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Subject:	Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the deployment of alternative fuels infrastructure, and repealing Directive 2014/94/EU of the European Parliament and of the Council - Opinion of the European Economic and Social Committee

Delegations will find attached a copy of the above-mentioned opinion.

This opinion is available in all language versions on the following website:

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OPINION

European Economic and Social Committee

Regulation on deployment of alternative fuels infrastructure

Proposal for a regulation of the European Parliament and of the Council on the deployment of alternative fuels infrastructure, and repealing Directive 2014/94/EU of the European Parliament and of the Council
[COM(2021) 559 final – 2021/0223 (COD)]

Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions – A strategic rollout plan to outline a set of supplementary actions to support the rapid deployment of alternative fuels infrastructure
[COM(2021) 560 final]

TEN/750

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Referral	Council of the European Union, 30/07/2021 European Parliament, 13/09/2021 European Commission, 13/09/2021
Legal basis	Articles 90-91, Articles 170-171 and Article 304 of the Treaty on the Functioning of the European Union
Section responsible	Transport, Energy, Infrastructure and the Information Society
Adopted in section	09/11/2021
Adopted at plenary	09/12/2021
Plenary session No	565
Outcome of vote (for/against/abstentions)	136/4/9

1. **Conclusions and recommendations**

1.1 The EESC welcomes the proposal for a regulation on the deployment of an alternative fuels infrastructure.

1.2 BEVs (Battery Electric Vehicles) seem to be emerging as the preferred option for car transport from most manufacturers. The shortage of lithium (probably short term) and the increasing price of lithium poses a problem to the fast rollout of BEVs, and to belated research and development of more effective storage systems. However the possibility of further research and technological development may help to alleviate these current problems.

1.3 There are major reserves of lithium worldwide. Chile has the largest known reserves of lithium followed by Australia and China. There is a need to invest in new mines to ease the current tight supply situation. There are environmental issues with mining especially the high water requirement and possible pollution by toxic chemicals, and it is often associated with serious social problems. The EESC is very concerned about these aspects of international trade. International trade agreements and value chains must comply with green and sustainable development requirements and binding diligence rules must be set for businesses[1]. In the EU there is the possibility of lithium mining in Portugal assuming environmental issues can be resolved.

1.4 The extensive rollout of an alternative fuels infrastructure throughout the EU is essential and confidence must be given to investors to establish the alternative fuels infrastructure. Public authorities must ensure alternative fuels and charging stations are available where needed, especially in areas where it is not yet economically viable to provide such facilities.

1.5 The EESC points to the significant role of renewables, including biofuels, as an immediately available and reasonably priced solution for in particular HDVs and long distance freight on road. Attention needs to be paid to the greenhouse gas footprint of all alternative and renewable fuels.

1.6 The upgrading of the electricity grid must be an immediate priority so as to facilitate fast charging stations and also the manufacture of hydrogen and other alternative fuels. In addition, the installation of bidirectional smart meters to enable electricity to flow both ways is necessary. Planning and regulatory requirements need to be reviewed so as to avoid delays in upgrading the grid.

1.7 Decarbonising of transport is critically linked to the rapid increase in the generation of green electricity; e-mobility only makes sense in climate policy terms if it uses green electricity, and increased investment in green electricity is therefore essential. The Commission must do much more to help develop and consider prosumer models.

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1 See opinions CCMI/177 and NAT/803.

1.8 It is necessary to support massive public investment into R&D in scientific and technological work to improve batteries, especially in terms of size, capacity and length of service. If research can achieve a reduction in the lithium requirement for batteries for vehicles then it would reduce our dependence on tight global supplies which come from outside the EU. This possibility would improve EU capacity in relation to the rapid uptake of renewable energy for transport, leading to sustainable mobility. Also, there is an urgent need for R&D and technological development so that all possible alternative fuels are evaluated and promoted and all transport modes are considered. It would be unwise to become dependent on one system only. In particular the potential of green hydrogen should be explored.

