



European Economic and Social Committee

TEN/654
Action Plan on Alternative
Fuels Infrastructure

OPINION

European Economic and Social Committee

Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: Towards the broadest use of alternative fuels – an Action Plan on Alternative Fuels Infrastructure under Article 10(6) of Directive 2014/94/EU, including the assessment of national policy frameworks under Article 10(2) of Directive 2014/94/EU
[COM(2017) 652 final]

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Consultation	European Commission, 18/01/2018
Legal basis	Article 304 of the Treaty on the Functioning of the European Union
Section responsible	Section for Transport, Energy, Infrastructure and the Information Society
Adopted in section	05/04/2018
Adopted at plenary	19/04/2018
Plenary session No	534
Outcome of vote (for/against/abstentions)	170/1/3

1. **Conclusions and recommendations**

- 1.1 This opinion mainly concerns the provision of alternative fuels infrastructure in the EU in light of EU commitments under the Paris Agreement. It is therefore an addition to the many previous transport opinions adopted by the EESC. The EESC strongly recommends that implementation of the Action Plan on Alternative Fuels Infrastructure be prioritised by the EU and by all stakeholders.
- 1.2 The EESC strongly welcomes the European Commission's initiatives to decarbonise the transport sector, particularly its determination that the provision of alternative fuels infrastructure should be accelerated so that there are zero greenhouse gas and air pollutant emissions by 2050.
- 1.3 However, the EESC is concerned that the national policy frameworks agreed by each Member State as instruments to achieve decarbonisation are currently falling significantly short of their stated aims and objectives. Because of that, the Action Plan on Alternative Fuels Infrastructure is likely to fail. The EESC strongly recommends that the Commission and Member States recognise this as a matter of urgency.
- 1.4 Therefore the EESC recommends that the national policy frameworks be reviewed as a matter of urgency by the Commission with a view to ensuring that they will meet the stated targets.
- 1.5 The EESC recommends that any obstacles, including loss of tax revenue from fossil fuels, should be identified and eliminated by each of the Member States.
- 1.6 The EESC notes the significant financial commitment made by the EU for the provision of alternative fuels infrastructure. However, it is concerned that the estimates of the financing required are too low and that the leveraging of funding from the private sector is falling behind. The EESC recommends an urgent review of the financing that is projected to be raised and, where necessary, for appropriate action to be taken to correct a situation in which the necessary financial targets are not met.
- 1.7 The EESC notes the commitments of the shipping and aviation industry to meet the decarbonisation targets agreed by all stakeholders. However, it recommends that the necessary dialogue between the Commission, the Member States and these two industries be stepped up in the short term.
- 1.8 The EESC is extremely concerned about the low level of consumer involvement and interaction with relevant stakeholders. It therefore strongly recommends that consumers have a much more prominent role in all aspects of rolling out alternative fuels.
- 1.9 The EESC recommends that research be carried out to identify new rare earth sources. It also recommends that the Commission, in partnership with the Member States, maintain up-to-date information on the latest technologies for transport.

1.10 While the EESC welcomes the prioritisation of measures in urban areas, there is a need to devise programmes that are also suitable for rural transport. Therefore, the EESC recommends that such programmes could include the establishment of infrastructure based on the use of biofuels, mainly originating from agricultural waste, as well as waste from other sources, and use of technology that supports biodigesters. Such programmes could include the creation of infrastructure based on the use of advanced biofuels originating from agricultural, forestry or other waste sources.

2. **Introduction**

2.1 This opinion concentrates on the action plan as it applies to the provision of alternative fuels infrastructure in the EU. The EESC has already adopted opinions on the wider mobility package as well as other aspects of transport. Consequently this opinion will not examine the wider area of transport in terms of climate change. The importance of providing an infrastructure that will facilitate the switch from conventional fuels to sustainable fuels, in line with the European Commission strategy to achieve compliance with the Paris agreement, cannot be understated.

