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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)

{SEC(2021) 560 final} - {SWD(2021) 631 final} - {SWD(2021) 632 final} -
{SWD(2021) 637 final} - {SWD(2021) 638 final}

EXPLANATORY MEMORANDUM

1. CONTEXT OF THEPROPOSAL

This proposal concerns the creation of a new Regulation for the deployment of alternative fuels infrastructure. The new Regulation will repeal Directive 2014/94/EU of the European Parliament and of the Council on the deployment of alternative fuels infrastructure[1].

1.1. Reasons for and objectives of the proposal

Mobility and transport are essential for everyone living in Europe and for the European economy as a whole. Free movement of people and goods across the internal borders of the European Union is a fundamental freedom of the EU and its single market. Mobility brings many socio-economic benefits to the European public and businesses, but also has a growing impact on the environment, including in the form of increased greenhouse gas emissions and local air pollution, which affect human health and well-being.

In December 2019, the Commission adopted the *European Green Deal* communication[2]. The European Green Deal calls for a 90% reduction in greenhouse gas (GHG) emissions in transport. The aim is for the EU to become a climate-neutral economy by 2050, while also working towards a zero-pollution ambition. In September 2020, the Commission adopted its proposal for a European Climate Law to reduce net emissions of greenhouse gases by at least 55% by 2030 compared to 1990 and to put Europe on a responsible path to becoming climate-neutral by 2050[3]. The *Stepping up Europe's 2030 Climate Ambition* communication[4] notes the relevance of a holistic approach to large-scale and local infrastructure planning and the need for an appropriate rollout of alternative fuels infrastructure to support the transition to a nearly zero-emission car fleet by 2050. On 21 April 2021, the Council and Parliament reached provisional political agreement on the European Climate Law.

In December 2020, the Commission adopted the *Sustainable and Smart Mobility Strategy* communication[5]). The strategy lays the foundation for how the EU transport system can achieve this transformation and sets concrete milestones to keep the transport system's journey towards a smart and sustainable future on track. The transport sector is still vastly reliant on fossil fuels. Boosting the uptake of zero- and low-emission vehicles, vessels and aeroplanes and of renewable and low-carbon fuels in all modes of transport is a priority objective in the quest to make all transport modes more sustainable.

The increased deployment and use of renewable and low-carbon fuels must go hand in hand with the creation of a comprehensive network of recharging and refuelling infrastructure based on a geographically fair manner to enable the widespread uptake of low- and zero-emission vehicles in all transport modes. In the passenger car markets particularly, the broad mass of consumers will only switch to zero- emission vehicles once they are sure they can recharge or refuel their vehicles anywhere in the EU and as easily as is currently the case for conventionally fuelled vehicles. It is important that no EU region or territory is left behind and that regional disparities in the deployment of the infrastructure for alternative fuels are well-addressed in the formulation and implementation of national policy frameworks.

Directive 2014/94/EU on the deployment of alternative fuels infrastructure ('the Directive')

1 OJ L 307, 28.10.2014, p. 1.
2 COM(2019) 640 final.
3 COM(2020)563 final.
4 COM(2020)562 final.
5 COM(2020)789 final.

sets out a framework of common measures for the deployment of such infrastructure in the EU. It requires Member States to set up national policy frameworks to establish markets for alternative fuels and ensure that an appropriate number of publicly accessible recharging and refuelling points is put in place, particularly also to enable free cross-border circulation of such vehicles and vessels on the TEN-T network. In its recent report on the application of Directive 2014/94/EU on the deployment of alternative fuels infrastructure, the Commission noted some progress in the Directive's implementation[6]. However, the shortcomings of the current policy framework are also clearly visible: as there is no detailed and binding methodology for Member States to calculate targets and adopt measures, their level of ambition in target setting and supporting policies in place varies greatly. A comprehensive and complete network of alternative fuels infrastructure does not exist across the EU, the report concludes. Likewise, the European Court of Auditors noted in its special report on recharging infrastructure that obstacles to travelling across the EU in electric vehicles remain and that the deployment of recharging infrastructure in the Union needs to accelerate[7].

The Commission carried out an *ex post* evaluation of this Directive[8]. The evaluation found that the Directive is not well-adapted to the purpose of serving the increased climate ambition for 2030. The main problems include that Member States' infrastructure planning on average lacks the level of ambition, consistency and coherence needed, leading to insufficient, unevenly distributed infrastructure. Further interoperability issues with physical connections persist, while new issues have emerged over communication standards, including data exchange among the different actors in the electro-mobility ecosystem. Finally, there is a lack of transparent consumer information and common payment systems, which limits user acceptance. Without further EU action, this lack of interoperable, easy-to use recharging and refuelling infrastructure is likely to become a barrier to the needed market growth of low- and zero-emission vehicles, vessels and – in the future – aircraft.

This proposal is part of the overall set of interlinked policy initiatives under the 'Fit for 55' package. These policy initiatives correspond to the actions needed across all sectors of the economy to complement national efforts to achieve the increased climate ambition for 2030, as described in the Commission's 2021 work programme[9].

This initiative seeks to ensure the availability and usability of a dense, widespread network of alternative fuels infrastructure throughout the EU. All users of alternative fuel vehicles (including vessels and aircraft) need to be able to move through the EU at ease, enabled by key infrastructure such as motorways, ports and airports. The specific objectives are: (i) ensuring minimum infrastructure to support the required uptake of alternative fuel vehicles across all transport modes and in all Member States to meet the EU's climate objectives; (ii) ensuring the infrastructure's full interoperability; and (iii) ensuring full user information and adequate payment options.

Meeting the European Green Deal goal on the reduction of greenhouse gas emissions from transport and developing a common EU transport market require full connectivity and a seamless user experience along the European transport network for low- and zero-emission vehicles, vessels and aircraft. This in turn requires sufficient quantity and full

6 COM(2021)103 final

7 European Court of Auditors (2021): Special Report 05/2021: *Infrastructure for charging electric vehicles: more charging stations but uneven deployment makes travel across the EU complicated*.

8 SWD(2021) 637, 'Evaluation of Directive 2014/94/EU of the European Parliament and of the Council on the deployment of alternative fuels infrastructure'.

9 COM(2020) 690 final.

interoperability of infrastructure across borders. Only a common European legislative framework can reach these objectives. This initiative will contribute to coherent and consistent development and rollout of vehicle fleets, recharging and refuelling infrastructure and user information and services.

1.2. Consistency with existing policy provisions in the policy area

This initiative is consistent with the other policy initiatives of the 'Fit for 55' package. This initiative complements in particular: (i) the regulations setting CO_2 emission performance standards for new passenger cars and new light commercial vehicles[10] and heavy-duty vehicles[11]; and (ii) the legislative proposal for setting new CO_2 emission performance standards for new cars and new light commercial vehicles post-2020, also part of the 'Fit for 55' package[12]. The CO_2 emission performance standards provide a strong push for deployment of zero- and low-emission vehicles, thus also creating demand for alternative fuels infrastructure. This initiative will enable this transition by ensuring that sufficient publicly available recharging and refuelling infrastructure is in place for light- and heavy-duty road transport vehicles.