1.9 The vast majority of consumers will only be convinced to buy BEVs when they are certain that adequate charging infrastructure is in place. Even consumers who rarely drive long journeys still must be assured that they can travel a long distance in a BEV should they require to do so. That is why this regulation is so important and that it be fully implemented throughout the EU.

1.10 The EESC stresses the vital importance that the infrastructure is fully interoperable in every respect throughout the EU. We cannot have a situation where drivers have to carry around various adaptors in their cars in order to use the alternative fuels infrastructure in various Member States.

1.11 The QR code (Quick Response Code) option for ad hoc payments is not a payment system widely used in the EU despite the Commission statement in Article 5.2. The EESC foresees that usage of this option will cause accessibility problems for many user groups. The EESC is opposed to a situation where the use of QR code is the only method of making an ad hoc payment. Payment card readers must be available for all ad hoc payments.

1.12 The renewable energy directive provides calculation methods for determining GHG emissions from various alternative fuels. However, these are of little relevance to public purchasing decisions since there is virtually no awareness of the GHG emissions values attaching to vehicles and inadequate verification of the claims made by manufacturers and sellers. This needs to be remedied.

1.13 The EESC is sorry that there has been virtually no discussion of the contribution that citizens, cooperatives, and also trade unions and employers, could make, despite the fact that one of the objectives of the Energy Union is to put ordinary people and thus local solutions at the centre and that it is becoming clear that a lot of e-mobility charging takes place at home or at the workplace. The EESC therefore believes that a new strategy is needed that is more in line with the intended focus on citizens in the Energy Union, so as to promote more involvement of citizens, cooperatives, trade unions and employers in the cooperative effort to accelerate the decarbonisation of transport.

2. Gist of Commission proposal

2.1 The economic and social wellbeing of EU citizens is dependent on an efficient and effective mobility system throughout the EU.

2.2 Transport emits about 25% of EU Greenhouse Gas (GHG) emissions and also has a serious impact on air quality in urban centres.

2.3 In December 2019, the Commission adopted the European Green Deal Communication which calls for a 90% reduction in GHG emissions from transport by 2050, while also working towards the zero pollution ambition. In September 2020, the Commission adopted its proposal for a European Climate Law to reduce net emissions of GHG by at least 55% by 2030 – "The Fit for 55 package".

2.4 In December 2020, the Commission adopted the Sustainable and Smart Mobility Strategy Communication. The Strategy lays the foundation for transforming EU transport to achieve a smart and sustainable future.

2.5 This proposal creates a new Regulation on the Deployment of Alternative Fuels Infrastructure and will repeal Directive 2014/94/EU.

2.6 Directive 2014/94/EU came into force in 2014. The AFID is a common framework of measures for deploying the alternative fuels infrastructure to facilitate the reduction of GHG emissions from transport. It sets minimum requirements for establishing the alternative fuels infrastructure, with recharging stations for electric vehicle (EVs) and refuelling points for Natural Gas (LNG & CNG) and hydrogen, to be implemented by means of non-binding national policy frameworks. This strategy is to enable cross-border circulation of all modes of transport on the TEN-T Networks.

2.7 In a recent report on the application of this directive, the Commission noted some progress on implementation but concluded that there is no comprehensive and complete network of alternative fuels infrastructure across the EU.

2.8 The Commission carried out an ex post evaluation of this directive. The evaluation found that the directive is not well adapted to serving the increased 2030 climate goal.

2.9 This proposed regulation is part of the overall set of interlinked policies under the Fit for 55 package which sets out the actions needed across all sectors to achieve the 2030 climate goal.

2.10 The specific objectives of this proposed regulation are to:

2.10.1 ensure a minimum alternative fuels infrastructure to accommodate alternative fuel vehicles across all transport modes and in all Member States;

2.10.2 ensure the infrastructure is fully interoperable;

2.10.3 ensure full user information and all possible payment options.

