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

Delegations will find enclosed, for information, the text on which the Transport, Telecommunications and Energy Council (Transport) reached a general approach on the above proposal at its meeting on 2 June 2022.

ANNEX

Proposal for a

REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

on the deployment of alternative fuels infrastructure, and repealing Directive 2014/94/EU of the European Parliament and of the Council

(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[1],

Having regard to the opinion of the Committee of the Regions[2],

Acting in accordance with the ordinary legislative procedure,

Whereas:

[1] OJ C , , p. .
[2] OJ C , , p. .

(1) Directive 2014/94/EU[3] laid down a framework for the deployment of alternative fuels infrastructure. The Commission Communication on the application of that Directive[4] points to the uneven development of recharging and refuelling infrastructure across the Union and the lack of interoperability and user friendliness. It notes that the absence of a clear common methodology for setting targets and adopting measures under the National Policy Frameworks required by Directive 2014/94/EU has led to a situation whereby the level of ambition in target setting and supporting policies varies greatly among Member States.

(2) Various instruments of Union law already set targets for renewable fuels. Directive 2018/2001/EU[5] for instance set a market share target of 14 % of renewables in transport fuels.

(3) Regulation (EU) 2019/631[6] and Regulation (EU) 2019/1242[7] already set CO_2 emission performance standards for new passenger cars and for new light commercial vehicles as well as for certain heavy-duty vehicles. Those instruments should accelerate the uptake in particular of zero-emission vehicles and thereby create demand for recharging and refuelling infrastructure.

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3 Directive 2014/94/EU of the European Parliament and of the Council of 22 October 2014 on the deployment of alternative fuels infrastructure (OJ L 307, 28.10.2014, p. 1).

4 COM(2020)789 final.

5 Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources (OJ L 328, 21.12.2018, p. 82).

6 Regulation (EU) 2019/631 of the European Parliament and of the Council of 17 April 2019 setting CO_2 emission performance standards for new passenger cars and for new light commercial vehicles, and repealing Regulations (EC) No 443/2009 and (EU) No 510/2011 (OJ L 111, 25.4.2019, p. 13).

7 Regulation (EU) 2019/1242 of the European Parliament and of the Council of 20 June 2019 setting CO_2 emission performance standards for new heavy-duty vehicles and amending Regulations (EC) No 595/2009 and (EU) 2018/956 of the European Parliament and of the Council and Council Directive 96/53/EC (OJ L 198, 25.7.2019, p. 202).

(4) The initiatives on ReFuelEU aviation[8] and FuelEU maritime[9] should boost the production and uptake of sustainable alternative fuels in aviation and maritime transport. While the fuel use requirements for the sustainable aviation fuels can largely rely on the existing refuelling infrastructure, investments are needed for the electricity supply of stationary aircraft. The FuelEU maritime initiative sets requirements in particular for the use of on shore power that can only be fulfilled if an adequate level of shore-side electricity supply is deployed in TEN-T ports. However those initiatives do not contain any provisions on the required fuel infrastructure which are a prerequisite that the targets can be met.

(5) Therefore all modes of transport should be addressed in one instrument which should take into account a variety of alternative fuels. The use of zero-emission powertrain technologies is at different stages of maturity in the different modes of transport. In particular, in the road sector, a rapid uptake of battery-electric and plug-in hybrid vehicles is taking place. Hydrogen fuel-cell road vehicles are available to markets, as well. In addition, smaller hydrogen and battery electric vessels and hydrogen fuel-cell trains are currently being deployed in different projects and in first commercial operations, with full commercial roll out expected in the next years. In contrast, the aviation and waterborne sectors continue to be dependent on liquid and gaseous fuels, as zero- and low-emission powertrain solutions are expected to enter the market only around 2030 and in particular for the aviation sector even later, with full commercialisation taking its time. The use of fossil gaseous or liquid fuels is only possible if it is clearly embedded into a clear decarbonisation pathway that is in line with the long-term objective of climate neutrality in the Union, requiring increasing blending with or replacement by renewable fuels such as bio-methane, advanced biofuels or renewable and low-carbon synthetic, paraffinic, gaseous and liquid fuels.

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[8] COM(2021)561.
[9] COM(2021)562.

(6) Such biofuels, paraffinic, and synthetic fuels, substituting diesel, petrol and jet fuel, can be produced from different feedstock and can be blended into fossil fuels at very high blending ratios. They can be technically used with the current vehicle technology with minor adaptations. Renewable methanol can also be used for inland navigation and short-sea shipping. Synthetic and paraffinic fuels have a potential to reduce the use of fossil fuel sources in the energy supply to transport. All of these fuels can be distributed, stored and used with the existing infrastructure or where necessary with infrastructure of the same kind.

(7) Liquefied methane is likely to play a continued role in maritime transport, where there is currently no economically viable zero-emission powertrain technology available. The Communication on the Smart and Sustainable Mobility Strategy points to zero-emission seagoing ships becoming market ready by 2030. Fleet conversion should take place gradually due to the long lifetime of the ships. Contrary to maritime transport, for inland waterways, with normally smaller vessels and shorter distances, zero-emission powertrain technologies, such as hydrogen and electricity, should enter the markets more quickly. Liquefied methane is expected to no longer play a significant role in that sector. Transport fuels such as liquefied methane need increasingly to be decarbonised by blending/substituting with liquefied biomethane or renewable and low-carbon synthetic gaseous e-fuels (e-gas) for instance. Those decarbonised fuels can be used in the same infrastructure as gaseous fossil fuels thereby allowing for a gradual shift towards decarbonised fuels.

(8) In the heavy-duty road transport sector, liquefied methane trucks are fully mature. On the one hand, the common scenarios underpinning the Sustainable and Smart Mobility Strategy and the Climate Target Plan as well as the revised “Fit for 55” modelling scenarios suggest some limited role of gaseous fuels that will increasingly be decarbonised in heavy-duty road transport especially in the long haul segment. Furthermore, LPG and CNG vehicles for which already a sufficient infrastructure network exists across the Union are expected to gradually be replaced by zero emission drivetrains and therefore only a limited targeted policy for liquefied methane infrastructure deployment that can equally supply decarbonised fuels is considered necessary to close remaining gaps in the main networks.

(8a) This Regulation should lay down mandatory minimum targets for the deployment of publicly accessible recharging or refuelling infrastructures for road vehicles.

(8b) Publicly accessible recharging or refuelling points include, for example, privately owned recharging or refuelling points accessible to the public that are located on public or private properties, such as public parkings or parkings of supermarkets. A recharging or refuelling point located on a private property that is accessible to the general public should be considered as publicly accessible also in cases where access is restricted to a certain general group of users, for example to clients. Recharging or refuelling points for car-sharing schemes should only be considered accessible to the public if they explicitly allow access for third party users. Recharging or refuelling points located on private properties, access to which is restricted to a limited, determinate circle of persons, such as parking lots in office buildings to which only employees or authorised persons have access, should not be considered as publicly accessible recharging or refuelling points.

(8c) A recharging station is the physical installation for the recharging of electric vehicles. Every station has a theoretical maximum power output, expressed in kW. Every station has at least one recharging point that can serve only one vehicle at a time. The number of recharging points at a recharging station determine the number of vehicles that can be recharged at that station at any given time. Where more than one vehicle recharges at that recharging station at a given time, the maximum power output is distributed to the different recharging points, such that the power provided at each individual recharging point is lower than the power output of that station. A recharging pool consists of one or more recharging stations at a specific location, including, as the case may be, the dedicated parking lots adjacent to them. For the targets set in this Regulation for recharging pools, the minimum power output required for those recharging pools could be provided by one or more recharging stations.

(9) The deployment of publicly accessible recharging infrastructure for light-duty electric vehicles has been uneven across the Union. Continued uneven distribution would jeopardize the uptake of such vehicles, limiting connectivity across the Union. Continuing divergence in policy ambitions and approaches at national level will not create the long-term certainty needed for substantive market investment. Mandatory minimum targets for Member States at national level should therefore provide policy orientations and complement National Policy Frameworks. That approach should combine national fleet based targets with distance-based targets for the trans-European network for transport (TEN-T). National fleet based targets should ensure that vehicle uptake in each Member State is matched with the deployment of sufficient publicly accessible recharging infrastructure. Distance-based targets for the TEN-T network should ensure full coverage of electric recharging points along the Union's main road networks and thereby ensure easy and seamless travel throughout the Union.

(10) National fleet based targets should be established on the basis of the total number of registered electric vehicles in that Member State following a common methodology that accounts for technological developments such as the increased driving range of electric vehicles or the increasing market penetration of fast-charging points which can recharge a greater number of vehicles per recharging point than at a normal recharging point. The methodology also has to take into account the different recharging patterns of battery electric and plug-in hybrid vehicles. A methodology that norms national fleet based targets on the total maximum power output of the publicly accessible recharging infrastructure should allow flexibility for the implementation of different recharging technologies in Member States.

(11) Implementation in Member States should ensure that a sufficient number of publicly accessible recharging points is installed, in particular at public transport stations, such as port passenger terminals, airports or railway stations. A sufficient number of publicly accessible fast recharging points dedicated to light-duty vehicles should also be deployed to increase consumer convenience in particular across the TEN-T network to ensure full cross-border connectivity and allow electric vehicles to circulate throughout the Union. The deployment of publicly accesible recharging infrastructure should primarily be the result of private market investment. [...] However, Member States may, subject to Union law requirements on State aids, support the deployment of the necessary infrastructure in cases where market conditions require public support until a fully competitive market is established.

(11a) Depending on the specific circumstances in a Member State, the requirements to provide through publicly accessible recharging stations fixed total power outputs for each battery electric light-duty vehicle registered might no longer be justified in case it has adverse effects, by discouraging private investments, especially due to a risk of oversupply on the medium term. This risk might be related to the fact that a high number of private recharging points has been installed and addresses the needs of the users or that the use rate of publicly accessible recharging stations is low compared to the initial assumptions, with the consequence that the total power output available through publicly accessible recharging stations has reached a disproportionately high level compared to the actual use of such stations. In that case, the Member State concerned should be able to request the authorisation to apply lower requirements than the ones laid down in this Regulation in terms of level of total power output or to cease to apply such requirements. The share of battery electric light-duty vehicles compared to the total fleet of ligh-duty vehicles registered in the territory of a Member State should have reached at least 20%. The Member State should duly justify its request.

(13) Electric heavy-duty vehicles need a distinctively different recharging infrastructure than light-duty vehicles. Public accessible infrastructure for electric heavy-duty vehicles is however currently almost nowhere available in the Union. A combined approach of distance-based targets along the TEN-T network, with appropriate distinction between the TEN-T core network and the TEN-T comprehensive network, targets for overnight recharging infrastructure and targets at urban nodes, or in their vicinity, should ensure that a sufficient publicly accessible infrastructure coverage for electric heavy-duty vehicles is established throughout the Union to support the expected market uptake of battery electric heavy-duty vehicles.

(14) A sufficient number of publicly accessible fast recharging points dedicated to heavy-duty vehicles should be deployed along the TEN-T network to ensure full connectivity throughout the Union. That infrastructure should have sufficient power output to allow the recharge of the vehicle within the driver's legal break time. In order take into account the time needed for the planning, design and implementation of the recharging infrastructure, which may include the extension or upgrading of the electricity grid in certain areas, land acquisition, environmental authorisations, and/or awarding of public contracts, and in order to adapt to the progressive uptake of electric heavy-duty vehicles, the publicly accessible recharging infrastructure for these vehicles should be deployed progressively starting from 2025 in view of covering the entire TEN-T network by 2030.

(14a) For the deployment of electric recharging infrastructure along the TEN-T road network, all electric recharging stations to be deployed along the TEN-T road network should be located on the TEN-T road or within 3 km driving distance from the nearest exit of a TEN-T road.

(14b) Some Member States are in the process of upgrading sections of the TEN-T network in order to meet the requirements laid down in Regulation (EU) 1315/2013[10]. When upgrading the network to meet the requirements laid down in Regulation (EU) 1315/2013, Member States should strive to ensure that the requirements for the deployment of recharging and refuelling infrastructure on the TEN-T network set out in this Regulation are implemented in a comprehensive manner to avoid stranded assets and in a way ensuring a coordinated implementation of both Regulations.

(15) Recharging infrastructure along the TEN-T network should be complemented with fast publicly accessible recharging infrastructure in urban nodes, or their vicinity. That infrastructure is required in particular for providing charging opportunities for delivery trucks and for destination charging for long haul trucks, whereas the national fleet-based target should provide recharging points for light-duty vehicles also in urban areas. In addition to fast recharging points along the network and in urban nodes or in their vicinity, heavy-duty vehicles should also be able to use publicly accessible recharging infrastructure for overnight recharging along the main transport network to specifically support the electrification of the long haul sector.

[10] 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).

