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The Swedish Wind Energy Association's comments on the European Commission's Green Paper: A 2030 framework for climate and energy policies

The Swedish Wind Energy Association (SWEA) or Svensk Vindenergi is the voice of Swedish wind power industry with a total of 157 member companies.

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SWEA welcomes the European Commission's new 2030 EU energy and climate framework that will assure necessary political measures are taken in order to reach the objective of reducing Europe's greenhouse gas emissions by 80-95% compared to 1990 levels.

Summary

- EU should along with a 2030 renewable energy target, greenhouse gas (GHG) target and energy efficiency target have a target for developing the internal market in order to allow cost-efficient integration of large shares of wind power, considering infrastructure, balance power, demand-side management, storage etc.
- Binding target for renewable energy has turned out to be the most effective target when it comes to encourage investments in renewable energy that are needed in order to reduce carbon emissions, increase security of supply and competitiveness within EU. A 2030 renewable energy target is needed in order to stabilize the market and facilitate the fulfillment of the existing 2020 target by signaling to investors that

renewable energy is regarded as a key future technology in the EU, as highlighted in the Commission's Energy Roadmap 2050.

- In a European macroeconomic perspective it would be most desirable if the European member states use the cooperation mechanism as much as possible. However since it's less than 7 years left to 2020 and an uncertainty what happens after 2020, a new renewable energy target for 2030 would create better conditions for long-term cooperation between countries.
- Only a GHG target will not be sufficient. A GHG target alone would require power prices far above today's prices in order to stimulate development of new (low emission) power production. This would have negative consequences on the competitiveness of European industry and the whole European economy. Industries would have to move to outside European countries with lower power prices resulting in higher emissions outside of Europe. Since global warming is a global matter, only global reductions due to European initiatives count when combating climate change.
- Innovative and non-mature renewables should be supported via RND funds. A substantial amount of funding should also be targeted to various demonstration projects.
- The EU should lead the way for the transition to a carbon neutral and fossil-society independent of how other non-European countries choose to design their energy and climate policies. The benefits of more renewable under an ambitious 2030 framework are sufficiently large for such a framework to be justified in terms of job creation, technology exports, innovation and improved competitiveness.

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

- The energy roadmap 2050 indicates that at high share of renewable energy is needed in all decarbonisation scenarios. Binding target for renewable energy has turned out to be the key initiative behind the powerful development of renewable energy across Europe. A clear and binding target provides the energy sector with long-term investment stability so that necessary investments in renewable energy can take place.
- There has been a big difference in national support schemes for renewable energy, where some countries have had very ambitious level of support that later has become too costly (mainly solar), resulting in reductions of the level of support. Overcompensating schemes results in unnecessary high cost for end consumer and industry and post political measures on the other hand induce uncertainties to the market and to the investors. In that sense support system that encourages the market to continuously set a price on the cost of energy production is preferable, such as the Swedish/Norwegian certificate system.

- It is vital that lessons are learned from the failures of the EU Emission Trading Scheme (ETS). ETS has failed to deliver a carbon price signal that supports investment in renewable energy generation. As the commission outlined, the huge over-allocation of allowances coupled with the financial crisis, has resulted in a massive surplus of allowances.

  It is important to distinguish between the emission reductions that have taken place because of lower industrial activity caused by the economic recession and actual reductions. When developing the 2030 framework a variety of carbon pricing instruments needs to be considered and analyzed.

  The back loading of emission allowances is necessary even though it is only a quick fix since it will not solve the structural problem with the growing supply-demand imbalance.
  Any 2030 GHG reduction target needs to be supported by a mechanism ensuring that a predictable carbon price is established. A carbon price floor could give investors long term visibility over carbon prices and help create a much more level playing field across the energy sector.

- Today, development of infrastructure is both urgent and critical for the integration of renewable energy. The European internal market and grid infrastructure has to be modernized and develop faster in order to cope with the growing amount of renewable energy. EU should therefore have a target for developing the internal market in order to allow cost-efficient integration of large shares of wind power, considering infrastructure, balance power, demand-side management, storage etc.

Which target 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?

SWEA supports the current 2020 design of an overall EU target translated into national member state targets. The 2030 energy and climate package should include:

- A binding 2030 renewable energy target
- A binding 2030 greenhouse gas target
- A binding 2030 energy efficiency target
- A target for developing the internal market in order to allow cost-efficient integration of large shares of wind power, considering infrastructure, balance power, demand-side management, storage etc.

