

III

(Preparatory Acts)

EUROPEAN ECONOMIC AND SOCIAL COMMITTEE

446th PLENARY SESSION, HELD ON 9 AND 10 JULY 2008

Opinion of the European Economic and Social Committee on the 'Proposal for a Regulation of the European Parliament and of the Council on type-approval of hydrogen powered motor vehicles and amending Directive 2007/46/EC'

COM(2007) 593 final — 2007/0214 (COD)

(2009/C 27/01)

On 14 November 2007 the Council decided to consult the European Economic and Social Committee, under Article 95 of the Treaty establishing the European Community, on the

Proposal for a Regulation of the European Parliament and of the Council on type-approval of hydrogen powered motor vehicles and amending Directive 2007/46/EC.

The Section for the Single Market, Production and Consumption, which was responsible for preparing the Committee's work on the subject, adopted its opinion on 11 June 2008. The rapporteur was **Mr Iozia**.

At its 446th plenary session, held on 9 and 10 July 2008 (meeting of 9 July), the European Economic and Social Committee adopted the following opinion with 117 votes in favour and five abstentions.

1. Conclusions and recommendations

1.1 The EESC approves of the content of the proposed regulation and welcomes the Community-level establishment of harmonised standards for the type-approval of hydrogen powered vehicles. It endorses the choice of a single Community procedure to be valid in all Member States as this is simpler and much less burdensome than 27 different type-approval systems that would clearly pave the way for unfair competition and fragmentation in the internal market.

1.2 The importance of this measure is clear: despite expectations of considerable growth in the commercialisation of hydrogen-powered vehicles, there is no type-approval for them at national or European level. Where individual Member States have adopted provisional regulations, they differ significantly from one another.

1.3 The regulation must be approved rapidly as it will provide a definite frame of reference for the sector's companies, and thus pave the way for the major investment necessary to develop hydrogen-related technologies. The EESC has endorsed this strategic choice in recent opinions on the subject, stating that despite its continuing limitations, hydrogen is the challenge for the future.

1.4 The establishment of these Community standards on harmonisation is also an important element in guaranteeing safety for users. Building up their trust is essential in the light of the predicted increase in the use of this technology. According to Commission forecasts, the number of hydrogen-powered vehicles should reach the one million target by 2020.

1.5 An important example confirming the validity of this objective and the real possibility of reaching it is that of the steadily increasing number of taxis with hybrid fuel systems circulating in New York, where a positive urban policy has made it possible to marry environmental protection with market rules. This clearly demonstrates that attempts to build artificial barriers to the development of this technology often mask vested interests.

1.6 Reaching this target is essential, as only by making a decisive move to replace fossil fuels will it be possible to stay on track with the EU's policies on sustainable development and the fight against climate change. This goal can be achieved by means of a gradual shift to the use of hydrogen, second generation biofuels and other renewable fuels.

1.7 To provide the fundamental support this long-term strategy requires will involve specific commitments in the field of technological research. The EESC therefore calls for the implementation of targeted research programmes, starting with the rapid approval of the regulation proposed in COM(2007) 571, which provides for the establishment of a Joint Technological Initiative (JTI) based on the establishment of a Fuel Cells and Hydrogen Joint Undertaking ⁽¹⁾. The Committee would welcome research programmes aimed at finding new means of producing and using hydrogen and echoes the calls from businesses and research bodies active in the hydrogen sector for the Council and Parliament to speed up the approval of the necessary proposals.

1.8 The EESC urges the Commission to start work now on examining the issue of distribution network coverage, as safe and efficient storage and adequate distribution systems are essential elements in the dissemination of vehicles powered by gas mixes.

1.9 Initially, action should focus on the distribution of LPG and methane throughout the Community, as though in many EU countries they are scarce or non-existent these offer the most immediate and realistic hope of reducing dependence on carbon-based fuels. This initial drive for newer, safer and more efficient technologies in the field of storage and distribution should, in the near future, facilitate an intermediate phase of supplying a mix of gas and hydrogen until the final move to hydrogen distribution.

1.10 Steps must be taken to restore the confidence of future users and dispel the doubts that still surround hydrogen use. Widespread information programmes should be planned, with a clearly argued message, to reassure the public that this technology has already reached the current safety levels of conventional vehicles.

