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AEBIOM Answer to the Green Paper-

A 2030 framework for climate and energy policies

4. QUESTIONS

4.1. General

- **Which lessons from the 2020 framework and the present state of the EU energy system are most important when designing policies for 2030?**

The lessons drawn from the experience gained with the 2020 climate and energy package are as follows:

- The EU should continue policies which have proven to be successful in ensuring global competitiveness while decreasing greenhouse gas emissions and fossil fuel imports.
- The 2020 climate and energy framework and its binding renewable energy targets have provided the energy sector with much needed stability and predictability in uncertain times
- Binding targets have successfully driven investments in the renewable energy sector: Due to legally binding targets, Europe achieved a share of 13% renewable energy in 2011.
- Binding targets are effective tools to create jobs: The number of persons directly or indirectly employed in the EU renewable energy sector increased by 30% from 2009 to 2011 to reach 1.2 million people.
- A coherent approach addressing all interlinked and relevant sectors is the best way forward.
- The 2020 energy and climate framework made the renewable energy sector more recession-resistant than would otherwise have been the case and reduced the impact of regulatory instability sweeping Member States
- The Renewable Energy Directive and the NREAPs drafted by the 27 Member States provided the renewable energy industry with a very clear direction up until 2020.

- Further efforts are needed in terms of streamlining administrative barriers, clarity of planning and permitting procedures.
- The EU needs to better address energy in existing buildings: More than 70% of today's buildings will still exist in 2030. The EU should draft retrofitting plans and targets.
- Greenhouse gas emission reduction targets and carbon pricing mechanisms alone are not sufficient to drive investments in renewable energy and energy efficiency. While the ETS can in theory create conditions that make renewable energy investments comparatively more attractive, uncertainties related to wholesale prices, carbon prices or decision on CO2 taxes remain. Several factors including international cooperation, domestic policies on effort sharing or the overall economic situation will continue to make the price of CO2 volatile, even after the ETS' structural issues are addressed. These uncertainties will make renewable energy investments more risky and in turn increase the costs of capital with investors requiring higher returns on investments[1]. In contrast to a GHG-only approach, dedicated renewable energy policies offer a lower risk environment for investors.
- As stated by the European Commission, innovation driven only by carbon pricing would narrow the focus of technology development to the lowest costs, i.e. closest to market technologies, at the expense of the broad range of critical renewable energy technologies which could be competitive in the mid-term[2].
- It is crucial that the design of renewable energy support mechanisms adapt to the maturity and the changing costs of renewable energy technologies.
- Increasing the share of renewable energy by setting a 2030 target does not mean a continuation of existing support mechanisms for all renewable energy technologies. On the contrary, by increasing the cost competitiveness of renewable technologies through a 2030 target, the need for support mechanisms to bridge the increasingly narrow gap is progressively decreasing.

4.2. Targets

• Which targets for 2030 would be most effective in driving the objectives of climate and energy policy? At what level should they apply (EU, Member States, or sectoral), and to what extent should they be legally binding?

EU climate and energy policy pursues a variety of objectives: Providing energy, growing the economy, creating jobs, boosting global competitiveness, protecting the environment, reducing the cost of decarbonisation and bringing down the cost of technologies to allow for broad technology development at affordable prices.
In view of these objectives, AEBIOM believes that a package approach based on mutually reinforcing and ambitious renewable energy, emission reduction, and energy efficiency binding targets should be adopted:
- The Energy Roadmap 2050 identifies RES, EE and infrastructure as "no-regrets" options. In any given scenario, renewable energies are critical for decarbonisation towards 2050.

[1] Imperial College of London, Robert Gross et. al: On picking winners: The need for targeted support for renewable energy. 2012
[2] European Commission: Low Carbon Economy Roadmap 2050. 2011

- These three targets are needed not despite but because of the economic, social and environmental crisis. This will considerably reduce the EU's energy trade deficit by investing in Europe rather in fossil fuel exporting nations (the net EU fossil fuel import bill amounted to €406 in 2012).

- The three targets should be developed in relation to one another. Predictable and effort shared energy savings and renewable energy shares should be factored in when setting greenhouse gas targets for the non-ETS sectors (the Effort Sharing Decision), and when deciding on the structural reforms of the ETS - so that they can reinforce the effect of carbon pricing.