2.2 In November 2017, the Commission took decisive steps forward in implementing the EU's commitments under the Paris Agreement, which stipulated a binding domestic reduction in CO₂ of at least 40% by 2030. The "Clean Mobility Package" included an action plan and investment solutions for the trans-European deployment of alternative fuels infrastructure. The aim is to support national policy frameworks by supporting investments in the transport network (the trans-European transport network or "TEN-T") in urban areas. This will ensure the availability of alternative fuels infrastructure for road users.

2.3 The action plan also directs Member States to include objectives to reduce emissions caused by shipping and aviation.

2.4 The EESC – in at least 15 recent opinions dealing with transport in terms of decarbonisation, COP21 and many other environmental sustainability issues – has consistently supported improving public access to alternative fuels infrastructure.

2.5 As part of the EU's declared ambition to become a world leader in decarbonisation, the European Commission has put forward proposals to achieve a rapid transition from high-emission fuels in the transport sector to low- or non-emission fuels by 2025.

2.6 The action plan on alternative fuels infrastructure is a package of proposals designed to seamlessly and completely reduce emissions in the transport sector following a timeline oriented around the years 2020, 2025 and 2030.

2.7 By current EU estimates, as many as 95% of road vehicles and vessels use conventional fuels. This is despite the availability of a number of EU funding instruments (for fossil fuels or biofuels) which are not covered by the action plan.

2.8 However, due to the availability of EU funding, some progress in the provision of alternative fuels infrastructure has been made. The European Alternative Fuels Observatory has recorded

118 000 publicly accessible recharging points for electric vehicles. There are 3 458 refuelling points for compressed natural gas and, at the end of September 2017, there were 82 points for hydrogen vehicles. However only two Member States provide over 100 charging points for electric vehicles per 100 000 city inhabitants.

2.9 All Member States were due to report on progress by the end of 2017. Two failed to do so (Malta and Romania). A significant majority of the remaining Member States have demonstrated that they are falling behind in relation to their targets and, based on current predictions, will fail completely to meet them.

3. National policy frameworks

3.1 Following Directive 2014/94/EU, Member States have established national policy frameworks which must provide minimum infrastructure coverage by 2020, 2025 and 2030, depending on the fuel in question. Each national policy framework sets targets and objectives, and Member States were required to report to the Commission by 2017.

3.2 The Directive focused on fuels where failures of market coordination are relevant, such as electricity, hydrogen and natural gas (LNG and CNG). Biofuels are also considered to constitute an important alternative and are likely to account for the majority of alternative fuels on the market in the short to medium term. The main components necessary for building an infrastructure which would protect the use of biofuels are already in existence.

3.3 The national policy frameworks (NPFs) are designed to provide minimum alternative fuels infrastructure coverage by 2020, 2025 and 2030 in each of the Member States. The main elements of this infrastructure are electricity, compressed natural gas (CNG), liquid natural gas (LNG), and hydrogen.

According to estimates of infrastructure investment needs by Member States under Directive 2014/94/EU, the following figures apply:

- *Electricity*: up to EUR 904 million by 2020 (NPFs require targets for 2020 only).
- *CNG*: up to EUR 357 million by 2020 and up to EUR 600 million by 2025 for CNG road vehicles (based on the total cost of the 937 (by 2020) and 1 575 (by 2025) new CNG refuelling points planned under the national policy frameworks).
- *LNG*: up to EUR 257 million by 2025 for LNG road vehicles. For LNG for waterborne transport, up to EUR 945 million in the TEN-T Core Network Corridor seaports by 2025 and up to EUR 1 billion in the TEN-T Core Network Corridor inland ports by 2030.
- *Hydrogen*: up to EUR 707 million by 2025 (see COM(2017) 652 final).

3.4 Only 8 out of 25 Member States were assessed as fully compliant in terms of meeting their targets, while two Member States had not submitted reports by November 2017. The Commission's assessment is extremely critical of progress made and particularly of the level of ambition, as demonstrated by a range of conflicting policies in different countries, which undermine their commitments to achieving their own objectives to provide alternative fuels infrastructure.

