Memo

Question 1:
How significant do you consider the impacts of non-harmonisation of support schemes to be for the development of RES and RES technologies?

The three principles of sustainability, competitiveness and security of supply are the three pillars for European energy policies and strategies. However present national support schemes for renewables foster very little competitiveness. A majority of support schemes are based on technology specific tariffs limiting competition between renewable technologies. In addition competition between individual member states is further impeded due to cross border trade barriers. Which EU regulations justify these barriers is still unclear.

The national renewable targets were settled based on a cost burden approach. These were decided as an increase of 5.75% as a flat rate and additional increases based on each country’s GDP. This means that the national targets were not based on the renewable energy resources available in each country. Member States interested in cost efficiency should investigate possible cost savings measures by opening up their borders for competition and trade.

The present national support schemes in the EU leads to sub-optimization and consequently, cost-inefficiencies. The current policies allow for direct investments to locations where the highest support is offered, and not necessarily to locations where production costs are low. This results in higher costs for customers and/or taxpayers.

The primary problem is the lack of competition. Harmonisation would create a level playing field that would support more efficient competition across the EU. Opening up for competition domestically and internationally would be the most efficient first step.

RES-technologies should be divided into at least two categories; almost mature technologies delivering volumes in the medium term, and immature technologies, which need more support and development. These immature technologies are not ready for delivering extensive volumes in the medium term but are necessary in the long-term. To ensure development of these technologies they would be available for specific EU-wide support programmes.

- The lack of competition due to closed national support schemes and technology specific tariffs leads to cost inefficiencies and hence higher costs for customers
- Introduction of competition between technologies and locations would be a first step for improvement
- Harmonisation would create a level playing field allocating production to areas with a best available and cost efficient resources and grid connection
Question 2:

In comparison, how significant do you consider the impacts of non-harmonisation of factors other than support schemes, explored in this report (or in addition to those explored) to be for the development of RES and RES technologies?

The following factors, among others, are not harmonised in Europe – excluding those programs with direct support levels:

- Conditions for the grid access. Priority access for renewables in some countries.
- Conditions for the balancing. Balancing not paid by RES-E producers in some countries.
- Permitting procedures vary across Europe.
- Procedures and costs for connection to the grid vary.
- The stability of the schemes varies due to imperfections, or lack of flexibility to market dynamics.
- No common view on the need of innovation. Some countries are focused more on innovation than others promoting very high tariffs for immature technologies. This leads to very high costs in some countries.
- Non-harmonised implementation of other EU-regulation like the Water Framework Directive and Energy Efficiency Policy.
- No incentives to encourage DSOs to invest in smart grids.
- No market model for smart grids and demand-side participation.
- No common rules and incentives for use of cooperation mechanisms.

The lack of harmonisation for the above items will lead to a distortion of the market. It is essential that EU companies can plan ahead in a transparent, non-distorted internal market where choice of location and technology is based on comparative advantage. That will help EU companies to develop and deploy cost effective solutions that can also be sold in global markets i.e. to increase their competitiveness.

This will all help to reach the 20% goal in the most efficient way and at the least cost for the customers. This increase in competition will decrease the costs of energy consuming companies and increase the acceptance for the changes occurring via this transformation process.

In order to ensure, that an affordable RES-E production will cover a major share of electricity generation it is essential that there are harmonisation regulations for all types of production when entering the electricity market. This will contribute to the stability of the grid and the functioning of an internal market, i.e. day-ahead market coupling and cross-border trading.

- Renewables entering the electricity market shall face the same conditions as all other types of production to avoid market distortion.
- Support shall be able to cover all costs over the “normal” electricity market.
Question 3:
Please place the factors of non-harmonisation (whether explored in this report or not) in order of materiality/significance. Please separate non-harmonisation of support schemes into type, level, structure, history and stability of support as explored in the public consultation document (Table 1).

Please rank the five factors mentioned below in order of their importance, starting with 1 i.e. most important and ending with 5 i.e. the least important.

1. Type of support (price-based scheme, quota-based scheme)
2. Level of support (high/low amount of support provided)
3. Support provision structure (fixed rate over time, variable rate over time)
4. History of support (long-term, short term)
5. Support scheme stability (perception of stability, perception of instability)

It should be noted that all changes required for renewable support schemes should not be retroactive i.e. they should preserve the status quo for existing plants built under a certain regulatory regime. These investments have already been made, based on a given legal subsidy framework and these schemes should be phased out or adjusted gradually in accordance with the existing regulation.

New renewable power plants, however, should be promoted in a different way.

The following steps would lead to a more cost efficient promotion of renewables and better integration to the electricity market:

1. Generation facilities in existing support schemes should be integrated step-by-step to the electricity market by taking responsibility for grid connections, selling the power to the market and participating in the balance market.