(15a) In order to avoid investments that would be disproportionate compared to the traffic volumes along some TEN-T roads, Members States should be able to provide that one pool serves both directions of travel while meeting the other applicable requirements in terms of distance, power output and number of recharging points at the pools that are applicable for a single direction of travel or to reduce the total power output of the recharging pools dedicated to light-duty or heavy-duty vehicles located along TEN-T roads with low traffic volumes of respectively light-duty or heavy-duty vehicles and where the recharging infrastructure cannot be justified in socio-economic cost-benefit terms. For the same purpose, Member States should also be able to allow a higher maximum distance between the publicly accessible recharging pools dedicated to light-duty or heavy-duty vehicles in the cases of roads of the TEN-T core network with very low traffic volumes.

(15a2) Given the insular geography of Cyprus, the absence of land connection with other Member States and the mainland and the limited extent of its TEN-T road network, the long-distance heavy-duty traffic circulating in that Member State is limited. In addition, given the limited daily mileage of electric heavy-duty vehicles in that Member State, their recharging needs will mostly be covered by overnight recharging capacities in private locations, such as depots. Cyprus would therefore be under disproportionate and unnecessary obligations if it had to ensure a minimum coverage of publicly accessible recharging pools dedicated to heavy-duty vehicles in its territory at the same level as the one laid down by this Regulation in terms of total power output of pools located along the TEN-T network and maximum distance between those pools. Consequently, Cyprus should be able to submit to the Commission a reasoned request for the authorisation to apply lower requirements in that respect provided that such a request, if authorised, will not impede the circulation of electric heavy-duty vehicles in that Member State.

(15b) Owners of electric vehicles should make use to a large extent of recharging points at their own premises or in collective parking lots in residential and non-residential buildings. While the deployment of ducting infrastructure and of recharging points in those buildings is regulated through Directive 2010/31/EU, Member States should take into account the availability of such private infrastructure when planning the deployment of publicly accessible recharging points.

(16) The deployment of recharging infrastructure for heavy-duty vehicle is equally important in private locations, such as in private depots and at logistic centres to ensure overnight and destination charging. Public authorities may take measures in the context of setting up their revised national policy frameworks to ensure that the appropriate infrastructure is provided for that overnight and destination charging.

(19) The possibility to develop advanced digital services, including contract-based payment solutions, and to ensure transparent user information by digital means depends on the deployment of digitally connected and smart recharging points that support the creation of a digitally connected and interoperable infrastructure[11]. Those smart recharging points should comprise a set of physical attributes and technical specifications (hardware and software) that are necessary to send and receive data dynamically, enabling the flow of information between market actors that are dependent on these data for fully developing the recharging experience, including charging point operators, mobility service providers, e-roaming platforms, distribution systems operators and, ultimately, end consumers.

[11] In line with the principles laid down in the European Interoperability Framework – Implementation Strategy, COM/2017/0134 final.

(20) Smart metering systems as defined in Directive (EU) 2019/944[12] enable dynamic data to be produced, which is needed to ensure the stability of the grid and to encourage rational use of recharging services. By providing dynamic energy metering and accurate and transparent information on the cost, they encourage, in combination with smart recharging points, recharging at times of low general electricity demand and low energy prices. The use of smart metering systems in combination with smart recharging points can optimise recharging, with benefits for the electricity system and for the end user. Member States should encourage the use of smart metering system for the recharging of electric vehicles at publicly accessible recharging stations, where technically feasible and economically reasonable, and ensure that these systems comply with the requirements laid down in Article 20 of Directive (EU) 2019/444.

(21) The increasing number of electric vehicles in road, rail, maritime and other transport modes will require that recharging operations are optimised and managed in a way that does not cause congestion and takes full advantage of the availability of renewable electricity and low electricity prices in the system. Smart recharging in particular can facilitate the integration of electric vehicles into the electricity system further as it enables demand response through aggregation and through price based demand response. System integration can further be facilitated through bi-directional recharging (vehicle-to-grid). All normal recharging points built or renovated after the date of application of this Regulation at which vehicles are typically parked for a longer period should therefore support smart recharging.

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[12] Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU (OJ L 158, 14.6.2019, p. 125).

(22) The development of infrastructure for electric vehicles, the interaction of that infrastructure with the electricity system, and the rights and responsibilities assigned to the different actors in the electric mobility market, have to be consistent with the principles established under Directive (EU) 2019/944. In that sense, distribution system operators should cooperate on a non-discriminatory basis with any person establishing or operating publicly accessible recharging points. The access of Union electricity suppliers to recharging points should be without prejudice to the derogations under Article 66 of Directive (EU) 2019/944.

(23) 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. In view of the limited alternative locations on highways, existing highway concessions such as for conventional refuelling stations or rest areas are a particular cause for concern, since they can run over very long periods and sometimes even lack a specified end date altogether. Member States should seek, to the extent possible and in compliance with Directive (EU) 2014/23[13], to competitively award new concessions specifically for recharging stations on or adjacent to existing highway rest areas in order to limit deployment cost and enable new market entrants.

[13] Directive 2014/23/EU of the European Parliament and of the Council of 26 February 2014 on the award of concession contracts (OJ L 94, 28.3.2014, p. 1).

(24) Price transparency is crucial to ensure seamless and easy recharging and refuelling. Users of alternative fuel vehicles should be given accurate price information before the start of the recharging or refuelling service. The price should be communicated in a clearly structured manner to allow end users to identify the different price components charged by the operator to calculate the price of a recharging session and anticipate the total cost. This requirement should be without prejudice to the right of Member States to determine the applicable unit price of the electricity recharged from a charging station in accordance with Directive 98/6/EC.

(25) New services emerge, in support of the use of electric vehicles and offer a basis for the development of grid integration services. Incentives provided by Member states as well as binding measures such as mandatory roaming capability on designated recharging points have played a significant role in the development of such services. Entities offering those services, such as mobility service providers, should be able to operate under fair market conditions. In particular, operators of recharging points should not give unduly preferential treatment to any of those service providers, for instance through unjustified price differentiation that may impede competition and ultimately lead to higher prices for consumers. The Commission should monitor the development of the recharging market. When reviewing the Regulation, the Commission will take actions where required by market developments such as limitations of services for end users or business practices that may limit competition.

(26) Hydrogen-powered motor vehicles have at present very low market penetration rates. However, a build-up of sufficient hydrogen refuelling infrastructure is essential in order to make large-scale hydrogen-powered motor vehicle deployment possible as envisaged in the Commission's hydrogen strategy for a climate-neutral Europe[14]. Currently, hydrogen refuelling points are only deployed in a few Member States and are largely not suitable for heavy-duty vehicles, not allowing for a circulation of hydrogen vehicles across the Union. Mandatory deployment targets for publicly accessible hydrogen refuelling points should ensure that a sufficiently dense network of hydrogen refuelling points is deployed across the TEN-T core network to allow for the seamless travel of hydrogen fuelled light-duty and heavy-duty vehicles throughout the Union. For the deployment and location of hydrogen refuelling infrastructure along the TEN-T network, all hydrogen refuelling stations to be deployed along the TEN-T road network should be located on the TEN-T road or within 10 km driving distance from the nearest exit of a TEN-T road.

(27) To ensure that hydrogen fuelled vehicles are able to refuel at or close to the destination, which is usually located in an urban area, Member States should analyse the best location for refuelling stations and, in that context, consider the deployment of such stations [...] in urban nodes, as defined in Regulation (EU) No 1315/2013, or their vicinity, or in multimodal hubs as those are not only the typical destination for heavy-duty vehicles but could also serve hydrogen to other transport modes, such as rail and inland shipping.

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[14] COM(2020) 301 final.

(28) At the early stage of market deployment there is still a degree of uncertainty with regard to the kind of vehicles that will come into the market and to the kind of technologies that are going to be widely used. As outlined in the Commission's communication 'A hydrogen strategy for a climate-neutral Europe'[15] the heavy-duty segment was identified as the most likely segment for the early mass deployment of hydrogen vehicles. Therefore, hydrogen refuelling infrastructure should preliminarily focus on that segment while also allowing light-duty vehicles to fuel at publicly accessible hydrogen refuelling stations. To ensure interoperability, all publicly accessible hydrogen stations should at least serve gaseous hydrogen at 700 bar. The infrastructure roll out should also take into account the emergence of new technologies, such as liquid hydrogen, that allow a larger range for heavy-duty vehicles and are the preferred technology choice of some vehicle manufacturers.

(29) A number of liquefied methane refuelling points are established in the Union, already providing a backbone for the circulation of liquefied methane driven heavy-duty vehicles. The TEN-T core network should remain the basis for the deployment of liquefied methane infrastructure, and progressively for liquefied bio-methane, as it covers the main traffic flows and allows cross border connectivity throughout the Union. It had been recommended in Directive 2014/94/EU that such refuelling points be installed every 400 km on the TEN-T core network, but certain limited gaps in the network remain to reach that objective. Member States should by 2025 reach that objective and fill the remaining gaps, after which the target should cease to apply.

[15] COM(2020) 301 final

(30) Users of alternative fuel vehicles should be able to recharge or refuel on an ad hoc basis and pay easily and conveniently at all publicly accessible recharging and refuelling points, without the need to enter into a contract with the operator of the recharging or refuelling point or a mobility service provider. Therefore, for recharging or refuelling on an ad hoc basis, all publicly accessible recharging and refuelling points should accept payment instruments that are widely used in the Union, and in particular electronic payments through terminals and devices used for payment services. The application in time of that obligation should be deferred for those infrastructures deployed before this Regulation starts to apply. That ad hoc payment method should always be available to consumers, even when contract-based payments are offered at the recharging or refuelling point.

(31) Transport infrastructure should allow seamless mobility and accessibility for all users, including persons with disabilities and older persons. In principle, the location of all recharging and refuelling stations as well as the recharging and refuelling stations themselves should be designed in such a way that they can be used by as much of the public as possible, in particular by older persons, persons with reduced mobility and persons with disabilities. This should include for example providing sufficient space around the parking lot, ensuring that the recharging station is not installed on a kerbed surface, ensuring that the buttons or screen of the recharging station are at an appropriate height and the weight of the recharging and refuelling cables is such that persons with limited strength can handle them with ease. In addition the user interface of the related recharging stations should be accessible. In that sense, the accessibility requirements in Directive 2019/882[16] should be applicable to recharging and refuelling infrastructure.

[16] Directive (EU) 2019/882 of the European Parliament and of the Council of 17 April 2019 on the accessibility requirements for products and services (OJ L 151, 7.6.2019, p. 70).

(32) Shore-side electricity facilities can serve maritime and inland waterway transport as clean power supply and contribute to reducing the environmental impact of seagoing ships and inland waterway vessels. Under the FuelEU maritime initiative, ship operators of container and passenger ships need to comply with provisions to reduce emissions while moored at the quayside. Mandatory deployment targets should ensure that the sector finds sufficient shore-side electricity supply for ships that are moore at the quayside in TEN-T core and comprehensive maritime ports to comply with those requirements. Therefore, this Regulation lays down clear shore-side electricity infrastructure deployment targets in TEN-T ports. Considering the fact that Member States have different governance models for ports, Member States may decide that the infrastructure is deployed within their ports in the different terminals according to the needs, in order to reach those targets. It is important that the deployment within ports, and where relevant between terminals, be there where the maximum return of investment and occupancy rate result in the highest environmental benefits (greenhouse gasses and air pollution reductions).

(33) Seagoing container ships and seagoing passenger ships, being the ship categories which are producing the highest amount of emissions per ship while moored at the quayside, should as a priority be provided with shore-side electricity supply. In order to take into account power demand characteristics while moored at the quayside of different passenger ships, as well as port operational characteristics, it is necessary to distinguish between the passenger ship requirements for ro-ro passenger ships and high speed passenger crafts, and those for other passenger ships.

(34) These targets should take into account the types of vessels served and their respective traffic volumes. Maritime ports with low traffic volumes of certain ship categories based on the average annual number of port calls, should not be subject to the mandatory requirements for the corresponding ship categories based on a minimum level of traffic volume, so as to avoid underused capacity being installed. Similarly, the mandatory targets should not aim to target maximum demand, but a sufficiently high volume, in order to avoid underused capacity and to take account of port operational characteristics.

(34a) When determining the number of the port calls, calls of short duration, of ships that use zero-emission technologies, of unscheduled port calls for reason of safety or saving lives at sea and exceptional circumstances requiring the use of on-board energy generation, under emergency situations representing immediate risk to life, the ship, the environment or for other reasons of force majeure should **not** be taken into account.

(34b) Maritime transport is an important link for the cohesion and economic development of islands and the outermost regions in the Union as well as for some specific territories of some Member States such as Ceuta and Melilla. Energy production capacity in these islands, regions and territories may not always be sufficient to account for the power demand required to support the provision of shore-side electricity supply. In such a case, those islands, regions and territories should be exempted from this requirement unless and until such an electrical connection with the mainland or neighbouring countries, as the case may be, has been completed or there is a sufficient locally generated capacity from clean energy sources.

(34c) All relevant stakeholders should coordinate about shore-side electricity supply for seagoing ships in order to facilitate planning and investments on the medium and long terms both for the ship side and port side and to allow for smooth operations on an every day basis.

(35) An appropriate number of refuelling points for liquefied methane at maritime ports of the TEN-T core network should be available by 2025. Refuelling points for liquefied methane include liquefied methane terminals, tanks, tank truck trailers, truck tankers, mobile containers, bunker vessels and barges.

