Draft CEPI input to Commission public consultation

Brussels, 9 October 2018

"Future climate and energy policy – a strategy for long-term EU greenhouse gas emissions reductions"

CEPI represents the European forest fibre and paper industry and gathers, through its 18 member countries, some 550 pulp, paper and board producing companies. Over the past years our sector has annually invested €3 billion in combining competitiveness, sustainability and innovation and we have a tremendous investment agenda ahead.

We have set ourselves an ambitious vision: ***to drive growth in the global bioeconomy***. Such an economy assumes a high level of circularity of materials and carbon. The vision goes beyond our own sector by including a transformation of society to a circular bio-based economy.

Already today we contribute in three ways: by *substitution*, whereby our circular bio-based products replace other products that are produced from fossil raw materials or in carbon-intensive production processes; by *carbon capture* in forests and in bio-based products and by *reducing the use of fossil energy sources* in our own operations.

The EU can be a forerunner in achieving such a circular, bio-based and low-carbon economy. The EU will, however, only be a role model for others if an ambitious strategy is combined with ***a solid industrial policy contributing to growing prosperity*** including a stable, predictable and enabling regulatory framework. This framework must assure a level playing field within the EU, but also conditions that allow successful competition for EU-based businesses in a global context. Furthermore, the strategy must include a commitment to ***increase the production of renewable resources***. That way, circular, bio-based and low-carbon products can be produced in Europe, from European raw materials, for European and global citizens.

With this in mind, achieving a successful long-term EU strategy would require carbon emissions reductions to happen in all segments of society, crossing sectorial boundaries. Nevertheless, CEPI has identified three 'no regrets' options that will enable Europe to deliver on all of the above-mentioned objectives:

1. **Promote an internationally competitive, low-carbon, sustainable industrial basis in Europe**
   European leadership against climate change can only materialise if production of low-carbon goods happens in Europe. It is therefore in Europe's strategic interest to attract investments in industries, such as forest fibre and paper, which are actively pursuing the dual strategy of reducing their carbon footprint while producing materials needed to decarbonise European society. To prevent investments leakage, the enabling conditions need to be maintained throughout the whole transition to a low-carbon economy.

2. **The circular bioeconomy to be at the core of the low-carbon economy**
   Developing a European circular bioeconomy is one of the main drivers to ensure sustainable and low-carbon goods are produced in Europe, from European raw materials, for European citizens. The market for these products - replacing other products that are produced from fossil raw materials – is growing and is expected to continue to grow, as consumers are progressively increasing their awareness of the benefits that our products deliver both in tackling climate change and delivering benefits to society at large.

3. **Acknowledge the role of sustainable forest management as an enabler for circular bioeconomy and optimal carbon flux**
   Although carbon capture in forests is a functioning technology, sustainable forest management makes sure they act as a carbon pump, by capturing more carbon from the atmosphere and pumping it into products.

Our industry is fully engaged in constructively to shaping Europe's future. Our recently published 2050 Roadmap identifies investments, needs and paths to follow in order to significantly reduce our direct, indirect and transport-related carbon emissions. [1]

In the following paragraphs we put forward our views on what could be our sector's contribution to a decarbonising European economy, and how our sector relates to key aspects in moving forwards towards 2050.

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[1] http://www.cepi.org/publication/investing-europe-industry-transformation-2050-roadmap-low-carbon-bioeconomy

The low-carbon transition and our industry

We are an integral part of a low-carbon society

Carbon emissions reductions will have to happen in all segments of society, crossing sectorial boundaries. At the same time, the low-carbon transition represents a great opportunity to connect the dots between low-carbon, circular and bioeconomy.

In this respect, our sector provide an ever-growing variety of products and solutions to decarbonise other sectors thanks to our long expertise in providing sustainable, renewable, recyclable, bio-based materials.