- 3.4.1 The EESC notes that some of these countries have improved their efforts since the figures were published.
- 3.5 The overall conclusion reached by the Commission is that the NPFs have failed badly to demonstrate real progress in terms of the meaningful deployment of alternative fuels infrastructure.
- 3.6 The damning nature of the assessment, and the attention drawn in the Commission staff working document to the limited impact of NPFs, would indicate that targets will be missed by some distance and that there is, at the very least, a need for an urgent review.

4. **Background and gist of the Commission Communication**

- 4.1 The action plan aims to assist the national policy frameworks, to help create an "interoperable EU backbone infrastructure by 2025". The aim is to create core transport corridors that can be used for long distances and across borders, provided there is agreement by all stakeholders.
- 4.2 The EU wishes to accelerate deployment in two areas. Firstly, in the TEN-T core and comprehensive networks. Secondly, the priority is to better meet infrastructure needs in urban and suburban areas.
- 4.3 The measures are intended to benefit consumers, industries and public authorities on the basis that responsibility is shared between public authorities and industry. There should be a sustainable level of available vehicles and vessels to ensure continuity in supply and demand.
- 4.4 Electricity as an alternative fuels infrastructure has become the main priority across the EU. However, progress in deploying the necessary infrastructure for electric vehicles by 2020 is low; estimated 2020 shares range between 0.1% and 9.2% of the vehicle stock in different Member States (SWD(2017) 365 final).
- 4.5 The Communication makes it clear that there is a need for an integrated approach in terms of a common policy framework across the EU for vehicles, electricity grids, economic incentives, and digital services. Otherwise the achievement of a transition to low- and zero-emission mobility will be uneven and will create a multi-speed approach between Member States.
- 4.6 The plan stresses the need to inject significant public and private investment. It advocates the "blending of non-repayable grants with repayable debt finance" as a way of meeting the high level of funding required.
- 4.7 Two separate forums – the Sustainable Transport Forum and the European Sustainable Shipping Forum – with similar roles, aimed at achieving the participation of Member States, civil society and other relevant stakeholders, have been established by the Commission.

5. **Challenges with alternative infrastructure provision**

- 5.1 The EESC points to various challenges with providing infrastructure for alternative fuels, and laments the lack of urgency shown by all stakeholders in addressing these.
- 5.2 There is a severe lack of charging infrastructure necessary for recharging and refuelling vehicles and vessels across the EU. The EESC believes that one of the main contributory factors to this is insufficient smart grid development, which creates a situation where consumers are unable to participate in the transition.
- 5.3 Given the slow progress by all parties in implementing measures, the EESC concludes that there is a varying commitment to alternative fuels infrastructure among the Member States, as borne out by the Commission's evaluations. The EESC believes that this is a major barrier to achieving the EU's sustainability goals. However, considerable progress has been made in the EU with developing biofuels (not covered by the 2014 directive), especially in some Member States.
- 5.4 Some uncertainties still arise concerning the technology of alternative fuels infrastructure. These include the manufacture of batteries necessary to make electric cars, in view of the increasing cost of extracting the required virgin raw materials. The use of secondary recovered raw materials, as per the circular economy principles, should be encouraged. Equally, consumers have an information deficit regarding the safety of compressed gas, and the use and availability of hydrogen. This should be addressed.
- 5.5 Perceived uncertainties among consumers surrounding technology, plus the lack of immediate information on price comparisons, have been identified as a significant challenge to adoption by consumers. (EU Study on the Implementation of Article 7(3) of the "Directive on the Deployment of Alternative Fuels Infrastructure", January 2017.) They also see real limitations in terms of long journeys, particularly in rural areas. This is a major barrier to success.
- 5.6 The high cost of transition in rural areas is a significant prohibitive factor in achieving deployment of alternative fuels infrastructure. Likewise, the failure by stakeholders to proactively encourage the provision of alternative fuels infrastructure suitable for the varied needs of agriculture and long-distance driving in areas that have scattered rural settlements must be recognised as a matter of urgency.
- 5.7 The desire to mix public and private funding mechanisms will depend on meeting the varying needs of public and private investors. Reconciling these needs, particularly when there are divergent expectations among public and private sources, could delay progress.
- 5.8 The action plan is largely concerned with achieving transition in the main urban centres of population. Part of the reason for this is that technology for recharging is still limited, and since rural journeys tend to be longer, charging points need to be more available. Likewise, the EESC notes that the installation of infrastructure needed in rural areas requires considerably more attention.