(35a) Installations providing shore-side electricity supply should also be deployed in inland waterway ports of the TEN-T network.

(36) External electricity supply should replace aviation kerosene as a source of energy when the aircraft is stationary at airports. This should reduce pollutant and noise emissions, improve air quality and reduce the impact on climate change. Therefore, all commercial transport operation should be able to make use of external electricity supply while parked at the contact or remote stands at TEN-T airports. The external energy supply to aircraft could be ensured thanks to fixed or mobile ground power units, both at contact stands and remote stands. While aircrafts should be able to make use of external electricity supply at all contact and remote stands used for commercial air transport operations, it would not be necessary that each stand is equipped with at least one fixed or mobile ground power unit, since one source of electricity, either fixed or mobile, can serve multiple stands and be deployed according to operational needs.

(36a) Members States should be able to exempt airports of the TEN-T network, with less than 10 000 commercial flight movements per year, from the obligation to provide electricity to stationary aircraft at all remote stands. Considering the number of flights concerned, the investment and maintenance costs for providing the remote stands with electricity in those airports may not be proportionate to the environmental benefit, especially in comparison with more efficient investments to tackle airports' CO2 emissions.

(37) In accordance with Article 3 of Directive 2014/94/EU, Member States have established national policy frameworks outlining their plans and objectives to ensure that those objectives would be met. Both the assessment of the national policy framework and the evaluation of Directive 2014/94/EU have highlighted the need for higher ambition and a better coordinated approach across Member States in view of the expected acceleration in the uptake of alternative fuel vehicles, in particular of electric vehicles. Furthermore, alternatives to fossil fuel will be needed in all transport modes to meet the ambitions of the European Green Deal. The existing National Policy Frameworks should be revised to clearly describe how the much greater need for publicly accessible recharging and refuelling infrastructure as expressed in the mandatory targets is going to be met by the Member States. The revised frameworks could also address transport modes for which no mandatory deployment targets exists. Member States should regularly report on the progress made on the implementation of those revised national policy framework.

(38) The revised national policy frameworks should include 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. Additionally, the revised frameworks should describe the overall national framework for planning, permitting and procuring of such infrastructure, including the identified obstacles and actions to remove them so shat a faster rollout of infrastructure can be achieved.

(39) The development and implementation of the revised 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.

(40) In order to promote alternative fuels and develop the relevant infrastructure, the national policy frameworks could contain detailed strategies to promote alternative fuels in sectors that are difficult to decarbonise such as aviation, maritime transport, inland waterway transport as well as rail transport on network segments that cannot be electrified. In particular, Member States could develop clear strategies for the decarbonisation of inland waterway transport along the TEN-T network in close cooperation with those Member States concerned. Long term decarbonisation strategies could also be developed for TEN-T ports and TEN-T airports, in particular with a focus on the deployment of infrastructure for low and zero emission vessels and aircraft as well as for railway lines that are not going to be electrified. On the basis of those strategies the Commission should review this Regulation with a view to setting more mandatory targets for those sectors.

(41) Member States should make use of a wide range of regulatory and non-regulatory incentives and measures to reach the mandatory targets and implement their national policy frameworks, in close cooperation with private sector actors, who should play a key role in supporting the development of alternative fuels infrastructure.

(42) Pursuant to Directive 2009/33/EC[17], minimum national shares of public procurement are reserved for clean and zero-emission buses, where a clean bus uses alternative fuels as defined in Article 2, point (3) of this Regulation. With ever more public transport authorities and operators switching to clean and zero-emission buses in order to reach those targets, Member States should include the targeted promotion and development of the necessary bus infrastructure as a key element in their National Policy Frameworks. Member States should establish and maintain appropriate instruments to promote the deployment of charging and refuelling infrastructure also for captive fleets, in particular for clean and zero-emission buses at local level.

(43) 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.

(44) 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, a unit price comparison of certain alternative fuels and conventional fuels, expressed as 'fuel price per 100km', should be shown for information purposes at all relevant fuel stations.

[17] Directive 2009/33/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of clean and energy-efficient road transport vehicles (OJ L 120, 15.5.2009, p. 5).

(45) It is necessary to provide consumers with sufficient information regarding the geographic location, characteristics and services offered at the publicly accessible recharging and refuelling points of alternative fuels covered by this Regulation. Therefore, Member States should ensure that operators or owners of publicly accessible recharging and refuelling points make relevant static and dynamic data available. Requirements on data types regarding availability of and accessibility to relevant recharging and refuelling-related data should be laid down, building on the outcomes of the Programme Support Action on "Data collection related to recharging/refuelling points for alternative fuels and the unique identification codes related to e-mobility actors" ('IDACS').

(46) Data should play a fundamental role in the adequate functioning of recharging and refuelling infrastructure. The format, the frequency and the quality in which these data should be made available and accessible should determine the overall quality of an alternative fuels infrastructure ecosystem that meets user needs. Moreover, those data should be accessible in a coherent manner in all Member States. Therefore, data should be provided in accordance with the requirements set in Directive 2010/40/EU of the European Parliament and the Council[18] for national access points (NAPs) and the relevant delegated and implementing acts adopted on the basis thereof, that may be complemented by the Commission in the framework of this Regulation.

[18] Directive 2010/40/EU of the European Parliament and of the Council of 7 July 2010 on the framework for the deployment of Intelligent Transport Systems in the field of road transport and for interfaces with other modes of transport (OJ L 207, 6.8.2010, p. 1).

(47) It is crucial that all actors in the electric mobility ecosystem can interact easily through digital means to provide the best service quality to the end user. This requires unique identifiers of relevant actors in the value chain. To that end, Member States should appoint an Identification Registration Organisation ('IDRO') for issuing and managing unique identification ('ID') codes to identify, at least, operators of recharging points and mobility service providers. The IDRO should collect information on e-mobility ID codes that are already in use in the respective Member State; issue new e-mobility codes, where needed, to recharging point operators and mobility service providers under an Union-wide common agreed logic in which electro-mobility ID codes are formatted; allow to exchange and verify the uniqueness of these e-mobility codes via a possible future common Identification Registration Repository ('IDRR'). The Commission should issue technical guidance on the set up of such organisation, drawing on the Programme Support Action on "Data collection related to recharging/refuelling points for alternative fuels and the unique identification codes related to e-mobility actors" ('IDACS').

(47a) Technical specifications as specified in Annex II to Directive 2014/94/EU are to remain applicable as specified in that Directive.

(50) Technical specifications for interoperability of recharging and refuelling points should be specified in European or international standards. The European standardisation organisations ('ESOs') should adopt European standards in accordance with Article 10 of Regulation (EU) No 1025/2012[19]. Those standards should be based on current international standards or ongoing international standardisation work, where applicable. To that end, European standardisation procedures for recharging and refuelling infrastructure should proceed quickly and in timely support of the timeline necessary for planning, tendering and building the infrastructure required under this Regulation. The standardisation processes for a European-wide harmonised charging infrastructure for stationary and dynamic charging should be accelerated or initiated.

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19 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 Council 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).

(50a) Maritime transport and inland navigation need new standards to facilitate and consolidate the entry into the market of alternative fuels, in relation to electricity supply and hydrogen, methanol and ammonia bunkering, but also standards for communication exchange between vessels and infrastructure.

(50b) 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 European Union should ensure that technical specifications for maritime transport adopted pursuant to this Regulation are consistent with international rules adopted by the IMO.

(52) In the application of this Regulation, the Commission should consult relevant expert groups, and in particular the Sustainable Transport Forum ('STF') and the European Sustainable Shipping Forum ('ESSF'). Such expert consultation is of particular importance when the Commission intends to adopt delegated or implementing acts under this Regulation.

(53) Alternative fuels infrastructure is a fast developing area. The lack of common technical specification constitutes a barrier for the creation of a single market of alternative fuels infrastructure. Therefore, the power to adopt acts in accordance with Article 290 TFEU should be delegated to the Commission to norm technical specifications for areas where common technical specifications are outstanding but necessary. In particular, this should include the communication between the electric vehicle and the recharging point, the communication between the recharging point and the recharging software management system (back-end); the communication related to the electric vehicle roaming service and the communication with the electricity grid, while ensuring the highest level of cybersecurity protection and protection of final customers' personal data. It is also necessary to define the suitable governance framework and roles of the different actors involved in the vehicle-to-grid communication ecosystem. Moreover, emerging technological developments, such as electric road systems ('ERS') have to be accounted for. As concerns data provision, the power to adopt acts in accordance with Article 290 TFEU should be delegated to the Commission to add new data types to the data on publicly accessible recharging and refueling points to be made available and accessible under this Regulation.

(53a) In order to ensure uniform conditions for the implementation of Articles 17(4), 17(5) and 18(4a) of this Regulation, implementing powers should be conferred on the Commission with respect to the development of labelling provisions, to the format, frequency and quality of data on publicly accessible recharging and refueling points to be made available and accessible under this Regulation and to the procedure enabling that availability and accessibility.

(54) The market for alternative fuels and in particular for zero emission fuels is still in the early stages of development and technology is evolving fast. This should likely affect the demand for alternative fuels and consequently for alternative fuels infrastructure across the modes. The Commission should therefore, by 31 December 2024, review this Regulation based on a technology and market readiness report dedicated to heavy-duty vehicles. It should take into account the first indications of the preferences of the market and consider the technological and standard developments. [...] The Commission should, after an initial complete review by 31 December 2026, perform a regular review, every 5 years, also considering the electronic means of payment referred to in Article 5 and the thresholds for framing the derogations in Articles 3 and 4.

(55) Since the objective of this Regulation, 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 alternative fuel vehicles and for cost-efficient developments by European industry, and to allow Union-wide mobility of alternative fuel 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 Regulation does not go beyond what is necessary in order to achieve that objective.

(56) Directive 2014/94/EU should therefore be repealed. Commission Delegated Regulation (EU) 2019/1745[20] and Commission Delegated Regulation (EU) 2021/1444[21] set out undated technical standards for certain types of alternative fuels infrastructure. These standards are now dated and listed in Annex II to this Regulation. As a result, these delegated regulations should also be repealed,

HAVE ADOPTED THIS REGULATION

Article 1

Subject matter

1. This Regulation sets out mandatory national targets for the deployment of sufficient alternative fuels infrastructure in the Union, for road vehicles, vessels and stationary aircraft. It lays down common technical specifications and requirements on user information, data provision and payment requirements for alternative fuels infrastructure.

2. This Regulation sets out rules for the national policy frameworks to be adopted by the Member States, including the deployment of alternative fuels infrastructure in areas where no mandatory Union wide targets are set and the reporting on the deployment of such infrastructure.

3. This Regulation establishes a reporting mechanism to stimulate cooperation and ensures a robust tracking of progress. The mechanism shall comprise a structured, transparent, iterative process between the Commission and Member States for the purpose of the finalisation of the national policy frameworks and their subsequent implementation and corresponding Commission action to support the faster and coherent deployment of infrastructure for alternative fuels in Member States.

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[20] Commission Delegated Regulation (EU) 2019/1745 of 13 August 2019 supplementing and amending Directive 2014/94/EU of the European Parliament and of the Council as regards recharging points for L-category motor vehicles, shore-side electricity supply for inland waterway vessels, hydrogen supply for road transport and natural gas supply for road and waterborne transport and repealing Commission Delegated Regulation (EU) 2018/674, *OJ L 268, 22.10.2019, p. 1.*

[21] Commission Delegated Regulation (EU) 2021/1444 of 17 June 2021 supplementing Directive 2014/94/EU of the European Parliament and of the Council with regards standards for recharging points for electric buses, *OJ L 313, 6.9.2021, p. 1.*

Article 2

Definitions

For the purposes of this Regulation, the following definitions apply:

(1) ‘accessibility of data’ means a possibility to request and obtain the data at any time in a machine readable format;

(2) ‘ad hoc price’ means the price charged by an operator of a recharging or refuelling point to an end user for recharging or refuelling on an ad hoc basis;

(2a) 'along the TEN-T network' means: for electric recharging stations that they are located on the TEN-T network or within 3 km driving distance from the nearest exit of a TEN-T road; for hydrogen refuelling stations that they are located on the TEN-T network or within 10 km driving distance from the nearest exit of a TEN-T road.

(3) ‘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, including:

(a) ‘alternative fuels for zero-emission vehicles, vessels or aircraft':

– electricity,

– hydrogen,

– ammonia,

(b) ‘renewable fuels’:

– biomass fuels, including biogas, and biofuels as defined in Article 2, points (27), (28) and (33) of Directive (EU) 2018/2001[22],

– synthetic and paraffinic fuels, including ammonia, produced from renewable energy,

[22] Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources (OJ L 328, 21.12.2018, p. 82)

(c) 'transitional alternative fuels':

- natural gas, in gaseous form (compressed natural gas (CNG)) and liquefied form (liquefied natural gas (LNG)),
- liquefied petroleum gas (LPG),
- synthetic and paraffinic fuels produced from non-renewable energy;

(3a) 'aircraft contact stand' means a stand in a designated area of the airport apron equipped with a passenger boarding bridge;

(3b) 'aircraft remote stand' means a stand in a designated area of the airport apron not equipped with a passenger boarding bridge;

(4) ‘airport of the TEN-T core and TEN-T comprehensive network’ means an airport as listed and categorised in Annex II to Regulation (EU) No 1315/2013[23];

(6) ‘automatic authentication’ means the authentication of a vehicle at a recharging point through the recharging connector or telematics;

(7) ‘availability of data’ means the existence of data in a digital machine-readable format.