The importance of a renewable energy target

- Binding target for renewable energy has turned out to be the most effective target when it comes to investments in renewable energy that are needed in order to reduce carbon emissions, increase security of supply and competitiveness within EU. Since

the national renewable energy targets for 2020 have contributed to the positive development of renewable energy similar 2030- targets should be imposed with regards to different prerequisites of each member state.

- Long-term and binding rules for investments in renewable energy, including ambitious and binding 2030 targets is a required when building trust among investors. It reduces the cost of uncertainties and hence the cost of capital, which in turn reduces the need for support for renewable energy. Uncertainty about government policy after 2020 will likely hold down investment even in the short run. A renewable energy target by 2030 is needed in order to stabilize the market and facilitate the fulfillment of the existing 2020 target by signaling to investors that renewable energy is regarded as a key future technology in the EU, as highlighted in the Commission's Energy Roadmap 2050.

- In a European macroeconomic perspective it would be most desirable if the European member states use the cooperation mechanism as much as possible. However since it's less than 7 years left to 2020 and an uncertainty what happens after 2020 a new renewable energy target for 2030 would create better conditions for long-term cooperation between countries.

- Renewable energy policy is not only about decarbonisation: it also promotes energy security, green growth and jobs and industrial and technology leadership in technologies in which Europe excels and needs to keep a competitive edge , such as onshore and offshore wind power. Europe is however on the verge of losing the industrial position that Germany and some other countries have given us by focusing on renewable energy and energy efficiency.

  In the U.S. most new generating capacity came from wind power last year which accounted for nearly half of all new generating capacity. Recently President Obama announced a new Climate Action Plan aiming to double renewable electricity generation by 2020, based on current levels.

  China has by promoting energy efficiency in industry and the expansion of renewable clearly reduced the increase in greenhouse gases. Renewable energy accounted for the majority of all new electricity generation last year, and wind power alone is reported to have given more TWh of electricity than fossil generation and nuclear power together. A renewable energy target is therefore very important for the industrial competitiveness of EU.

- Renewable energy targets are needed to incentivize the shift towards electrification of transport and heating and decarbonising the power sector. This will enable far greater levels for decarbonisation to be achieved in the longer term.

- Finally it is important that the targets are set and communicated, as a minimum target so that they do not risk being inhibitory once they have achieved.

Increased ambition for the GHG target

- An ambitious and binding GHG target should be set for 2030 to ensure the EU is on the optimal pathway to 80-95% GHG reductions by 2050. Given the importance of the

ETS as a key tool to drive emissions reductions in the long-term, the 2030 GHG target should include an increase in the EU domestic greenhouse gas reduction to 30% in 2020, and an increase of the annual linear reduction factor

A GHG target alone will be insufficient

- GHG and Renewable energy targets are mutually supportive while reducing GHGs is complex, challenging and requires more than one tool. Betting on one policy instrument which so far has showed to be an ineffective and inefficient instrument for driving investments would be a risky strategy. It's doubtful whether an ETS-only approach could drive necessary investments in renewable energy (and other low carbon technologies) in order to decarbonise the power sector by 2050.

  A GHG target alone would require power prices far above today's prices in order to stimulate development of new (low emission) power production. This will have negative consequences on the competitiveness of European industry and the whole European economy. Industries would have to move to outside European countries with lower power prices resulting in higher emissions outside of Europe. Since global warming is a global matter, only global reductions due to European initiatives count when combating climate change.

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

- It is important that the 2030 emissions reductions targets take full account of expected emissions reductions delivered by the renewable energy targets and to implement measures in order to avoid over allocation of allowances.

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

- A renewable energy sub target for transportation is not preferable since it could prevent greater electrification of these sectors. The emphasis should instead be placed on technology-neutral measures to promote CO2 reductions in these sectors.

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

- First of all it is important to distinguish between a renewable energy target and volumes of support schemes for renewable energy. Some mature renewable energy technologies will probably not require much of financial support (if not at all) while other more immature probably will. It will remain necessary to set ambitious 2030 renewable energy targets that cover both mature and less mature technologies to ensure that actions needed to accommodate large amounts of renewable on the electricity system and in the electricity markets are taken.