1.11 The EESC agrees that the most appropriate legal instrument to use is a regulation, as this creates a level playing field for the sector's producers by ensuring that the standards it contains will be implemented simultaneously in all Member States.

1.12 The EESC approves of the proposal to prepare and implement basic standards by means of a committee procedure. It also welcomes the arrangements for a transition period for the full application of all the standards; this appears necessary for producers, given the complexity involved.

1.13 The EESC welcomes Europe's presence in the Global Coordination Group (GCG), which is seeking to establish type-approval standards at world level (GTR — Global Technological Regulation), and considers Europe's involvement important. However, it would also stress that the search for a global agree-

ment must not obstruct the European legislative procedure. Having its own legislative instrument and experience of applying Community standards will strengthen Europe's presence on all global bodies, and ensure that the establishment of international regulations in the field of hydrogen-powered vehicles has more than one available point of reference to take into account (Japan).

1.14 The experience gained from having legislation at Community level and the important results that may stem from a solid ongoing commitment to technological research could help to boost the competitiveness of companies already operating in the vehicle sector, given that major shares of the future market are staked on the new technologies and fuels.

1.15 In the EESC's view, all this requires bold and timely decisions, together with a long-sighted strategic vision focusing on a future scenario where, in time, hydrogen is destined to play a major and decisive role.

1.16 The EESC would invite the Commission to reconsider its proposal to label hydrogen-powered cars, as this could be seen as criminalising them in some way, identifying them as 'dangerous', whereas their safety test results are on a par with those for cars powered by other fuels. As an alternative to that label, the EESC feels it would be more appropriate to identify the fuel-types of all cars, making them clearly recognisable.

1.17 In the absence of a distribution network, to facilitate the dissemination of hydrogen-powered vehicles, the EESC recommends that the Commission introduce type approval for small reforming units for the automatic production of hydrogen from methane (home energy stations or similar facilities). This could mark the first real step towards meeting the new demand for hydrogen in the early days, while the ultimate goal must continue to be that of producing hydrogen from renewable resources or biogas, by means of photolysis or electrolysis using electricity generated from renewable sources.

2. Introduction

2.1 The starting-point for the regulation in question (COM(2007) 593 final) is that there are no European standards governing the type-approval of hydrogen powered vehicles, despite predictions that the market presence of such vehicles is set to increase.

2.2 Neither are there regulations governing this field in the EU's individual Member States.

None of the current legislation governing vehicle type approval includes any general standards for hydrogen powered vehicles, partly because of their differences compared with vehicles that run on traditional fuels.

⁽¹⁾ OJ C 204, 9.8.2008, p. 19.

2.3 A few Member States have adopted provisional regulations that differ significantly from one country to another. If this situation is allowed to continue, the type approval procedures developed in individual Member States will differ, with the inevitable consequences of internal market fragmentation and distorted competition rules, making the real possibility for this technology to contribute decisively to improving the environment remote.

2.4 This draft regulation is therefore intended to ensure that the internal market functions properly and to prevent vehicles from circulating in individual Member States under differing type approval standards, leading to imbalances between individual producers and paving the way for artificial barriers to trade in Europe.

2.5 The result would be to hinder rather than promote the practical development of hydrogen technologies and related initiatives in Europe, although it is one of the most significant available alternatives to fossil fuels. The latter still account for 98 % of public and private transport and 50 % of primary energy sources, a figure likely to increase to 73 % unless there is a definite decision to diversify.

2.6 This regulation, along with major research programmes in the sector as part of the 7FP, marks an important step towards bringing hydrogen use to the safety levels reached by traditional technologies and could also contribute towards gaining the support of potential users.

2.7 Harmonised standards at Community level for the type approval of hydrogen powered vehicles would doubtless constitute a decisive step towards securing the necessary consensus among users. The development of user confidence in the use of hydrogen is essential if the placing on the market of vehicles run on alternative low-greenhouse gas emission fuels is to be stepped up, something that is essential to protect the environment properly and practically.

3. The Commission proposal

3.1 The draft regulation aims to set standards valid throughout the EU for the type approval of hydrogen powered vehicles.