(8) ‘battery electric vehicle’ means an electric vehicle that exclusively runs on the electric motor, with no secondary source of propulsion;

(9) ‘bi-directional recharging’ means a smart recharging operation where the direction of the electricity flow may be reversed, allowing that electricity flows from the battery to the recharging point it is connected to;

(10) ‘connector’ means the physical interface between the recharging or refuelling point and the vehicle through which the fuel or electric energy is exchanged;

(11) ‘commercial air transport’ means air transport as defined in Article 3, point (24) of Regulation (EU) 2018/1139[24];

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23 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)

24 Regulation (EU) 2018/1139 of the European Parliament and of the Council of 4 July 2018 on common rules in the field of civil aviation and establishing a European Union Aviation Safety Agency, and amending Regulations (EC) No 2111/2005, (EC) No 1008/2008, (EU) No 996/2010, (EU) No 376/2014 and Directives 2014/30/EU and 2014/53/EU of the European Parliament and of the Council, and repealing Regulations (EC) No 552/2004 and

(12) ‘container ship’ means a ship designed exclusively for the carriage of containers in holds and on deck;

(13) ‘contract-based payment’ means a payment for a recharging or refuelling service from the end user to a mobility service provider on the basis of a contract between the end user and the mobility service provider;

(14) ‘digitally-connected recharging point’ means a recharging point that can send and receive information in real time, communicate bi-directionally with the electricity grid and the electric vehicle, and that can be remotely monitored and controlled, including to start and stop the recharging session and to measure electricity flows;

(15) ‘distribution system operator’ means an operator as defined in Article 2, point (29) of Directive (EU) 2019/944[25];

(16) ‘dynamic data’ means data that do change often or on a regular basis;

(17) ‘electric road system’ means a physical installation along a road that allows for the transfer of electricity to an electric vehicle while the vehicle is in motion;

(18) ‘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;

(19) ‘electricity supply to stationary aircraft’ means the supply of electricity through a standardised fixed or mobile interface to aircraft when stationed at an aircraft contact stand or at an aircraft remote stand;

(20) ‘end user’ means a physical or legal person purchasing an alternative fuel for direct use in a vehicle;

(21) ‘e-roaming’ means the exchange of data and payments between the operator of a recharging or refuelling point and a mobility service provider from which an end user purchases a recharging service;

(EC) No 216/2008 of the European Parliament and of the Council and Council Regulation (EEC) No 3922/91 (OJ L 212, 22.8.2018, p. 1).

25 Directive (EU) 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU (OJ L 158, 14.6.2019, p. 125)

(22) ‘e-roaming platform’ means a platform connecting market actors, notably mobility service providers and operators of recharging or refuelling points, to enable services between them, including e-roaming;

(23) ‘European standard’ means a standard as defined in Article 2, point (1)(b) of Regulation (EU) No 1025/2012[26];

(24) ‘freight terminal’ means a freight terminal as defined in in Article 3 point (s) of Regulation (EU) No 1315/2013;

(25) ‘gross tonnage’ (GT) means gross tonnage as defined in Article 3, point (e) of Regulation (EU) 2015/757[27];

(26) ‘heavy-duty vehicle’ means a motor vehicle of categories M2, M3, N2 or N3 as defined respectively in Article 4 (1) (a) (ii), Article 4 (1) (a) (iii), Article 4 (1) (b) (ii) and Article 4 (1) (b) (iii) of Regulation (EU) 2018/858[28];

(27) ‘high power recharging point’ means a recharging point that allows for a transfer of electricity to an electric vehicle with a power output of more than 22 kW;

(28) ‘high-speed passenger craft’ means a craft as defined in Regulation 1 of Chapter X of SOLAS 74, and carrying more than 12 passengers;

(29) ‘light-duty vehicle’ means a motor vehicle of categories M1 or N1 as defined respectively in Article 4 (1) (a) (i) and Article 4 (1) (b) (i) of Regulation (EU) 2018/858;

(29a) 'liquefied methane' means LNG, liquefied biogas or synthetic LNG, including blends of those fuels;

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26 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 Council 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)

27 Regulation (EU) 2015/757 of the European Parliament and of the Council of 29 April 2015 on the monitoring, reporting and verification of carbon dioxide emissions from maritime transport, and amending Directive 2009/16/EC (OJ L 123, 19.5.2015, p. 55).

28 Regulation (EU) 2018/858 of the European Parliament and of the Council of on the approval and market surveillance of motor vehicles and their trailers, and of systems, components and separate technical units intended for such vehicles, amending Regulations (EC) No 715/2007 and (EC) No 595/2009 and repealing Directive 2007/46/EC (OJ L 151, 14.6.2018, p. 1)

(30) ‘mobility service provider’ means a legal person who provides services in return for remuneration to an end user, including the sale of a recharging service;

(31) ‘normal power recharging point’ means a recharging point that allows for a transfer of electricity to an electric vehicle with a power output less than or equal to 22 kW;

(32) ‘national access point’ means a digital interface as defined in Article 4(22)[29] of Directive 2010/40/EU;

(33) ‘operator of a recharging point’ means the entity responsible for the management and operation of a recharging point, which provides a recharging service to end users, including in the name and on behalf of a mobility service provider;

(34) ‘operator of a refuelling point’ means the entity responsible for the management and operation of a refuelling point, which provides a refuelling service to end users, including in the name and on behalf of a mobility service provider;

(35) ‘passenger ship’ means a ship that carries more than 12 passengers, including cruise ships, high-speed passenger crafts and ships with facilities to enable road or rail vehicles to roll on and roll off the vessel (‘ro-ro passenger ships’);

(36) ‘plug-in hybrid vehicle’ means an electric vehicle constituted by a conventional combustion engine combined with an electric propulsion system, which can be recharged from an external electric power source;

(37) ‘power output’ means the theoretical maximum power, expressed in kW, that can be provided by a recharging point, station, or pool or a shore-side electricity supply installation to a vehicle or vessel connected to that recharging point, station, pool or installation;

(38) ‘publicly accessible alternative fuels infrastructure', means an alternative fuels infrastructure which is located at a site or premise that is open to the general public, irrespective of whether the alternative fuels infrastructure is located on public or on private property, whether limitations or conditions apply in terms of access to the site or premise and irrespective of the applicable use conditions of the alternative fuels infrastructure;

(39) ‘Quick Response code’ (QR code) means an ISO/IEC 18004:15-compliant encoding and visualization of data;

[29] As proposed in COM(2021)813 final (ITS Directive)

(40) ‘recharge on an ad hoc basis’ means a recharging service purchased by an end user without the need for that end user to register, conclude a written agreement, or enter into a longer-lasting commercial relationship with the operator of that recharging point beyond the mere purchase of the service;

(41) ‘recharging point’ means a fixed or mobile interface that allows for the transfer of electricity to an electric vehicle, which, whilst it may have one or several outlets to accommodate different connector types, is capable of recharging only one electric vehicle at a time, and excludes devices with a power output less than or equal to 3,7 kW the primary purpose of which is not recharging electric vehicles.

(42) ‘recharging point, station or pool dedicated to light-duty vehicles’ means a recharging point, station or pool intended for recharging light-duty vehicles, either due to the specific design of the connectors/plugs or the design of the parking space adjacent to the recharging point, station or pool, or both;

(43) ‘recharging point, station or pool dedicated to heavy-duty vehicles’ means a recharging point, station or pool intended for recharging heavy-duty vehicles, either due to the specific design of the connectors/plugs or to the design of the parking space adjacent to the recharging point, station or pool, or both;

(44) ‘recharging pool’ means one or more recharging stations at a specific location;

(45) ‘recharging station’ means a physical installation at a specific location, consisting of one or more recharging points;

(46) ‘recharging service’ means the sale or provision of electricity, including related services, through a publicly accessible recharging point;

(47) ‘recharging session’ means the full process of recharging a vehicle at a publicly accessible recharging point from the moment the vehicle is connected to the moment the vehicle is disconnected;

(48) ‘refuel on an ad hoc basis’ means a refuelling service purchased by an end user without the need for that end user to register, conclude a written agreement, or enter into a longer-lasting commercial relationship with the operator of that refuelling point beyond the mere purchase of the service;

(49) ‘refuelling point’ means a refuelling facility for the provision of any liquid or gaseous fuel, through a fixed or a mobile installation, which is capable of refuelling only one vehicle, one vessel or one aircraft at a time;

(50) ‘refuelling service’ means the sale or provision of any liquid or gaseous fuel through a publicly accessible refuelling point;

(51) ‘refuelling session’ means the full process of refuelling a vehicle at a publicly accessible refuelling point from the moment the vehicle is connected to the moment the vehicle is disconnected;

(52) ‘refuelling station’ means a single physical installation at a specific location, consisting of one or more refuelling points;

(53) ‘regulatory authority’ means a regulatory authority designated by each Member State pursuant to Article 57(1) of Directive (EU) 2019/944;

(54) ‘renewable energy’ means energy from renewable non-fossil sources as defined in Article 2, point (1) of Directive (EU) 2018/2001;

(55) ‘ro-ro passenger ship’ means a ship with facilities to enable road or rail vehicles to roll on and roll off the vessel, and carrying more than 12 passengers;

(56) ‘safe and secure parking’ means a parking and rest area as referenced in Article 17, point(1)(b) of Regulation (EU) No 1315/2013, that is dedicated to heavy-duty vehicles overnight parking and has been certified pursuant to the provisions in Article 8a of Regulation (EC) No 561/2006[30] and the delegated acts adopted on the basis thereof;

(58) ‘shore-side electricity supply’ means the provision of shore-side electrical power through a standardised interface to seagoing ships or inland waterway vessels, moored at the quayside;

(59) ‘smart recharging’ means a recharging operation in which the intensity of electricity delivered to the battery is adjusted dynamically, based on information received through electronic communication;

(60) ‘static data’ means data that do not change often or on a regular basis;

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30 Regulation (EC) No 561/2006 of the European Parliament and of the Council of 15 March 2006 on the harmonisation of certain social legislation relating to road transport (OJ L 102, 11.4.2006, p. 1)

(61) ‘TEN-T comprehensive network’ means a network as defined in Article 9 of Regulation (EU) No 1315/2013;

(62) ‘TEN-T core network’ means a network as defined in Article 38 of Regulation (EU) No 1315/2013;

(63) ‘TEN-T core inland waterway port and TEN-T comprehensive inland waterway port’ means an inland waterway port of the TENT-T core or comprehensive networks, as listed and categorised in Annex II of Regulation (EU) No 1315/2013;

(64) ‘TEN-T core maritime port and TEN-T comprehensive maritime port’ means a maritime port of the TENT-T core or comprehensive networks, as listed and categorised in Annex II of Regulation (EU) No 1315/2013;

(65) ‘transmission system operator’ means a system operator as defined in Art 2, point (35) of Directive (EU) 2019/944;

(66) ‘urban node’ means an urban node as defined in Article 3, point (p) of Regulation (EU No) 1315/2013.

Article 3

Targets for electric recharging infrastructure dedicated to light-duty vehicles

1. Member States shall ensure that, in their territory, publicly accessible recharging stations dedicated to light-duty vehicles are deployed commensurate to the uptake of light-duty electric vehicles and provide sufficient power output for those vehicles.

To that end, Member States shall ensure that, at the end of each year, starting from the year of the date of application as referred to in Article 24, the following power output targets are met cumulatively:

(a) for each battery electric light-duty vehicle registered in their territory, a total power output of at least 1 kW is provided through publicly accessible recharging stations; and

(b) for each plug-in hybrid light-duty vehicle registered in their territory, a total power output of at least 0.66 kW is provided through publicly accessible recharging stations.

1a. When the share of battery electric light-duty vehicles compared to the total fleet of ligh-duty vehicles registered in the territory of a Member State reaches at least 20% and the Member State demonstrates that the implementation of the requirements set out in the second subparagraph of paragraph 1 has adverse effects by discouraging private investments and is no longer justified, that Member State may submit to the Commission a reasoned request for the authorisation to apply lower requirements in terms of level of total power output or to cease to apply such requirements.

The Commission shall, within 6 months, adopt a decision, on that request, as justified in each case.