This initiative also acts in strong synergy with the revision of the Renewable Energy Directive[13], the Regulation of the European Parliament and of the Council on ensuring a level playing field for sustainable air transport (RefuelEU Aviation initiative)[14] and the proposal for a Regulation of the European Parliament and of the Council on the use of renewable and low-carbon-fuels in maritime transport (FuelEU Maritime initiative)[15], which set obligations on the supply of, and demand for, renewable and low-carbon transport fuels. Each of those instruments promotes an increase in the supply or demand of sustainable alternative fuels in one or more transport modes.

For waterborne transport, this initiative delivers on the clear requirement of the European Green Deal to oblige docked ships to use shore-side electricity. It is fully complementary to Fuel EU maritime initiative by ensuring that sufficient shore-side electricity supply is installed in ports to provide electricity while passenger ships (including ro-ro passenger ships, high speed passenger craft and cruise ships) and container vessels are at berth and accommodating the demand for decarbonised gases (i.e. bio-LNG and synthetic gaseous fuels (e-gas). For the case of passenger ships, the different ship categories vary in their power demand characteristics while at berth, which leads to different investment needs at port. This needs to be combined with the different operational characteristics of ports, including layouts and terminals. For this reason a further distinction is made on passenger ships compared to the FuelEU maritime initiative in identifying two categories, that of ro-ro

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10 Regulation (EU) 2019/631 of the European Parliament and of the Council setting CO_2 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 L111, 25.4.2019, p. 13.

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

12 COM (2021) 556. Proposal for a regulation of the European Parliament and of the Council amending Regulation (EU) 2019/631 as regards strengthening the CO2 emission performance standards for new passenger cars and new light commercial vehicles in line with the Union's increased climate ambition.

13 Directive (EU) 2018/2001.

14 COM(2021) 561, proposal for a regulation of the European Parliament and of the Council on ensuring a level playing field for sustainable air transport.

15 COM(2021) 562, proposal for a regulation of the European Parliament and of the Council on the use of renewable and low-carbon fuels in maritime transport.

passenger ships and high speed passenger vessels, and that of other passenger ships, notably cruise ships. Together with the FuelEU maritime initiative it therefore contributes to overcoming the current "chicken-and-egg" issue, which has meant that the very low demand for ship operators to connect to the electric grid while at berth has made it less attractive for ports to invest in short-side electricity. Limited introduction of On-shore power supply OPS in ports risks disturbing the level playing between ports, in particular for early investors, as not OPS equipped vessels could shift their traffic. It is therefore important that minimum requirements be set for maritime ports across the whole TEN-T network.

The initiative is also complementary to the ReFuelEU aviation initiative. It supplements that initiative's push for sustainable aviation fuels that largely do not require a distinct refuelling infrastructure with provisions for electricity supply for all stationary aircraft and thus supporting the decarbonisation of the aviation sector.

Next to the legislative proposal, the Commission will address the need for additional research and innovation (R&I) activities, in particular through the co-programmed Zero Emissions Waterborne Transport partnership proposed by the Waterborne Technology Platform under Horizon Europe, the Clan Sky 2 Joint Undertaking and the Clean Hydrogen Joint Undertaking which works in synergy with these two transport partnerships.

This initiative is also consistent with the revision of the Renewable Energy Directive. It seeks to ensure that lack of recharging and refuelling infrastructure does not hamper the overall ramp-up of renewable and low-carbon fuels in the transport sector, where they require distinct infrastructure. At Union level, there is no policy instrument equivalent to the Directive on the deployment of alternative fuels infrastructure able to ensure deployment of publicly accessible recharging and refuelling infrastructure across all modes of transport in a similar manner. This initiative is also closely linked to the upcoming proposal to revise the Regulation on the Guidelines for the Trans-European Transport Network[16]. The planned revision of that Regulation will build upon and complement the alternative fuels infrastructure already deployed through individual projects on the TEN-T network corridors. By consistently cross-referencing the provisions of this initiative, the revision of the Regulation will ensure sufficient coverage on the TEN-T core and comprehensive network.

By ensuring that the necessary infrastructure for zero- and low-emission vehicles and vessels is in place, this initiative will also complement a set of other policy initiatives under the 'Fit for 55' package that stimulate demand for such vehicles by setting price signals that incorporate the climate and environmental externalities of fossil fuels; such initiatives include the revision of the Emissions Trading System[17], and the revision of the EU Energy Taxation Directive[18].

1.3. Consistency with other Union policies

This initiative needs to work in synergy with the Energy Performance of Buildings Directive[19] (EPBD), which addresses private recharging infrastructure by stipulating requirements for rollout of recharging infrastructure in buildings. The relationship between public and private recharging infrastructure has been thoroughly addressed in the impact assessment supporting this policy initiative.

By ensuring that the necessary infrastructure for zero- and low-emission vehicles and

16 Regulation (EU) No1315/2013.
17 Directive 2003/87/EC.
18 Directive 2003/96/EC.
19 Directive 2010/31/EU.

vessels is in place, this initiative will also complement policy efforts on road charging, which are also intended to stimulate demand for such vehicles. The aim here is to better incorporate the climate and environmental externalities of fossil fuels, as intended by the Eurovignette Directive[20], currently also under revision.

Another policy instrument aimed at accelerating the deployment of low- and zero-emission vehicles is the Clean Vehicles Directive[21]. A broader availability of infrastructure and a faster rollout of zero- and low- emission vehicles will indirectly facilitate the deployment of clean vehicles in public fleets. However, public fleets (bus fleets especially) typically rely on their own recharging and refuelling points rather than on publicly accessible infrastructure. Interaction with the Directive is mainly through standardisation to ensure interoperability.

Deploying more hydrogen and battery electric vehicles in the EU fleet is also an important part of the Commission's hydrogen strategy[22] and strategy for smart energy system integration[23]; insufficient availability of the corresponding infrastructure for vehicles would risk jeopardising these ambitions.

By facilitating the deployment of growing numbers of zero- and low-emission vehicles, this initiative also contributes to the zero-pollution ambition in the European Green Deal, complementing the Euro 6 (for cars and vans)[24] and Euro VI (for buses and lorries)[25] pollutant emission standards, that set emission limits for all vehicles.

Finally, this initiative works in conjunction with the Intelligent Transport Systems Directive[26], for which the Commission intends to present a proposal for review later this year, and its delegated acts, in particular the Delegated Regulation on Union-wide real-time traffic information services[27]. The fast-evolving data environment for alternative fuels requires this initiative to specify the relevant data types to be made available, in synergy with the general framework established in the Intelligent Transport Systems Directive.