3.2 It amends Framework Directive 2007/46/EC by including category M1-M2-M3 and N1-N2-N3 ⁽²⁾ hydrogen powered vehicles fully within the EC vehicle type approval procedural framework and including hydrogen-powered vehicles in all type approval related directives and regulations.

⁽²⁾ M1 vehicles designed for passenger transport, with a maximum of eight seats in addition to the driver's seat.

M2 vehicles designed for passenger transport, with more than eight seats in addition to the driver's seat and weighing no more than 5 tonnes.

M3 vehicles designed for passenger transport, with more than eight seats in addition to the driver's seat and weighing more than 5 tonnes.

N1 vehicles designed for goods transport, weighing no more than 3,5 tonnes.

N2 vehicles designed for goods transport, weighing more than 3,5 tonnes but no more than 12 tonnes.

N3 vehicles designed for goods transport, weighing more than 12 tonnes.

3.3 **The legal basis** of the proposal is Article 95 of the Treaty.

The proposal fully respects the **principle of subsidiarity** as the political objectives agreed at Community level cannot be achieved by individual Member States. Furthermore, the procedure prevents the creation of barriers in the single market.

It also preserves the **principle of proportionality**, its objective being simply the smooth running of the single market and a high level of public safety and environmental protection.

3.4 The Commission proposes to use a regulation as this will ensure that the provisions enter into force in all Member States at the same time, without having to wait for them to be transposed into national legislation. It should also avoid delays in the adaptation of type-approval standards and prevent the risk of provisions being changed significantly during transposition.

3.5 The proposal has been carefully examined by means of a thorough consultation of all the stakeholders. Beginning with the 'Hydrogen Working Group', the survey involved national authorities, vehicle manufacturers, vehicle parts suppliers and industry associations.

3.6 The four options studied were:

- no policy change, i.e. maintaining the status quo;
- legislation at Member State level;
- legislation at European Union level;
- and a non-regulatory approach, i.e. self regulation.

3.7 A consultant was then appointed to collate the responses concerning safety, technology and the relative costs of the various options. The results were then assessed by the main companies in the automobile sector involved with hydrogen technology.

3.8 From this broad consultation process it clearly emerged that the best course of action would be legislation at Community level to establish a type-approval procedure for all hydrogen powered vehicles.

3.9 To back up this choice, the Commission has presented a study ⁽³⁾ that argues that introducing even a strict European type approval process is the simplest and least costly way ahead, given the theoretical cost of 27 different type-approvals for each of the individual Member States.

⁽³⁾ TRL Ltd: technical and scientific consultancy employed by the Commission.

3.10 The consultant's assessment was submitted to the Commission, which produced the present proposal on the basis of the prior consultation work, thus starting the institutional process.

3.11 According to the Commission, the standards established in this regulation offer hydrogen powered vehicle users the necessary guarantees in terms of safety and will contribute decisively to environmental protection.

3.12 The concluding objective is that 36 months after the entry into force of the regulation, hydrogen systems, all components in contact with hydrogen and the related materials used must comply fully with the standards set out by the regulation.

4. The hearing

4.1 The hearing, attended by the Commission, academics, vehicle manufacturers involved in developing hydrogen-powered cars, European associations, consumers and fuel cell producers, delivered valuable ideas and information on the latest technological developments.

4.2 It highlighted the importance of public information and of events such as the one that has been held for a number of years in Rome (H₂ Roma), introducing the public to the producers, demonstrating technological developments and raising awareness of a technology still considered dangerous by most people. Those present were very interested in the part that the EESC could play as a cultural mediator.

4.3 Companies and consumers underlined the need to be able to rely on the safety of vehicles and storage and distribution facilities, as well as on the availability of hydrogen. Research should continue with better backing. They welcomed recent European initiatives promoting fuel cells, with the decision to finance a Joint Technological Initiative.

4.4 Autonomy tests have shown that hydrogen-powered cars already have a range of up to 600 km. Further tests are in the pipeline.

4.5 As the hearing showed, hydrogen-powered cars are now a technological reality. What are missing however are the economic and social conditions necessary to move into the marketing phase. The type approval regulation will do away with an initial obstacle.