Specifically, our products:

- are a key tool in the climate change mitigation policies, thanks to their ability to store carbon, but also to avoid carbon emissions by substituting fossil-based materials;
- help take environmental responsibility and achieve economic benefits through self-sufficiency (use of mainly locally-sourced, renewable and recycled resources);
- help limit the extraction and depletion of non-renewable resources;
- can reduce the amount of waste landfilled or spread in the environment (land and sea) thanks to their recyclability and, once recycling is no longer possible, to their biodegradability and compostability;
- contribute to rural development and livelihood, as they depend on natural renewable resources growing on land and in the marine environment;
- enable the fulfilment of a number of sustainability challenges (as identified by the United Nations with the Sustainable Development Goals (SDG)).

Our recently published poster "What a tree can do?" shows the immense possibilities that our sector can offer, by interacting and integrating with other industries, in delivering sustainable, bio-based and renewable products to reduce carbon emissions while promoting jobs and growth.

Just to mention the most relevant industries that could benefit from our products: aviation, civil construction, printing & publishing, food, automotive, cosmetics & personal care, electronics, pharmaceutical & medical, furniture, chemicals, textile, energy, oil and gas industries, metallurgical industries.

The market for these products is growing and is expected to continue to grow. Consumers are progressively increasing their awareness of the benefits that our products deliver, both in tackling climate change and delivering benefits to society at large.

We are walking the path of full decarbonisation, but challenges remain

The forest fibre and paper industry is strongly committed to reducing its carbon emissions while providing jobs and growth in Europe. In 2017 our sectorial emissions were already 26% lower than 2005 levels, primarily due to energy efficiency improvements and an increased use of renewable energy sources.

The forest fibre and paper industry is also a very heterogeneous sector, with solutions being difficult to replicate due to several constraints, such as location, energy mix, access to raw materials, different type of products and production processes.

For certain mills, where there is a positive mix of these factors, we expect production to be fully decarbonised well before 2050.

For other mills challenges exist, namely:

- A lack of technological solutions (breakthroughs) that would radically change production processes.
- Constraints in the use of bioenergy due to several factors such as: limited or no access to biomass feedstock, lack of public acceptance by local communities, lack of storage facilities, and logistics constraints.
- Full electrification, even if it were economically viable, would have significant and inexperienced impacts on electricity networks.

For these mills solutions are far from being technically and commercially available or deployable. More support for dedicated R&D is urgently needed.

In conclusion, our sector will continue playing its role in addressing these outstanding challenges, but more support will be needed from public authorities to bring timely solutions to the market. Specifically, a successful transition of our sector would require:

- Delivering cost-competitive new technologies and proven solutions at industrial scale by 2030, at the latest.
- Preserving the international competitiveness of the forest fibre and paper sector throughout the whole length of the transition to full decarbonisation.
- Ensuring a reliable and cost-competitive supply of energy sources and raw materials, particularly in view of increasing competition for biomass.

Research & Innovation: our decarbonisation routes to 2050

Our industry developed a 2050 Roadmap in 2011, which was reviewed in 2017. The Roadmap aimed at assessing what would be needed for the paper industry to reach -80% emissions by 2050. In both editions the CEPI Roadmaps identified a set of options that, cumulatively, would have contributed to reaching the objective. These options include energy efficiency, fuel switch and, most importantly, the role of breakthrough and emerging technologies in bridging the gap.

There is no preferred route to deep decarbonisation of our industry. However, some considerations have to be made on the list identified by the European Commission in the public consultation:

- Development of new products and business concepts. Our present and future bio-based products leverage on our low-carbon footprint and the long track record in sustainable production, providing innovative solutions to decarbonise our society.
- Circular economy, including recycling and re-use. Circular economy is at the essence of the paper industry. Through recycling and re-using our materials, coupled with sustainable forest management, we play our role in preserving and growing forests in Europe. Forests therefore play a double role as source of carbon-neutral raw materials replacing fossil-based ones and as carbon sinks. In this context, it should be noted that the role of forest is not to offset a continuation of fossil emissions.
- Improve the maximum energy efficiency. Energy efficiency improvements will continue to play an important role in lowering carbon emissions. Energy efficiency alone will not deliver the deep emission reductions in line with the long-term EU strategy.
- Further electrify. An increased use of electricity is technically feasible but financially unfeasible due to high CAPEX and OPEX costs (including network charges, fees, taxes, etc.). Providing demand-side flexibility services may deliver a more cost-effective solution for society: barriers should be urgently addressed and removed, particularly in view of ensuring grid stability and visibility on long-term investments.
- Use of low-carbon fuels, such as hydrogen. Hydrogen, biogas or synthetic fuels or gases could be an option but they would have to be cost-competitive and delivered via pipelines to paper mills. At the same time, on-site biogas generation and consumption could be a more cost-effective option and should be further promoted.

