

**【欧州】 【Common】**

Common - Fit for 55 package: European Parliament's Plenary adopts final version of the Regulation of the Alternative Fuels Infrastructure (AFIR), repealing the Directive on the deployment of alternative fuels infrastructure (AFID)

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**【概要 : Summary】**

Based on the EU's commitment under the 2015 Paris Agreement and the European Green Deal (COM/2019/640 final) target, climate neutrality and a 90% reduction of GHG emissions from transport should be reached by 2050. Accordingly, the European Climate Law (Regulation (EU) 2021/1119 ( "European Climate Law" ) supports the introduction of a more stringent target to reduce GHG emissions by at least 55% by 2030, compared to 1990 levels.

Accordingly, the European Commission had to revise several pieces of EU legislation related to the reduction of GHG emissions. Accordingly, on 14 July 2021, the Commission presented the "Fit for 55" package of legislative proposals. This package also included the revision of the Alternative Fuels Infrastructure Directive (AFID), (Directive 2014/94/EU) of 2014.

The Directive 2014/94/EU was implemented to improve the alternative fuel infrastructure development in the EU to provide the necessary infrastructure for the long-term security needed for the use of vehicles using alternative fuels. However, based on the European Commission's assessment, it had become clear that the AFID had failed to meet its key

objective to deploy enough alternative fuels infrastructure for all modes of transport in the EU. Therefore, the proposal on an Alternative Fuels Infrastructure Regulation (AFIR) (COM/2021/559 final) under the "Fit for 55" package sets binding minimum requirements for EU Member States to deploy alternative fuels infrastructure.

The Council of the EU and the European Parliament found a provisional political agreement on 28 March 2023, regarding important decisions on the fast-recharging stations long the trans-European transport (TEN-T) network as well as hydrogen refuelling infrastructure serving passenger cars, light-duty vehicles and lorries, among others. Maritime ports of certain capacity also must provide shore-side electricity for vessels as well as airports for stationary aircraft by 2030, among others.

On 11 July 2023, the European Parliament's Plenary adopted a legislative resolution on the proposal for a regulation on the deployment of alternative fuels infrastructure and repealing Directive 2014/94/EU (AFIR), thereby taking the next step in the legislative process on the way to clearing the Regulation to enter into force.

**【記事 : Article】****1. Background of the revision of the alternative fuels' infrastructure rules**

The transport sector is currently responsible for about 25% of the EU's total GHG emissions. Out of these 25%, the majority of 71% comes from road transport, followed by aviation (14.4%), ships (13.5%), trains (0.5%) and others (0.5%) (Council of the EU 2023).

Since the European Green Deal (COM/2019/640 final) of 11 December 2019 sets the target to reach climate neutrality by 2050 including a target to achieve a 90% reduction of GHG emissions from transport, the European Climate Law (Regulation (EU) 2021/1119) establishes a new 2030 mid-term target to introduce a more stringent GHG emission target of reducing GHG emissions by at least 55% by 2030, compared to 1990 levels. (European Commission n.d.).

Although the 2014 Alternative Fuels Infrastructure Directive (2014/94/EU) (AFID) had some positive impact on the deployment of alternative fuels infrastructure, it failed to meet the key objective to ensuring the deployment of a sufficient amount of alternative fuels infrastructure for all modes of transport in the EU. Therefore, also the Alternative Fuels Infrastructure Directive 2014/94/EU had to be revised as part of the "Fit for 55" package to establish a sufficient network of recharging and refuelling infrastructure.

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 of the European Parliament and of the Council", (COM/2021/559 final) is one of the legislative proposals the European Commission presented on 14 July 2021 as part of the Fit for 55 package. The proposal sets legally binding minimum targets and requirements for deploying alternative fuels infrastructure in the EU Member States.

**2. The proposal on AFIR COM/2021/559 final and provisional political agreement between the Council and the European Parliament**

The proposal on an Alternative Fuels Infrastructure Regulation (AFIR) (COM/2021/559 final) sets concrete targets for deploying alternative fuels infrastructure in the EU in the upcoming years (COM (2021) 559 final). The main objective is to ensure sufficient access to an infrastructure network for recharging or refuelling of road vehicles, aircraft, ships, and barges with alternative fuels (General Secretariat of the Council 2022).