5. General comments

5.1 The EESC approves of the content of this regulation and welcomes the adoption of harmonised standards for the type

approval of hydrogen powered vehicles. This marks a step forwards from the present situation where the lack of legislation is clearly likely to distort competition and fragment the internal market. It is important that the regulation is approved rapidly, not least for reasons of safety and environmental protection.

5.2 In the EESC's opinion, the absence of a definite frame of reference inevitably tends to discourage the necessary significant investment in technological development for the use of hydrogen as a fuel for future cars.

5.3 The regulation appears to be in line with the EU's policies on sustainable development and with the fight against climate change, which underpin Community initiatives and make a vital contribution to the general objectives of the Lisbon Strategy.

5.4 The EESC is firmly convinced that unless hydrogen powered vehicles are developed rapidly and on a grand scale and fossil fuels are gradually replaced the environmental benefits will be severely limited and thus negligible in quantitative terms. It would argue that the use of hydrogen, second generation biofuels and other renewable fuels could make it possible to further environmental sustainability and to make a strong stand against climate change.

5.5 The EESC maintains that the exciting path towards reversing the current trend whereby demand for energy is satisfied primarily by fossil fuels, which currently account for 85-90 % of world energy supply, will involve the use of hydrogen and a commitment to research in the field of hydrogen and fuel cells. Any studies of future prospects must take into account the fact that the future for fossil fuels is likely to involve shortages and constantly increasing prices.

5.6 The EESC recently adopted an opinion⁽⁴⁾ fully supporting the Commission's proposal (COM(2007) 571 final) to earmark approximately EUR 470 million for a Joint Technological Initiative (JTI) for 'fuel cells and hydrogen', which will enable the Commission, Member States and the industry to pool their various resources in a vast research initiative in order to launch programmes targeting strategic sectors for the diversification and future availability of energy.

5.7 In a subsequent opinion on the energy mix in transport⁽⁵⁾, the EESC 'considers a sharp increase in funding for research into the production and use of hydrogen (...) to be vital' and 'echoes the calls from businesses and research centres engaged in developing hydrogen use for the Council and Parliament to speed up the process of adopting the proposal'.

⁽⁴⁾ OJ C 204, 9.8.2008, p. 19.

⁽⁵⁾ CESE 1104/2007 (TEN/297), point 1.4. Not yet published in the OJ.

5.8 Fuel cells are energy converters that reduce the production of greenhouse gas and other pollutants considerably. As for biomass processing, the EESC takes a careful look in the same opinion at recent progress in the field of new catalysts designed for fuel cells, which are a highly promising technology for the supply of clean energy for cars.

5.9 While stressing that the use of hydrogen in the gradual substitution of fossil fuels is necessary and desirable, the Committee points out that the aim of bringing hydrogen-powered vehicles into circulation cannot be achieved without significant investment in all related fields of research. For this reason, the EESC would like to see research programmes aimed at consolidating this strategy.

5.10 The Committee considers that although the high cost of this process is an issue, it must not be allowed to slow down technological development in this field. It is keenly watching all programmes aimed at seeking new eco-friendly ways to produce hydrogen, given that the current method, whereby over 90 % of hydrogen is produced from methane, is based on a major energy source that is significant but nonetheless finite.

5.11 The EESC would stress that when assessing the costs of each technological advance, the major sums necessary should be assessed not just in relation to the admittedly large private vehicle sector, but also from a strategic, forward-looking perspective, taking into account the future benefits that might arise from the wider use of hydrogen for instance in public and private transport, goods transport and in trains and water transport, going as far as the possible use of hydrogen in electricity power stations, though this is a more distant prospect.

5.12 The EESC is utterly convinced that if these major research programmes develop in the desired way and receive the necessary political and financial support from all the interested parties, there is a strong possibility of seeing partially or fully hydrogen powered cars on the roads relatively soon.

5.13 One concrete example of this positive trend is the steadily increasing use of hybrid taxis in New York, where a positive urban policy has made it possible to marry respect for the environment with market rules. This clearly demonstrates that attempts to place obstacles in the way of the development of this technology often mask vested interests.

5.14 In all its opinions on the subject, the EESC has supported the choice to use hydrogen, which, despite the currently known limitations, is the challenge for the future. The Committee is keeping a close eye on recently planned initiatives

using various production and supply technologies and paving the way for the future use of hydrogen to power vehicles.

