



**EUROPEAN UNION**

**THE EUROPEAN PARLIAMENT**

**THE COUNCIL**

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**LEGISLATIVE ACTS AND OTHER INSTRUMENTS**

**Subject: DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL  
on the deployment of alternative fuels infrastructure**

**DIRECTIVE 2014/.../EU**  
**OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL**

**of**

**on the deployment of alternative fuels infrastructure**

**(Text with EEA relevance)**

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty on the Functioning of the European Union, and in particular Article 91 thereof,

Having regard to the proposal from the European Commission,

After transmission of the draft legislative act to the national parliaments,

Having regard to the opinion of the European Economic and Social Committee<sup>1</sup>,

Having regard to the opinion of the Committee of the Regions<sup>2</sup>,

Acting in accordance with the ordinary legislative procedure<sup>3</sup>,

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<sup>1</sup> OJ C 271, 19.9.2013, p. 111.

<sup>2</sup> OJ C 280, 27.9.2013, p. 66.

<sup>3</sup> Position of the European Parliament of 15 April 2014 (not yet published in the Official Journal) and decision of the Council of ....

Whereas:

- (1) In its Communication of 3 March 2010 entitled "Europe 2020: A strategy for smart, sustainable and inclusive growth", the Commission aims at enhancing competitiveness and energy security by a more efficient use of resources and energy.
- (2) The Commission's White Paper of 28 March 2011 entitled "Roadmap to a Single European Transport Area – Towards a Competitive and Resource Efficient Transport System" called for a reduction in the dependence of transport on oil. This needs to be achieved by means of an array of policy initiatives, including the development of a sustainable alternative fuels strategy as well as of the appropriate infrastructure. The Commission's White Paper also proposed a reduction of 60 % in greenhouse gas emissions from transport by 2050, as measured against the 1990 levels.
- (3) Directive 2009/28/EC of the European Parliament and of the Council<sup>1</sup> sets a market share target of 10 % of renewables in transport fuels.
- (4) Based on the consultation of stakeholders and national experts, as well as the expertise reflected in the Commission Communication of 24 January 2013 entitled "Clean Power for Transport: A European alternative fuels strategy", electricity, hydrogen, biofuels, natural gas, and liquefied petroleum gas (LPG) were identified as currently the principal alternative fuels with a potential for long-term oil substitution, also in light of their possible simultaneous and combined use by means of, for instance, dual-fuel technology systems.

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<sup>1</sup> Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC (OJ L 140, 5.6.2009, p. 16).

- (5) Power sources means all alternative sources of energy for transport, such as electricity and hydrogen, that do not have to be released through combustion or non-combustion oxidation.
- (6) Synthetic fuels, substituting diesel, petrol and jet fuel, can be produced from different feedstock, converting biomass, gas, coal or plastic waste into liquid fuels, methane and dimethyl ether (DME). Synthetic paraffinic diesel fuels, such as hydrotreated vegetable oils (HVO) and Fischer-Tropsch diesel, are fungible and can be blended into fossil diesel fuel at very high blending ratios, or can be used neat in all existing or future diesel vehicles. Therefore, those fuels can be distributed, stored and used with the existing infrastructure. Synthetic fuels substituting petrol, such as methanol and other alcohols, can be blended with petrol and can be technically used with current vehicle technology with minor adaptations. Methanol can also be used for inland navigation and short-sea shipping. Synthetic and paraffinic fuels have a potential to reduce the use of oil sources in the energy supply to transport.
- (7) LPG or autogas is an alternative fuel, derived from natural gas processing and oil refining, with a lower carbon footprint and significantly less pollutant emissions than conventional fuels. Bio-LPG derived from various biomass sources is expected to emerge as a viable technology in the medium to long term. LPG can be used for road transport (for cars and trucks) for all ranges of distances. It can also be used for inland navigation and short-sea shipping. LPG infrastructure is relatively well developed, with a significant number of filling stations already present in the Union (approximately 29 000). However, the distribution of those filling stations is uneven, with low penetration in a number of countries.

- (8) Without prejudice to the definition of alternative fuels in this Directive, it should be noted that additional types of clean fuels exist that can represent potential alternatives to fossil fuels. Promising results from research and development should be considered when new types of alternative fuels are selected. Standards and legislation should be drawn up, without giving preference to any particular type of technology, so as not to hamper further development towards alternative fuels and energy carriers.
- (9) The CARS 21 High Level Group report of 6 June 2012 stated that the lack of a Union-wide harmonised alternative fuel infrastructure hampers the market introduction of vehicles using alternative fuels and delays their environmental benefits. In its Communication of 8 November 2012 entitled "CARS 2020: Action Plan for a competitive and sustainable automotive industry in Europe", the Commission took up the main recommendations of the CARS 21 High Level Group report and presented an Action Plan based on them. This Directive is one of the key actions regarding alternative fuels infrastructure announced by the Commission.

- (10) Fragmentation of the internal market due to uncoordinated market introduction of alternative fuels should be avoided. Coordinated policy frameworks of all Member States should therefore provide the long-term security required for private and public investment in vehicle and fuel technology, and infrastructure build-up, in order to serve the dual purpose of minimising dependence on oil and mitigating the environmental impact of transport. Member States should therefore establish national policy frameworks outlining their national targets and objectives, and supporting actions for the development of the market as regards alternative fuels, including the deployment of the necessary infrastructure to be put into place, in close cooperation with regional and local authorities and with the industry concerned, while taking into account the needs of small and medium-sized enterprises. Where necessary, Member States should cooperate with other neighbouring Member States at regional or macro-regional level, by means of consultation or joint policy frameworks, in particular where continuity of alternative fuels infrastructure coverage across national borders or the construction of new infrastructure in the proximity of national borders is required, including different non-discriminatory access options for recharging and refuelling points. The coordination of those national policy frameworks and their coherence at Union level should be supported by cooperation between Member States and assessment and reporting by the Commission. In order to facilitate reporting by the Member States of the information provided for in Annex I, non-binding guidelines should be adopted by the Commission.

- (11) A coordinated approach is necessary in order to meet the long-term energy needs of all transport modes. In particular, policies should build upon the use of alternative fuels, with a focus on the specific needs of each transport mode. In the elaboration of national policy frameworks, account should be taken of the needs of the different transport modes existing on the territory of the Member State concerned, including those for which limited alternatives to fossil fuels are available.
- (12) The development and implementation of the national policy frameworks of the Member States should be facilitated by the Commission by means of exchanges of information and best practices between the Member States.
- (13) In order to promote alternative fuels and develop the relevant infrastructure, the national policy frameworks may consist of several plans, strategies or other planning documentation developed separately or in an integrated manner, or in another form, and at the administrative level decided upon by the Member States.
- (14) Fuels included in the national policy frameworks should be eligible for Union and national support measures for alternative fuels infrastructure, in order to focus public support on a coordinated internal market development towards Union-wide mobility using alternative fuels vehicles and vessels.

- (15) This Directive is not intended to place an additional financial burden on Member States or on regional and local authorities. It should be possible for Member States to implement this Directive by making use of a wide range of regulatory and non-regulatory incentives and measures, in close cooperation with private sector actors, who should play a key role in supporting the development of alternative fuels infrastructure.
- (16) In accordance with Regulation (EU) No 1316/2013 of the European Parliament and of the Council<sup>1</sup>, the development of new technologies and innovation, in particular regarding the decarbonisation of transport, is eligible for Union funding. That Regulation also provides for additional funding to be granted for actions which exploit the synergies between at least two of the sectors covered by it (namely transport, energy and telecommunications). Lastly, the Commission is assisted by the Connecting Europe Facility (CEF) Coordination Committee in coordinating the work programmes with a view to allowing multi-sectoral calls for proposals in an effort to take full advantage of possible synergies between those sectors. The CEF would, therefore, contribute to the deployment of alternative fuels infrastructure.