2.11 The Commission believes that only a common European legislative framework can reach the objectives of decarbonising the transport sector across all modes and across all Member States in a cohesive and coherent manner.

2.12 Following an extensive impact assessment report, the Commission decided to accept Policy Option 2. This option proposed mandatory fleet-based targets for electrical recharging points for LDVs (Light Duty Vehicles) and setting distance-based targets for all road vehicles for the TEN-T Network, including for Urban Nodes for Heavy Duty Vehicle (HDV) infrastructure. Detailed provisions for ports and airports on the TEN-T Network are also provided but no mandatory targets are set. This option provides for greater harmonisation of payment options, physical and communication standards and consumer rights. It would strengthen price transparency and user information and include signposting of recharging and refuelling stations.

2.13 A regulation was considered the best option to achieve the desired objectives across all EU Member States.

2.14 Member States will have to adopt a revised national policy framework to develop a market for alternative fuels in the transport sector and deploy the relevant infrastructure in line with the strengthened provisions and mandatory targets. It also includes provisions on formulating a strategy for the deployment of alternative fuels in other modes of transport where there are no mandatory requirements.

2.15 Member States will report to the Commission on a regular basis. The Commission will monitor and report on progress in each Member State.

2.16 The regulation contains provisions for Member States to ensure the installation of minimum shore-side electricity supply for certain sea-going ships in maritime ports and for inland waterway vessels, with some specified exemptions.

2.17 There are minimum provisions for electricity supply to all stationary aircraft in TEN-T core and comprehensive network airports.

2.18 Article 3 sets out targets for electrical recharging infrastructure for LDVs.

2.19 Article 4 sets out targets for electrical recharging infrastructure for HDVs.

2.20 Targets for hydrogen refuelling infrastructure are outlined in Article 6.

2.21 There are targets for an appropriate number of publically accessible LNG filling stations along the TEN-T core network by January 2025 in areas where there is demand.

2.22 Targets for shore-side electricity in maritime ports and inland waterway ports are set out in Articles 9 and 10.

2.23 Targets for the supply of LNG in maritime ports are outlined in Article 11.

2.24 Targets for the supply of electricity to stationary aircraft are outlined in Article 12.

2.25 In Article 5.2 (a) of the proposal, the Commission proposes that low-power charging stations be equipped with a payment instrument "that is widely used in the EU", so that consumers can pay on an ad hoc basis. This payment instrument can either be (1) a payment card reader (2) a contactless card reader or (3) a Quick Response (QR) code allowing for the payment transaction.

2.26 In a Communication from the Commission (COM(2021) 560 final), the Commission outlines a strategic rollout plan of supplementary actions to support the rapid deployment of an alternative fuels infrastructure.

2.27 The Connecting Europe Facility 2021-27 (CEF II) will address climate change. To this end, CEF II will create an Alternative Fuels Facility to fund an alternative fuels infrastructure by a combination of CEF grants and financing from finance institutions to achieve a higher impact for the investment.

2.28 The European Regional Development Fund and the Cohesion Fund are available to support investment in research, innovation and the deployment of an alternative fuels infrastructure in the less developed Member States and regions.

2.29 The Commission says that what is needed now is effective and efficient cross-border and cross-sector cooperation between all public and private sector stakeholders on developing an open, transparent and interoperable infrastructure with seamless infrastructure services.

3. General comments

3.1 The transport sector is responsible for 22.3% of total EU GHG emissions, with road transport representing 21% of GHG emissions. Passenger cars account for 12.8% of EU GHG emissions, vans 2.5% and HGVs & buses 5.6% (source: European Environment Agency 2017 excluding international and maritime emissions). Emissions from EU transport sector increased from 14.8% in 1990 to 24.6% in 2018 according to an EU Commission report of 2018. The rapid decarbonisation of the transport sector is essential in order to achieve the targets set in the EU Green Deal. The EESC welcomes this regulation as a positive step forward in decarbonising transport. It is essential that the quality of all transport services is maintained throughout the decarbonisation process.

