

## 【欧州】【Common】

# Common - Environmental issues: European Commission assesses the EU Member States' implementation of Directive 2014/94/EU on the deployment of alternative fuels infrastructure

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### 【概要 : Summary】

The EU and its Member States committed to reduce their GHG emissions to achieve the 2015 Paris Agreement targets and they are also committed to reach the EU's climate neutrality by 2050 on the basis of the European Green Deal (COM/2019/640 final). However, while the transport system is critical for a functioning European economy and society, the transport sector's GHG emissions still represent around 27% of the EU's total GHG emissions. According to the European Commission, only low to zero carbon emitting alternative fuels could ultimately substitute fossil fuels to achieve the envisaged 90% GHG emissions reduction goal for the transport sector in 2050. Alternative fuels exist, but it is the lack of a network of new charging infrastructure, which delays the quicker uptake of low to zero emission vehicles. Therefore, the Directive on the deployment of alternative fuels infrastructure (AFID) (Directive 2014/94/EU) aims at ensuring a minimum coverage for alternative fuels infrastructure.

On 8 March 2021, the European Commission published the results of an assessment of the actions taken by the EU Member States regarding the implementation of the alternative fuels infrastructure.

According to the Commission's findings, the Alternative Fuels Infrastructure Directive 2014/94/EU has been an important instrument for the development of the alternative fuels' infrastructure.

However, the current policy framework also shows shortcomings, because the level of deployment of the alternative fuels infrastructure varies greatly between the EU Member States. Furthermore, the current deployment will not be sufficient to support the EU's envisaged 55% GHG emission reduction target by 2030.

Therefore, efforts will need to be considerably increased to reach a sufficient level of alternative fuels infrastructure to provide the backbone for the successful transition to low- and zero-emission mobility.

Finally, the need to transform the transport system is also affected by the measures to overcome the impacts of the COVID-19 pandemic. The measures to support the recovery from the COVID-19 pandemic could also accelerate the decarbonisation and modernisation of the entire transport system and thereby they could also offer a historic opportunity to make European transport sector more sustainable.

## 【記事 : Article】

### 1. The background of introducing of the Directive on Alternative Fuels Infrastructure (AFID)

The EU transport sector is still heavily dependent on fossil fuels and the supply of oil of 94%, and 84.3% is imported oil from increasingly unstable regions of the world. The 2011 Commission's Transport 2050 Strategy aimed to break EU transport's dependence on oil imports and proposed a target of 60% GHG emissions reduction by 2050. These goals meanwhile became more ambitious, as the EU committed to the 2015 Paris Agreement and the European Green Deal, which envisages to reach carbon neutrality by 2050. Alternative fuels are seen as key to reduce air pollution and GHG emissions and to improving the security of energy supply in the EU.

The main alternative fuels options for the different transport modes are liquefied petroleum gas (LPG), natural gas and biomethane (in the forms of CNG, LNG and GTL), electricity, biofuels and hydrogen. However, the broader uptake of alternative fuels is often hampered by the lack of refilling infrastructures for securing the supply of the alternative fuels. The lack of uptake of vehicles with alternative fuels technology and a lack of infrastructure to offer those vehicles alternative fuels created a vicious circle. Therefore, the EU introduced the Directive on alternative fuels infrastructure (2014/94/EU) in 2014 to support the gradual replacement of fossil fuels with alternative fuels in the transport sector by supporting the deployment of the necessary infrastructure for alternative fuels.

### 2. The Directive on Alternative Fuels Infrastructure (AFID) and the action plan for alternative fuels infrastructure COM (2017) 652 final

Since the scarcity of existing refuelling and recharging infrastructure is seen as a limiting

factor for the mass-market entry of vehicles using alternative fuels, the Commission presented a proposal on a Directive on alternative fuels infrastructure (AFID), Directive 2014/94/EU in 2014. It aims at supporting the deployment of a network of refuelling stations and charging points for alternative fuels in the EU Member States. The Directive 2014/94/EU set out minimum requirements for the building-up of alternative fuels infrastructure, including recharging points for electric vehicles and refuelling points for natural gas (LNG and CNG) and hydrogen, to be implemented by means of Member States' national policy frameworks, as well as common technical specifications for such recharging and refuelling points, and user information requirements.

The alternative fuels were defined 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. Without limiting it to the mentioned alternative fuels, the directive proposed an energy mix of alternative fuels represented by LPG, LNG, CNG, electricity, biofuels and hydrogen for the transport sector and to answer to the necessity of building a better infrastructure network for the alternative fuels' supply arises. Promising results from research and development should be considered when new types of alternative fuels are selected and standards and legislation should be drawn up, without giving preference to any particular type of technology, so as not to hamper further development towards alternative fuels and energy carriers.

Regarding the electric vehicles, the Directive 2014/94/EU requires Member States to set targets for recharging points accessible to the public, to be built by 2020, to ensure that electric vehicles can circulate at least in urban and suburban agglomerations.

