

Green paper – A 2030 framework for Energy and Climate policies

ENERCONs responses

2nd July 2013

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 decisions we make today are crucial for our future energy system. Conventional energy is polluting and expensive and it will become even more so in the future. It has also been shown that the costs of inaction with regard to climate change will be much higher than the costs of decisive action. The deployment of renewable energy and the promotion of energy savings are the most sensible ways of reducing emissions, improving the security of supply, promoting competitiveness and thus achieving the much-desired transition to a sustainable energy supply.

Renewable energy targets have unambiguously been the key success-factor of the EU's energy policy, and this should continue post-2020.

The lesson is that a stable long-term market and legislative framework is key. Headline targets for renewable energy, GHGs and energy efficiency have proven effective. The 2001 Renewable Electricity Directive achieved around 21% renewable electricity by 2010, including 6.3% from wind energy, in line with the target set. Early indications are that the EU is on target to achieve its 2020 renewable energy target, although for wind energy, eighteen Member States are falling behind, including Slovakia, Greece, Czech Republic, Hungary, France and Portugal and abrupt changes in support, in particular retroactive, are considerably undermining investors' confidence and could put the achievement of the targets at risk.

In this context, post-2020 legislation could incentivize Member States to implement support mechanisms which are stable and flexible to adjust to decreasing costs, market evolutions etc. In particular, retroactive changes should be the object of specific provisions and singled-out as they hamper the necessary investments.

An important lesson from the 2020 framework is that in addition to headline targets for renewable energy, the post-2020 framework should ensure the timely development of key enabling factors:

- **2020 implementation:** a stable regulatory framework to 2020 is a pre-condition for the success of a 2030 climate and energy framework. Member States must implement stable and reliable policy frameworks in order to meet their trajectory up to 2020. The Commission must carefully monitor implementation of the Renewable Energy Directive and take swift action where necessary.

- **Electrification:** The EU should increase the electrification of its economy in order to reduce exposure to high fossil fuel prices and take full advantage of its significant potentials for wind energy (onshore).
- **R&D and innovation:** while an ambitious 2030 renewable energy target will be a key driver for private sector R&D and innovation in the wind industry, ambitious EU and national R&D and innovation policies will remain critical for the period after 2020.

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?

A combination of renewable energy, GHG, and efficiency targets will be most effective in driving the objectives of climate and energy policy. They should be legally binding and with an overall EU target, with the Member States being given legally binding targets in order to ensure the EU is met. An effort sharing calculation will take into account economic conditions and renewable energy penetration levels.

In particular, a suitably ambitious and binding 2030 target for renewable energy would be particularly cost-efficient in delivering the EU's energy and climate objectives. Investments made possible by these long-term targets will help drive down costs – both capital expenditure and the cost of capital. Furthermore, renewable energy targets will promote energy security, green growth and jobs and industrial and technology leadership.

The 2030 renewable energy target should not be seen as aspirational, and should therefore be legally binding. EU energy efficiency targets have shown the importance of setting binding targets. The 2030 renewables target should also be suitably ambitious otherwise no targets are needed as one would be in a business as usual framework. A target's credibility and integrity is critical.

Binding targets are more robust than indicative targets. When binding upon Member States, they foster greater awareness and political action in Member States. The legal requirement to reach a target largely determines its credibility, as robust legally binding targets mean that Member States will make every effort in a timely manner to ensure that the target is met in order to avoid infringement procedures and penalties. Binding targets give a direction which is non-negotiable. This in turn means that the market has greater certainty for planning and investment: binding targets are trusted by private investors and are bankable. Indicative targets may give a direction, but signals that the direction could change and be vulnerable to economic and political downturns.

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 target for GHG reduction was set too low and should all the more be increased following the economic crisis, there is no inconsistency between the current policies composing the 2020 package. As made clear in the 2008 impact assessment to the climate and energy package¹, RES and ETS policies are mutually reinforcing.

¹ 2008-01-23 Impact assessment accompanying the package of implementation measures for the EU's objectives on climate change and renewable energy for 2020.