3.2 The EESC regrets that there has been virtually no strategic discussion of the contribution that citizens, cooperatives, trade unions and employers could make to developing a charging infrastructure, despite the fact that one of the objectives of the Energy Union is to put ordinary people and thus local solutions at the centre, especially as it is becoming clear that a significant amount of e-mobility charging takes place at home and at the workplace. Therefore the EESC asks the Commission to start such a strategic discussion.

3.3 The extensive rollout of EVs will over time require an increase in electricity generation and the upgrading of the grid to accommodate fast recharging, especially for Battery Electric Trucks (BET).

3.4 The regulation mentions the need for bidirectional smart meter systems to enable electricity to flow both ways: from the grid to the vehicle and from the vehicle to the grid. This must be greatly expanded to help with shortage of supply during peak electricity demand.

3.5 A number of smart electricity systems need to be put in place to facilitate the following:

3.5.1 Vehicles are plugged in and do not start to recharge until a signal is received from the grid; the recharge should take place if possible at a cheaper rate when peak rate has subsided.

3.5.2 Vehicle-to-grid technology known as V2G would allow vehicles charging at times of surplus power from renewable sources to use that power, then during peak demand times the EV would return some of this stored energy to the grid. As demand subsides, the EV would be recharged. This would be especially suitable for school buses and other vehicles that are idle for long periods. It would need to be financially beneficial to the supplier. For this reason local solutions involving local people should be much more intensively considered and facilitated.

3.6 The EESC welcomes the targets that have been set for the rollout of the alternative fuels infrastructure. This will give confidence to both alternative fuel investors and potential purchasers of zero-emission and low-emission vehicles. Alternative fuels as well as renewables, including sustainable biofuels, are of paramount importance for heavy duty vehicles, in particular regarding long distance road freight.

3.7 Policies must ensure that long queues at recharging points are avoided and that slow recharging points are avoided so that consumers have confidence in the recharging system.

3.8 In the Green Deal, the Commission noted that 1 million public recharging and refuelling stations in the EU would be needed by 2025 and the Commission has a target of 30 million zero-emission vehicles by 2030. These are very ambitious targets and will require great determination by Member State governments and the Commission and buy-in by the public if they are to be achieved.

3.9 It will be necessary to remove various barriers that are holding back the achievement of these targets:

3.9.1 removing any disproportionate planning requirements, given the size and scale of recharging and refuelling infrastructure necessary;

3.9.2 ensuring planning laws allow onsite production of hydrogen;

3.9.3 reducing lead-in times for connections to the electricity grid;

3.9.4 preparing fast-track plans to upgrade the electricity grid.

3.10 Decarbonising air and sea travel needs greater ambition and a more determined effort to further develop R&D in the sectors in addition to providing the most suitable alternative fuels.

4. **Specific comments**

4.1 Lithium is an essential earth metal and a critical raw material for modern rechargeable batteries. The market analysis *Benchmark Mineral Intelligence (BMI)* predicts an acute shortage of lithium from 2022 onwards, according to Reuters. This could cause a slowdown in the manufacture of EVs. Lukasz Bednarski in his new book titled *Lithium* (published by Hurst) argues that lithium will be as fundamental in 21st century industrial economies as oil was in the 20th century. It will therefore be necessary to explore and promote other low-emission and zero-emission fuels so as to provide options to consumers and facilitate the quickest possible reduction in transport GHG emissions.

4.2 It will be necessary to further promote and explore the use of E-fuels and hydrogen-powered vehicles in order to discover their potential to reduce transport GHG emissions as fast as possible.

4.3 The internal combustion engine (ICE) will be in use for some time yet. In this context, the potential of E-fuels needs to be researched and promoted. E-fuels can be used in ICE and plug-in hybrids and can make use of the existing network of filling stations.