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<sup>1</sup> Regulation (EU) No 1316/2013 of the European Parliament and of the Council of 11 December 2013 establishing the Connecting Europe Facility, amending Regulation (EU) No 913/2010 and repealing Regulations (EC) No 680/2007 and (EC) No 67/2010 (OJ L 348, 20.12.2013, p. 129).



- (17) The Horizon 2020 framework programme, established by Regulation (EU) No 1291/2013 of the European Parliament and of the Council<sup>1</sup>, will also provide support for research and innovation with regard to alternative fuel vehicles and the related infrastructure, in particular through the Societal Challenge "Smart, green and integrated transport". That specific source of financing should also contribute to the development of alternative fuels infrastructure and should be fully considered as an additional opportunity to ensure a sustainable mobility market throughout the Union.
- (18) In order to trigger investment in sustainable transport and support the deployment of a continued network of alternative fuels infrastructure in the Union, the Commission and the Member States should support national and regional development measures in this area. They should encourage exchanges of best practices in alternative fuels infrastructure deployment and management between local and regional development initiatives and, to this end, they should promote the use of the European Structural and Investment Funds, in particular the European Regional Development Fund and the Cohesion Fund.
- (19) Support measures for alternative fuels infrastructure should be implemented in compliance with the State aid rules contained in the Treaty on the Functioning of the European Union (TFEU). Member States may consider it necessary to provide support to operators affected by this Directive in accordance with the applicable State aid rules. Any national support measures for alternative fuels infrastructure notified to the Commission should be assessed without delay.

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<sup>1</sup> Regulation (EU) No 1291/2013 of the European Parliament and of the Council of 11 December 2013 establishing Horizon 2020 - the Framework Programme for Research and Innovation (2014-2020) and repealing Decision No 1982/2006/EC (OJ L 347, 20.12.2013, p. 104).

- (20) The Trans-European Network for Transport (TEN-T) guidelines recognise that alternative fuels serve, at least partly, as a substitute for fossil oil sources in the energy supply to transport, contribute to its decarbonisation and enhance the environmental performance of the transport sector. The TEN-T guidelines require, with regard to new technologies and innovation, that the TEN-T is to enable the decarbonisation of all transport modes by stimulating energy efficiency as well as by introducing alternative propulsion systems and the provision of corresponding infrastructure. The TEN-T guidelines also require that inland and sea ports, airports and roads of the core network established by Regulation (EU) No 1315/2013 of the European Parliament and of the Council<sup>1</sup> ("TEN-T Core Network") provide for the availability of alternative fuels. In the CEF, the TEN-T funding instrument makes the deployment on the TEN-T Core Network of those new technologies and innovation, including infrastructure for alternative clean fuels, eligible for grants. In addition, the deployment of infrastructure for alternative clean fuels on the broader comprehensive network will be able to receive financial assistance from the CEF in the form of procurement and financial instruments, such as project bonds.

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<sup>1</sup> Regulation (EU) No 1315/2013 of the European Parliament and of the Council of 11 December 2013 on Union guidelines for the development of the trans-European transport network and repealing Decision No 661/2010/EU (OJ L 348, 20.12.2013, p. 1).

- (21) Biofuels, as defined in Directive 2009/28/EC, are currently the most important type of alternative fuels, accounting for 4,7 % of the total fuels consumed in Union transport in 2011. They can also contribute to a substantial reduction in overall CO<sub>2</sub> emissions if they are produced sustainably. They could provide clean power to all forms of transport.
- (22) The lack of harmonised development of alternative fuels infrastructure across the Union prevents the development of economies of scale on the supply side and Union-wide mobility on the demand side. New infrastructure networks need to be built up, such as for electricity, natural gas (liquefied natural gas (LNG) and compressed natural gas (CNG)) and, where appropriate, hydrogen. It is important to acknowledge the different stages of development of each fuel technology and related infrastructures, including the maturity of business models for private investors and the availability and user acceptance of alternative fuels. Technological neutrality should be ensured and national policy frameworks should take due account of the requirement to support the commercial development of alternative fuels. Moreover, population density and geographical characteristics should be taken into account in the elaboration of national policy frameworks.

(23) Electricity has the potential to increase the energy efficiency of road vehicles and to contribute to a CO<sub>2</sub> reduction in transport. It is a power source that is indispensable for the deployment of electric vehicles, including L-category vehicles as referred to in Directive 2007/46/EC of the European Parliament and of the Council<sup>1</sup> and Regulation (EU) No 168/2013 of the European Parliament and of the Council<sup>2</sup>, which can contribute to improving air quality and reducing noise in urban/suburban agglomerations and other densely populated areas. Member States should ensure that recharging points accessible to the public are built up with adequate coverage, in order to enable electric vehicles to circulate at least in urban/suburban agglomerations and other densely populated areas, and, where appropriate, within networks determined by the Member States. The number of such recharging points should be established taking into account the number of electric vehicles estimated to be registered by the end of 2020 in each Member State. As an indication, the appropriate average number of recharging points should be equivalent to at least one recharging point per 10 cars, also taking into consideration the type of cars, charging technology and available private recharging points. An appropriate number of recharging points accessible to the public should be installed, in particular at public transport stations, such as port passenger terminals, airports or railway stations. Private owners of electric vehicles depend to a large extent on access to recharging points in collective parking lots, such as in apartment blocks and office and business locations. Public authorities should take measures to assist users of such vehicles by ensuring that the appropriate infrastructure with sufficient electric vehicle recharging points is provided by site developers and managers.

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<sup>1</sup> Directive 2007/46/EC of the European Parliament and of the Council of 5 September 2007 establishing a framework for the approval of motor vehicles and their trailers, and of systems, components and separate technical units intended for such vehicles (Framework Directive) (OJ L 263, 9.10.2007, p. 1).

<sup>2</sup> Regulation (EU) No 168/2013 of the European Parliament and of the Council of 15 January 2013 on the approval and market surveillance of two- or three-wheel vehicles and quadricycles (OJ L 60, 2.3.2013, p. 52).

- (24) Member States should ensure that publicly accessible infrastructure for the supply of electricity to motor vehicles is built up. To define an appropriate number of recharging points accessible to the public in their national policy frameworks, it should be possible for Member States to take into consideration the number of existing recharging points accessible to the public on their territory and their specifications, and to decide whether to concentrate deployment efforts on normal or high power recharging points.
- (25) Electro-mobility is a fast developing area. Current recharging interface technologies include cable connectors, but future interface technologies such as wireless charging or battery swapping need to be considered as well. Legislation needs to ensure that technological innovation is facilitated. This Directive should therefore be updated as appropriate in order to take into account future standards for technologies such as wireless charging and battery swapping.
- (26) A recharging or refuelling point accessible to the public may include, for example, privately owned recharging or refuelling points or devices accessible to the public through registration cards or fees, recharging or refuelling points of car-sharing schemes which allow access for third party users by means of subscription, or recharging or refuelling points in public parking. Recharging or refuelling points which allow private users physical access with an authorisation or a subscription should be considered to be recharging or refuelling points accessible to the public.

