Input from the Renewable Heating and Cooling Technology Platform to the consultation on "A 2030 framework for climate and energy policies"

2 July 2013

The Renewable Heating and Cooling Technology Platform welcomes the opportunity to contribute to the consultation on the European Commission Green Paper "A 2030 Framework for Climate and Energy Policies" *This contribution is focusing essentially on horizontal issues and topics directly relevant to Renewable heating and cooling technologies.*

Background

Endorsed by the European Commission in 2008, the European Technology Platform on Renewable Heating & Cooling (RHC-Platform) brings together stakeholders from the biomass, geothermal and solar thermal sector. Building on the experience gained since 2005 within the European Solar Thermal Technology Platform (ESTTP), now incorporated in the RHC-Platform, four major European organisations – EUREC, AEBIOM, EGEC and ESTIF – are leading the process towards the definition of a joint Vision and Strategic Research Agenda to facilitate the uptake of renewable heating and cooling technologies.

The RHC-Platform key messages

1. Renewable energy technologies for heating and cooling are safe, clean, efficient and increasingly cost-competitive. The European Technology Platform on Renewable Heating and Cooling aims at playing a decisive role in maximising synergies and strengthening efforts towards research, development and technological innovation which will consolidate Europe's leading position in the sector. As a result, society as a whole will benefit from the increasing contribution of renewable heating and cooling to the European Union's 20/20/20 targets.

2. The potential of RES H&C in the 2020 package has been underestimated as the reference to 30% RES share in 2030 does not fully include RES H&C (the model used by the Commission does not capture small scale installations). Nevertheless, efficient renewable heating and cooling technologies are essential for a cost-effective decarbonisation of the energy sector. This is clearly demonstrated by the comprehensive analysis of the current heat demand and supply, and forecast for 2020, 2030 and 2050, provided by both RHC-Platform publications: The *"2020- 2030-2050 Vision for the renewable heating and cooling sector in Europe"* and the *"Strategic Research and innovation agenda Renewable Heating and Cooling.* http://www.rhc-platform.org/home/

3. This potential will be fully realized and bring its vital contribution, only if heating and cooling forms an integral part of all climate and energy policies. Research, development, innovation and demonstration play a crucial part and, therefore, the RHC Platform requests that the EU dedicates a minimum of 800 million euros over the programme period 2014-2020. This 800 million will trigger 2 432 million euros worth of private investment and should be complemented by 800 Million of national public funding.

4. The EU ETS only covers combustion installations above 20 MW and, therefore, does not include heating and cooling which consists almost exclusively of small scale installation

5. The extension of the three target approach covering the whole EU economy and all energy sub-sectors (electricity, heating and cooling, and transport) will therefore be necessary to achieve the 2050 targets in the most cost-efficient manner

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

Although greenhouse gas (GHG) targets and carbon price mechanisms (EU ETS, Carbon tax) can provide some price indicators, the current climate and energy framework has demonstrated that a greenhouse gas target alone is not sufficient to raise the investments to decarbonise the EU economy As stated by the European Commission, innovation driven solely by carbon pricing would reduce the focus of technology development to the lowest costs, i.e. closest to current market technologies, at the expense of a broad range of critical renewable electricity and heating and cooling technologies which could be competitive in the mid-term[1].

The 2020 climate and energy package was based on the assumptions that reducing carbon emissions in the power sector was the cheapest option and, for this reason, the burden on the EU ETS sector was set higher than for the non-EU ETS sector, including buildings. Against this background, the RHC Platform is keen to demonstrate how efficient renewable heating and cooling technologies, including renewable district heating, can provide a cost-effective contribution to the decarbonisation of the EU economies. The heating sector currently represents 47% of the EU final energy consumption and remains largely dominated by fossil fuels (80%) and by small-scale installations. Given that:

- The EU ETS does apply only to combustion installations above 20 MW;
- No EU-wide CO2 tax directed at small scale installations is in place;
- Non- binding targets in the field of energy savings have shown their limitations;

[1] European Commission: Low Carbon Economy Roadmap 2050. 2011

- The GHG emissions savings potential in non- ETS sectors (the Effort Sharing Decision) was underestimated and targets were set too low;

The logical conclusion is that a GHG-only approach beyond 2020 would definitely not cover the entire energy sector in the most cost-efficient way. Hence, a three target approach, including a 2030 EU binding renewable energy target covering electricity, heating and cooling, and transport is undeniably crucial.

