EHA Contribution to the EU Consultation on the Green Paper on a 2030 framework for climate and energy policies

The European Hydrogen Association EHA, representing 21 national hydrogen and fuel cell associations including more than 300 companies, and 100 research institutes across Europe, welcomes the opportunity to contribute to the Consultation on the Green paper on a 2030 framework for climate and energy policies. As hydrogen applications are coming to market this decade and the contribution of hydrogen to EU's energy and climate ambitions, although relatively small, will become increasingly more visible to consumers, decisive action on political and financial support is needed. Recent policy papers on alternative fuel infrastructure development (COM 2013/18) and energy storage recognize the role of hydrogen as an almost invariable part of the list of EU's "no preference list" of alternatives.

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?**

Over the last 7 years the EU 2020 framework has once and for all put the EU's commitment on the global map of good intentions with regards to reducing emissions. For emerging technology pathways like hydrogen and fuel cells it has offered the possibility to align its solutions with the roll out of renewable energy systems and its impact on exiting energy networks. However the market roll out of H2 and FC solutions does not necessarily have the same pace in cost reduction and market readiness as renewable applications. The current phase of developing a hydrogen sector in alignment with energy trends that are still in constant flux (Carbon Capture and Storage > Shale gas > Lowering coals prices > Energy Wende) is economically challenging especially for the pioneering and smart specialized SME's that have carried the industry forward.

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

A target in itself would be to set a "target" date when EU Member States would decide to agree on a harmonized carbon/energy tax that takes into account the timeframe needed to implement cost effective innovative solutions like hydrogen and fuel cells. Harmonized carbon taxes should then become part of any trade agreement that the EU is undertaking with any major economy outside Europe. This target to develop a target should be legally binding if not confirmed by national referenda so that no intermediate elections could interrupt the process.

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

The renewable energy target induced an increasing need for storage that resulted in a renewed interest in innovative energy storage technologies including hydrogen.

However the expectations of the EC and energy companies for these new technologies to respond to now GW storage demands are not matching economical and technical requirements to develop the technologies to address this storage demand response in a short timeframe.

Although the 2020 framework and a dedicated Joint Undertaking for Fuels Cells and Hydrogen indicated favourable targets to accelerate investment in and co-financing of the development of FC and H2 applications, the pressure on delivering market ready conveniently priced hydrogen solutions for energy storage has not been matched with effective financial instruments.

First indications on the budget for the next Fuel cell and Hydrogen Joint Undertaking program for 2020 are pointing to EU co-financing levels of not more than € 700 mln less than a third of what has been calculated as a minimum for EU R&D and demonstration programs.[1]The Green Paper is indicating that "clarifying the objectives for 2030 will support progress towards a competitive economy and a secure energy system by creating more demand for efficient and low carbon technologies and spurring research, development and innovation…." but is not more specific again in defining clear measures to spur this demand especially in view of the "budgetary problems of Member States and businesses…".

- **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?**

The development of electric powertrains and the interest of national and local authorities to take up the ambitions outlined in the latest White Paper on "Roadmap to a single European Transport Area, Towards a competitive and resource efficient transport system" to half the use of conventionally fuelled cars in urban transport and CO2 free city logistics in major urban areas in 2030, will forever link energy networks to transport networks. Clean energy supply linked to clean transport applications will require alignment of transport and energy targets as well industrial and trade policy to ensure that Europe leverages its role as a market leader in for example hydrogen and fuel cell technologies.

A renewable target for transport needs to be accompanied however with a transparent and harmonized monitoring and measuring framework that takes into account the specifics of for example fuel cell electric and battery electric vehicle infrastructure needs.

1 Fuel Cell and Hydrogen Technologies in Europe, http://www.new-ig.eu

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

Economic viability and maturity of technologies will only improve with numbers. The current phase of demonstration projects with a maximum of only handful of installations or vehicles needs to lead to a subsequent phase of demonstrations of a number that will trigger significant price reductions that are bordering competitive levels. These "target" numbers need to be carefully planned by both industry and financing entities at national and local level, with the EU taking a role in bridging the "gaps".

- **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?**

The ambition of the EC proposal for a Directive for the Development of an alternative fuels infrastructure (COM 2013/18) in reducing the € 1 bln per day cost of import of fossil fuels for transport should be expanded and include the exact cost of keeping conventionally fuelled power plants running as only joint clean transport and clean energy will accelerate this reduction one Euro at a time. This could become a public effort where all consumers and producers collectively reduce this cost: electronic ticker on the Eastern façade of the Berlayemont?