- (27) Electricity and hydrogen are particularly attractive power sources for the deployment of electric/fuel cell vehicles and L-category vehicles in urban/suburban agglomerations and other densely populated areas, which can contribute to improving air quality and reducing noise. Electro-mobility is an important contributor to meeting the Union's ambitious climate and energy targets for 2020. Indeed, Directive [2009/28/EC](#), transposed by Member States by 5 December 2010, set mandatory targets for all Member States for the share of energy from renewable sources, with the aim of reaching by 2020 a Union target of at least a 20 % share of energy from renewable sources, and a 10 % share of renewable energy being specifically used in the transport sector.
- (28) The recharging of electric vehicles at recharging points should, if technically and financially reasonable, make use of intelligent metering systems in order to contribute to the stability of the electricity system by recharging batteries from the grid at times of low general electricity demand and to allow secure and flexible data handling. In the long term, this may also enable electric vehicles to feed power from the batteries back into the grid at times of high general electricity demand. Intelligent metering systems as defined in Directive [2012/27/EU](#) of the European Parliament and of the Council<sup>1</sup> enable real-time data to be produced which is needed to ensure the stability of the grid and to encourage rational use of recharging services. Intelligent metering systems provide accurate and transparent information on the cost and availability of recharging services, thereby encouraging recharging at "off-peak" periods, which means times of low general electricity demand and low energy prices. The use of intelligent metering systems optimises recharging, with benefits for the electricity system and for consumers.

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<sup>1</sup> Directive [2012/27/EU](#) of the European Parliament and of the Council of 25 October 2012 on energy efficiency, amending Directives [2009/125/EC](#) and [2010/30/EU](#) and repealing Directives [2004/8/EC](#) and [2006/32/EC](#) (OJ L 315, 14.11.2012, p. 1).

- (29) With respect to recharging points for electric vehicles which are not publicly accessible, Member States should aim to explore the technical and financial feasibility of synergies with intelligent meter roll-out plans following the obligation under Annex I.2 to Directive 2009/72/EC of the European Parliament and of the Council<sup>1</sup>. Distribution system operators play an important role in relation to recharging points. In the development of their tasks, the distribution system operators, some of whom may be part of a vertically integrated undertaking owning or operating recharging points, should cooperate on a non-discriminatory basis with any other owners or operators of recharging points, in particular providing them with the information needed for the efficient access to and use of the system.
- (30) In the development of infrastructure for electric vehicles, the interaction of that infrastructure with the electricity system, as well as the electricity policy of the Union, should be consistent with the principles established under Directive 2009/72/EC. The establishment and operation of recharging points for electric vehicles should be developed as a competitive market with open access to all parties interested in rolling-out or operating recharging infrastructures.
- (31) The access of Union electricity suppliers to recharging points should be without prejudice to the derogations under Article 44 of Directive 2009/72/EC.

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<sup>1</sup> Directive 2009/72/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC (OJ L 211, 14.8.2009, p. 55).

- (32) In 2010, the Commission delivered a mandate (M468) to the European Standardisation Organisations (ESOs) to issue new standards or review existing standards with the aim of ensuring interoperability and connectivity between an electricity supply point and a charger of electric vehicles. CEN/CENELEC set up a focus group, which published a report in October 2011. Whereas the report contained a number of recommendations, no consensus on the selection of one standard interface was reached. Therefore, further policy action is needed in order to provide a non-proprietary solution ensuring interoperability across the Union.
- (33) Interface to charge electric vehicles could include several socket outlets or vehicle connectors as long as one of them complies with the technical specifications set out in this Directive, so as to allow multistandard recharging. However, the choice made in this Directive of Union-wide common connectors for electric vehicles (Type 2 and Combo 2) should not be detrimental to Member States having already invested in the deployment of other standardised technologies for recharging points and should not affect existing recharging points deployed before the entry into force of this Directive. Electric vehicles already in circulation before the entry into force of this Directive should be able to recharge, even if they were designed to recharge at recharging points that do not comply with the technical specifications set out in this Directive. The choice of equipment for normal and high power recharging points should comply with specific safety requirements in force at national level.



- (34) Shore-side electricity facilities can serve maritime and inland waterway transport as clean power supply, in particular in maritime and inland navigation ports where air quality or noise levels are poor. Shore-side electricity can contribute to reducing the environmental impact of sea-going ships and inland waterway vessels.
- (35) Standardisation of shore-side electricity supply should not impede the use of systems already in place prior to the entry into force of this Directive. In particular, Member States should allow maintenance and upgrading of existing systems with a view to ensuring their efficient use throughout their lifespan, without requiring full compliance with the technical specifications set out in this Directive.
- (36) Electricity supply to stationary airplanes at airports can reduce fuel consumption and noise, improve air quality and reduce the impact on climate change. Member States should therefore ensure that the need to install electricity supply at airports is considered in their national policy frameworks.
- (37) Hydrogen-powered motor vehicles, including hydrogen-powered L-vehicles, have at present very low market penetration rates but a build-up of sufficient hydrogen refuelling infrastructure is essential in order to make larger-scale hydrogen-powered motor vehicle deployment possible.

- (38) Member States which decide to include hydrogen refuelling points in their national policy frameworks should ensure that publicly accessible infrastructure for the supply of hydrogen to motor vehicles is built up, ensuring circulation of hydrogen-powered motor vehicles within the networks determined by the Member States. Where appropriate, cross-border links should be taken into account with a view to enabling hydrogen-powered motor vehicles to circulate Union-wide.
- (39) As far as natural gas vehicles are concerned, around 3 000 refuelling points are presently in operation in the Union. Additional refuelling points could be put in place and supplied from the existing well-developed area covering natural gas distribution networks in the Union, provided that the quality of the gas is suitable for use in current and advanced technology gas vehicles. The current distribution network for natural gas could be supplemented with local refuelling points utilising locally produced biomethane.
- (40) Common infrastructure for natural gas requires common technical specifications for its hardware as well as for the gas quality. The quality of natural gas used in the Union depends on its origin, on its constituents, for example biomethane blended into natural gas, and on the way in which natural gas is handled through the distribution chain. Therefore, a spread of technical characteristics could prevent the optimal use of engines and reduce their energy efficiency. In this respect, the Technical Committee CEN/TC 408 - Project Committee is developing a set of quality specifications for natural gas used in transport and for the injection of biomethane into the natural gas grid.

- (41) Member States should ensure, by means of their national policy frameworks, that an appropriate number of refuelling points accessible to the public for the supply of CNG or compressed biomethane to motor vehicles is built up, in order to ensure that CNG motor vehicles can circulate in urban/suburban agglomerations and other densely populated areas as well as throughout the Union, at least along the existing TEN-T Core Network. When establishing their networks for the supply of CNG to motor vehicles, Member States should ensure that refuelling points accessible to the public are put in place, taking into account the minimum range of CNG motor vehicles. As an indication, the necessary average distance between refuelling points should be approximately 150 km. To ensure market functioning and interoperability, all CNG refuelling points for motor vehicles should provide gas of the quality required for use in current and advanced technology CNG vehicles.

(42) LNG is an attractive fuel alternative for vessels to meet the requirements for decreasing the sulphur content in marine fuels in the SO<sub>x</sub> Emission Control Areas which affect half of the ships sailing in European short sea shipping, as provided for by Directive 2012/33/EU of the European Parliament and of the Council<sup>1</sup>. A core network of refuelling points for LNG at maritime and inland ports should be available at least by the end of 2025 and 2030, respectively. Refuelling points for LNG include, inter alia, LNG terminals, tanks, mobile containers, bunker vessels and barges. The initial focus on the core network should not rule out the possibility of LNG also being made available in the longer term at ports outside the core network, in particular those ports that are important for vessels not engaged in transport operations. The decision on the location of the LNG refuelling points at ports should be based on a cost-benefit analysis including an examination of the environmental benefits. Applicable safety-related provisions should also be taken into account. The deployment of LNG infrastructure provided for in this Directive should not hamper the development of other potentially upcoming energy-efficient alternative fuels.

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<sup>1</sup> Directive 2012/33/EU of the European Parliament and of the Council of 21 November 2012 amending Council Directive 1999/32/EC as regards the sulphur content of marine fuels (OJ L 327, 27.11.2012, p. 1).