2. Member States shall ensure a minimum coverage of publicly accessible recharging points dedicated to light-duty vehicles on the road network in their territory. To that end, Member States shall ensure that:

(a) along the TEN-T core network, publicly accessible recharging pools dedicated to light-duty vehicles and meeting the following requirements are deployed in each direction of travel with a maximum distance of 60 km in-between them:

(i) by 31 December 2025, each recharging pool shall offer a power output of at least 300 kW and include at least one recharging point with an individual power output of at least 150 kW;

(ii) by 31 December 2030, each recharging pool shall offer a power output of at least 600 kW and include at least two recharging points with an individual power output of at least 150 kW;

(b) along the TEN-T comprehensive network, publicly accessible recharging pools dedicated to light-duty vehicles and meeting the following requirements are deployed in each direction of travel with a maximum distance of 60 km in-between them:

(i) by 31 December 2030, each recharging pool shall offer a power output of at least 300 kW and include at least one recharging point with an individual power output of at least 150 kW;

(ii) by 31 December 2035, each recharging pool shall offer a power output of at least 600 kW and include at least two recharging points with an individual power output of at least 150 kW.

2a. A single publicly accessible recharging pool dedicated to light-duty vehicles may be deployed along TEN-T roads for both directions of travel provided that such pool is easily accessible from both directions of travel, that appropriate signposting is deployed and that the requirements set out in paragraph 2 in terms of distance, total power output of the pool, number of points and power output of single points are complied with as for two directions of travel.

2b. By way of derogation from paragraph 2a, along TEN-T roads with a total annual average daily traffic of less than 10.000 light-duty vehicles and where the infrastructure cannot be justified in socio-economic cost-benefit terms, Member States may provide that a publicly accessible recharging pool dedicated to light-duty vehicles may serve both directions of travel while meeting the requirements set out in paragraph 2 in terms of distance, total power output of the pool, number of points and power output of single points applicable for a single direction of travel provided that the recharging pool is easily accessible from both directions of travel and that appropriate signposting is deployed. Member States shall notify such derogations to the Commission. They shall review them every two years in the framework of the national progress report referred to in Article 14.

2c. By way of derogation from paragraph 2, along TEN-T roads with a total annual average daily traffic of less than 10.000 light-duty vehicles and where the infrastructure cannot be justified in socio-economic cost-benefit terms, Member States may reduce up to 50% the total power output of a publicly accessible recharging pool dedicated to light-duty vehicles required pursuant to paragraph 2, provided that such recharging pool serves only one direction of travel and that the other requirements set out in paragraph 2 in terms of distance, number of points and power output of single points are complied with. Member States shall notify such derogations to the Commission. They shall review them every two years in the framework of the national progress report referred to in Article 14.

2d. By way of derogation from the requirement relating to the maximum distance of 60 km between the publicly accessible recharging pools dedicated to light-duty vehicles set out in paragraph 2, points (a) and (b), Member States may allow a higher distance of up to 100 km for such recharging pools along TEN-T roads with a total annual average daily traffic of less than 4.000 light-duty vehicles provided that appropriate signposting regarding distance between recharging pools is deployed. Member States shall notify any derogation pursuant to this paragraph to the Commission. They shall review them every two years in the framework of the national progress report referred to in Article 14.

Where a derogation has been notified by a Member State pursuant to this paragraph, the requirements set out in paragraph 2, points (a) and (b), in terms of maximum distance between recharging pools shall be deemed as being met for the purposes of paragraphs 2a, 2b and 2c.

3. Neighbouring Member States shall ensure that the maximum distances referred to in paragraph 2, points (a) and (b) are not exceeded for cross-border sections of the TEN-T core and the TEN-T comprehensive network.

Article 4

Targets for electric recharging infrastructure dedicated to heavy-duty vehicles

1. Member States shall ensure a minimum coverage of publicly accessible recharging points dedicated to heavy-duty vehicles in their territory. To that end, Member States shall ensure that:

(a01) by 31 December 2025, at least along 15 % of the length of the TEN-T network, publicly accessible recharging pools dedicated to heavy-duty vehicles are deployed in each direction of travel and that each recharging pool offers a power output of at least 1400 kW and includes at least one recharging point with an individual power output of at least 350 kW;

(a02) by 31 December 2027, at least along 40 % of the length of the TEN-T network, publicly accessible recharging pools dedicated to heavy-duty vehicles are deployed in each direction of travel and that each recharging pool:

(i) along the TEN-T core network, offers a power output of at least 2800 kW and includes at least two recharging points with an individual power output of at least 350 kW

(ii) along the TEN-T comprehensive network, offers a power output of at least 1 400 kW and includes at least one recharging point with an individual power output of at least 350 kW;

(a) by 31 December 2030, along the TEN-T core network, publicly accessible recharging pools dedicated to heavy-duty vehicles are deployed in each direction of travel with a maximum distance of 60 km in-between them and that each recharging pool offers a power output of at least 3500 kW and includes at least two recharging points with an individual power output of at least 350 kW; [...]

(b) by 31 December 2030, along the TEN-T comprehensive network, publicly accessible recharging pools dedicated to heavy-duty vehicles are deployed in each direction of travel with a maximum distance of 100 km in-between them and each recharging pool offers a power output of at least 1400 kW and includes at least one recharging point with an individual power output of at least 350 kW;

(c) by 31 December 2030, in each safe and secure parking area at least one publicly accessible recharging station dedicated to heavy-duty vehicles with a power output of at least 100 kW is installed;

(d) by 31 December 2025, in each urban node, or their vicinity, publicly accessible recharging points dedicated to heavy-duty vehicles providing an aggregated power output of at least 600 kW are deployed, provided by recharging stations with an individual power output of at least 150 kW;

(e) by 31 December 2030, in each urban node, or their vicinity, publicly accessible recharging points dedicated to heavy-duty vehicles providing an aggregated power output of at least 1200 kW are deployed, provided by recharging stations with an individual power output of at least 150 kW.

1a. The calculation of the percentage of the length of TEN-T network referred to in points (a01) and (a02) of paragraph 1, shall be based on the following elements:

(a) for the calculation of the denominator: the total length of the TEN-T network within the territory of the Member State;

(b) for the calculation of the numerator: the cumulated length of the sections of the TEN-T network between two publicly accessible recharging pools dedicated to heavy-duty vehicles; sections of the TEN-T network between two recharging pools that are more than 120 km apart shall not be taken into account when calculating the numerator.

1b. A single publicly accessible recharging pool dedicated to heavy-duty vehicles may be deployed along TEN-T roads for both directions of travel provided that such pool is easily accessible from both directions of travel, that appropriate signposting is deployed and that the requirements set out in paragraph 1 in terms of distance, total power output of the pool, number of points and power output of single points are complied with as for two directions of travel.

1c. By way of derogation from paragraph 1b, along TEN-T roads with a total annual average daily traffic of less than 2.000 heavy-duty vehicles and where the infrastructure cannot be justified in socio-economic cost-benefit terms, Member States may provide that a publicly accessible recharging pool dedicated to heavy-duty vehicles may serve both directions of travel while meeting the requirements set out in paragraph 1 in terms of distance, total power output of the pool, number of points and power output of single points applicable for a single direction of travel provided that the recharging pool is easily accessible from both directions of travel and that appropriate signposting is deployed. Member States shall notify such derogations to the Commission. They shall review them every two years in the framework of the national progress report referred to in Article 14.

1d. By way of derogation from paragraph 1, along TEN-T roads with a total annual average daily traffic of less than 2.000 heavy-duty vehicles and where the infrastructure cannot be justified in socio-economic cost-benefit terms, Member States may reduce up to 50% the total power output of a publicly accessible recharging pool dedicated to heavy-duty vehicles required pursuant to paragraph 1, provided that such recharging pool serves only one direction of travel and that the requirements set out in paragraph 1 in terms of distance, number of points and power output of single points are complied with. Member States shall notify such derogations to the Commission. They shall review them every two years in the framework of the national progress report referred to in Article 14.

1e. By way of derogation from the requirement relating to the maximum distance of 60 km between the publicly accessible recharging pools dedicated to heavy-duty vehicles set out in paragraph 1, point (a), Member States may allow a higher distance of up to 100 km for such recharging pools along roads of the TEN-T core network with a total annual average daily traffic of less than 800 heavy-duty vehicles provided that appropriate signposting regarding distance between recharging stations is deployed. Member States shall notify such derogations to the Commission. They shall review them every two years in the framework of the national progress report referred to in Article 14.

Where a derogation has been notified by a Member State pursuant to this paragraph, the requirements set out in paragraph 1, point (a), in terms of maximum distance between recharging pool shall be deemed as being met for the purposes of paragraphs 1b, 1c and 1d.

1f. By way of derogation from the requirements set out in paragraph 1, points (a01), (a02), (a) and (b) relating to the total power output of publicly accessible recharging pools dedicated to heavy-duty vehicles and from the requirements set out in paragraph 1, point (a) relating to the maximum distance between those pools, Cyprus may submit to the Commission a reasoned request for the authorisation to apply lower requirements in terms of level of total power output of publicly accessible recharging pools dedicated to heavy-duty vehicles and/or to apply a higher maximum distance of up to 100 km between those pools provided that such request, if authorised, will not impede the circulation of electric heavy-duty vehicles in that Member State.

The Commission shall adopt a decision on that request, as justified, within six months. Any exemption granted pursuant to this paragraph shall be limited to a period of maximum four years, after which it shall be reviewed by the Commission upon reasoned request by Cyprus.

2. By 31 December 2030, neighbouring Member States shall ensure that the maximum distances referred to in points (a) and (b) of paragraph 1 are not exceeded for cross-border sections of the TEN-T core and the TEN-T comprehensive network. Before that date, attention shall be given to cross border sections and neighbouring Member States shall make all possible efforts to respect those maximum distances as soon as they deploy the recharging infrastructure along the cross border sections of the TEN-T network.

Article 5

Recharging infrastructure

2. Operators of recharging points shall, at the publicly accessible recharging points operated by them, provide end users with the possibility to recharge their electric vehicle on an ad hoc basis.

At those recharging points deployed from the date of application referred to in Article 24, ad hoc charging shall be possible using a payment instrument that is widely used in the Union. To that end, operators of recharging points shall, at those points, accept electronic payments through terminals and devices used for payment services, including at least one of the following:

(a) payment card readers;

(b) devices with a contactless functionality that is at least able to read payment cards;

(c) for publicly accessible recharging points with a power output below 50 kW, devices using an internet connection and allowing for a secure payment transaction such as those generating a specific Quick Response code.

From 1 January 2027 onwards, operators of recharging points shall ensure that all publicly accessible recharging points operated by them, including those points deployed before the date of application referred to in Article 24, that meet the requirements set out in Article 3(2) and have a power output equal to or more than 50 kW, comply with the requirements set out in points (a) or (b)

One payment terminal or device referred to in the second subparagraph may serve several recharging points within a recharging pool.

The requirements laid down in this paragraph shall not apply to publicly accessible recharging points that do not require payment for the recharging service.

3. Operators of recharging points shall, when they offer automatic authentication at a publicly accessible recharging point operated by them, ensure that end users always have the right not to make use of the automatic authentication and may either recharge their vehicle on an ad hoc basis, as provided for in paragraph 2, or use another contract-based recharging solution offered at that recharging point. Operators of recharging points shall transparently show that option and offer it in a convenient manner to the end user, at each publicly accessible recharging point that they operate and where they make available automatic authentication.

4. Prices charged by operators of publicly accessible recharging points shall be reasonable, easily and clearly comparable, transparent and non-discriminatory. Operators of publicly accessible recharging points shall not discriminate between the prices charged to end users and prices charged to mobility service providers nor between prices charged to different mobility service providers. Where relevant, the level of prices may only be differentiated in a proportionate manner, according to an objective justification.

5. Operators of recharging points shall clearly make the information on the ad hoc price available at all publicly accessible recharging stations operated by them so that this information is known to end users before they initiate a recharging session. This information shall include all price components charged by the operator to calculate the price of a recharging session such as price per session, price per minute or price per kWh.

With respect to publicly accessible recharging points with a power output equal to or more than 50 kW, deployed from the date of application referred to in Article 24 and with respect to those recharging points referred to in the third subparagraph of paragraph 2, this information shall be clearly shown at the recharging station.

6. Prices charged by mobility service providers to end users shall be reasonable, transparent and non-discriminatory. Mobility service providers shall make available to end users all applicable price information, prior to the start of the recharging session, and specific to their intended recharging session, through freely available, widely supported electronic means, clearly distinguishing all the price components, including applicable e-roaming costs and other fees or charges applied by the mobility service provider. The fees shall be reasonable, transparent and non-discriminatory. No extra charges for cross-border e-roaming shall be applied.

7. No later than 1 year after the date of application as referred to in Article 24, operators of recharging points shall ensure that all publicly accessible recharging points operated by them are digitally-connected recharging points.

8. Operators of recharging points shall ensure that all publicly accessible normal power recharging points built or renovated after the date of application referred to in Article 24 operated by them are capable of smart recharging.

10. No later than 1 year after the date of application as referred to in Article 24, the operators of publicly accessible recharging points shall ensure that all direct current (DC) publicly accessible recharging points operated by them have a fixed recharging cable installed.

11. Where the operator of a recharging point is not the owner of that point, the owner shall make available to the operator, in accordance with the arrangements between them, a recharging point with the technical characteristics which enable the operator to comply with the obligation set out in paragraphs 3, 7, 8 and 10.