Horizon Europe is the EU's key funding programme for research and innovation[28]. It tackles climate change, helps to achieve the UN's Sustainable Development Goals and boosts the EU's competitiveness and growth. Cluster 5: Climate, Energy and Mobility aims to fight climate change by making the energy and transport sectors more climate and environment-friendly, more efficient and competitive, smarter, safer and more resilient. European research and innovation can drive, navigate and accelerate the transformative Green Deal agenda, by setting the direction, testing and demonstrating solutions, addressing trade-offs, and ensuring that policy is coherent, innovation friendly, and evidence-informed. The partnerships on Zero-emission Road Transport (2Zero), on Connected, Cooperative and Automated Mobility (CCAM), on the European Industrial Battery Value Chain (Batt4EU), on Clean Hydrogen, on Clean Energy Transition and on Driving Urban Transitions to a Sustainable Future will play a key role in delivering a climate-neutral and environmentally friendly mobility. The Horizon Europe Mission on climate-neutral and

[20] Directive 1999/62/EC.
[21] Directive (EU) 2019/1161.
[22] COM(2020) 301 final.
[23] COM/2020/299.
[24] Regulation (EC) 715/2007.
[25] Regulation (EC) 595/2009.
[26] Directive 2010/40/EU.
[27] Delegated Regulation (EU) 2015/962.
[28] https://ec.europa.eu/info/research-and-innovation/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe/european-partnerships-horizon-europe_en.

smart cities[29] aims to support, promote and showcase 100 European cities in their systemic transformation towards climate neutrality by 2030.

Cohesion policy will play a central role in helping all regions in their transition towards a greener, climate neutral Europe. The European Regional Development Fund and the Cohesion Fund are available to support investment in innovation and deployment, in particular in the less developed Member States and regions. Cohesion policy will offer support to a sustainable, smart and resilient transport system, covering all transport modes and all levels of the transport system in line with the specific requirements and priorities identified in the national and regional programmes.

2. LEGAL BASIS, SUBSIDIARITY AND PROPORTIONALITY

2.1. Legal basis

To ensure the correct functioning of the internal market, the Treaty on the Functioning of the European Union (TFEU) establishes the Union's prerogative to lay down provisions for the common transport policy, Title VI (Articles 90-91), and for the trans-European networks, Title XVI (Articles 170-171). With this legal framework in mind, Union action enables better coordination for the even and widespread deployment of alternative fuels infrastructure, instead of relying on Member States only. This facilitates travel across the Union in alternative fuel vehicles for both personal users and businesses. It also helps prevent a lack of, or patchy deployment of, alternative fuels infrastructure from becoming a potential barrier to the completion of the internal market and from discouraging the automotive industry's production of zero- and low-emission vehicles.

Meeting the European Green Deal's transport emission reduction objectives (as corroborated by the sustainable and smart mobility strategy) requires a substantial increase in zero- and low-emission vehicles and vessels. This will not take place without the deployment of a coherent and complete network of fully interoperable alternative fuels infrastructure making it possible to travel across the Union in an alternative fuel vehicle. As noted when the current Directive was adopted, such a network cannot be adequately developed by Member States individually; instead, Union intervention is required.

2.2. Subsidiarity (for non-exclusive competence)

The Union added value of this intervention in terms of effectiveness, efficiency and synergies is underlined in the evaluation of the current Directive, in conjunction with the assessment of national implementation reports submitted by Member States. The evaluation showed that developing a common EU framework has to some extent helped avoid fragmentation. Such a framework has supported the development of national policies to develop alternative fuels infrastructure in all Member States and has supported the creation of a more level playing field within the industry. By encouraging interoperability, relevant technical standards and setting of targets on similar timescales, Union-level action has provided some cost savings and better value for money by facilitating economies of scale, avoiding duplication of effort and resources, and providing funding investments for infrastructure. The Directive's implementation (and its supporting activities) have facilitated cooperation and information exchange on alternative fuels between the relevant industry and public actors. Without the Directive, such cooperation would likely not exist.

[29] https://ec.europa.eu/info/research-and-innovation/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe/missions-horizon-europe/climate-neutral-and-smart-cities_en.

Without Union intervention, it would be very unlikely that a coherent and complete network of fully interoperable alternative fuels infrastructure would develop across all Member States, thus ensuring that it is possible to travel across the Union in an alternative fuel vehicle. This in turn is a prerequisite for the uptake of such vehicles across the Union, which is vitally important for the EU to meet its 2030 increased climate ambition.

2.3. Proportionality

In accordance with the principle of proportionality, this proposal does not go beyond what is necessary to achieve the objectives set. All measures are considered to be proportionate in terms of their impacts, as demonstrated in the impact assessment that accompanies this initiative[30]. The proposed intervention sets more binding requirements on Member States to ensure the uptake of sufficient publicly accessible infrastructure for recharging and refuelling of alternative fuels vehicles in the Union. This is necessary for the EU to deliver on the increased climate and energy ambition for 2030 and meet the overall objective of reaching climate neutrality by 2050, an objective reflected in, among others, the CO_2 standards for cars and vans and the cross-border connectivity for such vehicles in the TEN-T core and comprehensive network.

The experience of implementing the current Directive shows the need for this revised intervention. Implementation of the current Directive is leading to uneven rollout of infrastructure in Member States, not adding up to the dense, widely needed network of alternative fuels infrastructure that is needed. This has been fully demonstrated in the Commission report to the European Parliament and Council on the application of the Directive 2014/94/EU on deployment of alternative fuels infrastructure[31] and in the impact assessment supporting the current initiative. The nature and scope of the problem is similar across Member States and there is evidence of the need and value added of ensuring cross-border connectivity for alternative fuels vehicles in the Union, which duly justifies Union action.

This initiative creates a stable and transparent policy framework to help create open and competitive markets, thus stimulating investment in recharging and refuelling infrastructure in all modes of transport. It establishes a common minimum on which markets can build and start to deliver further infrastructure in response to vehicle demand from markets, based on a clear and transparent target mechanism that applies throughout the Union.

2.4. Choice of the instrument

While the Impact Assessment resulted in a Directive as the preferred policy option, the Commission made the choice to propose a Regulation. The choice of a Regulation ensures a rapid and coherent development towards a dense, widely-spread network of fully interoperable recharging infrastructure in all Member States. The decision is particularly justified in view of the needed swift and coherent implementation of the national fleet-based minimum deployment targets set at Member State level and the mandatory distance-based targets along the TEN-T network, as the first proposed targets would have to be reached by 2025 already. With this timescale, building up a sufficiently dense, wide-spread network of recharging and refuelling infrastructure for zero- and low-emission vehicles throughout the Union at the same pace and under the same conditions is now of strong relevance to support the highly necessary accelerated market uptake of zero- and low-emission vehicles. This requires already in the years before 2025, the design and

[30] SWD(2021) 631, 'Impact Assessment accompanying the 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'.

[31] COM/2021/103 final.

development of Member State plans and measures to deliver on the targets. A new Regulation establishes clearly binding and directly applicable obligations for Member States at national level, ~~and~~ ensuring their EU-wide coherent and timely application and implementation at the same time. It avoids the risk of delays and inconsistencies in national transposition processes, thus also creating a clear level-playing field for markets, which will help the Union-wide roll-out of recharging and refuelling infrastructure. The Regulation will establish a more robust governance mechanism that tracks Member State progress in achieving the targets and that enables Member States to set the right incentives so that competitive recharging markets can develop. Clear timelines for the design and development of Member States' national policy frameworks to achieve the targets, robust monitoring and reporting mechanisms, as well as provisions for corrective measures by Member States can enable efficient overall monitoring and steering of efforts in Member States to achieve the targets. This initiative guarantees such an approach.

