APREN Associação de Energias Renováveis

APREN's reply to the European Commission Green paper on 2030 Climate and Energy Framework

July 2013

Executive Summary

To achieve the multiple objectives of the European Climate and Energy policy, the ***European Union should adopt an integrated climate and energy framework with ambitious and legally binding targets for Renewable Energy Sources (RES), Energy Efficiency (EE) and reduction of Greenhouse Gas emissions (GHG)***. Those new binding minimum targets should be established at European level and broken down at national level for an efficient and legally enforceable implementation. Such a framework would bring more benefits for European citizens and industries than a one-legged policy based on a supposedly "technology-neutral" "GHG-only" approach.

The consensus of the 2009 agreement should be preserved and the three targets should be adopted at the same time. For a mutual reinforcement the RES goal and EE targets should be determined first, then addressing the remaining emissions with a GHG target.

The European Commission should not follow the temptation to first reach an agreement on a GHG emissions targets in view of the international discussions in 2015 at the COP in Paris, and then pursue negotiations on RES and EE targets. This would send the wrong signal to investors and international partners as it would not reflect the EU commitment to comprehensive and an integrated framework for 2030. Due to the long-term investment cycles, investment certainty for RES is needed now as 2020 is already tomorrow.

In conclusion, ***the European Commission should propose an integrated climate and energy framework based on RES, EE and GHG ambitious and legally binding targets***.

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Key points

APREN calls on the European Commission to prepare a legislative proposal to:

- Propose three mutually reinforcing 2030 targets for RES, EE and GHG emissions. The targets should be ambitious, legally binding, set up at European level and broken down into nationally binding targets.

- Give the possibility for the Commission to impose direct penalties on the Member States which do not fully and timely implement the post-2020 framework.

- Resolve some of the malfunctioning of the EU Emissions Trading Scheme (EU ETS) on short-term (through the EU ETS allowances back-loading) and medium-term (through a structural reform of the system).

- Ensure a level playing field by making a thorough analysis of subsidies given to the energy sector and push the EU Member States to phase out subsidies to fossil fuels and nuclear energy.

- Not allow any new subsidies to nuclear energy.

- Guarantee the continuation of the priority access for RES.

- Encourage EU Member States to adopt flexible and evolving support frameworks for RES to avoid retrospective changes.

- Develop in parallel to the 2030 framework an industrial policy, a better financing framework for RES and a comprehensive and ambitious R&D policy.

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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?**

Success of the 2020 binding RES target
The 20% RES binding targets have shown how long-term legally binding targets are successful in giving the necessary incentive to Member States to develop a RES industry. Since the adoption of the RES Directive, the European RES industry has grown significantly, creating a large amount of green jobs in Europe, increasing by 30% since 2009 to reach 1.2 million people in 2011. The binding targets helped the EU reaching a share of 13% RES in final energy consumption in 2011. In the light of the current disturbances in many EU Member States, using the economic crisis to justify retrospective and damaging changes for support mechanisms to RES, we are convinced that without binding commitment under the RES Directive, we would see more negative actions and the Commission would not have the authority to bring Member States back in track.

The 2020 energy and climate framework has made the RES sector one of the most recession-resistant areas of European economy; RES, EE and information and communication technologies (ICT) are those sectors which have shown positive growth in the face of the crisis. In fact, the RES industry contributed 1% of the EU´s GDP. The binding 20% RES target will lead to a net GDP increase of 0.25% in comparison to a scenario with no RES policies. By 2030 this could further increase to a minimum net GDP growth of 0.45%.

Success of the comprehensive package
One of the key success factor of the 2020 Climate and Energy policy is that it links different sectors to ensure that the European Union achieve its ambitious 2050 agenda. In order to reach its objectives (competitiveness, decarbonisation, security of supply, economic and social growth, among others), many instruments are needed. The EU 2050 agenda cannot be reached with a single CO_2 reduction tool.