However, it was not only be necessary to set up the infrastructure for alternative fuels

refuelling/recharging points. It also needed more information and persuasion to make the customers opt for the vehicles using alternative fuels. Targets should ideally foresee a minimum of one recharging point per ten electric vehicles. However, while the Directive clearly specifies the overall needs for road infrastructure and ports, it does not provide a common methodology to inform target setting and measure development. The EU Member States had to set and make public their targets and present their national policy frameworks by the end of 2016. Thereafter the Commission would assess and report on those national policy frameworks in order to ensure coherence at EU level. The main target of the Directive 2014/94/EU was to support the introduction of sufficient alternative fuel distribution infrastructures with a minimum number of recharging points and using a common plug for electric vehicles. However, the EU Member States were not willing to be dictated by the European Commission in how far to equip their countries with infrastructures for alternative fuels. Therefore, all what remained from the original Commission proposal was the obligation for Member States to adopt national plans for the setting up of refuelling infrastructure for alternative fuels.

The second Mobility Package further responded to the challenge of making mobility clean, competitive and connected through a combination of demand- and supply-side measures on low-emission mobility. It also included an Action Plan on alternative fuels infrastructure COM(2017) 652 final to support the implementation of the Alternative Fuels Infrastructure Directive. The “Action Plan on Alternative Fuels Infrastructure under Article 10(6) of Directive 2014/94/EU, including the assessment of national policy frameworks under Article 10(2) of Directive 2014/94/EU” outlines a number of actions to support an accelerated roll-out of alternative fuels infrastructure in the EU. By

2025, the EU should have completed the recharging and refuelling infrastructure, providing full coverage of the TEN-T core network corridors.

### 3. The revision of the Directive on Alternative Fuels Infrastructure (AFID) 2014/94/EU

The Directive 2014/94/EU required Member States to put in place development plans for alternative fuels infrastructure, but according to a 2017 Commission evaluation, the plans did not provide sufficient certainty for fully developing the alternative fuels infrastructure network. The development has been uneven across the EU.

In a resolution adopted in October 2018, the European Parliament called for the revision of the Directive 2014/94/EU, to ensure that sufficient infrastructure is in place in line with efforts to reduce emissions in the transport sector. The resolution also called on the Commission to widen the scope of Directive 2014/94/EU, to make hydrogen infrastructure development mandatory and to replace the system of national plans with more efficient instruments, such as binding and enforceable targets.

The 2019 European Green Deal (COM/2019/640 final) also stressed the need to boost the production and uptake of sustainable alternative fuels and to set the objective of having 1 million public recharging and refuelling points in place by 2025. The European Green Deal also pointed out the need of decarbonising the shipping sector. The alternative fuels to be used particularly post 2030 will be hydrogen or hydrogen carriers, such as ammonia, as well as bio-LNG, electricity, methanol and e-fuels. With the exception of e-fuels they all require particular infrastructures. The roadmap in the annex (COM(2019) 640 final, ANNEX) to the European Green Deal envisaged the review of the Alternative Fuels Infrastructure Directive in 2021.

On 27 May 2020, in response to the COVID-19 pandemic, the Commission proposed the recovery

plan for Europe putting an even greater focus on developing alternative fuels infrastructure, electric vehicles, hydrogen technology and renewable energy and repeated its intention to review the 2014 Directive. The Smart and Sustainable Mobility Strategy, presented on 9 December 2020, lists the revision of the Directive 2014/94/EU in its legislative action plan for 2021. Finally, the 2021 Commission Work Programme foresees the publication of a proposal for a revision in the second quarter of 2021. In the context of the ongoing evaluation of Directive 2014/94/EU, the Commission has carried out an assessment of the national implementation reports as received from the Member States under the Directive 2014/94/EU.

#### 4. The assessment of the Directive 2014/94/EU on alternative fuels infrastructure (AFID)

On 8 March 2021, the European Commission published a report to the European Parliament and the Council on the application of Directive 2014/94/EU and the development of alternative fuels infrastructure (AFID). The “Report on EU-wide alternative fuels infrastructure deployment - increased level of ambition, but still no comprehensive and complete network across EU” presents the results of the assessment of action taken by EU Member States regarding the implementation of the AFID and alternative fuels infrastructure in the EU. The in-depth assessments of the individual national implementation reports provide a basis for further discussion on how Member States could further support the quick build-up of a sufficient infrastructure for alternative fuels. According to the Commission’s findings, the Directive has had a positive impact on the uptake of alternatively fuelled vehicles and their infrastructure. These assessments show that full implementation of planned targets and measures by Member States would lead to an infrastructure

roll-out by 2030 that could potentially support a fleet of alternative fuels vehicles that is in line with projections for a 40% GHG emission reduction in the EU. However, the Commission’s report and staff working document also underline the existence of shortcomings of the current policy framework. The current deployment would not allow a comprehensive and complete network coverage of alternative fuels infrastructure throughout the EU, because there exist large differences between Member States’ plans and their realisation. Moreover, the policy frameworks often do not display sufficient detail on the state of play and on the implementation of existing and planned policy measures. This corresponds to findings of earlier assessments of the Commission as well as to the conclusions of the European Parliament’s Own Initiative Report on alternative fuels infrastructure of 2018.