- (43) The Commission and the Member States should endeavour to modify the European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways, concluded at Geneva on 26 May 2000, as amended (ADN), to allow large-scale carriage of LNG on inland waterways. The amendments which this entails should be made applicable to all transport in the territory of the Union by adapting Annex III, Section III.1 of Directive 2008/68/EC of the European Parliament and of the Council<sup>1</sup>. Directive 2006/87/EC of the European Parliament and of the Council<sup>2</sup> should be amended, where necessary, to allow the efficient and safe use of LNG for propulsion of vessels on inland waterways. Proposed amendments should not conflict with the provisions of the ADN applicable in the Union territory by virtue of Annex III, Section III.1 of Directive 2008/68/EC.
- (44) Member States should ensure an appropriate distribution system between storage stations and refuelling points for LNG. As regards road transport, the availability and geographical location of loading points for LNG tank vehicles are essential to developing an economically sustainable LNG mobility.

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<sup>1</sup> Directive 2008/68/EC of the European Parliament and of the Council of 24 September 2008 on the inland transport of dangerous goods (OJ L 260, 30.9.2008, p. 13).

<sup>2</sup> Directive 2006/87/EC of the European Parliament and of the Council of 12 December 2006 laying down technical requirements for inland waterway vessels and repealing Council Directive 82/714/EEC (OJ L 389, 30.12.2006, p. 1).

- (45) LNG, including liquefied biomethane, might also offer a cost-efficient technology allowing heavy-duty vehicles to meet the stringent pollutant emission limits of Euro VI standards as referred to in Regulation (EU) No 595/2009 of the European Parliament and of the Council<sup>1</sup>.
- (46) The TEN-T Core Network should be the basis for the deployment of LNG infrastructure as it covers the main traffic flows and allows for network benefits. When establishing their networks for the supply of LNG to heavy-duty motor vehicles, Member States should ensure that refuelling points accessible to the public are put in place, at least along the existing TEN-T Core Network, within adequate distances taking into account the minimum range of LNG heavy-duty motor vehicles. As an indication, the necessary average distance between refuelling points should be approximately 400 km.
- (47) The deployment of the refuelling points for both LNG and CNG should be adequately coordinated with the implementation of the TEN-T Core Network.
- (48) An appropriate number of LNG and CNG refuelling points accessible to the public should be put in place by 31 December 2025, at least along the TEN-T Core Network existing at that date and, after that date, on the other parts of the TEN-T Core Network where these are made accessible to vehicles.

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<sup>1</sup> Regulation (EU) No 595/2009 of the European Parliament and of the Council of 18 June 2009 on type-approval of motor vehicles and engines with respect to emissions from heavy duty vehicles (Euro VI) and on access to vehicle repair and maintenance information and amending Regulation (EC) No 715/2007 and Directive 2007/46/EC and repealing Directives 80/1269/EEC, 2005/55/EC and 2005/78/EC (OJ L 188, 18.7.2009, p. 1).

- (49) In light of the increasing diversity in the type of fuels for motorised vehicles coupled with on-going growth in the road mobility of citizens across the Union, it is necessary to provide vehicle users with clear and easy-to-understand information on the fuels available at refuelling stations and on the compatibility of their vehicle with different fuels or recharging points on the Union market, without prejudice to Directive 2009/30/EC of the European Parliament and of the Council<sup>1</sup>. Member States should be able to decide to implement such information measures also in respect of vehicles in circulation.
- (50) In the absence of a European standard for a given alternative fuel, Member States should be allowed to use other standards for user information and labelling.
- (51) Simple and easy-to-compare information on the prices of different fuels could play an important role in enabling vehicle users to better evaluate the relative cost of individual fuels available on the market. Therefore, when fuel prices are displayed at a fuel station, in particular for natural gas and hydrogen, it should be possible for unit price comparison to conventional fuels, such as "1 petrol litre equivalent", to be displayed for information purposes.

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<sup>1</sup> Directive 2009/30/EC of the European Parliament and of the Council of 23 April 2009 amending Directive 98/70/EC as regards the specification of petrol, diesel and gas-oil and introducing a mechanism to monitor and reduce greenhouse gas emissions and amending Council Directive 1999/32/EC as regards the specification of fuel used by inland waterway vessels and repealing Directive 93/12/EEC (OJ L 140, 5.6.2009, p. 88).

- (52) In light of the increasing diversity in the type of fuels for motorised vehicles, it is necessary to provide vehicle users with data regarding the geographic location of the refuelling and recharging points accessible to the public of alternative fuels covered by this Directive. Therefore, when companies or internet sites provide this information, it should be accessible on an open and non-discriminatory basis to all users.
- (53) It is of particular importance for fact-based policy-making at all levels to collect best practice and coordinated data through monitoring activities, such as the Clean Vehicle Portal and the European Electro-mobility Observatory.
- (54) Key information concerning the availability of recharging and refuelling points and any other information necessary for Union-wide mobility should be included, where applicable, in traffic and travel information services as part of the intelligent transport system.
- (55) In order to ensure adaptation of the provisions of this Directive to market developments and technical progress, the power to adopt acts in accordance with Article 290 TFEU should be delegated to the Commission in respect of the technical specifications of refuelling and recharging points and relevant standards. It is of particular importance that the Commission follow its usual practice and carry out appropriate consultations during its preparatory work, including at expert level. The Commission, when preparing and drawing up delegated acts, should ensure a simultaneous, timely and appropriate transmission of relevant documents to the European Parliament and to the Council.



- (56) The International Maritime Organization (IMO) develops uniform and internationally recognised safety and environmental standards for maritime transport. Conflicts with international standards should be avoided in view of the global nature of maritime transport. Therefore, the Union should ensure that technical specifications for maritime transport adopted pursuant to this Directive are consistent with international rules adopted by the IMO.
- (57) Technical specifications for interoperability of recharging and refuelling points should be specified in European or international standards. The ESOs should adopt European standards in accordance with Article 10 of Regulation (EU) No 1025/2012 of the European Parliament and of the Council<sup>1</sup>, and those standards should be based on current international standards or ongoing international standardisation work, where applicable. For standards not yet adopted, the work should be based on standards under development: "Guidelines for systems and installations for supply of LNG as fuel to ships" (ISO/DTS 18683), "Natural gas fuelling stations – LNG stations for fuelling vehicles" (ISO/DIS 16924) and "Natural gas fuelling stations – CNG stations for fuelling vehicles" (ISO/DIS 16923). The Commission should be empowered to update the references to technical specifications given in European or international standards by means of delegated acts.

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<sup>1</sup> Regulation (EU) No 1025/2012 of the European Parliament and of the Council of 25 October 2012 on European Standardisation, amending Council Directives 89/686/EEC and 93/15/EEC and Directives 94/9/EC, 94/25/EC, 95/16/EC, 97/23/EC, 98/34/EC, 2004/22/EC, 2007/23/EC, 2009/23/EC and 2009/105/EC of the European Parliament and of the Council and repealing Decision 87/95/EEC and Decision No 1673/2006/EC of the European Parliament and of the Council (OJ L 316, 14.11.2012, p. 12).

- (58) In the application of this Directive, the Commission should consult relevant expert groups, including at least the European Expert Group on Future Transport Fuels, consisting of experts from industry and civil society, as well as the Joint Expert Group on Transport & Environment, which brings together experts from the Member States.
- (59) A group of experts called the European Sustainable Shipping Forum (ESSF) has been established by the Commission in order to assist it in implementing the Union's activities in the area of maritime transport sustainability. A sub-group on marine LNG has been set up under the ESSF, with the mandate of proposing to the ESSF the development of standards or rules for marine LNG as ship fuel covering technical, operational, safety, security, training and environmental aspects of LNG bunkering. A Committee for the Creation of Technical Standards (CESTE) has also been established to deal with the technical standards in the field of inland navigation. It is of particular importance that the Commission follow its usual practice and carry out consultations with experts, including the ESSF and the CESTE, before adopting delegated acts on requirements on the bunkering of LNG, including the safety aspects related thereto.
- (60) The Central Commission for the Navigation of the Rhine (CCNR) is an international organisation that addresses all issues concerning inland navigation. The Danube Commission is an international intergovernmental organisation that provides and develops free navigation on the Danube. It is of particular importance that the Commission follow its usual practice and carry out consultations with experts, including the CCNR and the Danube Commission, before adopting delegated acts on inland navigation.