The coherence and synergies between the heating and cooling sections of the National Renewable Energy Action Plans, the implementation of both the Energy efficiency and the Energy Performance of Buildings directives, as well as the energy labelling and eco design of heating appliances,, should be reinforced with regard to renewable heating. This should ensure that they complement each other and do not create conflicting and unclear priorities. In particular, the EU needs to better address energy issues in existing buildings, as over 70% of today's buildings will still exist in 2030, and it should draft retrofitting plans and targets. Any future targets would be more effectively implemented if each member state had a mandatory obligation to develop a sector-based National strategy for renewable energy technologies, setting out a framework for the implementation of each technology.

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 sectorial), and to what extent should they be legally binding?

The RHC Platform believes that the only credible solution is an extension of the three-target approach beyond 2020, based on binding targets applying at EU and national level.

In view of the multiple objectives[2] of EU climate and energy policies, a package approach based on mutually reinforcing and ambitious renewable energy, emission reduction, and energy efficiency binding targets should be adopted:

- The Energy Roadmap 2050 identifies RES, EE and infrastructure as "no-regrets" options. In any given scenario, renewable energies are critical for decarbonisation towards 2050.

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

[2] Some of which are: providing energy, growing the economy, creating jobs, boosting global competitiveness, protecting the environment, reducing the cost of decarbonisation and bringing down the cost of technologies to allow for broad technology development and affordable prices.

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

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

- To allow for a fair effort sharing among Member States
- To provide Member States with the flexibility they need to meet the targets.

A renewables target gives a wide choice to Member States for deciding on their energy mix in terms of sectors and technologies. However, contrary to what occurred in connection with the National Renewable Energy Action Plan, comprehensive studies and documentation at national level should explain the reasoning behind the targets set by each member states.

Having only one EU target would relieve Member States of the responsibility and freedom to meet their target in the way they choose. Furthermore, renewable energy developments would be concentrated in the most mature markets resulting in disproportionate costs and public acceptance issues in these countries.

These targets should be ambitious; otherwise the EU will end up developing a business as usual scenario. Against this background, it is worth noting that a share of RES in 2030 (based on the Energy Roadmap 2050) of about 30% would represent no more than business as usual, as the share of RES H&C is not properly integrated. **The model used** for the Roadmap does not appear to be suitable and cannot be taken as a reference for the post-2020 policy-framework (see Annex I showing how the model used for the Energy Roadmap 2050 did not take into account heating and cooling).

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

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

- A binding target is the best way to encourage all Member States to commit to an optimal level of renewable energy, particularly in emerging and developing national markets.
- A binding target will provide greater market certainty for planning and investments: Binding targets are trusted by private investors and are bankable.

- A binding renewables target will - by providing a long-term objective - lower investment costs, uncertainty and facilitate the achievement of the 2020 targets in the most cost-efficient way.
- Market prospects and clarity on market volumes are key stimulus for investments in research and innovation, as the deployment of technologies in a market is an important source of information to further improve R&D3 and hence reduce costs.
- Binding renewable energy targets will help the EU retain a first-mover advantage in global markets. The EU has very strong players in the manufacturing and services fields for heating and cooling.
- There is a clear international consensus about the importance of a renewable energy target: the number of countries worldwide with renewable targets more than doubled between 2005 and 2012. In 2012, 118 countries had renewable energy targets in place (in 2009, only 109 countries).