To date, the Emission Trading Scheme applies only to large scale installations (above 20 MW). Today the heating sector represents 50% of the EU final energy consumption and remains largely dominated by fossil fuels (80%). and by small scale installations. Given that there is no EU-wide CO_2 tax directed at small scale installations and that non-binding targets in the field of energy savings have shown their limitations, a GHG-only approach beyond 2020 would not cover the entire energy sector in the most cost-efficient way. Hence, a binding renewable energy target covering electricity, heating and cooling, and transport is needed.

Regarding the level of the targets, targets should be set at EU level and then broken down at national level following the same model as the Renewable Energy Directive:

- to allow for a fair effort sharing among Member States.
- to provide Member States with the flexibility they need to meet the targets. A renewables target leaves a wide choice for Member States to decide on their energy mix in terms of sectors and technologies).

Having only an EU target would lift Member States from the responsibility and freedom to meet their target in the way they prefer. Furthermore, renewable energy developments would be concentrated in the most mature markets leading to disproportionate costs and public acceptance issues in these countries.

These targets should be ambitious; otherwise the EU will end up developing a business as usual scenario.

An ambitious legally binding target for renewable energy accompanied by compulsory measures is needed for the following reasons:

- EU energy efficiency and automotive targets have shown the relevance of setting binding targets: Binding targets are more robust than indicative aspirations. Having a binding target means that Member States need to make every effort in a timely manner.

- A binding target is the best way to encourage all Member States to commit to an optimal level of renewable energy, particularly in emerging and developing national markets.

- A binding target will provide greater market certainty for planning and investments: Binding targets are trusted by private investors and are bankable. A binding renewables target will - by providing the long-term direction - decrease the costs of investment uncertainty and facilitate the achievement of the 2020 targets in the most cost-efficient way.

- Market prospects and clarity on market volumes are key stimulants to investments in research and innovation as much as deployment of technologies in a market is an important source of information to further improving R&D[3] and hence reducing costs.

- Binding renewable energy targets will help the EU to keep a first-mover advantage on global markets: Many competitors already have renewable energy targets beyond 2020 such as South Korea, Japan and certain US States.

- There is a clear international consensus of the importance of a renewable energy target: the number of countries worldwide with renewable targets more than doubled between 2005 and 2012. In 2012, 118 countries had renewable energy targets in place (in 2009, only 109 countries).

• **Have there been inconsistencies in the current 2020 targets and if so how can the coherence of potential 2030 targets be better ensured?**

While the EU should have opted for a 30% GHG emission reduction target, AEBIOM does not see inconsistencies between the current policies composing the 2020 package:

The impact assessment of the 2007 climate and energy package was modeled taking into account various aspects and potential impacts of one policy on another. The deployment of RES and its indirect impact on the GHG target for instance was intended:

The 2007 impact assessment expected a carbon price of 25-30€/t by 2020 assuming that

- The RES target of 20% by 2020 would be met, translating into an indicative 34% target for RES-electricity, 25% for RES-heat and a binding target of 10% for RES in transport

- Electricity consumption and production would grow significantly

- The EU economy, including heavy industry sectors, would grow

However, the draft RES Directive and the accompanying impact assessment changed in the final version following the negotiations: introducing more exemptions in the ETS and a lower RES trajectory in the initial phase.

Renewable energy developments can only be assumed to have an impact on the carbon price if the actual renewable electricity deployment goes above the planned trajectory. However, in the aftermath of the economic downturn, the situation is the following:

- Electricity consumption has gone down by 3% since 2008, instead of increasing as expected

[3] International Energy Agency (IEA): Interactions of policies for renewable energy and climate. Working paper 2011

- Heavy industry emissions decreased by over 30% on average in the last 5 years, due to reduced production
- Renewable electricity production is 1.74% above the indicative trajectory in 2011, reducing emissions approximately by an additional 39Mt beyond the RES Directive objective.

The European Commission estimates that the ETS surplus was 2000Mt at the end of 2013, making clear that an additional 39Mt reduction from RES is not to blame.

Exceeding the RES-E targets is an achievement in difficult times. This RES-E development represents lasting emission reductions, unlike most of the 2000Mt surplus. This surplus reflects the economic downturn – which has not been foreseen - and the (free and generous) allocation methodology.

