

EHA contribution to the EU Consultation on the future "EU 2020" strategy

The European Hydrogen Association, EHA, representing 15 national associations and the main hydrogen infrastructure development companies, promoting the use of hydrogen as a clean energy carrier used in fuel cells, welcomes the opportunity to contribute to the consultation on the future EU 2020 strategy. The European hydrogen and fuel cell sector embodies the potential that the Commission's consultation paper seeks to realise by 2020, contributing to the priorities that form the main drivers of EU 2020:

1. Accumulating knowledge on a new energy and transport technology and produce commercial applications; many fuel cell systems are already competitive products;
2. Fostering creativity and innovation especially in SME's; many hydrogen and fuel cell design-to-product development took place in Europe's small and medium sized companies.
3. Facilitating a step change to a clean and efficient use of primary energy sources including renewable sources: highest well to wheel efficiency of hydrogen produced by renewable sources used in fuel cells.



Source: TES (Transportation Energy Strategy) Report 2007

In view of the experiences in the hydrogen and fuel cell sector with regards to these three critical areas, this paper would like to offer some suggestions to facilitate the competitive, connected and greener economy that the EU 2020 strategy envisions.

No silver bullet exists to solve energy and transport challenges but hydrogen, as an energy carrier and linked to all clean energy technologies, provides powerful green bullets to accelerate the uptake of all low carbon energy technologies that are now being proposed as EU Industrial Initiatives (EII) by the EU Strategic Energy Technology Plan (SET Plan)¹. Since 2002, the hydrogen production and distribution and fuel cell component and system industry in Europe, together with the EU Commission, EU Member States, research institutions and regional and local authorities, have joined forces to create one of the first EII's, the EU Joint Undertaking for Fuel Cells and Hydrogen, FCH JU.

These efforts have accumulated into the establishment of several large scale hydrogen demonstration projects, including the development of onsite hydrogen production and refueling stations, that have proven the technical feasibility of using hydrogen as a fuel for public and private transport applications and in stationary power systems². Hydrogen as an energy carrier, like electricity, can be produced by primary sources, including renewables. In contrast to electricity hydrogen is easy and safely to store in large quantities and therefore is an excellent component of future smart energy and transport grids. Fuel cells and hydrogen technologies are therefore important drivers to facilitate the decarbonisation of Europe's energy and transport system as envisioned by the EU Commission by 2050.

However in order to make this happen "the harnessing of the existing instruments" need to go further than in the EU 2020 communication:

1. Decarbonisation will not happen in a sustainable way if interdependence between Member States, national and local government, between policies and at global level is not leveraged to ensure the most efficient use of available primary energy sources.

Electricity and hydrogen, as energy carriers to power zero emission cars like, for example battery and fuel cell cars, will have to be produced by primary energy sources including renewable sources. The proposed EII's in the SET Plan together with the Joint Undertakings in energy, like the one for fuel cells and hydrogen, therefore need to collaborate closely to identify synergies and define which energy source can be best used to produce which energy carrier. As Member States and local communities need to be closely involved in building the market for these new technologies, the EU should develop and enforce effective models that governments can use to define the best local use of available primary energies in their energy and transport systems .

2. Exploiting the single market.

EU's single market efforts with regards to energy have mainly dealt with conventional electricity and gas infrastructures. Decarbonisation of EU's energy system will however need facilitated access to the grid of innovative clean technologies to build a clear, clean and competitive market, so that consumers can make educated choices. The EU needs to stimulate more effectively the lowering of regulatory barriers, harmonisation of local authorisation procedures and more in general consider the impact on the deployment of different clean technologies in its proposals for new regulation as well as the review of current EU legislation.

3. Setting EU 2020 in the Global Context.

The UN Climate Change Conference in Copenhagen has demonstrated the increasing importance of defining the concrete contribution of new technologies to reduce emissions especially in developing countries. Effective deployment of climate adaptation and mitigation technologies will dominate future global climate negotiations. The new industrial sectors that the EII's seek to build will need EU's pro-active assistance to ensure that these technologies will be part of the global technology transfer funding structures that are currently being set up. Even more than established technologies, new technology companies will greatly benefit from industrial collaboration with emerging economies and from incentive schemes that ensure that these products can be deployed quickly in areas where they will have the biggest impact. The EU could take the lead in establishing a World Technology Trade Organisation that creates a global platform of market opportunities for companies in developed and developing countries.

4. Supporting growth through full use of Stability and Growth Pact.

Every new (energy) technology sector will welcome the EU 2020 reference to “prioritizing investments in...new technologies, high-quality education and in smart networks .. by enhancing public administration and by regulatory reform”. Leveraging funding at all government levels could greatly enhance overall financial discipline but will need not only coordination of funding programmes but also coordination of budget cycles. A lot of additional support for new technology development and innovation at local level is not put to use at national and EU level because local budget cycles do not match EU programmes’ call for proposal timelines. More involvement of regional and local authorities in EU programme planning, especially in the development of big technology demonstration projects, is needed to leverage their potential contributions with national and EU funding.

5. Reflecting political priorities in our public budgets.

The EU in recent years has put great emphasis on the creation of Public Private Partnerships to facilitate new market opportunities and to create the right infrastructures for new technology deployment. The potential role of these PPP’s in lowering barriers and leveraging funding should not be underestimated. However as the first PPP’s in energy technology have shown, to make PPP’s work effectively means that industrial and political goals find a common denominator at local level: reinforcement of the market position of involved industries, higher skilled work force that will also attract other private investors etc. The EU could stimulate the development of collaboration models between different government levels that include the definition of these common denominators to ensure larger success rates of PPP’s.

Respectfully submitted

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Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions
A European Strategic Energy Technology Plan (SET-Plan). 'Towards a low carbon future', COM(2007) 723 final.

2

Final Report of the HyFleet CUTE Bus project (November 2009):
<http://www.global-hydrogen-bus-platform.com/InformationCentre/Downloads>