3. RESULTS OF EX POST EVALUATIONS, STAKEHOLDER CONSULTATIONS AND IMPACT ASSESSMENTS

3.1. *Ex post* evaluations/fitness checks of existing legislation

A 'REFIT' *ex post* evaluation showed that the Directive has supported the development of policies and measures for the rollout of alternative fuels infrastructure in Member States, particularly through the requirement to develop national policy frameworks (NPFs)[32].

However, shortcomings in the current policy framework have also been pointed out in the evaluation. Moreover, the Directive's key objective, namely to ensure coherent market development in the EU, has not been met. Shortcomings arise in particular in the following three areas: (i) the lack of a complete network of infrastructure allowing seamless travel across the EU; (ii) the need for further common technical specifications to ensure interoperability in light of emerging technologies; and (iii) the lack of full user information, uniform and easy-to-use payment methods and full price transparency across the Union.

The evaluation concluded that 6 years after the Directive's adoption, the overall European market for alternative fuels infrastructure is still in a rather early development phase, though markets are maturing in some parts of the EU. Given the overall relevance of ensuring sufficient infrastructure to support the needed uptake of vehicles and vessels in light of the increased climate ambition for 2030, the evaluation of the Directive recommended retaining the legislation but revising it.

3.2. Stakeholder consultations

As part of the impact assessment, stakeholders were consulted in different formats.

A public consultation on the inception impact assessment (IIA)[33]for this initiative, running from 6 April to 4 May 2020. The Commission received 86 responses, mostly (61) from companies and business associations. NGOs and citizens also replied to the IIA, as did one network of cities.

An open public consultation organised by the Commission, running from 6 April 2020 to 29 June 2020. The consultation invited all members of the public and organisations to

[32] SWD(2021) 637.

[33] https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12251-Revision-of-Alternative-Fuels-Infrastructure-Directive.

provide input on both the evaluation and the impact assessment[34]. In total, 324 responses were received.

Targeted stakeholder interviews and surveys between October 2020 and January 2021: the Commission held exploratory interviews with EU-level representatives of key stakeholders, particularly to support and refine the overall problem definition and possible policy options. Further interviews were conducted and an online survey was distributed among relevant stakeholders representing public authorities and other public bodies (national, regional and local authorities, EU bodies), industry representatives (including relevant associations), and members of civil society (NGOs, consumer groups).

A targeted stakeholder consultation, organised by the consultant in charge of the external support study to the impact assessment, running from December 2020 to February 2021. The consultation included targeted surveys among key stakeholders and targeted interviews and data requests to fill specific information requests, particularly to support the development of a methodology to determine sufficient infrastructure deployment and to support the assessment of impacts of possible policy measures.

3.3. Collection and use of expertise

In preparing this initiative, the Commission used the findings of the *ex post* evaluation of the Directive[35]. Stakeholders provided a lot of information in the consultation activities, supplemented by information they supplied to the Commission on an ad hoc basis. The impact assessment relies to a considerable extent on an accompanying external support study carried out by a consultant[36]. The Commission also drew on a broad consultation with the Sustainable Transport Forum, the Commission's expert group on alternative fuels. The consultation with the Sustainable Transport Forum ran from October 2018 to November 2019, focusing on problems and future policy needs in the field of alternative fuels infrastructure[37]. Overall, the sources used to draft the impact assessment report were numerous, largely exhaustive and representative of the various stakeholder groups.

3.4. Impact assessment

The Regulatory Scrutiny Board received the draft version of the impact assessment report on 7 April 2021 and issued a positive opinion on 7 May 2021. The Board considered that the report could be further improved by: (a) better describing the difference between the options and how they link to the identified problems; and (b) nuancing the report to clarify whether the expected impacts stem from this specific initiative or from other policies, or from a combination of the two'.

The final impact assessment report includes a comprehensive description and assessment of the initiative's value added and its links with other policy initiatives. These can be found in Sections 1.3, 3.3 and 8.1 of the assessment report. A detailed description of the policy options is included in Section 5, while a comprehensive analysis of the impacts of all options is presented in Section 6. The analysed policy options can be summarised as follows:

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34 The input from the evaluation was analysed in the stakeholder consultation report supporting the final report of the evaluation.

35 SWD(2021) 637.

36 Final report, impact assessment support study 'Impact assessment on the revision of the Directive on the Deployment of Alternative Fuels Infrastructure (2014/94/EU)', 2021.

37 The findings of this exercise were compiled in a comprehensive report by the plenary of the Sustainable Transport Forum in November 2019: https://ec.europa.eu/transport/sites/transport/files/2019-stf-consultation-analysis.pdf.

– *Policy option 1:* **substantive changes to the Directive**. The national target setting and reporting under the national policy framework would remain an important pillar, strengthened by mandatory fleet-based targets for electric recharging points for light-duty vehicles (LDVs). For heavy-duty vehicles (HDVs), mandatory distance-based targets would be introduced along the TEN-T network for electric recharging points and hydrogen refuelling points, including limited provisions for hydrogen refuelling in urban nodes. Mandatory targets would also be introduced for stationary aircraft and shore-side electricity supply in maritime and inland waterway ports. In addition, some quality aspects of the infrastructure would be addressed to improve interoperability and user information.

– *Policy option 2:* **more substantive changes to the Directive than in option 1**. In addition to the mandatory fleet-based targets for electric recharging points for LDVs, distance-based targets would be set for all road vehicles infrastructure for the TEN-T network, including for urban nodes for heavy-duty vehicle infrastructure. This option would also include more detailed provisions for ports and airports on the TEN-T network and greater harmonisation on payment options, physical and communication standards and consumers' rights while charging. It would strengthen provisions on price transparency and other user information, including physical signposting of recharging and refuelling infrastructure.

– *Policy option 3:* **changing the Directive to a Regulation** (thus going furthest in terms of binding legal instruments). In addition to the mandatory fleet-based and distance-based targets under option 2, this option would add further location- based targets for electric LDVs and add further targets for HDVs. The option would also add considerable ambition for ports infrastructure, and make mandatory terminal payment at new fast-chargers the sole payment option.

Because it strikes the best balance between the achieved objectives and the implementation cost, option 2 was identified as the best policy option. However, policy option 2 lends itself as well to a Regulation, with an accelerated impact on the implementation of provisions in this case. The impact assessment includes a detailed description of the regulatory measures included under the different policy options.

3.5. Regulatory fitness and simplification

Much greater policy ambition for the supply of sufficient and fully interoperable recharging and refuelling infrastructure is necessary to support the needed market take-up of zero- and low-emission vehicles, in line with the overall policy ambition of the 'Fit for 55' package and its related policy initiatives. Regulatory fitness is achieved by setting out necessary minimum requirements for public authorities and market actors. The related higher cost to public authorities for supporting infrastructure rollout, particularly in parts of the transport network where demand is low, have to be seen against the backdrop of significantly increased user demand and large-scale opportunities for market growth. The review of policies under the 'Fit for 55' policy package will enable the market take-up of zero-emission vehicles and the servicing of vessels equipped with shore-side electricity supply. The impact assessment provides a detailed analysis of costs and benefits, including a summary in Annex 3.

