



Hydrogen, fuel cells and Electro-mobility in European Regions

HYER RESPONSE TO:

COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE ECONOMIC AND SOCIAL COMMITTEE AND COMMITTEE OF THE REGIONS

“A European Strategy for Low-Emission Mobility” COM (2016) 501

Introduction

Hydrogen Fuel Cells and Electro-Mobility in European regions (HyER) would like to comment on the above document. We feel that HYER, its members and local and regional authorities in general have a key role to play in a European Strategy for Low-Emission Mobility. In fact, such a strategy will only be achieved through the active co-operation of the European Union, Member States, and local and regional authorities. HyER Members have invaluable experience in the development of hydrogen, fuel cells and electro-mobility. These two technologies play a crucial role in the delivery of low emission mobility across the European Union.

HyER places great importance on this Communication and the development and implementation of this Low Emission Strategy. HyER and a number of its members are organising a half day seminar on 9 November entitled ‘Going Zero? The Role of Cities and Regions in Low Emission Transport’ which will feature the Communication.

HyER welcomes the sections on ‘Action by Cities’ on pages 11 and 12 of the Communication but through our response to the Communication, we hope to illustrate that our Members and local and regional authorities have a much more influential role than that portrayed in this section.

In addition, we would have like to see the role of hydrogen fuel cell transport emphasised more fully in the Communication as we believe that with electro-mobility, hydrogen fuel cells will play a key role in the low emission transport system of the future.

COMMENTS ON THE COMMUNICATION

a. Initial Remarks

HyER broadly welcomes the Communication and we agree that “low-emission mobility is an essential component of the broader shift to a low-carbon circular economy.” The Strategy also mentions the EU’s ambition to reduce greenhouse gas (GHG) emissions from transport by 60% of 1990 levels by the middle of the century. Although the shift to low carbon transport has started, the realisation this objective is extremely difficult to achieve and HyER would stress that:

The achievement of this ambitious target will need high levels of co-operation between the EU, national and regional spheres of government, municipalities, financial institutions and the private sector.

The Communication states that the Strategy has three strands:

1. Higher efficiency of the transport system
2. Low-emission alternative energy for transport
3. Low and zero-emission vehicles

In view of its remit, HyER will concentrate its observations on sections 2 and 3 of the communication.

b. Low-emission alternative energy for transport

HyER would like to comment on the section '**Effective framework for low-emission alternative energy.**' We are disappointed that this section gives as examples biofuels and we feel that more attention should be given to the production of electricity from renewable sources and the possibility of storing the surplus renewable energy production in the form of hydrogen. We note the Communication's comment that changes in rail are straightforward through the use of electrification. We would like to remind the Commission that the business case for electrification is not proven on rail lines that do not have the passenger and freight numbers so that a satisfactory return on investment is made. In 2018, Germany is introducing 40 hydrogen trains and these trains may be the answer for rail lines that do not justify electrification. The first train will operate in Lower Saxony next year.

HyER is also disappointed about the comments about the potential for other alternative fuels as well as natural gas. There are examples of ferries using lithium-ion electric engines in combination with other fuels and achieving substantial savings in terms of fuel consumption. A first applications with fuel cells for supply of energy and heat/air condition (CHP) on a ships is in place e.g on the Scandinavian ferry Mariella between Stockholm and Helsinki. The operation of a fuel cell on the MS Forester in the Baltic sea will start in early 2017. HyER is also following the use of hydrogen as a marine fuel.

The section mentions power-to-gas technologies and hydrogen has an important role in this context.

In the **roll-out of infrastructure for alternative fuels**, the Communication deals mainly with the Alternative Fuels Infrastructure Directive. HyER welcomes the Directive but would like to see greater emphasis on hydrogen as an energy vector for transport. HyER is aware that there are a number of Member States that do not wish to see greater emphasis on hydrogen as an alternative fuel. HyER is a member of the Sustainable Transport Forum and believes that this is an effective body in the delivery of the Alternative Fuels Infrastructure Directive. Member States will play a key role in the delivery of the Directive as they are responsible for the development of National Policy Frameworks. However, the attendance of Member States at the Sustainable Transport Forum has been disappointing.

HyER welcomes the financial support from the EU outlined in page 6 of the Communication and recognises the great support that the EU gives to HyER, its Members and other local and regional authorities.

HyER welcomes the comments of the Communication in terms of standardisation and interoperability. We warmly support the references to electro-mobility but would also like to see the same approach to the development of standards and interoperability for all the other alternative fuels. Standardisation and interoperability will be extremely important to ensure cross-border infrastructure in transport corridors. This will facilitate longer journeys by the provision of reliable and accessible refuelling and charging stations. HyER welcomes the Directive on Alternative Fuels Infrastructure as a means of ensuring such developments.

c. Moving Towards Zero Emission Vehicles

HyER agrees that “the transformational change towards low and zero emission vehicles will need to be supported by a wide range of measures at all levels of policy-makers to engage manufacturers and users.” HyER stresses that this is vital and HyER Members have developed strong links with manufacturers. HyER members and local and regional authorities are major users of vehicles and often manage the largest fleet in their geographical area. They can play a major role in trialling and purchasing zero emission vehicles and by so doing stimulate the market in low and zero emission vehicles. A number of regions are currently exploring initiatives for the joint procurement of fuel cell emission buses for instance.

There are some interesting comments on the **post 2020 strategy for cars and vans**. HyER agrees that “zero- and low- emission vehicles will need to be deployed and achieve significant market share by 2030. To support the transition, incentives on both the supply- and demand-side will be needed through measures at EU-level, as well as at Member State, regional or local level.” (Page 7). HyER is rather puzzled by the use of ‘or’ at the end of the quote and believes that all spheres of government have an important role in developing measures to stimulate this market.