Elements to be kept in the 2030 framework
In terms of RES policy, the binding character of the targets makes its achievement possible. In addition, the National Renewable Energy Action Plans, drafted by the 27 Member States, provided the RES industry with a very clear direction until 2020.
One of the key elements from the 2020 Climate and Energy framework that should remain for 2030 is the grid priority access for RES. Priority access to the grid will be needed and should be guaranteed until the necessary change of the market structure takes place.

Flexibility of support schemes needed
Another lesson learn is that the design of the RES supports schemes is crucial to adapt to the maturity but also to the changing costs of RES technologies and further efforts are needed in terms of streamlining administrative barriers, clarity of planning and permitting procedures.

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?**

An integrated climate and energy framework
To achieve the multiple objectives of the European Climate and Energy policy, the European Union should adopt an integrated climate and energy framework with ambitious and legally binding for (i) RES, (ii) EE and (iii) GHG emissions.
As shown in the European Commission's 2050 Energy Roadmap, these three targets represent the no-regrets options necessary for a cost-effective and sustainable energy supply in any given scenario.

The European governments need to give a clear investment signal to the industry by making a long-term commitment. Energy market price signals remain distorted in favour of non-RES. Although external costs are partially internalised through the EU's ETS, fiscal instruments or support frameworks for RES, current market prices are still far from reflecting true cost. Fossil and nuclear energy are still receiving four times the level of subsidies of RES.

Requisites for the 2030 targets
In order to be efficient, these targets should be:

- Legally binding: The current difficulties to reach the indicative EE targets (and even to set up policies which would foster its achievement) show the importance of binding targets. A binding target is the best way to encourage all Member States to commit to a sufficient level of renewable energy, particularly in emerging and developing markets. The market will have greater certainty for planning and investing: binding targets are trusted by private investors and are bankable. A binding RES target will - by providing the long-term direction- decrease the costs of uncertainty, and facilitate the achievement of the 2030 targets in the most cost-efficient way.
- Ambitious: A share of 30%, as envisaged by the Commission in the Energy 2050 Roadmap, is definitely not ambitious enough. We support a legally binding RES target of a minimum 45% of final energy consumption in the EU by 2030. This would entail an annual reduction in fossil fuel demand of 556 Mtoe from 2030 on. According to European Renewable Energy Council (EREC), a minimum target of 45% by 2030 would provide gross employment of about 4.4 million in the RES sector. The impact would also be of qualitative nature, revitalizing industrial areas and improving social cohesion. It would also improve Europe's security of supply, lower Europe's dependency on fossil fuel imports and massively reduce European energy bill.
- European and national: targets (especially RES ones) should be set at European level and broken down into national legally binding targets. Having an EU target only would lift Member States from the legal responsibility to meet their target. National binding targets provide Member States with the necessary flexibility to meet the targets and allow for a fair effort sharing among Member States.

The Commission could also assess the necessity of interim binding targets on Member States. That would avoid the on-going retrospectives changes to national legislations as the Member States would not be able to wait for the end of the period to start their investments, as criticized by the European Commission in its progress report.

The possibility of the Commission imposing direct penalties on the Member States which do not fully and timely implement the targets and policies of the post-2020 framework should also be accessed.

GHG target alone would fail to achieve the EU objectives

A GHG target alone – which with its current level even lacks ambition – has a broad economic impact, but bears the risk of incentivising the harvest of low-hanging fruits and the re-introduction of old and polluting technologies such as coal and nuclear, thus negatively impacting the strong drive needed for a fundamental energy transition.

A GHG target is well complemented by a RES one, which stimulates technological innovation, thus speeding up the technological learning process and lowering costs. The EU ETS, the technology neutral instrument meant to reduce emissions at European level, failed to achieve its objectives, with multiple causes for this failure (such as the impact of the economic crisis and a high influx of Clean Development Mechanism (CDM) credits).

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

Several instruments for several objectives

The Climate and Energy policy has several objectives and therefore numerous instruments are needed to achieve these objectives. We do not believe that there is inconsistency between the RES and GHG targets; nevertheless, the mutual reinforcement should be deepened by setting a RES goal first, then an EE target and finally addressing the remaining emissions with a GHG target.