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

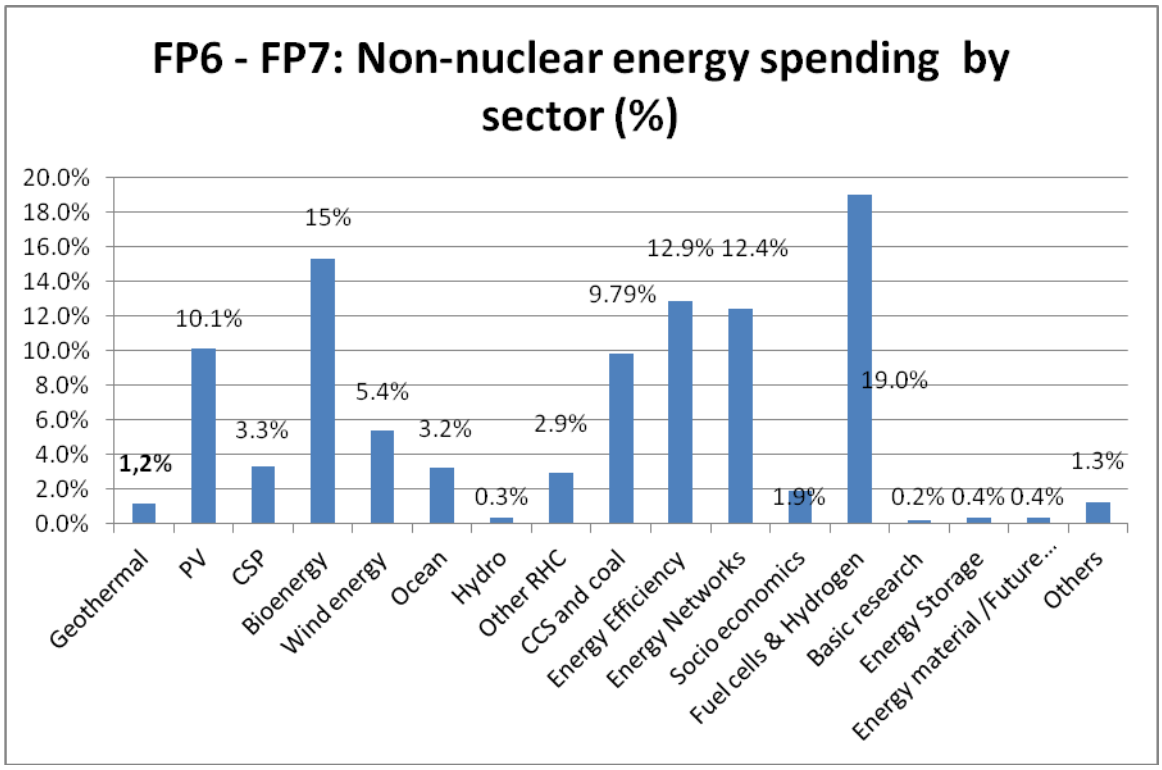
A successful innovation and decarbonisation policy must provide both a "demand pull" (via markets created) and a "supply push" (via R&D) to develop a broad portfolio of technologies. Innovation driven solely by carbon pricing would narrow the focus of technology deployment to the lowest cost, i.e. closest to market technologies, at the expense of the broad range of critical renewable energy technologies - which could be competitive in the mid-term and which are necessary for the long-term cost-effective decarbonisation of the energy sector.
Research and innovation policies at EU and Member State levels will be critical to support the achievement of the 2030 framework. This means that at EU level:

- Scarce public resources should be earmarked for" no-regrets" options.

- The EU should extend the SET-Plan to cover all RES technologies, including those which are currently not properly considered

- The allocation of R&D funds between technologies should be fairer, the RHC-Platform estimates that 4032 million Euros are required for the successful implementation of its strategic research priorities. Over the period 2014-2020, on average 576 million euro should be assigned annually to RHC research and innovation activities. This information is based of a quantitative analysis of the previous funding period (2007-2012), which proved very unfair and does not reflect the importance of RHC technologies in the energy mix.

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



From this analysis it is clear that RHC technologies are only receiving a small share of the EU financial support despite the fact that they represent over 47% of the final energy demand.

From Horizon 2020 onwards, imbalance of the EU R&D spend must be redressed and the support for RHC technologies increased with the main objective to provide reliable, efficient and affordable technology by 2020.

More information on the Renewable heating and cooling at the RHC Platform website:
http://www.rhc-platform.org/home/

Combating climate change and ensuring the security of energy supply represent great challenges for Europe. Adapting the current energy scenario into a truly sustainable one will require realizing the full potential of renewable energy sources to satisfy the heating and cooling demand– which accounts for around half the EU's final energy consumption.

The **European Technology Platform on Renewable Heating & Cooling (RHC-Platform)** brings together stakeholders from the biomass, geothermal and solar thermal sector - including the related industries - to define a common strategy for increasing the use of renewable energy technologies for heating and cooling.