The Communication goes on to discuss tax instruments and local and regional authorities can also give incentives such as subsidised charging points and exceptions for parking and congestion charges etc. which can be a strong stimulus for low emission vehicle sales. Regions and cities have developed incentives to purchase emission free vehicles in their municipal fleets as in our Member City, Hamburg.

The Communication deals with public procurement aspects under the section on lorries, buses and coaches. HyER would like to remind the Commission that HyER members and local and regional authorities are major procurers of cars and vans and as first users can play a significant role in developing markets. In many cases, local and regional authorities are either the largest, or one of the largest, fleet operators in their geographical area.

HyER agrees with the need for customer awareness in terms of low and zero-emission vehicles. As major fleet operators, HyER members are very keen to ensure that the new vehicles will perform as well as their fossil fuel counterparts. HyER Members are working with the European Commission on a number of projects to ensure that new low and zero-emission vehicles reach the demanding standards that fleet operators demand and passing the results to the public to increase customer awareness.

This section mentions the importance in the development of a domestic production base for a new generation of electric battery cells. HyER strongly supports this statement as it is a key component in the economic strategy of our Members but we would also add that it is equally important to develop the domestic manufacture of hydrogen fuel cells and other components that are needed in low and zero emission vehicles.

Some low and zero emission cars are well suited to particular types of use. For instance, HyER has spoken to taxi companies that say that electric vehicles are well suited to the demands of an urban taxi fleet in terms of distance travelled in a shift and drivers lunch and other breaks which allow for vehicle charging. These positive stories should be more widely publicised.

Local and regional authorities also have an important role to play in **the post 2020 strategy for lorries, buses and coaches**. Local and regional authorities are often public transport operators or work closely with them. HyER Members operate electric buses and also have played a key role in the development of hydrogen buses. HyER strongly supports the FCH-JU’s Hydrogen Bus initiative. HyER is also a project partner in the FREVUE project which develops electric vehicles as part of the urban logistics solution. In addition, HyER Members

wish to develop a range of hydrogen fuel cell powered and electric battery powered vehicles to widen the use of low and zero emission vehicles operating in the EU.

Public procurement is mentioned in the document but should be emphasised much stronger by giving clear targets. In any case purchasing alternative fuel vehicles should become a major preference when it comes to public procurement. Public authorities and organisations can set best practices and can stimulate the market when they substitute their own fleets with alternative fuels vehicles.

d. An Enabling Environment for Low Emission Mobility

HyER welcomes the important role that the **Energy Union** can play in the development of low emission mobility and the Communication makes the important link between the transport and energy sectors. The Communication states that the electricity infrastructure has the capacity to cope with the large scale use of electricity in transport. While HyER would broadly agree with this assertion, there are some Member States where this does not apply. HyER would like to see greater investment in smart grids which have many benefits. One of the major benefits will be in balancing grid demand so that the electrical charge from electric vehicles are fed into the grid at times of peak demand and batteries charged during periods of low demand

The Communication deals with the important issue of energy storage and correctly identifies the role of batteries in storing electricity. HyER also believes that hydrogen has an important role in energy storage if a research programme is undertaken to improve efficiency and costs etc. Transforming excess energy into hydrogen when the demand is low will indeed greatly improve the integration of renewables into the energy system and reduce the cost of producing green hydrogen.

A competitive system of energy storage will be an important part of the EU's **research, innovation and competitiveness strategies** and HyER welcomes the work done by the EU in the Horizon 2020 and predecessor programmes. Our Members have played an important role in a number of projects. HyER welcomes the proposal in the Communication that "resources should focus on innovative zero- and low-emission systems and their deployment. It is important to set clear priorities and maximise synergies e.g. between transport and energy systems".

HyER also agrees with the emphasis on transport related manufacturing. The EU need to ensure that products essential to low emission mobility like batteries and fuel cells continually improve in their performance.

HyER shares the Commission's views on **digital technologies** and would remind the Commission of the important role that some HyER Members and local and regional authorities play in **skills** training. Many local and regional authorities have an education and training competence and this linked to their economic development gives them a key co-ordination role. This allows them to develop low emission mobility as a driver for economic development and co-ordinating the skills training as the sector develops.

HyER Members welcome the investment that the Commission and EIB are putting into low emission mobility but reminds the Commission of the significant financial contribution made by our Members. In addition, HyER Members are extremely skilled in the development of public / private partnerships.

HyER also welcomes the comments made about the **role of cities**, but as this response shows cities and HyER Members have a much more significant role to play in the Low Emission Mobility Strategy.

European cities are facing a massive increase in Last-Mile-Delivery due to a heavy increase in eCommerce. This leads to a higher demand for light duty vehicles and vans with combustion engines. The solution would be the development and deployment of electric vehicles in the class 3.5 tons and larger. Currently there is almost no market offer in these vehicle classes from European OEMs. This is a very problematic and urgent matter which should be tackled immediately by the EU and Member States.

There is clearly a large potential coming from innovative Light Electric Vehicles such as microcars and scooters. Again when it comes to Last-Mile-Delivery we see an increasing demand for electric cargo bikes.

Conclusions

HyER agrees with the Commission that the Strategy should play an important role in modernising the European economy and in helping the EU reach climate change targets. HyER Members have similar policies at a regional and local levels. HYER has signed the Covenant of Mayors for Climate and Energy. This response shows the key role that HyER Members play in low emission mobility. We will continue to play that role and co-operate fully with the EU and Member States in achieving common goals.

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