The existing targets, EE, RES and GHG, are delivering mutually reinforcing results and must be continued. Pursuing the goals of decarbonisation, security of supply and competitiveness will require an integrated renewables – greenhouse gas – energy efficiency framework. While a single policy target or instrument might work well when pursuing one single objective, several objectives pursued together will require a set of coherent tools and targets.

• Are targets for sub-sectors such as transport, agriculture, industry appropriate and, if so, which ones? For example, is a renewables target necessary for transport, given the targets for CO2 reductions for passenger cars and light commercial vehicles?

Targets for sub-sectors can be useful in particular if a sub-sector lags behind in terms of overall development or if a desired change is more challenging to pursue. That may be the case for the transport sector.

However, Member States should be encouraged to exploit their respective total potential and to address non-economic barriers in sub-sectors which seem to be the most appropriate.

Enabling the deployment of a large portfolio of RES technologies in all sub-sectors is therefore best guaranteed by an overall renewable energy target, providing flexibility for Member States while addressing uncertainty for investors.

Rather than targets for sub-sectors, what is important is that the 2030 framework takes into consideration all energy sectors and services.

• How can targets reflect better the economic viability and the changing degree of maturity of technologies in the 2030 framework?

Targets should not be confused with support mechanisms:

- Targets are set to provide a direction to investors, a direction the market would not take if left alone.

- Support mechanisms are designed to reflect the changing degree of maturity of technologies. They can and should be adapted to the changing maturity of technologies.

• How should progress be assessed for other aspects of EU energy policy, such as security of supply, which may not be captured by the headline targets?

Security of supply can be provided by headline targets. While a greenhouse gas target cannot ensure increased independence from imports, renewable energy and energy efficiency targets, will reduce Europe's use of fossil fuels, which are the source of Europe's energy import dependency.

4.3. Instruments

• Are changes necessary to other policy instruments and how they interact with one another, including between the EU and national levels?

An ambitious 2030 renewable energy target of 45% renewable energy sources should be the key driver for renewable energy developments. However, alongside this target, changes to other policy instruments will be needed:

Post-2020 research and innovation policies:

The EU should implement and finance the Strategic Energy Technology plan (SET-Plan), which should be extended to cover all RES technologies, including those who are currently not covered. It should be extended post-2020 and be part of a comprehensive industrial strategy for renewable energy technologies.

Energy research funding within overall EU R&D funding has declined from 34% in FP1 to 7% in FP7. Future EU research and innovation policy has to recognise the importance of energy and climate issues by increasing its share in the overall EU research programme.

Infrastructures:

Member States which fail to develop their network to allow for the large scale integration of renewables should be targeted early by the Commission as not complying with the provisions of the renewable energy framework. 2030 renewable energy targets should be factored in ENTSO-E's 10 year network development plan. The EC should help provide access to equity and streamline planning and administrative procedures along the lines of the actions taken in the 2012 infrastructure package.

Financing

There is a contradiction between the EC policy on climate change and the European Investment Bank funding, which still finances fossil fuel power plants, including coal. The EIB's energy policy should be aligned with the EU's own 2020 and 2050 targets.

In addition, support to renewables has been transparent, as opposed to subsidies for nuclear and fossil fuels, which are still high. Subsidies for nuclear are mostly hidden – research[4] shows that if plant operators were to pay adequate liability premiums, the price for a kilowatt-hour nuclear energy would rise up to 2.36 euro, depending on the insurance model chosen.

Heating and cooling

The Commission announced its intention to publish an EU heating and cooling strategy in the autumn. AEBIOM trusts that this strategy will, among others, boost the development of RES in this sector. Collecting robust information and statistics will allow better assessment of the obstacles and shortcomings presented by current instruments, foster the exchange of best practices leading to European guidelines on RES heat policy and create synergies among existing instruments. It is of utmost importance that this exercise is in line with the next steps taken by the Commission in the 2030 climate and energy framework. Likewise, it is important that the National Renewable Energy Action Plans (the heating and cooling part), the requirements regarding heat supply in the implementation of the EPBD and the upcoming heating and cooling assessment in the Energy Efficiency Directive are coherent.