RES policy not responsible for the failure of the EU ETS

<u>The assumption according to which RES development undermined the carbon price is false; other reasons led to the low carbon prices, such as the over-allocation of allowances due to grandfathering and the continued impact of the economic crisis</u> (currently a surplus of almost 1 billion allowances).

The impact assessment of the 2007 Climate and Energy package was accurately modelled taking into account various aspects and potential interactions of the different policies. 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 Euros per tonne by 2020 assuming that:

- The RES target of 20% by 2020 would be met, translating into an indicative 34% target for RES-Electricity (RES-E), 25% for RES-Heat (RES-H) and a binding target of 10% for RES-Transport (RES-T),
- Electricity consumption and production would grow significantly,
- The EU economy, including heavy industry sectors, would grow.

However, with the economic downturn:

- Electricity consumption decreased by 3% since 2008, instead of increasing as expected,
- Heavy industry emissions decreased by over 30% in the last 5 years, due to reduced production,
- RES-E production is 1.74% above trajectory, reducing emissions approximately by an additional 39 Mton beyond the RES Directive objective,

These facts together led to the inefficiency of the EU ETS.

The European Commission estimates the EU ETS surplus to be around 2 000 Mton by the end of 2013, making clear that an additional 39 Mton reduction from RES is not to blame. Having over-achieved the RES-E targets is a great achievement in difficult times. This RES-E development represents lasting emission reductions, unlike most of the 2 000 Mton surplus.

2020 targets: mutually reinforcing objectives to be continued

The existing targets – RES, EE and GHG - are delivering mutually reinforcing objectives and must be continued. To further ensure that they work in a coherent and concerted way and that they are mutually supportive, we would suggest that priority should be given to a binding RES target and to a binding EE target, given their strategic long-term climate mitigation role and multiple benefits for European citizens and the economy. The GHG target should then be defined ambitiously enough to take the resulting emission reduction into account and provide additional incentives for emissions reductions beyond efficiency and renewable energy.

- **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 CO_2 reductions for passenger cars and light commercial vehicles?**

Targets for sub-sectors can certainly be effective, in particular if a sub-sector lags behind in terms of overall development or if a desired change is more challenging to pursue. Therefore, Member States should continue to set binding targets for electricity, heating and cooling and transport sector in their national action plans.

However at the same time Member States should be encouraged to exploit their respective total potential and to address non-economic barriers in those subsectors which seem to be the most appropriate.

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

Support for RES gradually phased out

It is important to stress that increasing the share of RES by setting a 2030 target does not mean a continuation of existing support mechanisms for all RES technologies. A coherent, stable and predictable 2030 framework, including an ambitious binding RES target, will significantly minimise the costs of uncertainty, lowering the investment risk, reducing the costs of capital and hence the level of support needed. In the post-2020 an increasing number of RES technologies will be able to move away from existing support mechanisms into a fair and properly functioning energy market for electricity, heating & cooling and transport.

Evolving national frameworks - key to efficiency
Experience has shown that incentives for RES technologies require evolving frameworks, which should be tailored to national specificities and differing levels of market maturity.

The RES sector has proven to be a very dynamic sector, with fast learning curves and effects of scale leading to rapid price decrease of the technologies. In the last years, many Member States have not taken these rapid changes into consideration in the design of their support schemes, leading sometimes to overcompensation and investment bubbles that then lead to retrospective changes to legislations. To avoid this situation and ensure the cost-effectiveness of support, some flexibility clauses should be integrated to the design of support schemes, from the outset, e.g. digressive support, regular revisions, use transitional periods etc.

While some exchanges of best practices could bring added value, harmonisation at EU level of support schemes' parameters and especially the nature and level of financial support would actually not deliver an adequate portfolio of renewable technologies. Its support should be properly designed in order to reflect a whole set of country-dependent parameters and ensure a sustainable rate of return for potential investors.

- **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 captured by the headline targets for RES and EE. While a GHG target cannot ensure increased independence from imports, RES targets as well as EE targets, reduce Europe's use of fossil fuels, which are the main reason for Europe's energy import dependency.