While the review increases the overall policy ambition, it does also include some important simplification aspects. This simplification primarily affects charge point operators and mobility service providers. Setting clear and common minimum requirements will simplify their business operations, as they will face similar minimum requirements in all Member

States. Such requirements will simplify the use of the infrastructure by private and corporate consumers (who currently face a plethora of use approaches) and enable better business service innovation. Consumer trust in the robustness of a Pan-EU network of recharging and refuelling infrastructure will increase, which will support the overall profitability of recharging and refuelling points and support a stable business case. All market actors and user groups will benefit from lower information costs and, in the case of market actors, lower legal compliance costs in the medium term, as the requirements for infrastructure provisioning under the Regulation will be better harmonised. Public authorities can also benefit from a coherent EU-wide framework that will simplify coordination with public and private market actors.

The impact assessment did not identify any area where this initiative's planned provisions would create a significant and disproportionate cost for SMEs, in comparison to all enterprises. This initiative creates long-term market certainty for investment in recharging and refuelling infrastructure and lays down the foundation for the development of an open data ecosystem that enterprises can use to develop new market services, which will benefit innovative SMEs. The initiative has an overall positive impact on the competitiveness of enterprises that install and operate recharging and refuelling infrastructure, as well as on the competitiveness of the automotive sector itself. This is because the provision of sufficient infrastructure has an impact on the market uptake of zero-emission vehicles, which is a key aspect of the automotive sector's future competitiveness, as explained in detail in the impact assessment underpinning the proposal for the revision of CO_2 standards for cars and vans[38].

3.6. Fundamental rights

The proposal has no impact on fundamental rights.

4. BUDGETARY IMPLICATIONS

The proposal has no impact on the European Union budget.

5. OTHER ELEMENTS

5.1. Implementation plans and monitoring, evaluation and reporting arrangements

The revised Regulation's implementation will be monitored using indicators for the physical rollout of recharging and refuelling infrastructure in the EU. Well-established monitoring instruments will be used to follow deployment.

Member States will have to adopt a revised national policy framework to develop the market for alternative fuels in the transport sector and deploy the relevant infrastructure in line with the proposed strengthened provisions. This will enable the Member States to report to the Commission on implementation in a coherent and consistent manner. Data provision to the Member States' national and common access points will follow commonly agreed data quality standards[39]. In addition, the European Alternative Fuels Observatory

[38] SWD(2021) 614, Impact Assessment accompanying the proposal for a regulation of the European Parliament and of the Council amending Regulation (EU) 2019/631 as regards strengthening the CO2 emission performance standards for new passenger cars and new light commercial vehicles in line with the Union's increased climate ambition.

[39] IT development and procurement choices will be subject to pre-approval by the European Commission Information Technology and Cybersecurity Board

will be upgraded and continue to gather and frequently update vehicle uptake and infrastructure deployment in all Member States[40]. The Commission will also continue to work together with its expert group, the Sustainable Transport Forum (and dedicated subgroups), to monitor market developments and identify related policy needs.

A full review of the Regulation is scheduled for the end of 2026 to identify any possible shortcomings and identify future needs for legislative action on emerging technologies. For an overview of operational objectives, indicators and data sources, see Annex 9 to the staff working document on the impact assessment accompanying this initiative.

5.2. Detailed explanation of the specific provisions of the proposal

This proposal sets up a new Regulation repealing the current Directive 2014/94/EU on the deployment of alternative fuels infrastructure. The structure of the new Regulation is as follows:

- Article 1 defines the subject matter of the Regulation, making specific, but no substantive, changes to the subject matter of the current Directive.
- Article 2 sets out a list of definitions, building on the list of definitions of the current Directive, and extending those where necessary and as appropriate in view of the overall changes in the scope and provisions of the new Regulation.
- Articles 3-12 contain provisions for the rollout of certain recharging and refuelling infrastructure for light- and heavy-duty road transport vehicles, vessels and aircraft.
- Articles 3 and 4 contain provisions for Member States to ensure minimum coverage of publicly accessible recharging points dedicated to light- and heavy-duty road transport vehicles on their territory, including on the TEN-T core and comprehensive network.
- Article 5 provides further provisions for ensuring user-friendliness of recharging infrastructure. This includes provisions on payment options, price transparency and consumer information, non-discriminatory practices, smart recharging, and signposting rules for electricity supply to recharging points.
- Article 6 contains provisions for Member States to ensure minimum coverage of publicly accessible refuelling points for hydrogen dedicated to heavy- and light-duty vehicles on the TEN-T core and comprehensive network.
- Article 7 provides further provisions for ensuring user-friendliness of refuelling infrastructure for hydrogen, including through minimum requirements on payment options, price transparency and contractual choice.
- Article 8 contains provisions for Member States to ensure until 1 January 2025 minimum coverage of publicly accessible refuelling points for liquefied natural gas dedicated to heavy-duty vehicles on the TEN-T core and comprehensive network.
- Articles 9 and 10 set out provisions for Member States to ensure installation of a minimum shore-side electricity supply for certain seagoing ships in maritime ports and for inland waterway vessels. The articles also define further the criteria for exempting certain ports and set requirements to ensure a minimum shore-side electricity supply.

[40] www.eafo.eu.

– Article 11 requires Member States to ensure an appropriate number of LNG refuelling points in maritime TEN-T ports and to identify relevant ports through their national policy frameworks.

– Article 12 concerns minimum provisions for electricity supply to all stationary aircraft in TEN-T core and comprehensive network airports.

– Article 13 reformulates provisions for Member States' national policy frameworks. It makes provision for an iterative process between Member States and the Commission to develop concise planning to deploy infrastructure and meet the targets as laid down in the Regulation. It also includes new provisions on formulating a strategy for the deployment of alternative fuels in other modes of transport together with key sectoral and regional/local stakeholders. This would apply where the Regulation does not set mandatory requirements, but where emerging policy needs connected to the development of alternative fuel technologies need consideration.

– Article 14, 15 and 16 set out the governance approach. This includes reporting obligations corresponding to provisions for Member States on national policy frameworks and national progress reports in an interactive process with the Commission. It also sets requirements for the Commission to report on Member States' national policy frameworks and progress reports.

– Article 17 covers user information requirements in the form of fuel labels and information requirements on fuel price comparison.

– Article 18 sets up data provision requirements for operators or owners of publicly accessible recharging or refuelling points on the availability and accessibility of certain static and dynamic data types, including the establishing of an identification registration organisation (IDRO) for the issuing of ID codes. This article also empowers the Commission to adopt further delegated acts to specify further elements as required.

– Article 19 specifies provisions for common technical specifications, complementing the existing common technical specifications with a set of new areas for which the Commission will be entitled to adopt new delegated acts. These will build, as deemed necessary, on standards developed by the European standardisation organisations (ESOs).