Under the proposal, the Commission sets several mandatory national targets for the deployment of alternative fuels infrastructure in the EU, for road vehicles, vessels, and stationary aircraft. The proposal (COM/2021/559 final) is presented in the legal form of a regulation rather than a directive, because once adopted by the Council and the European Parliament after the trilogue negotiations, a regulation will enter into force across all EU Member States with set requirements, whereas regarding the contents of a directive, each Member State would still be free to decide on the details how to transpose the contents into national laws (COM/2021/559 final).

Therefore, the Regulation on alternative infrastructure, AFIR, is expected to be most important for speeding up the deployment of all zero- and low-emission infrastructure for the adoption of alternative fuels in the transport sector. The regulation's legally set and EU-wide minimum requirements binding to all EU Member States will give the best possible capability to support the required uptake of alternative fuels infrastructure in the transport sector and deploying the necessary infrastructure across all transport modes in all EU Member States in a set time frame (European Parliament 2023a).

The objective of the proposed alternative fuel infrastructure regulation (AFIR) includes to

ensure the deployment of a sufficient infrastructure network for recharging or refuelling road vehicles or ships with alternative fuels (Council of the EU 2023b). It should also provide alternative solutions for vessels at berth and stationary aircraft with the installation of shore side electricity supply and stationary aircraft electricity supply. Furthermore, full interoperability should be achieved throughout the EU and to make sure that the infrastructure is easy to use (Council of the EU 2023b).

On 2 June 2022, the Transport, Telecommunications and Energy Council adopted its general approach on the Regulation on the deployment of alternative fuels infrastructure (COM/2021/559 final) proposal and on 19 October 2022, the European Parliament's Plenary voted in favour of the amendments of the AFIR, including a faster deployment of recharging and refuelling stations on main EU roads, an easy-to-use recharging/refuelling network, among others. ((General Secretariat of the Council 2022, European Parliament 2023a). Thereafter, the trilogue negotiations started to find a final compromise agreement on the details of the legislation on AFIR.

A provisional political agreement between the co-legislators was reached on 28 March 2023, setting mandatory deployment targets for electric recharging and hydrogen refuelling infrastructure for the road sector, for shore-side electricity supply in maritime and inland waterway ports, and for electricity supply to stationary aircraft (European Parliament 2023a, Council of the EU 2023b). It will also require the EU Member States to expand public charging capacity in line with zero-emission car sales (COM (2021) 559 final). In addition, hydrogen refuelling stations will be deployed for light, but also for heavy duty vehicles (COM (2021) 559 final). With a high enough public recharging capacity including hydrogen refuelling, the citizens will no longer

have a reason to feel anxious about finding charging and refuelling stations to their electric or fuel-cell cars (Council of the EU 2023b).

In their provisional political agreement, the Council and the Parliament agreed that recharging infrastructure for cars and vans will have to be introduced at the same pace as electric vehicles are taken up. For publicly available electric charging infrastructure for light duty road vehicles (cars and vans), the provisional political agreement of the Council and the Parliament agreed that for each registered battery-electric car in each Member State, a power output of 1.3 kW must be provided by publicly accessible recharging infrastructure. In addition, from 2025 onwards, fast recharging stations of at least 150 kW need to be installed every 60 km along the trans-European transport (TEN-T) network (European Commission 2023a).

Regarding the recharging of light-electric vehicles, in 2025 and 2030 requirements for the provision of recharging requirements for the total power capacity and the trans-European network-transport (TEN-T) coverage must be provided based on the size of the registered fleet (Council of the EU 2023b)

The AFIR also will set out distance-based infrastructure targets for light duty and heavy-duty vehicles. The gradual process of infrastructure deployment for electric heavy-duty vehicles is set to start in 2025 aiming at covering all TEN-T roads by 2030 (Council of the EU 2023b). In addition, recharging stations must be installed at safe and secure parking areas for overnight recharging as well as in urban nodes for delivery vehicles. (European Commission 2023a, European Parliament 2023a). Regarding the effects on the technological and market developments heavy-duty vehicles, the text of the provisional agreement includes a clause on a specific review in the short term, whereas the whole regulation will also be reviewed in the medium term (Council

of the EU 2023a, 2023b). The gradual process of infrastructure deployment for electric heavy-duty vehicles is set to start in 2025 towards covering all TEN-T roads by 2030.