Article 6

Targets for hydrogen refuelling infrastructure of road vehicles

1. Member States shall ensure that, in their territory, a minimum number of publicly accessible hydrogen refuelling stations are put in place by 31 December 2030.

To that end Member States shall ensure that by 31 December 2030 publicly accessible hydrogen refuelling stations equipped with at least a 700 bars dispenser are deployed with a maximum distance of 200 km in-between them along the TEN-T core network.

An analysis on the best location shall be carried out by Member States for such refuelling stations and shall in particular consider the deployment of such stations in urban nodes or their vicinity, or in multimodal hubs where also other transport modes could be supplied.

2. Neighbouring Member States shall ensure that the maximum distance referred to in paragraph 1, second subparagraph is not exceeded for cross-border sections of the TEN-T core network.

3. The operator of a publicly accessible refuelling station or, where the operator is not the owner, the owner of that station in accordance with the arrangements between them, shall ensure that the station is designed to serve light-duty and heavy-duty vehicles. [...]

Article 7

Hydrogen refuelling infrastructure

1. Operators of hydrogen refuelling stations shall, at the publicly accessible refuelling stations operated by them provide end users with the possibility to refuel on an ad hoc basis.

Ad hoc refuelling shall be possible at all publicly accessible hydrogen refuelling stations using a payment instrument that is widely used in the Union. To that end, operators of those stations shall accept electronic payments through terminals and devices used for payment services, including at least one of the following:

(a) payment card readers;

(b) devices with a contactless functionality that is at least able to read payment cards.

The requirements set out in this paragraph shall apply from the date of application referred to in Article 24 for those publicly accessible refuelling stations deployed after that date. For publicly accessible refuelling stations deployed before that date, those requirements shall apply from 6 months after that date.

Where the operator of the hydrogen refuelling point is not the owner of that point, the owner shall make available to the operator, in accordance with the arrangements between them, hydrogen refuelling points with the technical characteristics which enable the operator to comply with the obligation set out in this paragraph.

2. Prices charged by the operators of publicly accessible hydrogen refuelling points shall be reasonable, easily and clearly comparable, transparent and non-discriminatory. Operators of publicly accessible hydrogen refuelling points shall not discriminate between the prices charged to end users and those charged to mobility service providers as well as between the prices charged to different mobility service providers. Where relevant, the level of prices may only be differentiated according to an objective justification.

3. Operators of hydrogen refuelling points shall make price information available before the start of a refuelling session at the refuelling stations operated by them.

4. Operators of publicly accessible refuelling stations may provide hydrogen refuelling services to customers on a contractual basis, including in the name and on behalf of other mobility service providers. Mobility service providers shall charge prices to end users that are reasonable, transparent and non-discriminatory. Mobility service providers shall make available to end users all applicable price information, prior to the start of the refuelling session, and specific to their intended refuelling session, through freely available, widely supported electronic means, clearly distinguishing the price components charged by the operator of the hydrogen refuelling point, applicable e-roaming costs and other fees or charges applied by the mobility service provider.

Article 8

Infrastructure for liquefied methane for road transport vehicles

Member States shall ensure until 1 January 2025 that an appropriate number of publicly accessible refuelling points for liquefied methane are put in place, at least along the TEN-T core network, in order to allow heavy-duty motor vehicles using liquefied methane to circulate throughout the Union, where there is demand, unless the costs are disproportionate to the benefits, including environmental benefits.

Article 9

Targets for shore-side electricity supply in maritime ports

1. Member States shall ensure that a minimum shore-side electricity supply for seagoing container ships and seagoing passenger ships is provided in TEN-T maritime ports. To that end, Member States shall take the necessary measures to ensure that by 1 January 2030:

   (a) TEN-T core and TEN-T comprehensive maritime ports, for which the average annual number of port calls of ships that are moored at the quayside over the last three years by seagoing container ships above 5000 gross tonnes is above 100, are equipped to provide each year shore-side electricity supply for at least 90% of the total number of port calls of seagoing container ships above 5000 gross tonnes that are moored at the quayside at the maritime port concerned;

   (b) TEN-T core and TEN-T comprehensive maritime ports, for which the average annual number of port calls of ships that are moored at the quayside over the last three years by seagoing ro-ro passenger ships above 5000 gross tonnes and seagoing high-speed passenger crafts above 5000 gross tonnes is above 40, are equipped to provide each year shore-side electricity supply for at least 90% of the total number of port calls of seagoing ro-ro passenger ships above 5000 gross tonnes and seagoing high-speed passenger crafts above 5000 gross tonnes that are moored at the quayside at the maritime port concerned;

   (c) TEN-T core and TEN-T comprehensive maritime ports, for which the average annual number of port calls of ships that are moored at the quayside over the last three years by seagoing passenger ships above 5000 gross tonnes other than seagoing ro-ro passenger ships and seagoing high-speed passenger craft is above 25, are equipped to provide each year shore-side electricity supply for at least 90% of the total number of port calls of seagoing passenger ships above 5000 gross tonnes other than seagoing ro-ro passenger ships and seagoing high-speed passenger craft that are moored at the quayside at the maritime port concerned.

2. The port calls of ships referred to in Article 5(3), a), b), c), da)[31] and f) of [FuelEU Maritime] shall not be taken into account for the purposes of determining the total number of port calls of ships that are moored at the quayside at the port concerned under paragraph 1.

3. Where the maritime port of the TEN-T core network and the TEN-T comprehensive network is located on an island, in an outermost region as referred to in Article 349 of the Treaty on the Functioning of the European Union or on the territory of Ceuta and Melilla, which is not connected directly to the electricity grid of the mainland, or in case of an outermost region or of Ceuta and Melilla to the electricity grid of a neighbouring country, paragraph 1 shall not apply, until such a connection has been completed or there is a sufficient locally generated electricity capacity from non-fossil energy sources to cover the needs of the island, the outermost region or of Ceuta and Melilla.

Article 10

Targets for shore-side electricity supply in inland waterway ports

Member States shall ensure that:

(a) at least one installation providing shore-side electricity supply to inland waterway vessels is deployed at all TEN-T core inland waterway ports by 1 January 2025;

(b) at least one installation providing shore-side electricity supply to inland waterway vessels is deployed at all TEN-T comprehensive inland waterway ports by 1 January 2030.

[31] Subparagraph (da) in Article 5(3) of the FuelEUMaritime proposal reads as follows:
(da) that are unable to connect to on-shore power supply because exceptionally the electrical grid stability is at risk, due to insufficient available shore-power to satisfy the ship's required electrical power demand at berth

Article 11

Targets for supply of liquefied methane in maritime ports

1. Member States shall ensure that an appropriate number of refuelling points for liquefied methane are put in place at TEN-T core maritime ports referred to in paragraph 2, to enable seagoing ships to circulate throughout the TEN-T core network by 1 January 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 designate in their national policy frameworks TEN-T core maritime ports that shall provide access to the refuelling points for liquefied methane referred to in paragraph 1, also taking into consideration actual market needs and developments.

Article 12

Targets for supply of electricity to stationary aircraft

1. Member States shall ensure that, at all TEN-T core and comprehensive network airports, the provision of electricity supply to stationary aircraft is ensured by:

   (a) 1 January 2025, at all aircraft contact stands used for commercial air transport operations;

   (b) 1 January 2030, at all aircraft remote stands used for commercial air transport operations.

1a. Member States may exempt airports of the TEN-T network, with less than 10 000 commercial flight movements per year, in the last three years, from the obligation to provide electricity to stationary aircraft at all remote stands.

2. As of 1 January 2030 at the latest, Member States shall take the necessary measures to ensure that the electricity supplied pursuant to paragraph 1 comes from the electricity grid or is generated on site without using fossil fuels.

Article 13

National policy frameworks

1. By 1 January 2024, each Member State shall prepare and send to the Commission a draft national policy framework for the development of the market as regards alternative fuels in the transport sector and the deployment of the relevant infrastructure.

(a) The national policy framework shall contain at least the following elements:

(1) an assessment of the current state and future development of the market as regards alternative fuels in the transport sector, and of the development of alternative fuels infrastructure, considering intermodal access of alternative fuels infrastructure and, where relevant, cross-border continuity;

(2) national targets and objectives pursuant to Articles 3, 4, 6, 8, 9, 10, 11 and 12 for which mandatory national targets are set out in this Regulation;

(3) policies and measures necessary to ensure that the mandatory targets and objectives referred to in point 2 of this paragraph are reached;

(4) measures to promote the deployment of alternative fuels infrastructure for captive fleets, in particular for electric recharging and hydrogen refuelling stations for public transport services and electric recharging stations for car sharing, where such measures are planned or have been adopted by the Member State;

(5) measures to encourage and facilitate the deployment of recharging stations for light-duty and heavy-duty vehicles at private locations that are not accessible to the public, where such measures are planned or have been adopted by the Member State;

(6) measures to promote alternative fuels infrastructure in urban nodes, in particular with respect to publicly accessible recharging points, where such measures are planned or have been adopted by the Member State;

(7) measures to promote a sufficient number of publicly accessible high power recharging points, where such measures are planned or have been adopted by the Member State;

(7a) measures necessary to ensure that the deployment and operation of recharging points, including the geographical distribution of bidirectional charging points, contribute to the flexibility of the energy system and to the penetration of renewable electricity into the electric system, where such measures are planned or have been adopted by the Member State;

(8) measures to ensure that publicly accessible recharging and refuelling points for alternative fuels are accessible to older persons, persons with reduced mobility and with disabilities in line with the accessibility requirements of Directive 2019/882;

(9) measures to remove possible obstacles with regards to planning, permitting, procuring and operating of alternative fuels infrastructure, where such measures are planned or have been adopted by the Member State.

(b) The national policy framework may contain the following elements:

(1) a deployment plan for alternative fuels infrastructure in airports other than for electricity supply to stationary aircraft, for instance for hydrogen and electric recharging for aircrafts;

(2) a deployment plan for alternative fuels infrastructure in maritime ports, for instance for electricity and hydrogen, for port services as defined in Regulation (EU) 2017/352[32];

[32] Regulation (EU) 2017/352 of the European Parliament and of the Council of 15 February 2017 establishing a framework for the provision of port services and common rules on the financial transparency of ports (OJ L 57, 3.3.2017, p. 1).

(3) a deployment plan for alternative fuels infrastructure in maritime ports other than for liquefied methane and shore-side electricity supply for use by sea going vessels, for instance for hydrogen, ammonia and electricity;

(4) a deployment plan for alternative fuels in inland waterway transport, for instance for both hydrogen and electricity;

(5) a deployment plan including targets, key milestones and financing needed, for hydrogen or battery electric trains on network segments that will not be electrified;

(6) national targets and objectives for the deployment of alternative fuels infrastructure related to points (1), (2), (3), (4) and (5) of this subparagraph for which no mandatory targets are set out in this Regulation.

2. Member States shall ensure that the national policy frameworks take into account the needs of the different transport modes existing on their territory.

3. Member States shall ensure that national policy frameworks take into account, as appropriate, the interests of regional and local authorities, in particular when recharging and refuelling infrastructure for public transport is concerned, 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 Regulation are coherent and coordinated. In particular, Member States shall cooperate on the strategies to use alternative fuels and deployment of corresponding infrastructure in waterborne transport. The Commission shall assist the Member States in the cooperation process.

5. Support measures for alternative fuels infrastructure shall comply with the relevant State aid rules of the TFEU.

6. Each Member State shall make available to the public its draft national policy framework and shall ensure that the public is given early and effective opportunities to participate in the preparation of the draft national policy framework. [...]

7. The Commission shall assess the draft national policy frameworks and may issue recommendations to a Member State no later than six months after the submission of the draft national policy frameworks as referred to in paragraph 1. Those recommendations may, in particular, address:

(a) the level of ambition of targets and objectives with a view to meet the obligations set out in Articles 3, 4, 6, 8, 9, 10, 11 and 12;

(b) policies and measures relating to Member States' objectives and targets.

8. Each Member State shall take due account of any recommendations from the Commission in its final national policy framework. If the Member State concerned does not address a recommendation or a substantial part thereof, that Member State shall provide a written explanation to the Commission.

9. By 1 January 2025, each Member State shall notify to the Commission its final national policy framework.

Article 14

Reporting

1. Each Member State shall submit to the Commission a standalone national progress report on the implementation of its national policy framework for the first time by 1 January 2027 and every two years thereafter.

2. The progress report [...] 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 13.

3. Member States shall assess, at the latest by 30 June 2024 and periodically every four years thereafter, how the deployment and operation of recharging points could enable electric vehicles to further contribute to the flexibility of the energy system, including their participation in the balancing market, and to the further absorption of renewable electricity. That assessment shall take into account all types of recharging points, whether public or private, and provide recommendations in terms of type, supporting technology and geographical distribution in order to facilitate the ability of users to integrate their electric vehicles in the system. It shall be made publicly available. Member States may request the regulatory authority to carry out this assessment. On the basis of the results of the assessment, Member States shall, if necessary, take the appropriate measures for the deployment of additional recharging points and include them in their progress report referred to in paragraph 1. The assessment and measures shall be taken into account by the system operators in the network development plans referred to in Article 32(3) and Article 51 of Directive (EU) 2019/944.