– Article 20 concerns the use of delegations as regards the provisions on data provision and common technical specifications.

– Article 21 concerns the continuation of the committee procedure under the new Regulation.

– Articles 22, 23 and 24 specify the conditions for review and entry into force of this Regulation.

The proposal includes annexes:

– Annex I includes detailed provisions on national reporting by Member States, ensuring consistent and comparable reporting to support the implementation of this Regulation.

– Annex II concerns the listing of areas where common technical specifications under this Regulation apply to the internal market or will need be adopted under this Regulation by means of delegated acts in areas where new technology developments require the setting of common technical specifications.

– Annex III specifies requirements for Member States that will categorise their reporting on deployment of electric vehicles and recharging infrastructure.

– Annex IV contains the correlation table.

2021/0223 (COD)

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) Directive 2014/94/EU of the European Parliament and of the Council[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 of the European Parliament and of the Council[5] for instance set a market share target of 14 % of renewables in transport fuels.

(3) Regulation (EU) 2019/631 of the European Parliament and of the Council[6] and Regulation (EU) 2019/1242 of the European Parliament and of the Council[7] already

1 OJ C , , p. .
2 OJ C , , p. .
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).

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.

(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 on shore power 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 gaseous and liquid fuels.

(6) Such biofuels 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) LNG 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-

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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).

8 COM(2021) 561.

9 COM(2021) 562.

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. LNG is expected to no longer play a significant role in that sector. Transport fuels such as LNG need increasingly to be decarbonised by blending/substituting with liquefied biomethane (bio-LNG) 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, LNG 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 LNG infrastructure deployment that can equally supply decarbonised fuels is considered necessary to close remaining gaps in the main networks.

(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.

(12) 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 of the European Parliament and of the Council[10], Member States should take into account the availability of such private infrastructure when planning the deployment of publicly accessible recharging points.

(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, targets for overnight recharging infrastructure and targets at urban nodes 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 also 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 addition to fast recharging points along the network, 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.

(15) Recharging infrastructure along the TEN-T network should be complemented with fast publicly accessible recharging infrastructure in urban nodes. 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.

(16) The deployment of recharging infrastructure is equally important in private locations, such as in private depots and at logistic centres to ensure overnight and destination charging. Public authorities should 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.

(17) 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

[10] Directive 2010/31/EU of the European Parliament and of the Council of 19 May 2010 on the energy performance of buildings (OJ L 153, 18.6.2010, p. 13).

employees or authorised persons have access, should not be considered as publicly accessible recharging or refuelling points.

(18) A recharging station is the single 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.

(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 in real time, 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.

(20) Smart metering systems as defined in Directive (EU) 2019/944 of the European Parliament and of the Council[12] enable real-time data to be produced, which is needed to ensure the stability of the grid and to encourage rational use of recharging services. By providing energy metering in real time 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

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

[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).

recharging (vehicle-to-grid). All normal recharging points at which vehicles are typically parked for a longer period should therefore support smart recharging.

(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 and Member States should ensure that the electricity supply for a recharging point can be the subject of a contract with a supplier other than the entity supplying electricity to the household or premises where this recharging point is located. 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 of the European Parliament and of the Council[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.

(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 cost components.

(25) New services emerge, particularly in support of the use of electric vehicles. 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

[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).

[14] COM(2020) 301 final.

the seamless travel of hydrogen fuelled light-duty and heavy-duty vehicles throughout the Union.

(27) Hydrogen fuelled vehicles should be able to refuel at or close to the destination, which is usually located in an urban area. To ensure that publicly accessible destination refuelling is possible at least in the main urban areas, all urban nodes as defined in Regulation (EU) No 1315/2013 of the European Parliament and of the Council[15] should provide such refuelling stations. Within the urban nodes, public authorities should consider to deploy the stations within multimodal freight centres 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.

(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'[16] 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. To that end, a minimum number of hydrogen refuelling stations should serve also liquid hydrogen in addition to gaseous hydrogen at 700 bar.

(29) A number of LNG refuelling points are established in the Union, already providing a backbone for the circulation of LNG driven heavy-duty vehicles. The TEN-T core network should remain the basis for the deployment of LNG infrastructure, and progressively for bio-LNG, 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.

(30) Users of alternative fuel vehicles should be able to 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. 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

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[15] 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).

[16] COM(2020) 301 final

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 Annexes I and III to Directive 2019/882[17] should be applicable to recharging and refuelling infrastructure.

(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 at berth. Mandatory deployment targets should ensure that the sector finds sufficient shore-side electricity supply in TEN-T core and comprehensive maritime ports to comply with those requirements. The application of these targets to all TEN-T maritime ports should ensure the level playing field between ports.

(33) Container ships and passenger ships, being the ship categories which are producing the highest amount of emissions per ship at berth, should as a priority be provided with shore-side electricity supply. In order to take into account power demand characteristics while at berth 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 vessels, 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, should be exempted from 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. Maritime transport is an important link for the cohesion and economic development of islands in the Union. Energy production capacity in these islands 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 islands should be exempted from this requirement unless and until such an electrical connection with the mainland has been completed or there is a sufficient locally generated capacity from clean energy sources.

(35) A core network of refuelling points for LNG at maritime ports should be available by 2025. Refuelling points for LNG include LNG terminals, tanks, mobile containers, bunker vessels and barges.

(36) Electricity supply to stationary aircraft at airports should replace the consumption of liquid fuel with a cleaner power source by aircraft (use of Auxiliary Power Unit) or ground power units (GPUs). This should reduce pollutant and noise emissions, improve air quality and reduce the impact on climate change. Therefore, all

[17] 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).

commercial transport operation should be able to make use of external electricity supply while parked at gates or at outfield positions at TEN-T airports.

(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 should equally address all transport modes including those for which no mandatory deployment targets exists.

(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 should consist of 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 should 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 should 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 of the European Parliament and of the Council[18], 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

[18] 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).

(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. Member States should be able to decide to implement such information measures also in respect of vehicles placed on the market before 18 November 2016.

(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 displayed for information purposes at all relevant fuel stations.

(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[19] for national access points (NAPs).

(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

[19] 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).

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').

(48) 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.

(49) 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.

(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 of the European Parliament and of the Council[20]. Those standards should be based on current international standards or ongoing international standardisation work, where applicable.

(51) Technical specifications as specified in Annex II to Directive 2014/94/EU of the European Parliament and of the Council are to remain applicable as specified in that Directive.

(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. 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

[20] 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).

be accounted for. As concerns data provision, it is necessary to provide for additional data types and technical specifications related to the format, the frequency and the quality in which these data should be made available and accessible.

(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 review this Regulation by the end of 2026 in particular as regards the targets setting for electric recharging points for HDV as well as targets for infrastructure for alternative fuels for zero-emission vessels and aircraft in waterborne transport and aviation.

(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,

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.