• How should specific measures at the EU and national level best be defined to optimise cost-efficiency of meeting climate and energy objectives?

Renewable energy targets reduce long term costs by ensuring investor security thus reducing the cost of capital. Research shows that a long-term commitment to renewable energy leads to 10% to 30% reduction in the levelised costs of electricity.[5]

National support mechanisms need to be differentiated by technology to ensure the cost effective deployment of a broad portfolio of renewable energy technologies, be it in the electricity or in the heating sector.

A key element to ensure that the targets are met in a cost effective way is to promote stable legal legislative frameworks. Sudden or even retrospective changes to support mechanisms have a damaging effect on the investment climate. They increase the cost of capital for capital-intensive technologies, which is the case of several renewable energy technologies.

Member States are responsible for ensuring stable frameworks and support schemes but the EC has a role to play as well. In the past, the EC has in some instances pushed for the review of existing contracts in the field of renewable energy (2011 memorandum of understanding between Portugal, the EC, the ECB and the IMF). It is critical that such recommendations are not repeated. The EC also has a role in warning Member States of the dangers of such measures as they seriously undermine the cost-effectiveness of reaching the renewable energy targets.

[4] Günther et al., Berechnung einer risikoadäquaten Versicherungsprämie zur Deckung der Haftpflichtrisiken, die aus dem Betrieb
von Kernkraftwerken resultieren, 2011
[5] Ecofys et al: Financing Renewable energy in the European Energy Market. 2010.

• **How can fragmentation of the internal energy market best be avoided particularly in relation to the need to encourage and mobilise investment?**

To answer this question, one needs needs to take a look at today's market reality: EU power markets and infrastructures have been developed from a national security perspective in order to guarantee national supply. Markets were developed during state-owned or state-dominated times with centralised, incumbent energy monopolies/oligopolies financially protected by the Nation-States. Conventional power sources were financed through state subsidies and levies on electricity bills. Today, fossil and nuclear power support continues through direct or indirect subsidies for generation and, EU subsidies for fossil fuels are four times the level of support allocated to renewable energy[6].This support did not receive the same level of scrutiny as renewables support mechanisms. RES support mechanisms should therefore be seen as a compensation for the lack of a functioning Internal Energy Market and internalisation of all external costs.

Now, at a time of scarce public money, the EU is approaching the end of an investment cycle in the power sector. The EU's objective is to finance the energy transition largely through private investments. For that purpose, transparency on market rules, tax exemptions, support granted and administrative procedures needs to be ensured.

To allow for cost-efficient Europeanisation, an ambitious, stringent and stable EU framework adaptable to local and regional conditions should be put in place. The EU should harmonise certain elements of procedures (and therefore their related costs). A minimum set of parameters could also be taken into account by Member States when defining and updating their support mechanisms, such as the technology cost calculation. This will allow the progressive convergence of support policies, while maintaining the necessary flexibility to reflect specific context of the national markets.

To avoid further fragmentation of the internal energy market, the EU should as well further harmonise market design conditions e.g. provide for integrated intraday and balancing markets, harmonised network codes.

With regards to a 2030 RES target and the need to encourage investment in power generation assets, high shares of variable renewables require an increased need for flexibility from power generation capacity. Under transparent market conditions, with a decent degree of regional market integration, these power plants should still have a sound business case on the energy-only markets. In the mid-to long term however, further deliberations are needed on new market mechanisms, next to the energy-only market model, to ensure that investments in power generation continue once a liberalised and subsidy-free environment for all power generation technologies is achieved.

• **Which measures could be envisaged to make further energy savings most cost-effectively?**

[6] European Commission, Renewable energy: Progressing towards the 2020 target. 2011

Similar to renewable energy, long term targets for energy efficiency will stabilise the market and provide the sector with certainty, thereby facilitating the achievement of both 2020 targets and long term ambitions. This approach is the most effective way to foster investments and decrease costs. Both renewable energy and energy efficiency have been identified in the EC Energy Roadmap 2050 as no-regret options. Combining renewable energy and energy efficiency measures provide the double benefit of increasing the renewable energy output and reducing primary energy use e.g. in buildings.

• How can EU research and innovation policies best support the achievement of the 2030 framework?