Regarding the use of hydrogen, the investments in hydrogen refuelling, the requirements focus on the deployment of gaseous hydrogen refuelling infrastructure with a particular attention to urban nodes and multimodal hubs (Council of the EU 2023a). The proposal required publicly accessible hydrogen refuelling stations to be deployed with a maximum distance of 150 km in between them along the TEN-T core and the TEN-T comprehensive network and at least one should be available in every urban node (European Parliament 2023a). The hydrogen refuelling infrastructure for cars and lorries must be deployed from 2030 onwards in all urban nodes and every 200 km along the TEN-T core network (European Commission 2023a, Council of the EU 2023b).

Operators of electric recharging and hydrogen refuelling stations must ensure full price transparency, and offer a common ad hoc payment method, and make relevant data, such as that on location, available to fully inform the customer (European Commission 2023a). To make electric recharging and hydrogen refuelling infrastructure easy to use, different payment and price-display options will be made available (Council of the EU 2023b).

Regarding the electricity supply to vessels and stationary aircraft, the provisional, political agreement between the Council and the European Parliament set targets for the deployment of shore-side electricity supply for certain maritime ports and seagoing container and passenger ships and for inland waterway vessels, as well as for electricity supply for aircraft in airports of the TEN-T core and comprehensive network (European Parliament 2023a).

Regarding maritime ports with at least 50 port calls by large passenger vessels, or 100 port

calls by container vessels, they must provide shore-side electricity for such vessels by 2030 (European Commission 2023a, Council of the EU 2023a). This measure will not only help reduce the carbon footprint of maritime transport but will also significantly reduce local air pollution in port areas (European Commission 2023a). These onshore power supply measures in maritime ports are now fully consistent with the recently agreed FuelEU maritime proposal (Council of the EU 2023b)

Finally, airports must provide electricity to stationary aircraft at all gates by 2025, and at all remote outfield positions by 2030 (European Commission 2023a).

The AFIR is expected to contribute to the EU 's target of reducing net GHG emissions by at least 55% by 2030 and to increase the availability of alternative fuels infrastructure like publicly accessible electric recharging and hydrogen refuelling stations across the EU's main transport corridors and hubs, thereby minimising end consumer concerns about the difficulty to recharge or refuel a vehicle (European Commission 2023a, European Commission 2023b).

Once the process of formal adoption of the proposal is completed, the new rules will be published in the Official Journal of the European Union and enter into force after a transitional period of 6 months (European Commission 2023a).

### 3. European Parliament's Plenary adopts final version of new AFIR and the infrastructure's accessibility

The AFIR is entering the last round of its adoption procedure, after the European Parliament and the Council of the EU had found their provisional, political agreement on 28 March 2023. The European Parliament's TRAN Committee approved the provisional political agreement on 24 May 2023 and thereafter, on 11 July 2023, the European Parliament's plenary adopted the new rules on the deployment of alternative fuel infrastructure

with 514 votes in favour, 52 votes against and 74 abstentions (European Parliament 2023b).

Considering the final contents of the AFIR, in Article 1, the objective of the Regulation is explained, including the establishment of mandatory national targets leading to the deployment of sufficient alternative fuels infrastructure in the EU for road vehicles, trains, vessels and stationary aircraft. Furthermore, it lays down common technical specifications and requirements on user information, data provision and payment requirements for alternative fuels infrastructure (European Parliament 2023c).