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, as defined in Article 2, point (5) of Commission Delegated Regulation (EU) 2015/962[21];

(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;

(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':

– electricity,

– hydrogen,

– ammonia,

(b) 'renewable fuels':

– biomass fuels and biofuels as defined in Article 2, points (27) and (33) of Directive (EU) 2018/2001,

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

(c) 'alternative fossil fuels' for a transitional phase:

– 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;

(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;

(5) 'airport managing body' as defined in Article 2, point (2) of Directive 2009/12/EC of the European Parliament and of the Council[22];

(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.

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[21] Commission Delegated Regulation (EU) 2015/962 of 18 December 2014 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 157, 23.6.2015, p. 21).

[22] Directive 2009/12/EC of the European Parliament and of the Council of 11 March 2009 on airport charges, (OJ L 70, 14.3.2009, p. 11).

(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 point and the electric vehicle through which the electric energy is exchanged;

(11) ‘commercial air transport’ means air transport as defined in Article 3, point (24) of Regulation (EU) 2018/1139 of the European Parliament and of the Council[23];

(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;

(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 the gate or at an airport outfield position;

(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;

(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;

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

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

(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 of the European Parliament and the Council [24];

(26) ‘heavy-duty vehicle’ means a motor vehicle of categories M2, M3, N2 or N3 as defined in Annex II to Directive 2007/46/EC[25];

(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 in Annex II to Directive 2007/46/EC;

(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 where certain static and dynamic data are made accessible for re-use to data users, as implemented by Member States in compliance with Article 3 of Commission Delegated Regulation (EU) 2015/962;

(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;

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[24] 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).

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

(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 18004-compliant encoding and visualization of data;

(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 connectors 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 single 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 alternative fuel, through a fixed or a mobile installation, which is capable of refuelling only one vehicle at a time;

(50) ‘refuelling service’ means the sale or provision of any liquid or gaseous alternative 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) that is dedicated to heavy-duty vehicles overnight parking;

(57) ‘ship at berth’ means ship at berth as defined in Article 3, point (n) of Regulation (EU) 2015/757;

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

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

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

(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:

– publicly accessible recharging stations for light-duty vehicles are deployed commensurate to the uptake of light-duty electric vehicles;

– in their territory, publicly accessible recharging stations dedicated to light-duty vehicles are deployed that 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 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.

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 station 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 stations 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 station 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 stations with an individual power output of at least 150 kW.

3. Neighbouring Member States shall ensure that the maximum distances referred to in 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:

(a) along the TEN-T core network, publicly accessible recharging pools dedicated to heavy-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 1400 kW and include at least one recharging station with an individual power output of at least 350 kW;

(ii) by 31 December 2030, each recharging pool shall offer a power output of at least 3500 kW and include at least two recharging stations with an individual power output of at least 350 kW;

(b) along the TEN-T comprehensive network, publicly accessible recharging pools dedicated to heavy-duty vehicles and meeting the following requirements are deployed in each direction of travel with a maximum distance of 100 km in-between them:

(i) by 31 December 2030, each recharging pool shall offer a power output of at least 1400 kW and include at least one recharging station with an individual power output of at least 350 kW;

(ii) by 1 December 2035, each recharging pool shall offer a power output of at least 3500 kW and include at least two recharging stations 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 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 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 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.

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

Article 5

Recharging infrastructure

1. Operators of publicly accessible recharging stations shall be free to purchase electricity from any Union electricity supplier, subject to the supplier's agreement.

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 using a payment instrument that is widely used in the Union. To that end:

(a) operators of recharging points shall, at publicly accessible recharging stations with a power output below 50 kW, deployed from the date referred to in Article 24, accept electronic payments through terminals and devices used for payment services, including at least one of the following:

(i) payment card readers;

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

(iii) devices using an internet connection with which for instance a Quick Response code can be specifically generated and used for the payment transaction;

(b) operators of recharging points shall, at publicly accessible recharging stations with a power output equal to or more than 50 kW, deployed from the date referred to in Article 24, accept electronic payments through terminals and devices used for payment services, including at least one of the following:

(i) payment card readers;

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

From 1 January 2027 onwards, operators of recharging points shall ensure that all publicly accessible recharging stations with a power output equal to or more than 50 kW operated by them comply with the requirement in point (b).

The requirements laid down in points (a) and (b) 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 3, or use another contract-based recharging solution offered at that recharging point. Operators of recharging points shall transparently display 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 display the ad hoc price and all its components at all publicly accessible recharging stations operated by them so that these are known to end users before they initiate a recharging session. At least the following price components, if applicable at the recharging station, shall be clearly displayed:

– price per session,

– price per minute,

– price per kWh.

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 the price components charged by the operator of recharging point, 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. From the date 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. From the date referred to in Article 24, operators of recharging points shall ensure that all publicly accessible normal power recharging points operated by them are capable of smart recharging.

9. Member States shall take the necessary measures to ensure that appropriate signposting is deployed within parking and rest areas on the TEN-T road network where alternative fuels infrastructure is installed, to enable easy identification of the exact location of the alternative fuels infrastructure.

10. 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 1, 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 with a minimum capacity of 2 t/day and equipped with at least a 700 bars dispenser are deployed with a maximum distance of 150 km in-between them along the TEN-T core and the TEN-T comprehensive network. Liquid hydrogen shall be made available at publicly accessible refuelling stations with a maximum distance of 450 km in-between them.

They shall ensure that by 31 December 2030, at least one publicly accessible hydrogen refuelling station is deployed in each urban node. An analysis on the best location shall be carried out for such refuelling stations that shall in particular consider the deployment of such stations 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 and the TEN-T comprehensive 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. In freight terminals, operators or owners of these publicly accessible hydrogen refuelling stations shall ensure that these stations also serve liquid hydrogen.

Article 7

Hydrogen refuelling infrastructure

1. From the date referred to in Article 24 all operators of publicly accessible hydrogen refuelling stations operated by them shall provide for the possibility for end users to refuel on an ad hoc basis using a payment instrument that is widely used in the Union. To that end, operators of hydrogen refuelling stations shall ensure that all hydrogen refuelling stations operated by them 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.

   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 recharging session, and specific to their intended recharging 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

LNG infrastructure for road transport vehicles

Member States shall ensure until 1 January 2025 that an appropriate number of publicly accessible refuelling points for LNG are put in place, at least along the TEN-T core network, in order to allow LNG heavy-duty motor vehicles 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 and passenger ships is provided in 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 whose average annual number of port calls over the last three years by seagoing container ships above 5000 gross tonnes, in the previous three years, is above 50 have sufficient shore-side power output to meet at least 90% of that demand;

   (b) TEN-T core and TEN-T comprehensive maritime ports whose average annual number of port calls over the last three years by seagoing ro-ro passenger ships and high-speed passenger craft above 5000 gross tonnes, in the previous three years, is above 40 have sufficient shore-side power output to satisfy at least 90% of that demand;

   (c) TEN-T core and TEN-T comprehensive maritime ports whose average annual number of port calls over the last three years by passenger ships other than ro-ro passenger ships and high-speed passenger craft above 5000 gross tonnes, in the previous three years, is above 25 have sufficient shore-side power output to meet at least 90% of that demand.