- (61) When matters relating to this Directive, other than its implementation or infringements, are being examined by experts, thereby acting as expert groups, the European Parliament should receive full information and documentation and, where appropriate, an invitation to attend the relevant meetings.
- (62) In order to ensure uniform conditions for the implementation of this Directive, implementing powers should be conferred on the Commission to lay down common procedures and specifications. Those powers should be exercised in accordance with Regulation (EU) No 182/2011 of the European Parliament and of the Council<sup>1</sup>.
- (63) To ensure that alternative fuels for transport are of the quality required for use in current and future technology engines, and that they offer a high level of environmental performance with regard to CO<sub>2</sub> and other pollutant emissions, the Commission should monitor their introduction on the market. To that end, the Commission should, if appropriate, propose the necessary legal measures to ensure a harmonised high level of fuel quality throughout the Union.

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<sup>1</sup> Regulation (EU) No 182/2011 of the European Parliament and of the Council of 16 February 2011 laying down the rules and general principles concerning mechanisms for control by the Member States of the Commission's exercise of implementing powers (OJ L 55, 28.2.2011, p. 13).

- (64) In order to achieve the broadest possible use of alternative fuels for transport, while ensuring technological neutrality, and to promote sustainable electric mobility throughout the Union, the Commission should, if it considers appropriate, take suitable measures, such as the adoption of an Action Plan for the implementation of the strategy set out in the Commission Communication entitled "Clean Power for Transport: A European alternative fuels strategy". For this purpose, the Commission could take into account individual market needs and developments in the Member States.
- (65) Since the objective of this Directive, namely to promote a broad market development of alternative fuels, cannot be sufficiently achieved by the Member States individually, but can rather, by reason of the need for action to meet the demand for a critical mass of alternatively fuelled vehicles and for cost-efficient developments by European industry, and to allow Union-wide mobility of alternatively fuelled vehicles, be better achieved at Union level, the Union may adopt measures, in accordance with the principle of subsidiarity as set out in Article 5 of the Treaty on European Union. In accordance with the principle of proportionality, as set out in that Article, this Directive does not go beyond what is necessary in order to achieve that objective,

HAVE ADOPTED THIS DIRECTIVE:

*Article 1*  
*Subject matter*

This Directive establishes a common framework of measures for the deployment of alternative fuels infrastructure in the Union in order to minimise dependence on oil and to mitigate the environmental impact of transport. This Directive sets out minimum requirements for the building-up of alternative fuels infrastructure, including recharging points for electric vehicles and refuelling points for natural gas (LNG and CNG) and hydrogen, to be implemented by means of Member States' national policy frameworks, as well as common technical specifications for such recharging and refuelling points, and user information requirements.

*Article 2*  
*Definitions*

For the purpose of this Directive, the following definitions apply:

- (1) "alternative fuels" means fuels or power sources which serve, at least partly, as a substitute for fossil oil sources in the energy supply to transport and which have the potential to contribute to its decarbonisation and enhance the environmental performance of the transport sector. They include, inter alia:
- electricity,
  - hydrogen,

- biofuels as defined in point (i) of Article 2 of Directive 2009/28/EC,
  - synthetic and paraffinic fuels,
  - natural gas, including biomethane, in gaseous form (compressed natural gas (CNG)) and liquefied form (liquefied natural gas (LNG)), and
  - liquefied petroleum gas (LPG);
- (2) "electric vehicle" means a motor vehicle equipped with a powertrain containing at least one non-peripheral electric machine as energy converter with an electric rechargeable energy storage system, which can be recharged externally;
- (3) "recharging point" means an interface that is capable of charging one electric vehicle at a time or exchanging a battery of one electric vehicle at a time;
- (4) "normal power recharging point" means a recharging point that allows for a transfer of electricity to an electric vehicle with a power less than or equal to 22 kW, excluding devices with a power less than or equal to 3,7 kW, which are installed in private households or the primary purpose of which is not recharging electric vehicles, and which are not accessible to the public;
- (5) "high power recharging point" means a recharging point that allows for a transfer of electricity to an electric vehicle with a power of more than 22 kW;
- (6) "shore-side electricity supply" means the provision of shore-side electrical power through a standardised interface to seagoing ships or inland waterway vessels at berth;

- (7) "recharging or refuelling point accessible to the public" means a recharging or refuelling point to supply an alternative fuel which provides Union-wide non-discriminatory access to users. Non-discriminatory access may include different terms of authentication, use and payment;
- (8) "refuelling point" means a refuelling facility for the provision of any fuel with the exception of LNG, through a fixed or a mobile installation;
- (9) "refuelling point for LNG" means a refuelling facility for the provision of LNG, consisting of either a fixed or mobile facility, offshore facility, or other system.

### *Article 3*

#### *National policy frameworks*

1. Each Member State shall adopt a national policy framework for the development of the market as regards alternative fuels in the transport sector and the deployment of the relevant infrastructure. It shall contain at least the following elements:
  - an assessment of the current state and future development of the market as regards alternative fuels in the transport sector, including in light of their possible simultaneous and combined use, and of the development of alternative fuels infrastructure, considering, where relevant, cross-border continuity;

- national targets and objectives, pursuant to Articles 4(1), 4(3), 4(5), 6(1), 6(2), 6(3), 6(4), 6(6), 6(7), 6(8) and, where applicable, Article 5(1), for the deployment of alternative fuels infrastructure. Those national targets and objectives shall be established and may be revised on the basis of an assessment of national, regional or Union-wide demand, while ensuring compliance with the minimum infrastructure requirements set out in this Directive;
- measures necessary to ensure that the national targets and the objectives contained in the national policy framework are reached;
- measures that can promote the deployment of alternative fuels infrastructure in public transport services;
- designation of the urban/suburban agglomerations, of other densely populated areas and of networks which, subject to market needs, are to be equipped with recharging points accessible to the public in accordance with Article 4(1);
- designation of the urban/suburban agglomerations, of other densely populated areas and of networks which, subject to market needs, are to be equipped with CNG refuelling points in accordance with Article 6(7);
- an assessment of the need to install refuelling points for LNG in ports outside the TEN-T Core Network;
- consideration of the need to install electricity supply at airports for use by stationary airplanes.



2. Member States shall ensure that national policy frameworks take into account the needs of the different transport modes existing on their territory, including those for which limited alternatives to fossil fuels are available.
3. National policy frameworks shall take into account, as appropriate, the interests of regional and local authorities, as well as those of the stakeholders concerned.
4. Where necessary, Member States shall cooperate, by means of consultations or joint policy frameworks, to ensure that the measures required to achieve the objectives of this Directive are coherent and coordinated.
5. Support measures for alternative fuels infrastructure shall be implemented in compliance with the State aid rules contained in the TFEU.
6. National policy frameworks shall be in line with the Union's environmental and climate-protection legislation in force.
7. Member States shall notify their national policy frameworks to the Commission by ...\*.

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\* OJ: please insert the date: 24 months after the entry into force of this Directive.

8. Based on the national policy frameworks, the Commission shall publish and regularly update information on the national targets and the objectives submitted by each Member State regarding:

- the number of recharging points accessible to the public;
- refuelling points for LNG at maritime and inland ports;
- refuelling points for LNG accessible to the public for motor vehicles;
- CNG refuelling points accessible to the public for motor vehicles.