4. On the basis of input from transmission system operators and distribution system operators, the regulatory authority of a Member States shall assess, at the latest by 30 June 2024 and periodically every four years thereafter, the potential contribution of bidirectional charging to the penetration of renewable electricity into the electricity system. That assessment shall be made publicly available. On the basis of the results of the assessment, Member States shall take, if necessary, the appropriate measures to adjust the availability and geographical distribution of bidirectional recharging points in private areas and include them in their progress report referred to in paragraph 1.

Article 14a

Content, structure and format of national policy frameworks and national progress reports

The Commission shall adopt guidance and templates concerning the content, structure and format of the national policy frameworks and the content of the national progress reports to be submitted by the Member States in accordance with Article 13 and Article 14(1), no later than six months after the date of application referred to in Article 24. The Commission may adopt guidance and templates to facilitate the effective application across the Union of any other provisions of this Regulation.

Article 15

Review of national policy frameworks and national progress reports

1. By 1 January 2026, the Commission shall assess the national policy framework notified by Member States pursuant to Article 13(9) and submit to the European Parliament and to the Council a report on the assessment of those national policy frameworks and their coherence at Union level, including a first assessment of the expected level of attainment of the national targets and objectives referred to in Article 13(1).

2. The Commission shall assess the national progress reports submitted by Member States pursuant to Article 14(1) and shall as appropriate issue recommendations to Member States to ensure the achievement of the objectives and obligations laid down in this Regulation. Following those recommendations, the Member States may issue an update of their national progress report within six months following the Commission's recommendations.

3. The Commission shall submit to the European Parliament and to the Council a report on its assessment of the national progress reports one year after submission of those progress reports by the Member States pursuant to Article 14(1). This assessment shall contain an assessment of:

   (a) the progress made by Member States on the achievement of the targets and objectives;

   (b) the coherence of the development at Union level.

4. On the basis of national policy frameworks, national progress reports and reports submitted by Member States pursuant to respectively Article 13(9) Article 14(1) and Article 16(1), the Commission shall publish and regularly update information on the national targets and the objectives submitted by each Member State regarding:

(a) the number of publicly accessible recharging points and stations, separately for recharging points dedicated to light-duty vehicles and recharging points dedicated to heavy-duty vehicles, and in accordance with the categorisation provided in Annex III;

(b) the number of publicly accessible hydrogen refuelling points;

(c) the infrastructure for shore-side electricity supply in maritime and inland ports of the TEN-T core network and the TEN-T comprehensive network;

(d) the infrastructure for electricity supply for stationary aircraft in airports of the TEN-T core network and the TEN-T comprehensive network;

(e) the number of refuelling points for liquefied methane at maritime and inland ports of the TEN-T core network and the TEN-T comprehensive network;

(f) the number of publicly accessible refuelling points for liquefied methane for motor vehicles;

(g) the number of publicly accessible CNG refuelling points for motor vehicles;

(h) refuelling and recharging points for other alternative fuels at TEN-T core and comprehensive maritime and inland ports;

(i) refuelling and recharging points for other alternative fuels at airports of the TEN-T core network and the TEN-T comprehensive network;

(j) refuelling points for alternative fuels and recharging points for rail transport.

Article 16

Progress tracking

1. By 31 March of the year following the date of application referred to in Article 24 and every year thereafter by the same date, Member States shall report to the Commission the total aggregated recharging power output, the number of publicly accessible recharging points and the number of registered battery electric and plug-in hybrid vehicles deployed on their territory on 31 December of the previous year, in accordance with the requirements of Annex III.

2. Without prejudice to the procedure laid down in Article 258 TFEU, where it is evident from the report referred to in paragraph 1 of this Article or from any information available to the Commission that a Member State did not meet its national targets as referred to in Article 3(1), the Commission may issue a finding to this effect and recommend the Member State concerned to take corrective measures to meet the national targets. Within three months following the receipt of the Commission's findings, the Member State concerned shall notify to the Commission the corrective measures that it plans to implement to meet the targets set in Article 3(1) including additional actions that the Member State intends to implement to meet those targets and a clear timetable for actions that enables the assessment of the annual progress towards meeting those targets. Where the Commission finds that the corrective measures are satisfactory, the Member State concerned shall update its latest national progress report as referred to in Article 14 with these corrective measures and submit it to the Commission.

Article 17

User information

1. Relevant, consistent and clear information shall be made available as regards motor vehicles which can be regularly fuelled with individual fuels placed on the market, or recharged at recharging points. That information shall be made available:

   (a) in motor vehicle manuals and on motor vehicles by manufacturers as referred to inc Article 3(40) of Regulation (EU) 2018/858 when those vehicles are placed on the market;

   (b) at refuelling and recharging points by refuelling and recharging point operators, and

   (c) in motor vehicle dealerships by the distributors as referred to in Article 3(43) of Regulation (EU) 2018/858.

2. Identification of vehicles and infrastructures compatibility as well as identification of fuels and vehicle compatibility referred to in paragraph 1 shall be in compliance with the technical specifications referred to in points 9.1 and 9.2 of Annex II. 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) by refuelling point operators on corresponding pumps and their nozzles at all refuelling points operated by them, as from the date on which fuels are placed on the market;

   (b) by manufacturers as referred to in Article 3(40) of Regulation (EU) 2018/858 in the immediate proximity of all fuel tanks' filling caps of motor vehicles recommended for and compatible with that fuel and in motor vehicle manuals, when such motor vehicles are placed on the market.

3. When fuel prices are shown at a refuelling station, Member States shall ensure that a comparison between the relevant unit prices is shown where appropriate, and in particular for electricity and hydrogen, for information purposes following the common methodology for alternative fuels unit price comparison referred to in point 9.3 of Annex II.

4. Where European 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 Regulation, the Commission may, by means of implementing acts in accordance with Article 21(2), for the purposes of the uniform implementation of paragraphs 1 and 2:

   (a) mandate ESOs to develop compatibility labelling specifications,

   (b) determine 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. Where provisions on labelling of the respective European Standards are updated, implementing acts regarding the labelling are adopted or new European Standards for alternative fuels are developed, as necessary, the corresponding requirements on labelling shall apply 24 months after their respective updating or adoption to all refuelling and recharging points and to all motor vehicles when they are placed on the market.

Article 18

Data provisions

1. Member States shall appoint an IDentification Registration Organisation ('IDRO'). The IDRO shall issue and manage unique identification ('ID') codes to identify, at least operators of recharging points and mobility service providers, at the latest one year after the date of application referred to in Article 24.

2. No later than 1 year after the date of application as referred to in Article 24, operators of publicly accessible recharging points and refuelling points for alternative fuels or, in accordance with the arrangement between them, the owners of those points, shall ensure the availability of static and dynamic data concerning alternative fuels infrastructure operated by them or services inherently linked to such infrastructure that they provide or they outsource at no cost. The following data types shall be made available:

   (a) static data for publicly accessible recharging points and refuelling points for alternative fuels operated by them:

      (i) geographic location of the recharging points and refuelling points for alternative fuels,

      (ii) number of connectors,

      (iii) number of parking spaces for people with disabilities,

      (iv) contact information of the owner and operator of the recharging and refuelling station,

      (v) opening hours.

(b) further static data for publicly accessible recharging points operated by them:

(i) identification (ID) codes, at least of the recharging point,

(ii) type of connector,

(iii) type of current (AC/DC),

(iv) power output (kW).

(c) dynamic data for publicly accessible recharging points and refuelling points for alternative fuels operated by them:

(i) operational status (operational/out of order),

(ii) availability (in use/ not in use),

(iii) ad hoc price.

The requirements laid down in point (c) shall not apply to publicly accessible recharging points that do not require payment for the recharging service.

3. No later than 15 months after the date of application referred to in Article 24, Member States shall ensure that the data referred to in paragraph 2 is made accessible on an open and non-discriminatory basis to all stakeholders through their National Access Points in accordance with the relevant provisions related to such data in Delegated Regulation (EU) 2022/670[33] and in compliance with the additional complementary specifications that may be adopted in accordance with paragraph 4a.

4. The Commission shall be empowered to adopt delegated acts in accordance with Article 20 to add to the data types specified in paragraph 2 additional data types concerning publicly accessible recharging points and refuelling points for alternative fuels or services inherently linked to such infrastructure that the operators of that infrastructure provide or outsource in view of technological developments or new services made available on the market.

[33] Commission Delegated Regulation (EU) 2022/670 of 2 February 2022 supplementing Directive 2010/40/EU of the European Parliament and of the Council with regard to the provision of EU-wide real-time traffic information services, OJ L 122, 25.4.2022, p. 1.

4a. The Commission may, by means of implementing acts adopted in accordance with Article 21(2):

(a) adopt specifications, complementary to those set out in Delegated Regulation (EU) 2022/670, related to the data format, frequency and quality in which the data referred to in paragraph 2 and in the delegated acts adopted on the basis of paragraph 4 shall be made available;

(b) establish detailed procedures enabling the availability and accessibility of data required pursuant to this Article.

The implementing acts adopted on the basis of this paragraph shall be without prejudice to Directive 2010/40/EU and the delegated and implementing acts adopted on the basis thereof.

5. The delegated and implementing acts referred to in paragraph 4 and 4a shall provide for reasonable transitional periods before the provisions contained therein, or amendments thereof, become binding on the operators or owners of recharging points and refuelling points for alternative fuels.

Article 19

Common technical specifications

1. The technical specifications set out in Annex II shall be complied with. [...] 6. In accordance with Article 10 of Regulation (EU) No 1025/2012, the Commission may request European standardisation organisations to draft European standards defining technical specifications for areas referred to in Annex II to this Regulation for which no common technical specifications have been adopted by the Commission.

7. The Commission shall be empowered to adopt delegated acts in accordance with Article 20 to amend and supplement Annex II:

(a) by introducing the technical specifications for the areas listed in that Annex to enable full technical interoperability of the recharging and refuelling infrastructure in terms of physical connections, communication exchanges and access for people with reduced mobility for those areas;

(b) by updating the references to the standards referred to in the technical specifications set out in that Annex.

When such delegated acts are to apply to exisiting infrastructures those acts shall be based on a cost-benefit analysis, submitted to the European Parliament and the Council together with those delegated acts.

8. The delegated acts referred to in paragraph 7 shall provide for reasonable transitional periods before the technical specifications contained therein, or amendments thereof, become binding on the infrastructure. [...]

Article 20

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 18 and 19 shall be conferred on the Commission for a period of five years from the date of application as referred to in Article 24. 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.

3. The delegation of power referred in Articles 18 and 19 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.

3a. Before adopting a delegated act, the Commission shall consult experts designated by each Member State in accordance with the principles laid down in the Interinstitutional Agreement on Better Law-Making of 13 April 2016.

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 18 and 19 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 21

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.

Article 22

Review

1. By 31 December 2024, the Commission shall review the provisions of this Regulation related to heavy-duty vehicles, and, where appropriate, submit a proposal to amend this Regulation [...] . In support of this review, the Commission shall submit to the European Parliament and to the Council a technology and market readiness report dedicated to heavy-duty vehicles. This report shall take into account the first indications of the preferences of the market. It shall also consider the technological and standard developments achieved by that date and those expected in the short term, in particular regarding recharging and refuelling standards and technologies such as high power recharging standards, electric road systems (ERS) and liquid hydrogen. Regarding hydrogen refuelling stations, the Commission shall further assess the date referred to in Article 6(1) in light of the technology and market developments, the need to specify a minimum capacity for those stations, as well as the relevance and date to extend the requirements to deploy hydrogen refuelling stations to the TEN-T comprehensive network.

2. By 31 December 2026 and then every five years, the Commission shall review this Regulation, and, where appropriate, submit a proposal to amend it. The Commission shall in particular review whether the electronic means of payment referred to in Article 5(2) are still appropriate. It shall also assess whether the traffic thresholds referred to in Article 3 (2b) and (2c), and in Article 4 (1c) and (1d), are still relevant given the expected increase of the share of battery electric vehicles compared to the total fleet of vehicles circulating in the Union.

[...]

Article 23

Repeal

1. Directive 2014/94/EU , Commission Delegated Regulation (EU) 2019/1745 and Commission Delegated Regulation (EU) 2021/1444 are repealed with effect from the date of application referred to in Article 24.

2. References to Directive 2014/94/EU shall be construed as references to this Regulation and shall be read in accordance with the correlation table laid down in Annex IV.