2. For the determination of the number of port calls the following port calls shall not be taken into account:

   (a) port calls that are at berth for less than two hours, calculated on the basis of hour of departure and arrival monitored in accordance with Article 14 of the proposal for a Regulation COM(2021)562;

   (b) port calls by ships that use zero-emission technologies, as specified in Annex III of the proposal for a Regulation COM(2021)562;

   (c) unscheduled port calls for reasons of safety or saving life at sea.

3. Where the maritime port of the TEN-T core network and the TEN-T comprehensive network is located on an island which is not connected directly to the electricity grid, paragraph 1 shall not apply, until such a connection has been completed or there is a sufficient locally generated capacity from clean energy sources.

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.

Article 11

Targets for supply of LNG in maritime ports

1. Member States shall ensure that an appropriate number of refuelling points for LNG 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 LNG 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 airport managing bodies of all TEN-T core and comprehensive network airports ensure the provision of electricity supply to stationary aircraft by:

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

(b) 1 January 2030, at all outfield posts used for commercial air transport operations.

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 as renewable energy.

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.

That national policy framework shall contain at least the following elements:

(a) 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;

(b) 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;

(c) national targets and objectives for the deployment of alternative fuels infrastructure related to points (l), (m), (n), (o) and (p) of this paragraph for which no mandatory targets are set out in this Regulation;

(d) policies and measures necessary to ensure that the mandatory targets and objectives referred to in points (b) and (c) of this paragraph are reached;

(e) 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;

(f) 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;

(g) measures to promote alternative fuels infrastructure in urban nodes, in particular with respect to publicly accessible recharging points;

(h) measures to promote a sufficient number of publicly accessible high power recharging points;

(i) 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;

(j) measures to ensure that publicly accessible recharging and refuelling points are accessible to older persons, persons with reduced mobility and with disabilities, which have to be in line with the accessibility requirements of Annex I and Annex III of Directive 2019/882;

(k) measures to remove possible obstacles with regards to planning, permitting and procuring of alternative fuels infrastructure;

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

(m) a deployment plan for alternative fuels infrastructure in maritime ports, in particular for electricity and hydrogen, for port services as defined in Regulation (EU) 2017/352 of the European Parliament and of the Council[26];

[26] 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).

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

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

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

2. Member States shall ensure that the national policy frameworks take into account the needs of the different transport modes existing on their territory, including those for which limited alternatives to fossil fuels are available.

3. 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 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 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 reports shall cover the information listed in Annex I and shall, where appropriate, include a relevant justification regarding the level of attainment of the national targets and objectives referred to in Article 13.

3. The regulatory authority of a Member States shall assess, at the latest by 30 June 2024 and periodically every three 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. 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 1 30 June 2024 and periodically every three 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 both public and private areas and include them in their progress report referred to in paragraph 1.

5. 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(1) and six months after the date 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 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 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 shall issue an update of their 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 progress reports pursuant to Article 14(1) one year after submission of the national progress reports by the Member States. This assessment shall contain an assessment of:

   (a) the progress made at Member States level 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 and national progress reports of Member States pursuant to Article 13 (1) and 14 (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 LNG 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 LNG 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 and recharging points for rail transport.

Article 16

Progress tracking

1. By 28 February of the year following the entry into force of this Regulation 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. 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 is at risk of not meeting its national targets as referred to in Article 3(1), the Commission may issue a finding to this effect and request 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). The corrective measures shall entail additional actions that the Member State shall implement to meet the targets set in Article 3 (1) 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 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 by recharging points. That information shall be made available in motor vehicle manuals, at refuelling and recharging points, on motor vehicles and in motor vehicle dealerships in their territory. This requirement shall apply to all motor vehicles, and their motor vehicle manuals, placed on the market after 18 November 2016.

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) on corresponding pumps and their nozzles at all refuelling points, as from the date on which fuels are placed on the market; or

   (b) 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 after 18 November 2016.

3. When fuel prices are displayed at a fuel station, a comparison between the relevant unit prices shall be displayed 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, for the purposes of the uniform implementation of paragraphs 1 and 2:

   (a) mandate ESOs to develop compatibility labelling specifications,

   (b) adopt implementing acts determining the graphical expression, including a colour coding scheme, of compatibility for fuels introduced in the Union market which reach the level of 1 % of the total volume of sales, in the assessment of the Commission, in more than one Member State.

5. 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 to all refuelling and recharging points and motor vehicles registered on the territory of the Member States 24 months after their respective updating or adoption.

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 referred to in Article 24.

2. Operators of publicly accessible recharging and refuelling points 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 and allow accessibility of that data through the National Access Points at no cost. The following data types shall be made available:

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

      (i) geographic location of the recharging or refuelling point,

      (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.

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

      (i) identification (ID) codes, at least of the operator of the recharging point and mobility service providers offering services at that recharging point, as referred to in paragraph 1,

      (ii) type of connector,

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

(iv) power output (kW),

(c) dynamic data for all recharging and refuelling points operated by them:

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

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

(iii) ad hoc price.

3. Member States shall ensure the accessibility of data on an open and non-discriminatory basis to all stakeholders through their National Access Point in application of Directive 2010/40/EU of the European Parliament and the Council[27].

4. The Commission shall be empowered to adopt delegated acts in accordance with Article 17 to:

(a) add additional data types to the ones specified in paragraph 2;

(b) specify elements related to the data format, frequency and quality in which these data shall be made available;

(c) establish detailed procedures enabling the provision and exchange of data required pursuant to paragraph 2.

Article 19

Common technical specifications

1. Normal power recharging points for electric vehicles, excluding wireless or inductive units, deployed or renewed from the date referred to in Article 24, shall comply at least with the technical specifications set out in point 1.1 of Annex II.

2. High power recharging points for electric vehicles, excluding wireless or inductive units, deployed or renewed from the date referred to in Article 24 shall comply at least with the technical specifications set out in point 1.2 of Annex II.

3. Publicly accessible hydrogen refuelling points deployed or renewed from the date referred to in Article 24 shall comply with the technical specifications set out in points 3.1, 3.2, 3.3, and 3.4 of Annex II.

4. Shore-side electricity supply installations for maritime transport, deployed or renewed from the date referred to in Article 24 shall comply with the technical specifications set out in points 4.1 and 4.2 of Annex II.

5. CNG refuelling points for motor vehicles deployed or renewed from the date referred to in Article 24 shall comply with the technical specifications set out in point 8 of Annex II.

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.

[27] 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).

7. The Commission shall be empowered to adopt delegated acts in accordance with Article 17 to:

(a) supplement this Article with common technical specifications, to enable full technical interoperability of the recharging and refuelling infrastructure in terms of physical connections and communication exchange for the areas listed in Annex II;

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

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 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.

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.

3. Where the opinion of the committee is to be obtained by written procedure, that procedure shall be terminated without result when, within the time limit for delivery of the opinion, the chair of the committee so decides or a simple majority of committee members so request.

Article 22

Review

By 31 December 2026, the Commission shall review this Regulation, and, where appropriate, submit a proposal to amend it.

Article 23

1. Repeal Directive 2014/94/EU is repealed from the date 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.

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*