Indeed, security of supply can be ensured by increasing the share of indigenous energy sources and decreasing energy import. In 2011, the EU's combined trade deficit was 150 billion Euros. At the same time the net import bill for fossil fuels to the EU amounted to 388 billion Euros, more than 3% of EU GDP, and more than twice the trade deficit. Analysis shows that the EU´s fossil fuel demand can be reduced by about 550 Mtoe by 2030, representing approximately 370 billion Euros. This is equivalent to the total combined energy consumption of Belgium, Germany, Latvia, Poland, the UK and Spain.

Another aspect to ensure security of supply is the technical diversity of energy sources. Renewable energy technologies include a large number of different technical options that would foster the security of supply.

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 EU industrial policy

EU Climate and Energy policy in the future should be addressed together with EU industrial policy and should recognise and support both current and future opportunities for the industry to provide low carbon technologies and solutions. To keep its front-runner advantage in developing RES on a commercial scale, a real industrial policy would strengthen further local investments. Such a policy should be based on:

- Implementing a transparent and efficient European Energy market that provides an attractive investment climate while respecting general competition rules, through the use of low interest loans and easy access to capital;
- Ensuring investment security through a stable and favourable policy framework with long-term 2030 binding RES targets;
- Phasing out subsidies and R&D support to fossil fuels and nuclear as they distorts competition in the energy market;
- Promoting incentives at EU level to attract manufacturing investment;
- Simplifying administrative rules by developing sustainable support schemes, streamlining administrative procedures and implementing efficient grid connection processes – questions related with countries within EU that have its electricity grid poorly connected with other countries should be accessed, as the case of Iberia.

Effective financing instruments

- Creating an European Renewable Energy fund that could provide guarantees to renewable energy projects.
- Refocusing the European Investment Bank (EIB) investment policy as in contradiction with the EU policy on climate change, the EIB still finances fossil fuel power plants. The EIB's energy policy should be aligned with the EU's own 2020 and 2050 targets.

Efficient Research and Development (R&D) policy

- Developing a strong R&D and innovation policy for RES in line with a fast-paced RES industry. Focus on innovation that can be applied quickly in the market.
- Developing skills education for RES jobs.
- Implementing and financing the Strategic Energy Technology Plan (SET-Plan), and extended it to other technologies such as RES-H technologies. It should be extended post-2020 and be part of a comprehensive industrial strategy for renewable energy technologies.

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

National support mechanisms need to be differentiated per technology to ensure the cost effective deployment of a broad portfolio of renewable energy technologies.

Promoting a convergence of support schemes but no harmonization
Harmonisation of national support schemes is often referred to as a cost-efficient way of integrating RES, since energy would be produced "where it makes sense" from a resource point of view. Such an approach could even lead to sub-optimal solutions in terms of overall systems costs. The particular benefit of most RES technologies is their ability to join electricity generation and demand in a decentralized system. Therefore, while a convergence of support schemes is welcome in Europe, harmonising the type and the level of financial support would not deliver policy effectiveness.

Avoid abrupt and retrospective changes to support schemes
The European RES sector has been suffering for a few years from abrupt retrospective changes introduced to legislations in several EU Member States harming the industry and shattering investors' confidence. These changes have the characteristic of impacting already existing investments.
Those retrospective changes are changing the revenue streams expected by RES producers which they based their investments on. As a consequence, investors and producers are unable to pay back their bank loans. This situation has led RES projects to bankruptcy in the past, thereby further destroying the trust and investment climate in the sector.
Introducing retrospective changes increases risk premium for new projects and investors become reluctant to invest in the sector, seeing RES projects as a risky investment. In the same way, banks become more cautious before financing such projects, lend money at higher interest rates and therefore increase the cost of capital, making renewable energy projects "artificially" more expensive.