Where applicable, information regarding the following shall also be published:

- hydrogen refuelling points accessible to the public;
- infrastructure for shore-side electricity supply in maritime and inland ports;
- infrastructure for electricity supply for stationary airplanes.

9. The Commission shall assist Member States in the reporting on the national policy frameworks by means of the guidelines referred to in Article 10(4), shall assess the coherence of the national policy frameworks at Union level and shall assist Member States in the cooperation process provided for in paragraph 4 of this Article.

*Article 4*  
*Electricity supply for transport*

1. Member States shall ensure, by means of their national policy frameworks, that an appropriate number of recharging points accessible to the public are put in place by 31 December 2020, in order to ensure that electric vehicles can circulate at least in urban/suburban agglomerations and other densely populated areas, and, where appropriate, within networks determined by the Member States. The number of such recharging points shall be established taking into consideration, inter alia, the number of electric vehicles estimated to be registered by the end of 2020, as indicated in their national policy frameworks, as well as best practices and recommendations issued by the Commission. Particular needs related to the installation of recharging points accessible to the public at public transport stations shall be taken into account, where appropriate.
2. The Commission shall assess the application of the requirements in paragraph 1 and, as appropriate, submit a proposal to amend this Directive, taking into account the development of the market for electric vehicles, in order to ensure that an additional number of recharging points accessible to the public are put in place in each Member State by 31 December 2025, at least on the TEN-T Core Network, in urban/suburban agglomerations and other densely populated areas.
3. Member States shall also take measures within their national policy frameworks to encourage and facilitate the deployment of recharging points not accessible to the public.

4. Member States shall ensure that normal power recharging points for electric vehicles, excluding wireless or inductive units, deployed or renewed as from ...\*, comply at least with the technical specifications set out in point 1.1 of Annex II and with specific safety requirements in force at national level.

Member States shall ensure that high power recharging points for electric vehicles, excluding wireless or inductive units, deployed or renewed as from ...\*, comply at least with the technical specifications set out in point 1.2 of Annex II.

5. Member States shall ensure that the need for shore-side electricity supply for inland waterway vessels and seagoing ships in maritime and inland ports is assessed in their national policy frameworks. Such shore-side electricity supply shall be installed as a priority in ports of the TEN-T Core Network, and in other ports, by 31 December 2025, unless there is no demand and the costs are disproportionate to the benefits, including environmental benefits.

6. Member States shall ensure that shore-side electricity supply installations for maritime transport, deployed or renewed as from ...\*, comply with the technical specifications set out in point 1.7 of Annex II.

7. The recharging of electric vehicles at recharging points accessible to the public shall, if technically feasible and economically reasonable, make use of intelligent metering systems as defined in point (28) of Article 2 of Directive [2012/27/EU](#) and shall comply with the requirements laid down in Article 9(2) of that Directive.

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\* OJ: please insert the date: 36 months after the entry into force of this Directive.

8. Member States shall ensure that operators of recharging points accessible to the public are free to purchase electricity from any Union electricity supplier, subject to the supplier's agreement. The operators of recharging points shall be allowed to provide electric vehicle recharging services to customers on a contractual basis, including in the name and on behalf of other service providers.
9. All recharging points accessible to the public shall also provide for the possibility for electric vehicle users to recharge on an ad hoc basis without entering into a contract with the electricity supplier or operator concerned.
10. Member States shall ensure that prices charged by the operators of recharging points accessible to the public are reasonable, easily and clearly comparable, transparent and non-discriminatory.
11. Member States shall ensure that distribution system operators cooperate on a non-discriminatory basis with any person establishing or operating recharging points accessible to the public.
12. Member States shall ensure that the legal framework permits the electricity supply for a recharging point to be the subject of a contract with a supplier other than the entity supplying electricity to the household or premises where such a recharging point is located.

13. Without prejudice to Regulation (EU) No 1025/2012, the Union shall pursue the development by the appropriate standardisation organisations of European standards containing detailed technical specifications for wireless recharging points and battery swapping for motor vehicles, and for recharging points for L-category motor vehicles and electric buses.
14. The Commission shall be empowered to adopt delegated acts in accordance with Article 8 to:
- (a) supplement this Article and points 1.3, 1.4, 1.5, 1.6 and 1.8 of Annex II in order to require compliance of the infrastructures to be deployed or renewed with the technical specifications contained in the European standards to be developed pursuant to paragraph 13 of this Article, where the relevant ESOs have recommended only one technical solution with technical specifications as described in a relevant European standard;
  - (b) update the references to the standards referred to in the technical specifications set out in point 1 of Annex II where those standards are replaced by new versions thereof adopted by the relevant standardisation organisations.

It is of particular importance that the Commission follow its usual practice and carry out consultations with experts, including Member States' experts, before adopting those delegated acts.

Those delegated acts shall provide for transitional periods of at least 24 months before the technical specifications contained therein, or amendments thereof, become binding on the infrastructure to be deployed or renewed.

#### *Article 5*

#### *Hydrogen supply for road transport*

1. Member States which decide to include hydrogen refuelling points accessible to the public in their national policy frameworks shall ensure that, by 31 December 2025, an appropriate number of such points are available, to ensure the circulation of hydrogen-powered motor vehicles, including fuel cell vehicles, within networks determined by those Member States, including, where appropriate, cross-border links.
2. Member States shall ensure that hydrogen refuelling points accessible to the public deployed or renewed as from ... \* comply with the technical specifications set out in point 2 of Annex II.
3. The Commission shall be empowered to adopt delegated acts in accordance with Article 8 to update the references to the standards referred to in the technical specifications set out in point 2 of Annex II where those standards are replaced by new versions thereof adopted by the relevant standardisation organisations.

It is of particular importance that the Commission follow its usual practice and carry out consultations with experts, including Member States' experts, before adopting those delegated acts.

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\* OJ: please insert the date: 36 months after the entry into force of this Directive.

Those delegated acts shall provide for transitional periods of at least 24 months before the technical specifications contained therein, or amendments thereof, become binding on the infrastructure to be deployed or renewed.

### *Article 6*

#### *Natural gas supply for transport*

1. Member States shall ensure, by means of their national policy frameworks, that an appropriate number of refuelling points for LNG are put in place at maritime ports, to enable LNG inland waterway vessels or seagoing ships to circulate throughout the TEN-T Core Network by 31 December 2025. Member States shall cooperate with neighbouring Member States where necessary to ensure adequate coverage of the TEN-T Core Network.
2. Member States shall ensure, by means of their national policy frameworks, that an appropriate number of refuelling points for LNG are put in place at inland ports, to enable LNG inland waterway vessels or seagoing ships to circulate throughout the TEN-T Core Network by 31 December 2030. Member States shall cooperate with neighbouring Member States where necessary to ensure adequate coverage of the TEN-T Core Network.
3. Member States shall designate in their national policy frameworks the maritime and inland ports that are to provide access to the refuelling points for LNG referred to in paragraphs 1 and 2, also taking into consideration actual market needs.



4. Member States shall ensure, by means of their national policy frameworks, that an appropriate number of refuelling points for LNG accessible to the public are put in place by 31 December 2025, at least along the existing TEN-T Core Network, in order to ensure that LNG heavy-duty motor vehicles can circulate throughout the Union, where there is demand, unless the costs are disproportionate to the benefits, including environmental benefits.
5. The Commission shall assess the application of the requirement in paragraph 4 and, as appropriate, submit a proposal to amend this Directive by 31 December 2027, taking into account the LNG heavy-duty motor vehicles market, in order to ensure that an appropriate number of refuelling points for LNG accessible to the public are put in place in each Member State.
6. Member States shall ensure that an appropriate LNG distribution system is available in their territory, including loading facilities for LNG tank vehicles, in order to supply the refuelling points referred to in paragraphs 1, 2 and 4. By way of derogation, neighbouring Member States may, in the context of their national policy frameworks, form a pool for the purposes of fulfilling this requirement. Pooling agreements shall be the subject of the reporting obligations of the Member States under this Directive.
7. Member States shall ensure, by means of their national policy frameworks, that an appropriate number of CNG refuelling points accessible to the public are put in place by 31 December 2020, in order to ensure, in line with the sixth indent of Article 3(1), that CNG motor vehicles can circulate in urban/suburban agglomerations and other densely populated areas, and, where appropriate, within networks determined by the Member States.