Article 2 paragraph 4 of the new AFIR draft law contains the definition of alternative fuels and non-renewable fuels. “Alternative fuels” of the transport sector include (a) “alternative fuels for zero-emission vehicles, trains, vessels or aircraft” like electricity, hydrogen, ammonia, (b) renewable fuels, including biomass fuels, including biogas, and biofuels, as well as synthetic and paraffinic fuels, including ammonia, produced from renewable energy (European Parliament 2023c). It also includes (c) ‘non-renewable alternative fuels and transitional fossil fuels’ like natural gas in gaseous form (compressed natural gas (CNG)) and liquefied form (liquefied natural gas (LNG)), liquefied petroleum gas (LPG), and synthetic and paraffinic fuels produced from non-renewable energy (European Parliament 2023c).

Article 3 of the new Regulation sets the deployment targets for recharging infrastructure dedicated to light-duty electric vehicles. The recharging stations for light electric vehicles should be deployed in proportion to the uptake of light electric vehicles and provide sufficient power output for these vehicles (European Parliament 2023c). According to Article 3 paragraph 4, the EU Member States shall ensure a minimum coverage of publicly accessible recharging points dedicated to light-duty

electric vehicles are deployed (a) along the TEN-T core road network in each direction of travel with a maximum distance of 60km between them: (i) by 31 December 2025, offering a power output of at least 400 kW and including at least one recharging point with an individual power output of at least 150 kW (European Parliament 2023b, 2023c). Thereafter, (ii) by 31 December 2027, each recharging pool offers a power output of at least 600 kW and includes at least two recharging points with an individual power output of at least 150 kW (European Parliament 2023b, 2023c). According to Article 3 paragraph 4, (b), along the TEN-T comprehensive road network, publicly accessible recharging pools dedicated to light-duty electric vehicles are deployed in each direction of travel with a maximum distance of 60km between them: (i) by 31 December 2027, along at least 50% of the length of the TEN-T comprehensive road network, each recharging pool offers a power output of at least 300 kW and includes at least one recharging point with an individual power output of at least 150 kW, among others (European Parliament 2023c).

Article 4 contains the targets for recharging infrastructure dedicated to heavy-duty electric vehicles. EU Member States shall ensure a minimum coverage of publicly accessible recharging points dedicated to heavy-duty electric vehicles in their territory (European Parliament 2023c).

Charging stations for the recharging of electric heavy goods vehicles like trucks and buses should be provided every 120km (European Parliament 2023b). According to Article 4 paragraph 1 (a), the Member States shall ensure that by 31 December 2025, along at least 15% of the length of the TEN-T road network, publicly accessible recharging pools dedicated to heavy-duty electric vehicles are deployed in each direction of travel (European Parliament 2023c). By 2028, they should be installed on 50% of the major roads in the EU. The output power should be at least 1400 kW along the TEN-T core road network (European Parliament

2023b). Based on Article 4 paragraph 1 (c), by 31 December 2030, along the TEN-T core road network, and in each direction of travel, publicly accessible recharging pools dedicated to heavy-duty electric vehicles should be deployed with a maximum distance of 60km between them. Each recharging pool offers a power output of at least 3,600 kW and includes at least two recharging points with an individual power output of at least 350 kW (European Parliament 2023c).

Based on Article 4 paragraph 1 (d), along the TEN-T comprehensive road network, publicly accessible recharging pools dedicated to heavy-duty electric vehicles are deployed in each direction of travel with a maximum distance of 100km between them by 31 December 2030. Each recharging pool offers a power output of at least 1,500 kW and includes at least one recharging point with an individual power output of at least 350 kW, among others (European Parliament 2023c).

According to Article 4 paragraph 1 (e), also by 31 December 2027, in each safe and secure parking area there should be deployed at least two publicly accessible recharging stations, dedicated to heavy-duty electric vehicles with an individual power output of at least 100 kW (European Parliament 2023c).