4.3. Instruments

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

The alignment of local, regional and national and EU policies to allow the roll out of large scale programs has to remain Europe's top ambition. Integrating an energy (savings) component in all relevant policy making might involve more policymakers in different areas in aligning incentives and in leveraging budgets.

Another not insignificant aspect is the level of expertise in the policymaking process of EU staff. Recently many expert EU expert senior officials expert in hydrogen ad fuel cell technologies retired; in both DG MOVE and DG RTD we already miss their perspective and guidance. It will take time to reach their level of expertise in ensuring the most effective way of integrating the right policy measures in these crucial policy areas for hydrogen and fuel cell development.

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

Measures at EU and national level will need to ensure smooth implementation at local level. The impact of targets and incentives is best monitored on European streets. Monitoring and collecting of best practice in this phase is crucial; the recently established European Electro-mobility Observatory, EEO, managed by the European

Association for Hydrogen, Fuel Cells and Electro-mobility in European Regions, HyER (www.hyer.eu) is good example of EU supported efforts in this field..

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

Harmonisation of the integration of new energy technologies in transport and energy systems across borders, as is happening with the support for alternatives in the current and future Trans European Network for Transport (TEN T), offer the best opportunity to set the tone for Europe's energy transition as is foreseen in the Energy Roadmap 2050. The synchronisation of the National Implementation Plans, in for example the Hydrogen Infrastructure for Transport project (www.hit-tent.eu), includes the harmonisation of the production of hydrogen and link to local renewable energy systems.

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

Support for the integration of cogeneration systems as preferred local energy supply as well as preferred industrial heating and cooling systems should not be optional much longer. Cogeneration offers immediate reduction in energy use on a large scale and with the foreseen market readiness of fuel cell systems could look forward to even greater reduction in energy use and emissions.

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

The recent EU Energy Technologies and innovation Communication (COM 2013/253) recognizes the need for an Integrated Roadmap that allow Members States to align their national Action Plans to the most effective energy technology mix to ensure security and continuation of energy supply, increase consumer participation, integrate a sustainable portfolio of energy technologies and deliver sustainable alternative fuels to the European transport fuel mix. This will require coordination of policy instruments to push and pull demand.

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?**

Job creation should be more closely monitored in energy and transport sectors almost as much as emissions are being monitored. The framework should foresee a larger component of communicating yearly job and economic figures and testimonials especially of for example young people that are hired into sector or successful companies. The energy sector should become the next cool tech sector, after the internet sector hype.

- **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?**

As recent discussion in the EU Parliament demonstrated communications of carbon leakage are not consistent and do not seem to define policy. A larger effort at global scale should map carbon leakage not only from Europe but between other countries.

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

The metaphor of the cost of imported fossil fuels per day, used by DG MOVE in presenting the Clean Power for Transport package, is set to become an important benchmark at national and local level to build in a new historical trend in reducing this number. Energy costs per average household in 2013 including external costs could be such a benchmark to measure real progress in the consumption of clean 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?**

The EU should step up its efforts to demonstrate concrete actions and actively ensure the integration of European clean energy technologies in the recently set up UNFCCC Clean Technology Centre and Network. In this way the EU demonstrates its clear commitment in offering a broad collection of useful technologies that developing nations could mobilize to reduce their emissions, while at the same time facilitating European clean energy technology developers with a global platform to promote their technologies.

- **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)?**

Long-term commitment to clear objectives and targets will in the long term always pay off. Therefore the 2030 framework needs to demonstrate an increased effort and support to both policymakers at national and local level as well as the European manufacturing industry that the EU is responding to real energy and climate challenges in a consistent way.

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

No comment

- **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?**

No comment

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- **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?**

No comment

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?**

No comment

- **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?**

No comment

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

The financial framework as outlined in the Green Paper and the EU Energy Technologies and Innovation Communication is insufficient to ensure a timely uptake of hydrogen and fuel cell technologies to respond to the energy and transport ambitions outlined in recent energy and transport policy. An increased effort involving local and regional authorities as well as EU and national financing institutions is needed together with European industry to map a large scale roll out of market ready technologies like hydrogen ad fuel cells. National hydrogen and fuel cell associations as well as regional partnerships like HyER should be mobilized to collect best practice and data on impact and progress and to ensure the engagement of relevant stakeholders as well as the general public.

Respectfully submitted,

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