8. Member States shall ensure, by means of their national policy frameworks, that an appropriate number of CNG refuelling points accessible to the public are put in place by 31 December 2025, at least along the existing TEN-T Core Network, to ensure that CNG motor vehicles can circulate throughout the Union.
9. Member States shall ensure that CNG refuelling points for motor vehicles deployed or renewed as from ...\* comply with the technical specifications set out in point 3.4 of Annex II.
10. Without prejudice to Regulation (EU) No 1025/2012, the Union shall pursue the development by the relevant European or international standardisation organisations of standards, including detailed technical specifications, for:
  - (a) refuelling points for LNG for maritime and inland waterway transport;
  - (b) refuelling points for LNG and CNG motor vehicles.

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\* OJ: please insert the date: 36 months after the entry into force of this Directive.

11. The Commission shall be empowered to adopt delegated acts in accordance with Article 8 to:
- (a) supplement this Article and points 3.1, 3.2 and 3.4 of Annex II, in order to require compliance of the infrastructures to be deployed or renewed with the technical specifications contained in the standards to be developed pursuant to points (a) and (b) of paragraph 10 of this Article, where the relevant ESOs have recommended only one technical solution with technical specifications as described in a relevant European standard compatible with the relevant international standards, where applicable;
  - (b) update the references to the standards referred to in the technical specifications set out or to be set out in point 3 of Annex II where those standards are replaced by new versions thereof adopted by the relevant European or international standardisation organisations.

It is of particular importance that the Commission follow its usual practice and carry out consultations with experts, including Member States' experts, before adopting those delegated acts.

Those delegated acts shall provide for transitional periods of at least 24 months before the technical specifications contained therein, or amendments thereof, become binding on the infrastructure to be deployed or renewed.

12. In the absence of a standard containing detailed technical specifications for refuelling points for LNG for maritime and inland waterway transport, referred to in point (a) of paragraph 10, and in particular in the absence of those specifications relating to bunkering of LNG, the Commission, taking into account the work ongoing within the IMO, the CCNR, the Danube Commission and other relevant international fora, shall be empowered to adopt delegated acts in accordance with Article 8 to lay down:

- requirements for interfaces of bunker transfer of LNG in maritime and inland waterway transport,
- requirements related to safety aspects of the onshore storage and bunkering procedure of LNG in maritime and inland waterway transport.

It is of particular importance that the Commission follow its usual practice and carry out consultations with relevant groups of experts on maritime transport and on inland waterway transport, including experts from national maritime or inland navigation authorities, before adopting those delegated acts.

*Article 7*  
*User information*

1. Without prejudice to Directive 2009/30/EC, Member States shall ensure that relevant, consistent and clear information is made available as regards those motor vehicles which can be regularly fuelled with individual fuels placed on the market, or recharged by recharging points. Such information shall be made available in motor vehicle manuals, at refuelling and recharging points, on motor vehicles and in motor vehicle dealerships in their territory. This requirement shall apply to all motor vehicles, and their motor vehicle manuals, placed on the market after ...\*.
  
2. The supply of information referred to in paragraph 1 shall be based on the labelling provisions regarding fuel compliance under standards of the ESOs setting the technical specifications of fuels. Where such standards refer to a graphical expression, including a colour coding scheme, the graphical expression shall be simple and easy to understand, and it shall be placed in a clearly visible manner:
  - (a) on corresponding pumps and their nozzles at all refuelling points, as from the date on which fuels are placed on the market;
  
  - (b) on or in the immediate proximity of all fuel tanks' filling caps of motor vehicles recommended and compatible with that fuel and in motor vehicle manuals, when such motor vehicles are placed on the market after ...\*.

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\* OJ: please insert the date: 24 months after the entry into force of this Directive.

3. Where appropriate, and in particular for natural gas and hydrogen, when fuel prices are displayed at a fuel station, a comparison between the relevant unit prices shall be displayed for information purposes. The display of this information shall not mislead or confuse the user.

In order to increase consumer awareness and provide for fuel price transparency in a consistent way across the Union, the Commission shall be empowered to adopt, by means of implementing acts, a common methodology for alternative fuels unit price comparison.

4. Where ESO standards setting technical specifications of a fuel do not include labelling provisions for compliance with the standards in question, where the labelling provisions do not refer to a graphical expression including colour coding schemes, or where the labelling provisions are not suitable for attaining the objectives of this Directive, the Commission may, for the purposes of the uniform implementation of paragraphs 1 and 2, mandate ESOs to develop compatibility labelling specifications, or may adopt implementing acts determining the graphical expression, including a colour coding scheme, of compatibility for fuels introduced in the Union market which reach the level of 1 % of the total volume of sales, in the assessment of the Commission, in more than one Member State.
5. If labelling provisions of the respective ESO standards are updated, if implementing acts regarding the labelling are adopted or if new ESO standards for alternative fuels are developed as necessary, the corresponding labelling requirements shall apply to all refuelling and recharging points and motor vehicles registered on the territory of the Member States as of 24 months after their respective updating or adoption.

6. The implementing acts referred to in this Article shall be adopted in accordance with the examination procedure referred to in Article 9(2).
7. Member States shall ensure that, when available, the data indicating the geographic location of the refuelling and recharging points accessible to the public of alternative fuels covered by this Directive are accessible on an open and non-discriminatory basis to all users. For recharging points, such data, when available, may include information on real-time accessibility as well as historical and real-time charging information.

### *Article 8*

#### *Exercise of the delegation*

1. The power to adopt delegated acts is conferred on the Commission subject to the conditions laid down in this Article.
2. The power to adopt delegated acts referred to in Articles 4, 5 and 6 shall be conferred on the Commission for a period of five years from ...\*. The Commission shall draw up a report in respect of the delegation of power not later than nine months before the end of the five-year period. The delegation of power shall be tacitly extended for periods of an identical duration, unless the European Parliament or the Council opposes such extension not later than three months before the end of each period.

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\* OJ: please insert the date of entry into force of this Directive.

3. The delegation of power referred in Articles 4, 5 and 6 may be revoked at any time by the European Parliament or by the Council. A decision to revoke shall put an end to the delegation of the power specified in that decision. It shall take effect the day following the publication of the decision in the *Official Journal of the European Union* or at a later date specified therein. It shall not affect the validity of any delegated acts already in force.
4. As soon as it adopts a delegated act, the Commission shall notify it simultaneously to the European Parliament and to the Council.
5. A delegated act adopted pursuant to Articles 4, 5 and 6 shall enter into force only if no objection has been expressed either by the European Parliament or the Council within a period of two months of notification of that act to the European Parliament and the Council or if, before the expiry of that period, the European Parliament and the Council have both informed the Commission that they will not object. That period shall be extended by three months at the initiative of the European Parliament or of the Council.

#### *Article 9*

#### *Committee procedure*

1. The Commission shall be assisted by a committee. That committee shall be a committee within the meaning of Regulation (EU) No 182/2011.



