



G L O B E
EUROPEAN UNION EU

Event Summary

Lunch debate on Sustainable Mobility: “Fueling Innovation in Road Transport”

April 25, 2017 – European Parliament, Room A5G305, 12h00 to 14h00

Sirpa Pietikäinen opened the discussion by explaining GLOBE EU’s interest in understanding what disruption means for different sectors. Specifically, what does disruption mean for the mobility sector? Is it limited to finding different energy sources? Or does it involve looking at different ways of providing mobility as a service? She encouraged stakeholders to challenge politicians: what kind of a regulatory framework do we need? How important is regulatory certainty?

Jacques Pieraerts (Toyota) introduced the issue by stating that no a single solution to mobility exists. Toyota has been pursuing hybrid systems because it maximizes efficiencies regardless of the chosen power source. He mentioned that disruption takes time; it requires consumer acceptance and regulatory adjustments. Hydrogen has tremendous potential: fuel cells can power passenger vehicles but also trucks, buses, forklift trucks, boats, and even airplanes.

As main challenges he saw the current cost of fuel cell vehicles (although in 2020, second generation vehicles should already be cheaper) and the perceived risk of hydrogen (although as a fuel it is less dangerous than LPG). Building infrastructure is an issue for batteries and fuel cells alike.

The future will see both technologies with hydrogen prevailing when high-speed charging is necessary. Finally, he mentioned platinum as an essential element used in fuel stacks, which is currently sourced from South Africa and Russia with low geopolitical risk. Work on alternatives is ongoing and recycling of the platinum is easy because of the material’s inherent value.

Marie-France van der Valk (Renault-Nissan) emphasized that, in an increasingly digitalized society, the connectivity of EVs is becoming more and more important; cars should be able to “speak” with

infrastructure to maximize efficiencies. An equally important aspect of batteries is their potential use for storing renewable energy: the Arena stadium in Amsterdam uses batteries from EVs to store electricity the stadium generates with its own solar panels. She mentioned that range anxiety remains an issue with consumers although leasing batteries might be a solution as it provides the consumer with more flexibility.

Jan Tytgat (Umicore) warned about the availability of cobalt, which is an essential element in lithium-ion battery production. The supply of cobalt depends on demand for copper and nickel, the mining of which cannot be increased simply to increase cobalt production; research into substituting nickel for cobalt is ongoing but recycling is difficult because of insufficient collection of used lithium-ion batteries.

He said that many batteries disappear through unofficial channels even though some car manufacturers have set up their own battery collection systems. Current waste legislation was seen as an impediment to improving the situation.

Walter Ruess (Michelin) stated that the tire industry remains neutral on energy storage technology. He mentioned that tires have range-extending capacities (less friction with road surface) and considered financial support from the Commission necessary to help set up a network of hydrogen refueling stations.

Coupling the energy and transport sector by using batteries in EVs as a storage medium was mentioned as an important opportunity. This double purpose does not affect the life cycle of the battery. The financial benefit for EV owners, however, of allowing their vehicles to be used for the storage of surplus renewable energy would appear minor.

Comments from the floor included mention of the conversion of bio-methane to hydrogen as an opportunity especially in a circular economy.

Stakeholders also commented on the potential of using batteries to store surplus renewable energy. Although hydrogen can be equally used to store surplus energy from renewable sources, the “well-to-wheel” efficiency of electricity is still superior. Electrolysis is still too energy intensive.

Energy storage in batteries is most efficient but limited in duration. Although using hydrogen to store energy is less energy efficient, the duration of the storage would be unlimited.

The electricity sector has calculated that no more than 15 percent of electricity produced in the EU would be used for charging batteries if all passenger vehicles were EVs. Dynamic pricing for EV charging was deemed necessary to avoid a high number of EVs being charged simultaneously.

Even though long-term sustainability issues were the focus of the debate, industry representatives agreed that a lack in the uptake in the sales of EVs should not be ignored. They considered measures to give a boost to EVs today equally relevant: there is much legislation on the table that could make a difference and legislation that is missing.

Indeed, there is no equivalent to the EU's emissions trading system to apply the polluter pays principle to the use of fossil fuels for road transport.

The introduction of EVs alongside petrol and diesel engines must take place through legislative changes. Although average emission standards can bring car manufacturers to improve the performance of petrol and diesel engines, society as a whole must be involved to for EVs.

Five success factors for the expansion of EVs were mentioned: recognition that disruption takes time; pursuance of both hydrogen and battery technology; support for R&D; harmonization of charging and fueling standards; avoid that car manufacturers bear full responsibility and cost (although it was mentioned that automotive companies should easily be able to bear the investment of setting up an infrastructure for charging EVs).

The Commission provided an update on the Alternative Fuels Infrastructure Directive: 18 member states have submitted their national frameworks but a formal infringement procedure has started against member states that have not. An analysis of the frameworks can be expected in the last quarter of 2017.

Ismail Ertug MEP and chair of the meeting summarized the discussion as follows: technology neutrality is necessary, as is the interconnection of transport and energy. Opportunities and challenges for storage technologies clearly exist and infrastructure issues must be discussed further. Respect for circular economy principles is important.