- Technology neutral market based support system such as certificate systems is preferable since it leads to competitiveness between technologies and to cost reductions.
- 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 in order to achieve necessary cost reductions in renewable energy technology.

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?

- Transmission infrastructure plays a key role in security of supply. As stated above, EU should have a target for developing the internal market in order to allow cost-efficient integration of large shares of wind power, considering infrastructure, balance power, demand-side management, storage etc. This would then take care of national security of supply.

4.3. Instruments

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

- The 2030 framework should promote much greater use of cooperation mechanisms in order for member states to achieve their national targets in the most cost efficient way. It is from a European macroeconomic perspective crucial that the new renewable electricity production is placed where the best conditions are and thereby also to the lowest cost.

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

- A well functioning European cross border Intra-day and balancing market has to be developed.
- Also a European grid support serviced market that ensures system adequacy by providing incentives for all types of flexibility (infrastructure, demand-side management, storage in the longer-term, generation) in a non-discriminatory and market-based way.

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

- Hourly time pricing via smart metering is instrumental especially for electricity.

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

- Innovative and non-mature renewables should be supported via RND funds. A substantial amount of funding should also be targeted to various demonstration projects.

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?

- Wind energy may offer many advantages and potential to create economic value and should be considered by policy makers as they make decisions regarding current and future levels of support for renewable energy generation. Results from an Ernst and Young study show that when combining the cost and benefit items benefit from the LCOE (initial costs) and the GDP contribution (return on costs) wind power shows a lower net cost compared with CCGT for most European countries studied and at EU27 level

- To reap the full job creation potential of wind power investments, it's important to ensure that the turbines will continue to be manufactured within the EU. A new 2030 renewable target with long term political and regulatory certainty are necessary in order to avoid that industrial supply chain is pushed overseas.

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

- Today fossil fuel prices are very volatile and unpredictable. Even if unconventional gas resources are exploited within EU, EU would still likely continue be dependent on gas imports. More renewables into the system will reduce the dependency and thus the vulnerability of fossil fuel prices.

- More renewable in the system has two effects on the electricity price that needs to be considered. Due to the low operational cost of renewables and the merit-order principle, more renewable in the system will reduce the market-clearing price as more costly marginal plants will be too unprofitable to run. At the same time, since renewable are subsidized, electricity consumers will have to pay for remunerations between the power price and the production price (LCOE). Which effect dominates is market specific and depends in particular on the composition of renewable and their respective levels of remuneration. Several studies in different countries indicates that more land based wind power (and other comparable cheap renewables) combined with low degree of remuneration will decrease system overall cost. More solar PV integration would on the other hand increase total system costs. However the difference is relatively modest compared to the effect of increased fossil fuel prices.

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?

- The EU should lead the way for the transition to a carbon neutral and fossil-society independent of how other non-European countries choose to design their energy and climate policies. The benefits of more renewable under an ambitious 2030 framework are sufficiently large for such a framework to be justified in terms of job creation, technology exports, innovation and improved competitiveness as a result of reduced exposure to volatile fossil fuel prices.

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 general it is important for the market to gain knowledge about the long term pathway and that future political agendas and decisions are communicated long in advance in order to increase business certainty. When this is done in appropriate way the market can also be flexible when it comes to political decisions. However retroactive changes can never be good.

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

- Long-term policies with clear and unambiguous targets are essential for increasing the innovation capacity of the manufacturing industry while clear targets create a strong signal to the manufacturing industry and supply chain.
- Part of revenues from the auctioning revenues could be earmarked for research and development and innovation in the energy sector.

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?

- Member states have different have different prerequisites when it comes to meet renewable energy targets. The national 2030 targets for renewable energy has to partly take into account both the current share for renewable energy but also that different countries have different potential of renewable resources.

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?

- Significant cost effectiveness will be achieved when power sources are built at places with the best resources. Therefore EU shall put an effort in assuring cooperation mechanisms are used as much as possible between member states.

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

- Today EU rules prevent pension funds and other investors to invest simultaneously in energy infrastructure and production. Private investments can also be hindered by national rules or TSO praxis. EU should therefore do more in order to encourage private investment in cross-border infrastructure.
- In addition to political framework, there is a need for improvement in the field of administrative procedures such as permitting, licensing etc.

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