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

A distorted internal energy market, designed for conventional energies
The current EU energy markets and infrastructures have been developed during state-owned times with centralized, incumbent energy monopolies/oligopolies. RES cannot be fully integrated into the existing distorted market, where market prices do not account for any negative externalities of conventional energy. While targets unlock private investments, national support for renewables compensates for the flawed market designs and grid codes, which were tailored for centralized conventional power stations. RES targets and support schemes enjoy a broad legitimacy, which has strayed out of focus due to the continuous discussion about energy system transformation costs.

Concentrated markets, powerful incumbents and regulated prices are only a few of the impediments to the realization of a fully functioning European market. The objective of the RES industry is to be competitive and cost-efficient in a market designed with regard to variable energy at its heart.

A failing EU ETS
In the absence of a functional EU ETS which can internalize environmental costs and because of existing fossil fuel subsidies and governmental aid for nuclear energy, support for RES is necessary to counteract market failures and to create a level playing field.

The EU ETS did not had significant impacts on the investments in the power sector in the next few years. With prices of less than 4 Euros per tonne of CO_2[1], it is far from the 2020 price spread desired by the European Commission, which ranges from 16.5 to 25 Euros per tonne of CO_2. Priority should be given to the short-term rescue of the EU ETS through the back-loading of allowances, as well as a medium-term response through a structural reform, so that it can play a role in creating a relevant carbon price and promoting investments.

Massive hidden subsidies to the conventional energy industry

According to Dr. Fatih Birol, chief economist at the International Energy Agency (IEA), fossil fuel subsidies amounted to 500 billion US Dollars worldwide in 2011. They are, according to him "public enemy number one to sustainable energy development"[2].

Apart from fossil fuel subsidies, subsidies for nuclear power are another major distortion of market functioning and the level playing field and they should certainly not be accepted by the European Union. The transition towards a low carbon economy must not become a pretext for further support of this unsustainable technology which – despite decades of operation and experience – could not prove economic viability. On the contrary, investment in nuclear technology today will result in tremendous future cost burden for tax- and/or rate-payers for waste storage and dismantling of old power plants. And this goes even without taking into account the fact of no (or much too low) insurance responsibility of nuclear power plant operators.

We therefore call on the European Union to agree on a binding timetable for the phase out of subsidies to the conventional energy (fossil and nuclear). An important asset in this context would be a public database (transparency platform) which contains reliable information about all forms of support for the energy sector.

In addition, new public support for nuclear power should no longer be permitted, neither under the state aid regime nor for environmental and climate protection reasons.

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

Like for RES, long-term targets on EE will stabilise the market and provide the sector with certainty, thereby facilitating the achievement of both 2020 targets and long-term ambitions. Investments would be fostered and costs decrease most effectively.

Both RES and EE have been identified in the EC Energy Roadmap 2050 as no-regret options. Combining RES and EE measures provide the double benefit of increasing the RES output and reducing primary energy use e.g. in buildings. A program for promoting cogeneration – combined production of heat and power - should be prepared in order to enhance the potential of this efficient technology in Europe.

[1] EEX, Emissionsrechte, 2013
[2] http://www.ewea.org/blog/2013/02/fossil-fuel-subsidies-are-public-enemy-number-one/

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

Successful innovation and decarbonisation policy needs to focus on no-regret options and 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 medium-term and which are necessary for the long-term cost-effective decarbonisation of the energy sector.

Post-2020 research and innovation policies at EU and national levels
They will be critical to support the achievement of the 2030 framework. This means at the EU level:

- The EU should implement and finance the SET-Plan.
- The SET-Plan should be extended to renewable heating and cooling technologies.
- The SET-Plan should be extended post-2020 and be part of a comprehensive industrial strategy for renewable energy technologies.
- 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.

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?**

Competitiveness should not be narrowed only to electricity prices: Europe can only become competitive if its economy grows again, if new opportunities for investment are created, if it creates new jobs and promotes its technology exports. The final objective of EU energy policy should be to replace fossil fuel imports with technology exports.