- 5.9 The action plan is dependent on a high level of commitment from each Member State to ensuring that their respective national policy frameworks are implemented in a timely and efficient manner.
- 5.10 To encourage this, the Commission has established a Sustainable Transport Forum, which brings together representatives of the Member States, the transport sector and civil society, with the aim of achieving effective implementation of policies towards alternative fuels infrastructure.

6. **EESC observations**

- 6.1 The EESC is concerned by the clear failure of the NPFs to demonstrate, in terms of ambition, any real achievement of meaningful progress in the roll-out of an alternative fuels infrastructure. The fear that there is a strong likelihood of all targets being missed suggests that there is an urgent need to review this strategy and to make recommendations on a model that would achieve success. However, the diverse views on different fuels in different Member States and markets must be noted. For instance, LNG and CNG are not considered a reasonable option for new infrastructure in the Nordic countries, where biofuels on the other hand are very successful and promoted. In other parts of EU the preference for different fuels is totally different.
- 6.2 Technical maturity must also be taken into consideration. For instance hydrogen is still in the early testing phases in most markets. So is electric battery propulsion for heavy vehicles over longer distances like TEN-T corridors. Battery charging for such vehicles is probably less viable in the medium term. However, testing is also ongoing in several Member States for electric propulsion of heavy lorries through overhead wires or ground rails in the road surface (e-highways, etc.). This infrastructure is not mentioned in the action plan at all, but must today be considered rather more technologically mature than hydrogen fuels.
- 6.3 Estimates of investment need to provide publicly accessible alternative fuels infrastructure by 2020 range from EUR 5.2 billion to 6 billion. Looking forward to 2025, this figure is projected to reach a minimum of EUR 22 billion. Despite these estimates, there is little evidence that this will be sufficient to guarantee success in meeting the necessary targets.
- 6.4 It is possible that these estimates are too conservative and may have to be revised to take account of changing technology. Therefore, the EESC welcomes the Commission's desire to work more closely with the automotive industry to design various financial instruments to encourage private investment.
- 6.5 The EESC notes, however, that such instruments need to ensure that the deployment of infrastructure must bring wide benefit to the public in terms of access and affordability. Access in rural and isolated areas is of particular concern.
- 6.6 The EESC notes that fuel taxation is currently a significant source of national income in all EU Member States. Clearly, a reduction in income due to the achievement of environmental goals would pose challenges for the taxation policies of each Member State. It should be noted, however, that the Commission's proposal in the mobility package regarding road charging

(Eurovignette, see TEN/640) includes some new options for internalising external costs through infrastructure charges.

- 6.7 The EESC notes that the shipping sector is seen as difficult to regulate, mainly because of the international context in which rules and laws are made. While shipping needs to become proactive in its cooperation with alternative fuels infrastructure, it is clear that there is potential, at local level, to provide alternative fuels (e.g. methanol and LNG), particularly for short sea shipping and ferries. Electrical infrastructure for quayside operations etc. could also be mentioned.
- 6.8 Similarly, although less directly linked to the action plan, air transport is expected to increase exponentially up to 2050. Compliance with decarbonisation targets will require significant uptake of alternative fuels with a high greenhouse gas-saving potential. Use of biofuels in this area should be considered and the necessary investment should take place as a result of meaningful dialogue with all relevant stakeholders and the European Commission.
- 6.9 There is a need to streamline public and private investment in alternative fuels infrastructure. Therefore, the EESC welcomes the Commission's proposal to strengthen coordination of EU funding instruments and to strive for synergies so that measures at national and local levels can increase the impact of EU funding.
- 6.10 Consumer awareness is paramount to successful deployment of infrastructure. This includes information on price comparisons, health and environmental benefits, and specific interventions that assist families with lower income levels.

Brussels, 19 April 2018.

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