4.4 The EESC points to the significant role of renewables, including biofuels, as an immediately available and reasonably priced solution for in particular HDVs and long distance freight on road. Attention needs to be paid to the greenhouse gas footprint of biofuels production, in the same way as for instance the electricity supplied for electric vehicles and for hydrogen production.

4.5 The carbon footprint of biofuels must be less than that of fossil fuels when used in a vehicle. The problem is the process of producing biofuels which can cause significant GHG emissions and can have a detrimental effect on land use, especially when it leads to deforestation. For example, the use of palm oil is not sustainable.

4.6 The EESC recommends that biofuels with the least GHG emissions both during manufacturing and when used in transport should be promoted.

4.7 Rural areas are more dependent on car transport than urban areas because of the lack of public transport. Rural settlements are generally very scattered so it is not feasible to provide an extensive public transport system in many such areas. In the absence of a viable alternative means of transport, rural dwellers will suffer greatly as a consequence of high carbon taxes on petrol and diesel. The European Consumer Organisation (BEUC) in a report published in April 2021 says that for high mileage drivers living in rural areas a switch to BEVs brings tangible benefits, especially if BEV ownership is combined with on-site generated renewable electricity. The BEUC statement has merit provided the high start-up cost could be grant aided and that permission is actually given to run community-operated generation and charging stations.

4.8 The promotion of an alternative fuels infrastructure to accommodate rural areas is essential. In addition to promoting the roll out of EVs, we also need to promote the reduction of GHG

emissions in the existing fleet by promoting sustainable biofuels, E-fuels, hybrid and plug-in hybrid vehicles. The potential for green hydrogen must also be increased.

4.9 In the area of HDV transport, there must be a really determined effort to roll out the alternative fuels infrastructure. About 98% of trucks in the EU-27 run on diesel. To date, the emphasis has been more on LDV transport than on HDV transport.

4.10 There will need to be a significant roll out of BET trucks as well as hybrid and plug-in hybrid trucks. This can only happen when adequate recharging is possible in every Member State. It will also require sufficient financing to allow for meaningful fleet replacement.

4.11 Trucks require high-power, fast recharging at depots and road-side recharging stations. Being able to reserve a spot in advance at a recharging station would be very beneficial. Chargers up to 350KW have been piloted but chargers up to 1MW need to be developed in order to reduce charging times.

4.12 The power grid needs to be prepared in advance to accommodate such high power requirements for the fast recharging of trucks.

4.13 Hydrogen is considered to be promising for long-haul transport. The EESC welcomes the targets set for the roll out of hydrogen filling stations. The objective must be green hydrogen rather than blue hydrogen in the long term. In the case of hydrogen produced from methane, the high leakage of methane in the whole chain of extraction and transportation should be taken into account.

4.14 Hydrogen can also be used to fuel ICE vehicles with minor adaptations. Further research is needed to advance this proposal.

4.15 The EESC welcomes the Commission proposal to standardise hydrogen pressure at 700 Bar. Hydrogen has a low volume energy density so much larger tank storage is required.

4.16 The ideal would be on-site production of hydrogen where possible. Any planning barriers to such developments need to be examined with due regard for the higher level of health and safety measures required when dealing with hydrogen.

4.17 Hydrogen can be delivered by trucks and pipelines. Because of its low volume energy density, delivery by trucks would require many more truck journeys than deliveries of petrol and diesel.

4.18 The EESC is conscious that the Renewable Energy Directive provides clear calculation methods for determining the GHG emissions attached to the various alternative fuels. However, these are of little relevance to public purchasing decisions since there is virtually no awareness of the values and they are not notified by car manufacturers or sellers. This situation needs to be remedied.

4.19 Delivering a fast roll out of the alternative fuels infrastructure will require significant upfront funding to enable the system to become economically viable for investors in recharging and refuelling stations.

Brussels, 9 December 2021

Christa SCHWENG
The president of the European Economic and Social Committee