Investments, growth and jobs: RES industry is a recession-busting industry and a capital intensive industry which can provide a safe haven for investments in European growth. The EU RES sector directly and indirectly employs more than 1.2 million people constituting an increase of 30% on the 2009 figure. 2.7 million people in the EU will be employed by the renewables sector by 2020. Ambitious 2030 RES targets could result in 4.4 million jobs in the EU.
RES is not only a solution to climate change and to improve energy security, but also a way to boost economic growth and competitiveness; investment in the sector is a way to restore Europe's economy to health and stable legislative frameworks to promote the development of the renewable industry should be maintained and enhanced, even in times of austerity.

Energy independence: In 2011, the EU imported 54% of its energy and this could increase to 70% by 2030; in 2012 Europe imported fossil fuels at a cost of 470 billion Euros. Investments in RES reduce the need to import fuels, improving Europe's energy independence. The EU should aim at reinvesting energy import bills into the European economy.

Technology exports: Europe remains one of the world's major RES markets. However, it is necessary to keep its competitiveness. China is now the biggest national market and the U.S., South Korea, Japan, India are also increasing investments.

Phase out of fossil fuel subsidies: fossil fuel subsidies continue to prevail: in 2011 the total amount of fossil fuel subsidies in the 21 EU Member States of the OECD was 26.5 billion Euros - 10.1 billion Euros (38%) more than global support to wind energy 16.4 billion Euros (IEA). Phasing out fossil fuel subsidies can help decrease energy prices and increase the competitiveness of RES.

- **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 evidence that carbon leakage happened at all for the following 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: the list established by the Commission assumed a carbon price of 30 Euros per tonne of CO_2 while the carbon price is currently about 3 Euros a tonne. The list features 60% of sectors representing 95% of industry emissions. Revising the list taking into account the lower carbon prices could mean that only 33% of sectors accounting for just 10% of industry's GHG emissions would fit the criteria.

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

Energy costs bound to rise as the EU is at the end of an investment cycle
Investments in new capacity always have an effect on energy prices. With many of the EU's power plants being decommissioned in the coming decade, Europe needs to replace its ageing power system and this has a cost, whatever the technologies installed are.
The novelty with RES support mechanisms is their transparency and accountability, so the effect of the support mechanisms for RES on energy prices needs be put in a context.

Fossil fuels as main drivers of energy price increases
Until today, fossil fuels have been the main drivers of energy price increases 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. Energy price increases in the EU in the past years were mostly driven by fossil fuel increases, in particular gas prices.

Renewable energy limits the increase of electricity prices via the merit order effect
Because wholesale market power prices are solely determined by marginal costs and because renewable power from solar and wind has almost zero marginal costs, they push out from the market the power plants which use the most expensive primary energy resources, namely gas, coal and oil, thus decreasing the overall electricity price.

Stable legislative frameworks reduce energy prices
By enabling lower capital costs, stable legislative frameworks reduce energy prices. Political stability by the means of long-term, stable but dynamic policies enhances investors' confidence and minimizes the risk premium for financial investors which is critical for capital intensive technologies such as renewable energy.

- **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?**

EU benefits from climate and energy agenda unlinked to international agreement
There is a need to decouple discussions and decisions about the EU Climate and Energy framework from the international climate negotiations. The EU Climate framework helps to price technologies at their real cost for society and to limit the EU dependency for fuel imports, benefits that are disconnected from any international framework.

Competition for technology leadership
Dedicated and binding policies for RES helped the EU to establish a first-mover advantage in global markets and made it a front runner in renewable technology innovation. Europe is still one of the world's major RES market. However, actions of other countries should not be underestimated. In 2012, 118 countries had RES targets in place (in 2010 only 109 countries) and engaged in a competition for technology leadership in tomorrow's markets. European policy-makers should ensure that the EU is fully equipped for this competition, even in times of austerity and Europe needs to keep its competitiveness.

- **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)?**

By providing the necessary long-term predictability of market volumes and direction, a binding 2030 RES target will decrease the costs related to uncertainty facilitating at the same time the achievement of the existing 2020 targets in the most efficient way.
Investments in the energy sector have become significantly more difficult due to the uncertainty about the mid and long-term policy perspectives. Policies which ensure stability and predictability mitigate risk and increase the confidence of market actors. This in turn reduces the cost of capital and helps to unlock private investments.