The crisis, not renewables deployment undermined the carbon price. Renewable electricity development in 2012 was slightly higher than foreseen (1.74% above trajectory) but this represents only about 39 Mt in additional avoided/reduced emissions. Compared with a 2,000 Mt surplus, it is clear that RES are not a relevant factor behind the low carbon price.

A similar approach should hence be taken to 2030, setting three targets supporting each other. The GHG target should be defined ambitiously enough to take the emissions reductions of the separate 2030 renewable energy and efficiency targets into account and provide additional incentives for emissions reductions beyond efficiency and renewable energy. In that way the three targets would work in a coherent and concerted way, underpinning and mutually supportive. To ensure a stable investor framework an (automatic) ETS cap adjustment could be introduced to guarantee the health of the carbon price to respond to a fall in demand for EUAs.

If only a GHG target was set, national renewable energy targets would interfere with the ETS/carbon price because the equivalent in emissions reductions may not be properly forecasted. Setting an EU renewable energy target is therefore also necessary for the best possible interaction between the different 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?

Energy sub-sector targets at the EU level are not appropriate. Member States should be set an overall energy target and decide themselves how that target is divided between sub-sectors, based on their resources, geographical and technological differences. Renewable targets covering the whole energy sector would provide more flexibility to Member States than sectoral targets.

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

Targets should not be confused with support mechanisms. The 2009 renewable energy directive does not prescribe the means used by Member States to meet their national targets, including which support mechanisms should be used. This approach should continue post-2020.

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: while a greenhouse gas target cannot alone ensure increased independence from imports, renewable energy targets improve security of supply and reduce fossil fuel imports, which are the main reason for Europe's energy import dependency. Wind energy displaces electricity generated using costly fossil fuels with electricity generated by the wind. For the 2007 to 2010 period wind energy avoided fuel costs of €20.18 bn. By replacing electricity which is mostly based on imported fossil fuels, wind energy considerably improves Europe's energy independence.

When assessing the next 2030 climate and energy framework, the European Commission should not only model the achievement of emissions reductions, system security and costs, but also look at, and when possible model and set minimum levels of security of supply/import dependence levels as well as macroeconomic costs and benefits provided by the different options.

3. INSTRUMENTS

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

Policy instruments such as national support schemes have been paramount in ensuring a robust investment framework for the renewables. Seeing that in the future – as also outlined in the Energy Roadmap 2050 – variable renewable energy will play a central role in our energy supply system, policy intervention will be needed to ensure that sufficient investment is attracted to RES projects. A study by IZES² from 2012 comes to the conclusion that a fixed long-term degressive remuneration for renewable energy is the only reliable option for re-financing investments. This policy design element should be kept in mind when considering future support system approaches.

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

The key to ensuring that the targets are met in a cost effective way is the stability of long-term market and legislative frameworks. Stop-go policies, and retroactive changes, significantly undermine investor confidence and needlessly increase the cost of capital for capital-intensive technologies, such as most renewables.

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

Fragmentation of the internal energy market can be avoided by the European Union, and in particular the European Commission, adopting a leadership position in setting suitably ambitious renewable energy, GHG and efficiency targets, and driving forward the creation of an internal energy market together with progressing on developing cross-border grid infrastructure.

A stable long-term market and legislative framework at the EU level is the best way to mobilise investment in the power sector.

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

As with renewable energy targets, long term targets on energy efficiency would stabilize the market and provide the sector with clarity and certainty, thereby easing the achievement of the and facilitate the achievement of the existing 2020 targets by confirming to investors that energy savings are considered a long-term priority for the EU, as highlighted in the European Commission's 2050 Energy Roadmap. Investments would be fostered and costs decrease most effectively, thereby decreasing the level of public finance necessary.

Electrification of heating, cooling and transport should also be promoted as efficient tools to ensure cost-efficient energy savings.