5.15 In this light, the EESC would once more urge the Commission to examine the issue of distribution network coverage for alternative fuel, starting by boosting the distribution of CNG (compressed natural gas), which in Europe is distributed on a small scale in a few Member States and is totally absent in others, with a few positive exceptions, including Poland.

5.16 The field of storage and distribution is a concrete example of targeted research in the sector. The need for innovative technology in the field of gas distribution is a fundamental and critical issue for the dissemination of new vehicles, both in the intermediate phase of a possible mix of different gases, and in the pursuit of the ultimate objective of hydrogen fuel.

5.17 There is an urgent need here for ever more efficient and safe distribution systems, using the experience garnered from the two plants currently operating in Europe, in Mantova (Italy) and Munich (Germany), directing research towards increasingly advanced systems that centre on meeting high standards of safety and environmental protection.

5.18 For these reasons, the EESC believes that achieving high levels of safety and efficiency in the storage and distribution of gaseous fuels is crucial in the current phase, requiring a major programme to disseminate LPG and methane plants throughout Europe. This is a more immediate realistic objective when it comes to reducing dependence on carbon-based fuels, as an intermediate phase before the definitive stage of distributing hydrogen. The technologies necessary for storing and distributing gas and hydrogen are very similar, so the development of the former will inevitably favour the development of hydrogen.

5.19 The EESC is aware that the use of hydrogen still poses definite problems when it comes to cost and certain elements of safety. The thorough tests carried out in various countries mean that the obstacles of the past should now be completely overcome, bringing hydrogen use to the safety levels achieved by conventional technologies. Achieving this objective, and launching major programmes to provide specific information, might help to build the confidence of future users, something that is essential for the definitive relaunch of the use of this technology.

5.20 For this reason, it is essential that this hydrogen-based strategy be backed up by a thorough information programme to address and overcome the current doubts of future consumers who consider hydrogen to be a highly risky product.

5.21 A well-disseminated information programme must send out a clear message: hydrogen technology has already reached the current safety levels of conventional vehicles, even in the event of accidents. This is key if the Commission's forecast of 1 million vehicles on the Community's roads by 2020 (Impact Assessment, p. 34) is to be considered credible.

5.22 This regulation setting Community-level harmonised standards for the type approval of hydrogen powered vehicles is the first step towards building such a consensus. It should be supported for the fundamental reason that use of this fuel makes a key contribution to environmental protection, as it does not emit greenhouse gases or release carbon-based pollutants.

5.23 The EESC agrees with the choice of regulation as the legal instrument for the proposal as it creates a level playing field for the sector's producers by means of the immediate application in all Member States of the standards it contains.

5.24 The EESC approves of the proposal to prepare and implement basic standards by means of the committee procedure. It also welcomes the arrangements for a transition period; this reflects the complexity of the technology, which producers will require some time to apply.

5.25 The EESC supports and considers important the presence of Europe alongside Japan and the USA on the Global Coordination Group (GCG) aimed at achieving a world-wide procedure for the type-approval of hydrogen-powered vehicles.

5.26 However, the search for a solution at this level must not be allowed to get in the way of the Community legislative process, as the time needed to reach an agreement at world level will be longer than the timeframe for the current regulation. Indeed, once the EU has a specific legislative instrument and its own experience of implementation, it will have greater clout at the GCG and will be able to prevent any attempts to adopt a regulation based on the only experience currently available, i.e. that of Japan.

5.27 A strong European presence on world decision-making bodies is also vital for safeguarding the competitive edge of major vehicle manufacturers operating at European level, which must not lose touch with developments in a market where a strong, timely and technologically-advanced presence is key to winning a major market share in the future.

5.28 Type-approval, though just one aspect of the overall process, marks a significant step towards the availability of alternative fuels that can release Europe from the grip of fossil fuels and bring major environmental benefits, preparing us for the time when, sooner or later, that resource will slowly but surely run out.

5.29 All this calls for bold decisions and a long-term, strategic outlook, setting sights on the present and also on a future scenario in which the use of hydrogen is destined to play a fundamental role.

Brussels, 9 July 2008.

The President
of the European Economic and Social Committee
Dimitris DIMITRIADIS