2. Separate almost mature (new) technologies from immature technologies:

   a. For almost mature (new) technologies the question is if support at all is needed. If so, competition must be introduced to a much higher degree. The conditions for participating in the electricity market should be the same for RES technologies as for conventional technologies. Competition means support being more market based and technology neutral. The use of cooperation mechanisms would also enable cross border competition and consequently the sighting of new renewables where the technology would have a competitive advantage and not where it will receive the highest support. This will create a less expensive per kWh price. Support should, at a minimum, be capped.
b. For more immature technologies, which are expected to deliver volumes in the long-term perspective, more development is needed. Technology specific schemes or programmes for innovation may be a solution (offshore wind, PV, wave power etc), but volume caps and clear time frames are essential to limit the costs. The immature technologies may be at different stages in their development, which must be considered when designing such innovation programmes. Innovation is an EU-question and as much cooperation as possible would be preferable. Schemes could be organised for certain regions; Offshore wind in the North Sea or Solar PV in the South of Europe are two examples. Technology neutrality would still be preferred if possible.

3. Support schemes must be able to benefit from successful market dynamics and limit regulatory instability. This means that redesigning the scheme and hence bringing uncertainty to the investors should be limited at all costs.

4. From a customer perspective support schemes must designed in a cost efficient way, leading to the lowest costs for customers. It is the total cost of support schemes and consequently the total cost to the end-user that is important from their perspective.

5. Renewables must be able to be traded across boarders and totally separated from the trade of physical power for successful competition to take place.

Question 4:
In your view, does this consultation document capture all major implications of non-harmonisation of support schemes? Are there additional impacts on investment decisions, market functioning or any other areas you consider relevant?

The following are not captured by the documentation:

1. Consequences of cost inefficiencies for customers

In table 2, in the report, the variation of support costs are presented even though it is hard to compare due to different number of support years, what the support covers, i.e. if the balance costs are included or not.

It is obvious that the costs for customers in different countries vary a lot. Taking the example of the FIT scheme in Germany with the certificate scheme in Sweden we can see a cost difference of about 3 €cents/kWh paid by the customer. The consumer cost in Germany 2010 was about 3-4 €cents/kWh while as for the Swedish it was roughly 0,6 €cents/kWh.

2. Lack of analysis why support schemes have been altered

Differences within the categories of FIT, FIP and TGC are not fully described. These differences could, and do, influence the success of schemes of the same category. An analysis why some schemes are more successful than others within the same type of category would be interesting. This could allow for adjustments to existing schemes according to a best practice.
3. Missing in the document is a discussion about the role of renewables in the EU Energy Strategy

EU has decided upon a climate package covering three policies with targets to be reached in year 2020; a 20% CO2-emission reduction compared to emissions year 1990, 20% share of renewable energy and 20% increased energy efficiency compared to year 1990. The relation between the policies has been discussed. The EU-commission claims that the policies have equal importance, but when relating the policies to central EU-objectives (combating climate change, security of supply) it is easier to understand the relations between the policies.

There are basically two central objectives. The first objective is to combat climate change, which requires a massive reduction in GHG emissions over time, particularly energy related CO2 emissions. Here, Investment in low carbon energy production (for instance renewable energy), CCS and energy efficiency measures must play a role.

The second objective is directly linked to security of energy supply. Where renewable energy may reduce the dependency on imports of fossil fuels from what is projected to be an ever decreasing group of producers, located in potentially unstable regions of the world.

To reach the objectives there are different means to the same end. Reducing energy related CO2 emissions requires low carbon solutions to energy production in the form of deployment of low CO2-emitting technologies such as renewables, CCS, and nuclear (not excluding the need for increased energy efficiency measures). The objective concerning security of energy supply may also be reached by low CO2-emmitting solutions (which lead to less import of fossil fuels) but ultimately it requires a more general shift towards the use of primary energy sources, preferably produced ‘at home’.

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<tr>
<th>Objectives</th>
<th>Combat climate change by reducing CO2-emissions</th>
<th>Security of energy supply</th>
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<tbody>
<tr>
<td><strong>Means</strong></td>
<td><strong>CO2-emission reduction measures</strong></td>
<td><strong>Change to sustainable local supply</strong></td>
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<td></td>
<td>• New CO2-low emmitting production (renewables, CCS, nuclear etc)</td>
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The challenge is to convert the central objectives into specific and meaningful policy targets and regulations. For combating climate change a policy target to reduce CO2-emissions is at least, on paper, relatively straightforward. A path for CO2-emission reductions that were both consistent, with long term requirements, and economically efficient were delivered via the EU-ETS.

The objective concerning security of energy supply is substantially more difficult to make operational. What is actually meant by being dependent, and what is the willingness to pay for less dependency?

A pragmatic approach would be to let CO2-reductions be the primary driver of policies while energy security is a secondary benefit.

It is difficult to set targets for energy efficiency and deployment of low carbon technologies in combination. Essentially these are competing solutions to the same problem. The proper mix should be based on cost-efficiency.

It is highly unlikely that any legal entity or individual government can design a consistent mix of targets that are also cost efficient. We may be able to guess the generation costs of renewable energy in 10 years time and compare it to our estimates of marginal costs of energy efficiency but that is unlikely to match reality in 2050.

The conclusion to be drawn is that the most rational strategy to achieve the two overall objectives (reduced carbon emissions and security of supply), given the large uncertainty about energy demand, costs, and technologies, is a mix of hard policy targets for GHG reductions, potential energy efficiency incentives and deployment of renewable energy generation using competition as a tool not a foe.