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

Necessity of an industrial strategy
The EU should stimulate the innovation capacity of the RES 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. As part of this industrial strategy, the EU should develop flagship projects of European manufacturing based on Member States cooperation on industrial policy.

EU ETS auctioning revenues to support climate investments

100% of the EU ETS auctioning revenues should be earmarked to climate mitigation and if needed, to climate adaptation. This would ensure that the revenue stream will be used on price CO_2 and emissions reduction. The EU ETS should use all its intrinsic tools to reach that objective. Auctioning revenue is one of these tools. The current commitment of the EU Member States to use 50% of that auctioning revenue for climate mitigation and adaptation is welcome, but does not go far enough.

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. However it fails to acknowledge that energy saving and RES are our only significant and long-term indigenous energy resources to achieve greater energy independence and realise major macroeconomic benefits. Moreover, RES 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?**

Security of supply will be improved if the EU:

- Increasingly invest in RES and EE - ensure a diversified portfolio of technologies;
- Ensure that a sufficient infrastructure, grid and interconnectors are in place - greater balancing areas;
- 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, in the future, storage is required;
- Promote demand response and storage.

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?**

Targets should be set at EU level, broken down at national level and be binding upon Member States under an effort sharing calculation. Member States are thus given the flexibility to meet their targets with the technologies they prefer and in the sectors they prefer according to their RES potentials.

- **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 RES Directive includes cooperation mechanisms available to the Member States: statistical transfers, joint projects and joint support mechanisms. There mechanisms should be reinforced to facilitate target achievements while ensuring a fair distribution of efforts among Member States, based on the experience gained until 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?**

Creating a European Renewable Energy fund could provide guarantees to renewable energy projects.
In addition, it is necessary to refocus the EIB investment policy as in contradiction with the EU policy on climate change the EIB still finances fossil fuel power plants. The EIB's energy policy should be aligned with the EU's own 2020 and 2050 targets.
The European Commission should fully explore with the EIB and national public institutions possibilities 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.

Conclusions

A well-designed, integrated energy and climate policy framework for 2030 – with an ambitious and binding RES target playing a central role – would have a number of economic and social benefits, such as:

- **Cost-effectiveness** – RES technologies have already experienced tremendous innovations and cost reductions. Large scale market deployment – driven by ambitious targets and policies – has been essential in unlocking this potential and should be continued if we want to reduce the long-term costs of decarbonisation.

- **Green growth** – In 2011, the European economic activity related to the renewable energy industry was valued at more than 137 billion Euros.

- **Significant potential for job creation** - In 2012, more than 5 million people worldwide and more than 1 million people in the European Union were employed in the RES sector.

- **Competitiveness** – As opposed to conventional energy, the prices for renewable energy tell the truth – there are no carbon or external costs that require subsidizing. A policy approach which sets RES at the centre of our energy supply system and creates a level playing field is needed to diminish the power of the incumbents, to allow the ownership structure to diversify and to combat the existing market distortions.

- **Technological leadership** – Due to the early adoption of ambitious and binding targets, European companies are world leaders in renewable energy technology. A continuation of this policy approach will lead to further technology diversification which will allow European companies to maintain and strengthen their competitiveness.

- **Lower fossil fuel importation** – It is assumed that in 2012 the EU paid more than 500 billion Euros for the net import of fossil fuels. An ambitious target of 45% RES use in gross energy consumption by 2030 as proposed by EREC would reduce the European fossil fuel demand by around 370 billion Euros annually.

About APREN

APREN was created in 1988, in response to the publication of Decree Law 189/88 which allowed independent producers to deliver electricity from small hydro power to the National grid. Nowadays, the Association represents around 90% of all installed capacity of renewable energy sources under special regime (all but large hydro and small scale generation) in Portugal.

APREN gathers the interests of a vast majority of the Portuguese independent producers and acts as their speaker to the relevant national authorities - Government, Regulator, TSO and DSO, being considered as a valuable partner to help improving procedures and legislation related with the sector.

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