Successful innovation and decarbonisation policy needs to provide both a "demand pull" (via markets created) and a "supply push" (via R&D) to develop a broad portfolio of technologies. Innovation driven only by carbon pricing would narrow the focus of technology deployment to the lowest cost, i.e. closest to market technologies, at the expense of the broad range of critical renewable energy technologies - which could be competitive in the mid-term and which are necessary for the long-term cost-effective decarbonisation of the energy sector.

Research and innovation policies at EU and Member State levels will be critical to support the achievement of the 2030 framework. This means at the EU level:

- Scarce public resources should be focused on no-regret options.

- Energy research funding within the overall EU R&D funding has declined from 34% in FP1 to 7% in FP7. Future EU research and innovation policy should increase the share of energy in the overall EU research funding programme.

- The EU should implement and finance the Strategic Energy Technology plan (SET-Plan).

- The SET-Plan should be extended to cover all RES technologies, including those which are currently not considered.

- The SET-plan should be extended post-2020 and be part of a comprehensive industrial strategy for renewable energy technologies.

4.4. Competitiveness and security of supply

• Which elements of the framework for climate and energy policies could be strengthened to better promote job creation, growth and competitiveness?

Europe's competitiveness and its capacity to create jobs in the climate and energy sector, depends on its ability to drive innovation in sectors of the future. Therefore stable long-term market and legislative frameworks are key for competitiveness, jobs and growth.

Job creation in the RES sector is critical to Europe's competitiveness. Investing in renewable energy creates jobs across sectors, including areas such as construction which have been hit hardest by the crisis[7]. However, many jobs have been lost over the last two years following retrospective changes to support schemes adopted in several Member States. In Spain, for instance, according to an APPA study, some 20,350 jobs have been destroyed between 2008 and 2010 due to the retrospective changes introduced in 2010[8].

It is crucial, in order to avoid retrospective changes, to carefully monitor market and price developments. It can make sense for certain technologies to implement annual automatic price digression and/or a growth corridor with automatic adjustments whereby a target is set for the year. If the target is overachieved, the tariff decreases by an amount agreed in advance. If it is not reached, the tariff remains the same.

• What evidence is there for carbon leakage under the current framework and can this be quantified? How could this problem be addressed in the 2030 framework?

There is little proof that carbon leakage happened at all for the following reasons:

- Some energy-intensive industries have started delocalising to developing countries long before the climate and energy package (see labour costs and high taxation as some of the main reasons).

- Free allocation has been used to avoid carbon leakage.

- Most companies passed all or most of the carbon price onto their customers.

As a consequence, the list of economic sectors considered as high risk of carbon leakage should be updated. Indeed, the list established by the European Commission assumed a carbon price of 30 euros a tonne while the carbon price is currently about 4 euros a tonne. The list features 60% of sectors representing 95% of industry emissions. A CE Delft study[9] indicates that revising the list to take account of lower than expected carbon prices could mean that only 33% of sectors, accounting for just 10% of industry's greenhouse gas, emissions would fit the criteria.

There may be exceptional cases of carbon leakage limited to new investments in power plants being made in countries bordering the EU (e.g. Bosnia) -instead of being made in an EU Member State (e.g. Italy)- hence producing electricity outside of the EU but importing it in the EU. However, such cases are limited by the fact that physical power lines are a bottleneck for importing electricity from outside Europe.

If such plans to build power stations in the Balkan for electricity imports materialise, there will be a need to include CO_2-emitting plants in the EU ETS to avoid carbon leakage. This should prove easy as the source of emission is well identified and quantifiable.

[7] European Commission: Exploiting the employment potential of green growth. 2012
[8] Spanish Renewable Energy Association (APPA): Study of the Macroeconomic Impact of Renewable energies in Spain. 2012 http://www.appa.es/descargas/InformeAPPA2011_eng.pdf
[9] CE Delft Report - Carbon leakage and the future of the EU ETS market. 2013

• **What are the specific drivers in observed trends in energy costs and to what extent can the EU influence them?**

Until today, fossil fuels have been the main drivers of energy price increases in the EU. The EU has little margin for manoeuvre to influence world trends in energy costs: It is a price-taker, not a price-maker. To address this, the EU should further reduce its import dependency on fossil fuels, which will – without further action - reach more than 70% by 2030. The EU can become more resilient to energy prices by investing more in renewable energy sources.