It should also be noted that the choice among different options will depend on the availability of reliable, carbon-free/neutral and cost-competitive energy carriers.

There is therefore an urgent need to assess whether the energy sector, with a particular focus on infrastructures, is fit to support a European decarbonised energy system and, if that is not the case, to identify milestones for new investments.

The low-carbon transition around our industry

The role of forests

Forests serve multiple functions at the same time. They provide raw materials for renewable products and energy, biodiversity, leisure, fresh water and air as well as carbon storage. The sustainable management and use of forests guarantees that the joint provision of ecosystem services continues across generations of both people and trees. Resource efficiency forms the foundation of the use of wood.

Carbon capture by forests

European forests are absorbing more carbon than they release. During the last few years, forests in the EU have absorbed around 414 Mt CO_2 a year. The EU forests can be seen as a positive carbon account, growing each year.

There is however a "peak of carbon capture" for each tree – as the tree grows, its carbon capture rate increases up to a point after which the absorption rate starts to decline. As trees absorb most CO_2 in the growing phase, by sustainably managing forests one would achieve the result of having different areas with trees of different ages, resulting in a better CO_2 absorption.

Active and timely forest management is also necessary to adapt existing forests to climate change. Particularly in view of risk management: it would constitute a strategic solution to prevent risks outside human control (storm, fires, diseases…) from equally affecting the whole area, depleting overnight decades of carbon sink building and releasing stored CO_2. Thus, forests should not be used as a tool to offset fossil emissions from other sectors.

The sustainable forest management framework has evolved and strengthened over time, balancing a market-based demand for wood products and bioenergy with the other environmental and climate functions of the forest. The EU member states have strong forest legislation in place, following the Forest Europe sustainable forest management principles and in line with the EU Forest Strategy. This ensures that forests are growing in stock and surface in Europe.

In order to address specific sustainability concerns related to the energy use of wood, the EU is now introducing sustainability criteria on forest-based bioenergy and has thus found a proportionate complement to national forest legislation addressing sustainability issues. The accounting of carbon emissions and removals from forests has also been recently regulated under the LULUCF framework for the post-2020 period, therefore, no further regulation on sustainable forest management is needed.

Carbon stored forest-based products

The carbon in managed forests ends up in various products which store carbon for varying lengths of time.

Carbon moves, from wood to products, in an overall net positive carbon absorption balance. Wood harvested from forests is used for wood products, paper, paperboard and other bio-based products as well as bioenergy at the end of the life cycle, to name a few end uses.

Furthermore, wood-based products substitute fossil-based materials, resulting in additional carbon savings.

Forests and forest-based products complement each other as parts of a functioning whole. Although carbon capture in forests is a functioning technology, sustainable forest management makes sure that forests act as a carbon pump, by capturing more carbon from the atmosphere and pumping it into products.

Ex-post carbon capture (BECCS)

Carbon capture from biomass combustion (BECCS) is often portrayed as an attractive solution for climate change mitigation, as it would deliver carbon negative emissions. Against this backdrop, a few considerations should be made:

- Biomass is renewable, but its availability is limited. It is carbon-neutral as long as emissions from bioenergy are accounted for (in LULUCF) and forests are sustainably managed.
- Capturing CO_2 from biomass used for energy purposes is quite costly. The economic feasibility would have to be assessed vis-à-vis industrial competitiveness.
- Other technologies can deliver climate benefits at lower costs (e.g. use of green electricity vs. BECCS).
- BECCS would require the deployment of a CO_2 infrastructure. Before developing BECCS, one should have first exploited all options to reduce/eliminate emissions from fossil fuels.
- BECCS should not be used as a policy tool to offset emissions from other sectors.