Article 24

Entry into force

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

It shall apply from 6 months after entry into force.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels,

For the European Parliament	*For the Council*
The President	*The President*

ANNEX I

Reporting

The national progress report referred to in Article 14(1) of the Regulation shall include at least the following elements:

1. target setting

   (a) vehicle uptake projections for 31 December of the years 2025, 2030 and 2035 for:

   – light-duty road vehicles separately for battery electric, plug in hybrid, and hydrogen;

   – heavy-duty road vehicles, separately for battery electric and hydrogen;

   (b) targets for 31 December 2025, 2030 and 2035 for:

   – electric recharging infrastructure for light-duty vehicles: number of recharging stations and power output (classification of recharging stations following Annex III to this Regulation);

   – development of recharging stations for light-duty vehicles not accessible to the public, if applicable; [...] electric recharging infrastructure for heavy-duty vehicles: number of recharging stations and power output;

   – development of recharging stations for heavy-duty vehicles not accessible to the public, if applicable;

   – hydrogen refuelling stations: number of refuelling stations, capacity of the refuelling stations and connector provided;

   – road refuelling stations for liquefied methane: number of refuelling stations and capacity of stations;

   – refuelling points for liquefied methane at maritime ports of the TEN-T core and TEN-T comprehensive network, including location (port) and capacity per port;

   – shore-side electricity supply at maritime ports of the TEN-T core and TEN-T comprehensive network, including exact location (port) and capacity of each installation within the port;

   – shore-side electricity supply at inland waterway ports of the TEN-T core and TEN-T comprehensive network including location (port) and capacity;

   – electricity supply for stationary aircraft, number of installations per airport of the TEN-T core and TEN-T comprehensive network;

– other national targets and objectives for which no EU wide mandatory national targets exist, if applicable. For alternative fuels infrastructure in ports, airports and for rail the location and capacity/size of the installation has to be reported;

2. utilisation rates: for the categories under point 1(b), reporting the utilisation of that infrastructure;

3. the level of achievement of the targets reported for the deployment of alternative fuels in the different transport modes (road, rail, water and air):

– level of achievement of the infrastructure deployment targets as referred to in point 1(b) for all transport modes, if applicable, in particular for electric recharging stations, electric road system (if applicable), hydrogen refuelling stations, shore-side electricity supply in maritime and inland waterway ports, liquefied methane bunkering at TEN-T core maritime ports, other alternative fuels infrastructure in ports, electricity supply to stationary aircrafts;

– for recharging points, specifying the ratio of public to private infrastructure;

– alternative fuels infrastructure deployment within urban nodes;

3a. the review of the derogation pursuant to Article 3(2b);

4. 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 refuelling stations concessions;

5. information on the policy measures supporting the implementation of the national policy framework, including:

– 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;

6. public deployment and manufacturing support, including:

   – 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;

   – consideration of any particular needs during the initial phase of the deployment of alternative fuels infrastructures;

7. research, technological development and demonstration (RTD&D): annual public budget allocated to support alternative fuels RTD&D.

ANNEX II

Technical specifications

1. Technical specifications for electricity supply for road transport

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 EN 62196-2:2017.
- direct current (DC) normal 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 EN 62196-3:2014

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 EN 62196-2:2017;
- 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 EN 62196-3:2014.
- Recharging points for L-category motor vehicles: [...] The publicly accessible alternating current (AC) recharging points reserved for L-category electric vehicles up to 3,7 kW shall be equipped, for interoperability purposes, with at least one of the following:

  a) Socket-outlets or vehicle connectors of Type 3A as described in standard EN 62196-2:2017 (for Mode 3 charging);

  b) Socket-outlets compliant with IEC 60884-1:2002+A1:2006+A2:2013 (for Mode 1 or Mode 2 charging);
- The publicly accessible alternating current (AC) recharging points reserved for L-category electric vehicles above 3,7 kW shall be equipped, for interoperability purposes, with at least socket-outlets or vehicle connectors of Type 2 as described in standard EN 62196-2:2017.

1.3. Normal and high power recharging points for electric buses:

– alternating current (AC) normal and high power recharging points for electric buses shall be equipped at least with connectors of Type 2 as described in standard EN 62196-2:2017.

– direct current (DC) normal and high power recharging points for electric buses shall be equipped at least with connectors of the combined charging system 'Combo 2' as described in standard EN 62196-3:2014.

1.5a. Contact interface automated device for electric buses on conductive recharging in mode 4, according to EN 61851-23-1:2020, shall be equipped at least with mechanical and electrical interfaces, as defined in the standard EN 50696:2021, concerning:

– automated connection device (ACD) mounted on the infrastructure (pantograph)

– automated connection device (ACD) mounted on the roof of the vehicle

– automated connection device (ACD) mounted underneath the vehicle

– automated connection device (ACD) mounted on the infrastructure and connecting to the side or on the roof of the vehicle.

1.4. Technical specifications regarding the connector for recharging heavy-duty vehicles (DC charging).

1.5. Technical specifications for inductive static wireless recharging for passenger cars and light-duty commercial vehicles.

1.6. Technical specifications for inductive static wireless recharging for heavy-duty vehicles.

1.7. Technical specifications for inductive dynamic wireless recharging for passenger cars and light-duty vehicles.

1.8. Technical specifications for inductive dynamic wireless recharging for heavy-duty-vehicles.

1.9. Technical specifications for inductive static wireless recharging for electric buses.

1.10. Technical specifications for inductive dynamic wireless recharging for electric buses.

1.11. Technical specifications for electric road system (ERS) for dynamic overhead power supply via a pantograph for heavy-duty vehicles.

1.12. Technical specifications for electric road system (ERS) for dynamic ground level power supply through conductive rails for passenger cars, light-duty vehicles and heavy-duty vehicles.

1.13. Technical specifications for battery swapping for L-category vehicles.

1.14. If technically feasible, technical specifications for battery swapping for passenger cars and light-duty vehicles.

1.15. If technically feasible, technical specifications for battery swapping for heavy-duty vehicles.

1.16. Technical specifications for recharging stations to ensure access to users with disabilities.

2. Technical specifications for communication exchange in the electric vehicle recharging ecosystem

2.1. Technical specifications regarding communication between the electric vehicle and the recharging point (vehicle-to-grid communication).

2.2. Technical specifications regarding communication between the recharging point and the recharging point management system (back-end communication).

2.3. Technical specifications regarding communication between the recharging point operator, electromobility service providers and e-roaming platforms.

2.4. Technical specifications regarding communication between the recharging point operator and the distributed system operators.

3. Technical specifications for hydrogen supply for road transport

3.1. Outdoor hydrogen refuelling points dispensing gaseous hydrogen used as fuel on board motor vehicles shall comply at least with the interoperability requirements described in standard EN 17127:2020.

3.2. The quality characteristics of hydrogen dispensed by hydrogen refuelling points for motor vehicles shall comply with the requirements described in standard EN 17124:2022.The methods to ensure that the hydrogen quality is met are also described in the standard [...]

3.3. The fuelling algorithm shall comply with the requirements of standard EN 17127:2020.

3.4. Once concluded the processes of certification of standard EN ISO 17268:2020, connectors for motor vehicles for the refuelling of gaseous hydrogen shall comply at least with this standard.

3.5. Technical specifications for connectors for refuelling points dispensing gaseous (compressed) hydrogen for heavy-duty vehicles.

3.6. Technical specifications for connectors for refuelling points dispensing liquefied hydrogen for heavy-duty vehicles.

3a. Technical specifications for methane for road transport

3a.1. Refuelling points for compressed natural gas (CNG) for motor vehicles shall comply with a fuelling pressure (service pressure) of 20,0 MPa gauge (200 bar) at 15 °C. A maximum fuelling pressure of 26,0 MPa with 'temperature compensation' is allowed as addressed in standard EN ISO 16923:2018.

3a.2. The connector profile shall comply with UNECE Regulation No 110 referring to parts I and II in standard EN ISO 14469:2017.

3a.3. Refuelling points for liquefied methane for motor vehicles shall comply with a fuelling pressure lower than the maximum allowable working pressure of the vehicle tank as addressed in EN ISO 16924:2018, 'Natural gas fuelling stations – LNG stations for fuelling vehicles'. In addition, the connector profile shall comply with standard EN ISO 12617:2017 'Road vehicles – Liquefied natural gas (LNG) refuelling connector –3,1 MPa connector'

4. Technical specifications for electricity supply for maritime transport and inland navigation

4.1. Shore-side electricity supply for seagoing ships, including the design, installation and testing of the systems, shall comply at least with the technical specifications of the IEC/IEEE 80005-1:2019/AMD1:2022 standard, for high-voltage shore connections.

4.1a. Plugs, socket-outlets and ship couplers for high-voltage shore connection, shall comply at least with the technical specification of the IEC 62613-1:2019

4.2. Shore-side electricity supply for inland waterway vessels shall comply at least with the standard EN 15869-2:2019 or standard EN 16840:2017 depending on energy requirements.

4.3. Technical specifications for shore-side battery electricity recharging points for maritime vessels, featuring interconnectivity and system interoperability for maritime vessels.

4.4. Technical specifications for shore-side battery recharging points for inland navigation vessels, featuring interconnectivity and system interoperability for inland navigation vessels.

4.5. Technical specifications for vessel-to-port grid communication interface in automated onshore power supply (OPS) and battery recharging systems for maritime vessels.

4.6. Technical specifications for vessel-to-port grid communication interface in automated onshore power supply (OPS) and battery recharging systems for inland navigation vessels.

4.7. If technically feasible, technical specifications for battery swapping and recharging at onshore stations for inland navigation vessels.

5. Technical specifications for hydrogen bunkering for maritime transport and inland navigation

5.1. Technical specifications for refuelling points and bunkering for gaseous (compressed) hydrogen for maritime hydrogen-fuelled vessels.

5.2. Technical specifications for refuelling points and bunkering for gaseous (compressed) hydrogen inland navigation hydrogen-fuelled vessels.

5.3. Technical specifications for refuelling points and bunkering for liquefied hydrogen for maritime hydrogen-fuelled vessels.

5.4. Technical specifications for refuelling points and bunkering for liquefied hydrogen inland navigation hydrogen-fuelled vessels.

6. Technical specifications for methanol bunkering for maritime transport and inland navigation

6.1. Technical specifications for refuelling points and bunkering for [...] methanol for maritime methanol-fuelled vessels.

6.2. Technical specifications for refuelling points and bunkering for [...] methanol for inland navigation methanol-fuelled vessels.

7. Technical specifications for ammonia bunkering for maritime transport and inland navigation

7.1. Technical specifications for refuelling points and bunkering for [...] ammonia for maritime ammonia-fuelled vessels.

7.2. Technical specifications for refuelling points and bunkering for [...] ammonia for inland navigation ammonia-fuelled vessels.

8. Technical specifications for liquefied methane refuelling points for maritime transport and inland navigation

8.1. Refuelling points for liquefied methane for seagoing ships, which are not covered by the International Code of the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk (IGC Code), shall comply at least with the standard EN ISO 20519:2017.

8.2. Refuelling points for liquefied methane for inland waterway vessels shall comply at least with the standard EN ISO 20519:2017 (parts 5.3 to 5.7) for interoperability purposes only.

9. Technical specifications related to fuel labelling

9.1. The ‘Fuels - Identification of vehicle compatibility - Graphical expression for consumer information’ label shall comply at least with standard EN 16942:2016+A1:2021.

9.2. The ‘Identification of vehicles and infrastructures compatibility - Graphical expression for consumer information on EV power supply’ shall comply at least with standard EN 17186:2019.

9.3. The common methodology for alternative fuels unit price comparison set out by Commission Implementing Regulation (EU) 2018/732.

ANNEX III

Reporting requirements on deployment of electric vehicles and publicly accessible recharging infrastructure

1. Member States must categorise their reporting on electric vehicles deployment as follows:
   - battery electric vehicles, separately for categories M1, N1, M2/3 and N2/3
   - plug in hybrid electric vehicles, separately for categories M1, N1, M2/3 and N2/3

2. Member States must categorise their reporting on deployment of publicly accessible recharging points as follows:

Category	Sub-category	Maximum power output	Definition pursuant to Article 2 of this Regulation
Category 1 (AC)	Slow AC recharging point, single-phase	P < 7.4 kW	Normal power recharging point
	Medium-speed AC recharging point, triple-phase	7.4 kW ≤ P ≤ 22 kW	
	Fast AC recharging point, triple-phase	P > 22 kW	High power recharging point
Category 2 (DC)	Slow DC recharging point	P < 50 kW	
	Fast DC recharging point	50 kW ≤ P < 150 kW	
	Level 1 - Ultra-fast DC recharging point	150 kW ≤ P < 350 kW	
	Level 2 - Ultra-fast DC recharging point	P ≥ 350 kW	

3. The following data must be provided separately for publicly accessible recharging infrastructure dedicated to light-duty vehicles and heavy-duty vehicles:
   - number of recharging points, to be reported for each of the categories under point 2;
   - number of recharging stations following the same categorisation as for the recharging point; [...]
   - total aggregated power output of the recharging stations.

ANNEX IV

Correlation table

Directive 2014/94/EU	This Regulation
Article 1	Article 1
Article 2(1)	Article 2(3)
Article 2	Article 2
-	Article 3
-	Article 4
Article 4	Article 5
-	Article 6
-	Article 7
Article 6(4)	Article 8
-	Article 9
-	Article 10
Article 6(1)	Article 11
-	Article 12
Article 3	Article 13
Article 10	Articles 14, 15, 16
Article 7	Article 17
	Article 18
	Article 19
Article 8	Articlle 20
Article 9	Article 21
	Article 22
Article 11	Article 23
_	Article 24
Article 12	Article 25
Article 13	