Regarding hydrogen refuelling stations, Article 6 contains the targets for hydrogen refuelling infrastructure of road vehicles. Paragraph 1 sets the target that Member States will have to deploy a minimum number of publicly accessible hydrogen refuelling stations in their territory by 31 December 2030 (European Parliament 2023c). The EU Member States must ensure that they will be deployed along the core TEN-T network at least every 200km by 31 December 2030 (European Parliament 2023b, 2023c). Furthermore, by 31 December 2030, Member States shall ensure that at least one publicly accessible hydrogen refuelling station is deployed in each urban node (European Parliament 2023c). Moreover, Article 6 paragraph 2 states that neighbouring Member States shall

ensure that the maximum distance referred to in paragraph 1 is not exceeded for cross-border sections of the TEN-T core network (European Parliament 2023c). In recognition of the lower likelihood of lighter vehicles using hydrogen as a fuel, the AFIR stipulates that since the heavy-duty segment is most likely segment for the early mass deployment of hydrogen-powered vehicles, filling stations should focus on heavy duty trucks, but they also should allow public access for lighter vehicles (European Parliament 2023c). Regarding the recharging payments, users of alternative fuel vehicles will have to be able to pay easily with payment cards or contactless devices and without a subscription, while the price of these “fuels” will have to be displayed per kWh, kg or per minute/session (European Parliament 2023b).

Article 8 stipulates that an appropriate number of publicly accessible refuelling points for liquefied methane infrastructure for road transport vehicles are deployed until 31 December 2024 for heavy-duty motor vehicles using liquefied methane (European Parliament 2023c).

Article 9 sets the targets for shore-side electricity supply in maritime ports with Member States ensuring that a minimum shore-side electricity supply for seagoing container ships and seagoing passenger ships is provided in TEN-T maritime ports (European Parliament 2023c).

The targets for shore-side electricity supply in inland waterway ports are given in Article 10 (European Parliament 2023c).

The targets for supply of electricity to stationary aircraft are set in Article 12, with the Member States ensuring that, at all airports of the TEN-T core network and TEN-T comprehensive network, the provision of electricity supply to stationary aircraft is ensured by 31 December 2024, to at all aircraft contact stands used for commercial air transport operations to embark or disembark passengers or to load or unload goods (European Parliament 2023c).

By 31 December 2029, the supply of electricity to stationary aircraft at all aircraft remote stands used for commercial air transport operations to embark or disembark passengers or to load or unload goods need to be ensured (European Parliament 2023c).

After the European Parliament has adopted the new AFIR on 11 July 2023, also the Council is expected to approve the alternative fuels infrastructure rules. Thereafter, the co-legislators will sign the new law and after its publication in the EU's Official Journal, it will enter into force on the 20th day after its publication. The new AFIR will start to apply from six months after its entry into force (European Parliament 2023c).

#### 4. Conclusion

While under the 2014 AFID, the EU Member States had to develop national policy frameworks (NPFs) for deploying publicly available refuelling and recharging points, the AFID did only partially lead to the introduction of alternative fuel infrastructure. It failed to meet the key objective to ensuring the deployment of a sufficient amount of alternative fuels infrastructure for all modes of transport in the EU. Therefore, the introduction of the AFIR and repeal of the AFID is considered being one key legislative change proposed under the “Fit for 55” package of July 2021 to help shifting the transport sector towards sustainable, renewable, and efficient energy solutions.

The main objective of the new AFIR is to set the legislative framework for a swift deployment of the alternative fuels infrastructure and to ensure the availability of sufficient infrastructure network for recharging or refuelling of road vehicles, shore-side electricity supply in maritime and inland waterway ports and the electricity supply to stationary aircraft.

The new AFIR will set mandatory deployment targets for electric recharging and hydrogen

refuelling infrastructure for the road sector, which will enable the use of zero-emission road vehicles, in particular electric and hydrogen light- and heavy-duty vehicles, the deployment of electricity supply to moored vessels and stationary aircraft across the EU, with the main deployment targets to be met in 2025 or in 2030. By making a minimum of recharging and refuelling infrastructure mandatorily available across the EU, the AFIR is expected to end consumer concerns about the difficulty to recharge or refuel electric and hydrogen light- and heavy-duty vehicles. The regulation will also require the ports and airports in EU Member States to make electricity supply to moored vessels and stationary aircraft mandatory. The AFIR is now awaiting the Council of the European Union's 1st reading position on its way to enter into force.

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