2. Where reference is made to this paragraph, Article 5 of Regulation (EU) No 182/2011 shall apply. Where the committee delivers no opinion, the Commission shall not adopt the draft implementing act and the third subparagraph of Article 5(4) of Regulation (EU) No 182/2011 shall apply.
3. Where the opinion of the committee is to be obtained by written procedure, that procedure shall be terminated without result when, within the time-limit for delivery of the opinion, the chair of the committee so decides or a simple majority of committee members so request.

### *Article 10*

#### *Reporting and review*

1. Each Member State shall submit to the Commission a report on the implementation of its national policy framework by ...\*, and every three years thereafter. Those reports shall cover the information listed in Annex I and shall, where appropriate, include a relevant justification regarding the level of attainment of the national targets and objectives referred to in Article 3(1).
2. By ...\*\*, the Commission shall submit to the European Parliament and to the Council a report on the assessment of the national policy frameworks and their coherence at Union level, including an evaluation of the level of attainment of the national targets and objectives referred to in Article 3(1).

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\* OJ: please insert the date: 60 months after the entry into force of this Directive.

\*\* OJ: please insert the date: 36 months after the entry into force of this Directive.

3. The Commission shall submit a report on the application of this Directive to the European Parliament and to the Council every three years with effect from ...\*.

The Commission report shall contain the following elements:

- an assessment of the actions taken by Member States;
- an assessment of the effects of this Directive on the development of the market as regards alternative fuels infrastructure and its contribution to the market of alternative fuels for transport, as well as its impact on the economy and the environment;
- information on technical progress and the development of the market as regards alternative fuels in the transport sector and of the relevant infrastructure covered by this Directive and of any other alternative fuel.

The Commission may outline examples of best practices and make appropriate recommendations.

The Commission report shall also assess the requirements and the dates set out in this Directive in respect of the infrastructure build-up and implementation of specifications, taking into account the technical, economic and market developments of the respective alternative fuels, accompanied if appropriate by a legislative proposal.

4. The Commission shall adopt guidelines concerning the reporting by the Member States of the elements listed in Annex I.

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\* OJ: please insert the date: 72 months after the entry into force of this Directive.

5. By 31 December 2020, the Commission shall review the implementation of this Directive, and, as appropriate, submit a proposal to amend it by laying down new common technical specifications for alternative fuels infrastructure within the scope of this Directive.
6. By 31 December 2018, the Commission shall, if it considers it appropriate, adopt an Action Plan for the implementation of the strategy set out in the Commission Communication entitled "Clean Power for Transport: A European alternative fuels strategy" in order to achieve the broadest possible use of alternative fuels for transport, while ensuring technological neutrality, and to promote sustainable electric mobility throughout the Union. To that end, it may take into account individual market needs and developments in the Member States.

*Article 11*  
*Transposition*

1. Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive by ...\*. They shall forthwith inform the Commission thereof.
2. When Member States adopt those provisions, they shall contain a reference to this Directive, or be accompanied by such a reference on the occasion of their official publication. The methods of making such reference shall be laid down by Member States.
3. Member States shall communicate to the Commission the text of the main provisions of national law which they adopt in the field covered by this Directive.

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\* OJ: please insert the date: 24 months after the entry into force of this Directive.

*Article 12*  
*Entry into force*

This Directive shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

*Article 13*  
*Addressees*

This Directive is addressed to the Member States.

Done at ...,

*For the European Parliament*  
*The President*

*For the Council*  
*The President*

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## ANNEX I

### Report

The report shall contain a description of the measures taken in a Member State in support of alternative fuels infrastructure build-up. The report shall include at least the following elements:

1. Legal measures

Information on legal measures, which may consist of legislative, regulatory or administrative measures to support the build-up of alternative fuels infrastructure, such as building permits, parking lot permits, certification of the environmental performance of businesses and fuel stations concessions.

2. Policy measures supporting the implementation of the national policy framework

Information on those measures shall include the following elements:

- direct incentives for the purchase of means of transport using alternative fuels or for building the infrastructure;
- availability of tax incentives to promote means of transport using alternative fuels and the relevant infrastructure;
- use of public procurement in support of alternative fuels, including joint procurement;

- demand-side non-financial incentives, for example preferential access to restricted areas, parking policy and dedicated lanes;
- consideration of the need for renewable jet fuel refuelling points in airports within the TEN-T Core Network;
- technical and administrative procedures and legislation with regard to the authorisation of alternative fuels supply, in order to facilitate the authorisation process.

### 3. Deployment and manufacturing support

Annual public budget allocated for alternative fuels infrastructure deployment, broken down by alternative fuel and by transport mode (road, rail, water and air).

Annual public budget allocated to support manufacturing plants for alternative fuels technologies, broken down by alternative fuel and by transport mode.

Consideration of any particular needs during the initial phase of the deployment of alternative fuels infrastructures.

### 4. Research, technological development and demonstration (RTD&D)

Annual public budget allocated to support alternative fuels RTD&D, broken down by fuel and by transport mode.

5. Targets and objectives

- estimation of the number of alternative fuel vehicles expected by 2020, 2025 and 2030;
- level of achievement of the national objectives for the deployment of alternative fuels in the different transport modes (road, rail, water and air);
- level of achievement of the national targets, year by year, for the deployment of alternative fuels infrastructure in the different transport modes;
- information on the methodology applied to take account of the charging efficiency of high power recharging points.

6. Alternative fuels infrastructure developments

Changes in supply (additional infrastructure capacity) and demand (capacity actually used).

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## ANNEX II

### Technical specifications

#### 1. Technical specifications for recharging points

##### 1.1 Normal power recharging points for motor vehicles

Alternating current (AC) normal power recharging points for electric vehicles shall be equipped, for interoperability purposes, at least with socket outlets or vehicle connectors of Type 2 as described in standard EN62196-2. While maintaining the Type 2 compatibility, those socket outlets may be equipped with features such as mechanical shutters.

##### 1.2 High power recharging points for motor vehicles

Alternating current (AC) high power recharging points for electric vehicles shall be equipped, for interoperability purposes, at least with connectors of Type 2 as described in standard EN62196-2.

Direct current (DC) high power recharging points for electric vehicles shall be equipped, for interoperability purposes, at least with connectors of the combined charging system "Combo 2" as described in standard EN62196-3.

##### 1.3 Wireless recharging points for motor vehicles

##### 1.4 Battery swapping for motor vehicles



1.5 Recharging points for L-category motor vehicles

1.6 Recharging points for electric buses

1.7 Shore-side electricity supply for seagoing ships

Shore-side electricity supply for seagoing ships, including the design, installation and testing of the systems, shall comply with the technical specifications of the IEC/ISO/IEEE 80005-1 standard.

1.8 Shore-side electricity supply for inland waterway vessels

2. Technical specifications for hydrogen refuelling points for motor vehicles

2.1. Outdoor hydrogen refuelling points dispensing gaseous hydrogen used as fuel on board motor vehicles shall comply with the technical specifications of the ISO/TS 20100 Gaseous Hydrogen Fuelling specification.

2.2. The hydrogen purity dispensed by hydrogen refuelling points shall comply with the technical specifications included in the ISO 14687-2 standard.

2.3. Hydrogen refuelling points shall employ fuelling algorithms and equipment complying with the ISO/TS 20100 Gaseous Hydrogen Fuelling specification.

2.4. Connectors for motor vehicles for the refuelling of gaseous hydrogen shall comply with the ISO 17268 gaseous hydrogen motor vehicle refuelling connection devices standard.

3. Technical specifications for natural gas refuelling points
  - 3.1. Technical specifications for refuelling points for LNG for inland waterway vessels or sea-going ships
  - 3.2. Technical specifications for refuelling points for LNG for motor vehicles
  - 3.3. Technical specifications for CNG connectors/receptacles

CNG connectors/receptacles shall comply with UNECE Regulation No. 110 (referring to ISO 14469, parts I and II).

- 3.4. Technical specifications for CNG refuelling points for motor vehicles
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