Emissions reductions in transport

The forest fibre and paper industry has a supply chain that is quite different from that of other industries:

- Access to raw materials, such as wood from forests and recycled paper from collection points, is much more dispersed than in other industries.
- We rely mostly on road, rather than other means of transport.
- At the same time finished products need to be delivered with short lead times to diverse customers across Europe.

This presents both opportunities and challenges for decarbonisation.

Our sector has identified four main pathways to reduce our transport-related carbon emissions:[2]

- Truck fuel efficiency
- Fuel shift
- Increase in permitted unit loads and digitalisation pathways
- Supporting policy conditions and infrastructure, notably environmentally friendly trucking and harmonised EU rules and regulations.

[2] http://www.cepi.org/publication/decarbonising-transport-and-logistics-chains-europe-discussion-paper

This being said, our industry is an emerging producer of RES-T solutions mainly from wastes and residues from forestry and forest industries, such as advanced biofuels, biogas, excess electricity from bio-based forest fibre and paper mills. This is part of our contribution to the development of bioeconomy. In this respect, our sector is able to offer solutions to mitigate climate change through our existing and new products.

However, raw materials that can be used for RES-T are not available in unrestricted amounts. The overarching aim should therefore be to enlarge the bioeconomy and ensure enough biomass supply is available.

Furthermore, any policy instrument to support RES-T should:

a. Not result in transportation costs increased for large logistical buyers such as our sector, as this would negatively impact our global competitiveness;
b. Ensure regulatory predictability and stability;
c. Cost-efficiently drive RES-T integration into the market.

A role for society at large

For the paper industry, national, regional and local authorities have an important role in connecting the dots between a low-carbon, circular and bioeconomy.

Concerning the bioeconomy, it is of utmost importance to overcome misconceptions and misunderstandings. Ensuring the rapid availability of undisputable data and facts on the expected environmental, climate, social and economic benefits of the bioeconomy and bio-based products is a must in order to raise awareness and promote the bioeconomy across Europe's society at large.

In order to enhance the penetration of bio-based products, it is important to ease access to markets by lifting obstacles to their circulation within the single market and indicating a clear preference for sustainable, circular and bio-based products.

It is equally important that consumers are well aware of the benefits of recycling to adopt the right sorting behaviour thus contributing to the benefits of paper recycling and the prolongation of the fibres' life cycle and carbon storage potential. In this context, local authorities play a key role in enhancing separate collection systems, to allow for paper waste to enter a new cycle, therefore prolonging the life of the paper fibres and the carbon stored in them.

Last, but not least, in the education system there is a growing mismatch between, on the one hand, education and training and, on the other hand, the skills and competences needed in industry. These trends are occurring against a background of rapid change in the industry in terms of decarbonisation, new technologies and business models, as well as innovative products, yet a better qualified and skilled workforce will be crucial for the EU to compete on the global stage. [3] The role of local authorities will be of utmost importance.

[3] http://www.cepi.org/publication/future-skills-paper-industry

Note

CEPI aisbl - The Confederation of European Paper Industries

The Confederation of European Paper Industries (CEPI) is the pan-European association representing the forest fibre and paper industry. Through its 18 national associations CEPI gathers over 500 companies operating 940 paper mills across Europe producing paper, cardboard, pulp & other biobased products. CEPI represents 23% of world production, €75 billion of annual turnover to the European economy and directly employs over 180,000 people. Through its 18 national associations CEPI gathers 495 companies operating 903 pulp and paper mills across Europe producing paper, cardboard, pulp and other bio-based products. CEPI represents 22% of world production, more than €80 billion of annual turnover to the European economy and directly employs over 175,000 people.

From forest fibre technology to advance paper design the industry currently invests 3.5 billion annually and is a leader of the low carbon circular bioeconomy transition. CEPI's 2050 'Investment Roadmap' outlines the industry's vision to advance this transformation in Europe through value creation and decarbonisation.