The price of energy paid by the consumers is made of several components e.g. wholesale fuel prices, transmission and distribution charges and taxes. When analysing the increased energy prices, it is important to look at all drivers, not least fossil fuel prices and taxes:

In the United-Kingdom, the largest contributor to increased energy bill between 2004 and 2010 has been gas prices[10].

In Italy, over the last decade, the annual electricity bill cost for an average household increased by 55%, from 338€ to 524€. The main cause is the increase of the "energy & supply" component that incorporates the growth of international oil and gas prices (respectively +400% and + 300% in the period according to the: International Monetary Fund) that raised from 106€ up to 297€ (+280%) since 2002.

Increased fossil fuel prices are due to the depleted resources as well as increased energy demand from developing countries such as China and India.

In Denmark, which is a country featuring high share of RES in its electricity mix, RES subsidies (the so-called "PSO") constitute only 3.5% of the final electricity price paid by consumers while overall taxes represent more than 40% of the final price.

One element, which is important to note, is the fact that reduced wholesale prices which benefit from the merit-order effect of low marginal cost renewables have not been reflected in retail prices. Decreased wholesale prices should be passed on to the retail market.

Last but not least, it is important to note that energy costs are bound to rise, whatever the EU will do. Energy prices will go up because the EU is at the beginning of an investment cycle.

• **How should uncertainty about efforts and the level of commitments that other developed countries and economically important developing nations will make in the on-going international negotiations be taken into account?**

[10] According to the UK Climate change Committee, 63,7% of the increase in energy bills of a typical household from 2004 to 2010 is due to increased gas prices. Only 6,6% is due to low carbon generation support which includes the Emission Trading Scheme, the Electricity Market Reform and the Renewables Obligation.

While an ambitious climate and energy framework will help the EU take a strong negotiating position for COP 21, discussions and decisions about the EU climate and energy framework need to be seen as independent of international climate negotiations:

- The EU climate framework helps to price technologies at their true cost for society, a benefit which is disconnected from any international framework. The Health and Environment Alliance (HEAL) says the pollutants from burning coal cost the EU €43 billion a year[11]. The ETS re-allocates costs to emitting technologies. It is not linked to any international commitment.

- Despite the lack of agreement, all major economic partners have put in place climate and energy policies and have made commitments to reduce emissions at the international level. Compared to business-as-usual scenarios, the EU's 2020 commitment is not very different than those of other G20 countries. China and emerging economies in Latin America are investing heavily and increasing their market shares in renewable energy. The EU should put policies in place to maintain its technological and market leadership.

- The fact that the EU holds a competitive advantage in renewable energy technologies is in itself a reason to continue having a climate and energy framework independently from any international commitments.

• How to increase regulatory certainty for business while building in flexibility to adapt to changing circumstances (e.g. progress in international climate negotiations and changes in energy markets)?

In order to increase certainty for investors, a binding framework is needed to provide clarity on market volumes as well as binding measures with close monitoring.

Regarding climate policies, increasing regulatory certainty while adapting to changing circumstances could be done via an automatic downward adjustment mechanism: in case of economic downturn and if the carbon price goes below a certain level, the emission reduction cap should be automatically reduced further. This would provide investors with more certainty. However, in case of unexpected economic growth, there should not be an automatic upward adjustment of the emission reduction cap as this goes against the idea of a cap on emissions, which is crucial to the EU's decarbonisation goals. A price floor could also be envisaged.

• How can the EU increase the innovation capacity of manufacturing industry? Is there a role for the revenues from the auctioning of allowances?

The EU should stimulate the innovation capacity of the renewable energy manufacturing industry by developing and implementing an industrial strategy. The EU should bridge market and innovation by looking at the whole supply chain for each sector and focusing on manufacturing.

[11] Health and Environment Alliance (HEAL), The Unpaid Health Bill - How coal power plants make us sick. 2013

As part of this industrial strategy, the EU should develop flagship projects of European manufacturing based on Member States cooperation on industrial policy e.g. similar to the development of Airbus, thereby providing international visibility for the EU on the sectors of tomorrow.