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

Ambitious renewable energy targets are a key driver for wind (onshore) sector R&D and innovation, providing a demand pull for wind energy innovations and enabling large scale market deployment, which is essential for economies of scale and cost reductions. However, alongside the targets, post

² Leprich et al., Kompassstudie Marktdesign. Leitideen für ein Design eines Stromsystems mit hohem Anteil fluktuierender Erneuerbarer Energien, 2012

2020 research and innovation policies at EU and member state levels together with dedicated financial mechanisms will be critical to support the achievement of the 2030 framework.

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?

Renewable energy targets promote the development and deployment of wind energy which in turn creates growth and jobs. A greenhouse gas only approach would not be sufficient to make the huge job potential in wind energy a reality. The renewables element of the framework should therefore be strengthened, allowing the European Union to replace fossil fuel imports with technology exports. The EU should aim at investing today in wind energy jobs in Europe, rather than sending 1.1 billion Euros per day to fossil fuel exporting nations.

The wind energy industry is a recession-busting industry and a capital intensive industry which can provide a safe haven for investments in European growth: the targets-driven installation and operation of wind turbines has resulted in economic growth since the financial and economic crisis. For example, in 2010 the increase in the wind industry's contribution to GDP, at 4.1%, was twice as high as the growth of GDP itself. Between 2007 and 2010 the wind energy sector increased its contribution to GDP by 33%, and more than 30,000 direct jobs were created by the sector, a growth of 30%, while EU unemployment was rising by 9.6%³.

Stable frameworks by means of ambitious and binding 2030 targets, and stable but dynamic market and regulatory frameworks for wind energy, will enhance investors' confidence and minimizes the risk premium for financial investors. This is critical for capital intensive technologies such as wind energy; investments enabled by stable frameworks will also help drive down capital costs of technologies and thereby improve Europe's competitiveness.

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?

The European Wind Energy Association (EWEA) promoted auctioning as the only way to ensure proper carbon pricing. Free allocation has been used to avoid carbon leakage, but there is little evidence that carbon leakage has happened, with most companies passing all or most of the carbon price onto their customers^{4 5}.

Revising the carbon leakage list to take account of lower than expected carbon prices could mean only 33% of sectors accounting for just 10% of industry's greenhouse gas emissions would fit the criteria, a CE Delft study indicates. At present, 60% of sectors representing 95% of industry emissions are on this list.

In the power sector, carbon leakage is currently limited, as physical power lines are a bottleneck for importing electricity from outside Europe. If existing plans to build power stations outside the EU (e.g. in the Balkans) for electricity import are realised, there would be a need to include CO²-emitting plants outside the EU from which electricity is imported to the EU in the EU ETS to avoid carbon leakage. This should prove easy as the source of emission is well identified and quantifiable.

³ http://www.ewea.org/uploads/tx_err/Green_Growth.pdf

⁴ CE Delft Report, 2011

⁵ <http://www.theccc.org.uk/wp-content/uploads/2013/04/CF-C-Summary-Rep-web1.pdf>

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

Investments in new capacity always have an effect on energy *prices*. The novelty with renewable energy support mechanisms is their transparency and accountability. The effect of support mechanisms for wind energy on energy prices therefore needs to be put in a context. Energy price increases in the EU in the past years were mostly driven by fossil fuel increases, in particular gas prices.

Wind energy has rather smoothened the increase of electricity prices via the merit order effect: because wholesale market power prices are solely determined by marginal costs and because wind power has almost zero marginal costs, when the wind blows, it pushes 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.

Fossil fuel subsidies continue to prevail, including in the EU: in 2011 the total amount of fossil fuel subsidies in the 21 EU Member States of the OECD was €26.5bn, €10.1bn (38%) more than global support to wind energy €16.4bn (IEA). Phasing out fossil fuel subsidies can help decrease energy costs and increase the competitiveness of wind 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?

Discussions and decisions about the EU climate and energy framework can be decoupled from the international climate negotiations. The EU climate framework helps to price technologies at their true cost for society, a benefit in and of itself, disconnected from any international framework. Pushing for an ambitious 2030 climate and energy package will ease the EU's negotiating position in international climate negotiations.

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)?

A long-term stable market and regulatory framework for renewable energy will increase regulatory certainty for business.