The European renewable energy sector currently has a first mover advantage, which is the result of successful EU policy frameworks for renewables and binding renewable energy targets. Binding targets have provided the renewable energy sector with a direction up to 2020 enabling investments in R&D and innovation. 2030 renewable energy targets and EU commitment to dedicate public funding for technological development are crucial to increasing the innovation capacity of the industry.

100% of the ETS auctioning revenues should be earmarked for climate mitigation and if needed, adaptation. This is the only way to ensure that this revenue stream will be used to price CO_2 and reduce emissions. The ETS should use all its intrinsic tools to reach that objective and the auctioning revenue is one of these tools. The current commitment by EU Member States to use 50% of that auctioning revenue for climate mitigation and adaptation is welcome, but doesn't go far enough. It integrates several loopholes, not least is its non-mandatory nature.

Furthermore, at least part of this revenue should be used and managed at EU level. This would ensure a better traceability of used funds and transparency of allocation process. The "NER300" scheme is a good example of how revenues can benefit the EU at large, instead of a single Member State. A repetition of such a programme, albeit with some modifications to ensure a closer reflection of current technologies, should certainly be considered.

• **How can the EU best exploit the development of indigenous conventional and unconventional energy sources within the EU to contribute to reduced energy prices and import dependency?**

The Green Paper rightly stresses the role of Europe's indigenous energy resources. It however, fails to acknowledge that energy saving and renewable energy are our only significant and long-term indigenous energy solutions. Only energy efficiency and renewables will achieve greater energy independence and realise major macroeconomic benefits, including new local jobs, reduced sovereign debts and EU industrial leadership. Moreover, renewable energy sources are the only indigenous sources in which the EU has a competitive advantage.

• **How can the EU best improve security of energy supply internally by ensuring the full and effective functioning of the internal energy market (e.g. through the development of necessary interconnections), and externally by diversifying energy supply routes?**

By increasingly focusing on renewable energy and energy efficiency, the EU will continue to develop a diversified portfolio of technologies and hence improve security of supply.

The EU should also ensure that sufficient infrastructure, grid and interconnectors are in place. This increased grid and interconnection capacity could be used for balancing purposes. Greater

balancing areas will help ensuring better security of supply and should therefore be taken into account as key enablers when designing the 2030 climate and energy framework.

Last, but not least, a move away from national generation adequacy assessments to an EU integrated system adequacy assessment that comprises all forms of flexibility, generation, demand, interconnection capacity and storage, is required.

4.5. Capacity and distributional aspects

• How should the new framework ensure an equitable distribution of effort among Member States? What concrete steps can be taken to reflect their different abilities to implement climate and energy measures?

The EU needs a European binding target, broken down into national targets. Cooperation mechanisms should be reinforced to facilitate target achievements while ensuring a fair distribution of efforts among Member States.

• What mechanisms can be envisaged to promote cooperation and a fair effort sharing between Member States whilst seeking the most cost-effective delivery of new climate and energy objectives?

The Renewables Directive includes cooperation mechanisms available to Member States: statistical transfers, joint projects and joint support mechanisms. Norway and Sweden have implemented their joint support mechanism over several years. This was made possible by the fact that these two countries have very similar and integrated electricity markets. The industry would welcome an approach building on this example of bottom-up regional integration.

AEBIOM favours an increased use of cooperation mechanisms. Based on the experience gained until 2020, the EU will be able to draw lessons and further develop cooperation mechanisms post-2020. Cooperation mechanisms, together with a target-sharing (based on efforts by all Member States and taking GDP into account hence based on a fair-effort sharing), will promote cooperation among Member States in the most cost-efficient way.

• Are new financing instruments or arrangements required to support the new 2030 framework?

The European Commission should fully explore with the European Investment Bank and national public institutions opportunities to dedicate funds and innovative financial instruments within the EU budget towards the financing of energy and climate priorities for 2030. National green public banks should provide additional loans to the renewable energy sector, possibly based on the model of the German Kreditanstalt für Wiederaufbau (KfW).

The European Biomass Association is the common voice of the European bioenergy sector with the aim to develop the market for sustainable bioenergy, and ensure favourable business conditions for its members. AEBIOM brings together 30 national associations and around 70 companies from all over Europe.

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