Choosing a renewables pathway will enable Europe to become less vulnerable to changing circumstances in energy markets. While Europe can have no influence on fossil fuel markets, it still is today the main market for renewables and wind energy and a technology leader. Europe can continue to dominate trends for renewable energy, while becoming more resilient to fossil fuel trends. Choosing a renewables pathway will also clarify which electricity market and which grid will be needed to accompany to enable the 2030 framework. As such stability by means of ambitious and binding long term targets is the best way to achieve certainty for business while leaving flexibility to Member States and businesses to achieve the targets. An approach based on instruments and measures rather than targets would leave less flexibility.

Another example is the need for a predictable carbon price. An automatic adjustment mechanism, or a minimum carbon price, should therefore 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?

In 2010 the wind energy sector – both directly and indirectly – contributed €32.43 billion (bn) to the EU's GDP, 0.26% of the EU's total GDP for that year. The contribution of the wind energy sector is higher than the contribution of the footwear industry (0.21%). Wind energy's contribution can also be compared to the furniture sector, which contributed 0.99% of EU GDP in 2010, to the civil aviation sector, which contributed 1.5% of EU GDP in 2010, to the automotive industry at 6.5% and to construction at 9.9%.

In 2010 the increase in the wind industry's contribution to GDP, at 4.1%, was twice as high as the growth of GDP itself. Between 2007 and 2010 the wind energy sector increased its contribution to GDP by 33%. The wind industry is growing faster than the EU's economy as a whole and this will remain the case over the next two decades.

As such the wind industry will continue to be a driver for economic growth over the next twenty years. In 10 years' time the wind industry's contribution to GDP will increase almost three-fold, with the sector expected to generate 0.59% of the EU's GDP whilst having doubled employment. In twenty years' time the wind industry's contribution to GDP will increase fivefold to reach €174 bn, almost 1% of total EU GDP, and employment will have increased by a factor of three.

The wind industry buys and sells products and services from and to other economic sectors. This interdependence between sectors means that the wind industry is a driving force for many other industries – including metals, electric and electronic equipment, IT, construction, transport, and financial services. As a result the growing wind industry has helped other industrial and economic sectors weather the economic crisis. In addition, the wind industry spent more than 5% of its total turnover on research and development (R&D) in 2010.

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 EU should invest in the indigenous technologies in which it has a competitive advantage such as onshore wind energy, which reduces both energy prices (through the merit order effect), and import dependency.

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?

Europe should strive for security of supply. Renewable energy is the solution for reducing import dependency and energy prices. A system predominantly based on renewable energy involves other aspects than our current energy system, such as an increased need for flexibility in conventional power generation and demand.

Furthermore, a number of other options to balance renewable energy production for a period starting from a couple of hours to a couple of months is available even today, such as demand side management for households and industry and different solutions regarding storage.

Moreover, next to EU-wide market integration, power markets in the EU must be transparent and liquid in order to increase investor confidence. The EU should improve market transparency and monitoring by providing further incentives for the extensive use of commercial power exchanges for trading. This will ensure transparent price formation signalling investment needs and opportunities. In this sense, the EU should embrace flexibility as the main feature of tomorrow's power system and markets.

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 2020 target put in place by the 2009 Renewables directive was based on a distribution between the Member States which was both differentiated and equitable. This allowed for each of the Member States to plan the development of renewables to the fullest of their potential. In order to maximise the potential of renewables development by 2030, a similar approach should be adopted.

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 a number of cooperation mechanisms that are open to the Member States to enable a cost-effective delivery of the 2020 targets: statistical transfers, joint projects and joint support mechanisms. In fact, cooperation mechanisms are under-used. We are welcoming the intention of the Commission to publish guidance regarding the better use of cooperation mechanisms.

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

A stable long-term market and regulatory framework is critical to attracting a sufficient volume of appropriately priced financing, financial tools and arrangements should be adapted to the 2030 objectives and the no-regrets option of the Energy Roadmap 2050.

New financing instruments that reduce the cost of capital and reflect the transition to a system of more front-loaded investments will be necessary and require the full engagement from the finance community.