Furthermore, the measures considered on the basis of Directive 2014/94/EU are not sufficient anymore, since the 2030 Climate Target Plan COM(2020) 562 final raises the ambition by increasing the 2030 EU GHG emissions reductions target from 40% to 55%. This new target requires a considerably higher increase in the number of zero- and low-emissions vehicles and the appropriate construction and supply of infrastructures. Therefore, the new proposed reduction of the EU’s GHG emissions by 2030 by at least 55% has a relevant impact on the required uptake of sustainable alternative fuels, vehicles and infrastructure. There is a need for significantly accelerating the uptake of zero-emission vehicles and the related infrastructure in all market segments.

Furthermore, according to the Commission’s findings, new needs for technical specifications under the Directive have emerged, in particular concerning the interoperability and transparent exchange of information among the different players within the electric vehicle charging ecosystem. Standards for recharging heavy-duty

vehicles and refuelling liquid hydrogen are also required. In addition, maritime transport and inland navigation will also benefit from further common technical specifications to facilitate and consolidate the entry on the market of alternative fuels.

From a consumer perspective, using alternative fuels infrastructure also needs to be as easy as the use of conventional refuelling infrastructure. The current policy framework has shortcomings and consumers can face problems particularly when travelling across borders. Further action at EU level is required to ensure the deployment of interoperable and user-friendly recharging and refuelling infrastructure.

Finally, the cost-efficient integration of an increased number of electric vehicles in the electricity system must be ensured.

The Commission will consider the findings of the assessment report in the revision of the EU-wide alternative fuels infrastructure Directive and is expected to finalise the revision of Directive 2014/94/EU by tabling a proposal in 2021.

## 5. Conclusion

The European Commission's assessment report has shown that the Alternative Fuels Infrastructure Directive has had a positive impact on the uptake of alternatively fuelled vehicles and on the deployment of alternative fuels infrastructure in the EU Member States. The Commission found that the current infrastructure deployment level in the EU Member States is sufficient to serve the currently rather low number of alternatively fuelled vehicles. However, there does not exist a comprehensive and complete network of alternative fuels infrastructure across the EU. The level of ambition in target setting and supporting policies also vary greatly between EU Member States. This is concerning because the measures will not be sufficient for achieving the new and more ambitious GHG emission reduction targets which have to be met in 2030 and 2050. Against

this background, the Commission announced a revision of Directive 2014/94/EU and other legislation like the revision of the Renewable Energy Directive 2018/2001/EU on the promotion of the use of energy from renewable sources. The Commission is in the process of preparing the revision of the Alternative Fuels Infrastructure Directive and is expected to table a proposal during the year 2021. The recovery from the COVID-19 pandemic crisis should also be used to accelerate the decarbonisation and modernisation of the entire transport and mobility system.

## References

- Directive 2014/94/EU of the European Parliament and of the Council of 22 October 2014 on the deployment of alternative fuels infrastructure. In: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32014L0094>, retrieved 12 March 2021
- European Commission: Alternative fuels for sustainable mobility in Europe . In: [https://ec.europa.eu/transport/themes/urban/cpt\\_en](https://ec.europa.eu/transport/themes/urban/cpt_en), retrieved 12 March 2021
- European Commission: Clean fuels for transport: Member States now obliged to ensure minimum coverage of refuelling points for EU-wide mobility. In: [https://ec.europa.eu/commission/presscorner/detail/en/IP\\_14\\_1053](https://ec.europa.eu/commission/presscorner/detail/en/IP_14_1053), 29 September 2014, retrieved 17 March 2021
- European Commission: Clean power for transport - Frequently asked questions. MEMO. In: [https://ec.europa.eu/commission/presscorner/detail/en/MEMO\\_13\\_24](https://ec.europa.eu/commission/presscorner/detail/en/MEMO_13_24), 24 January 2013, retrieved 17 March 2021
- European Commission: COMMISSION STAFF WORKING DOCUMENT Accompanying the document COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS Sustainable and Smart Mobility Strategy - putting European transport on track for the future, SWD/2020/331 final. In: <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A52020SC0331>, retrieved 17

March 2021

European Commission: COMMISSION STAFF WORKING DOCUMENT. Detailed Assessment of the Member States Implementation Reports on the National Policy Frameworks for the development of the market as regards alternative fuels in the transport sector and the deployment of the relevant infrastructure.

Implementation of Art 10 (3) of Directive 2014/94/EU Accompanying the document REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND THE COUNCIL on the application of Directive 2014/94/EU on the deployment of alternative fuels infrastructure {COM(2021) 103 final}, SWD(2021) 49 final. In:

<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52021SC0049>, 8. 3. 2021, retrieved 12 March 2021

European Commission: COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS Stepping up Europe's 2030 climate ambition Investing in a climate-neutral future for the benefit of our people. COM/2020/562 final. In:

<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52020DC0562>, 17. 9. 2020, retrieved 12 March 2021

European Commission: COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS. Sustainable and Smart Mobility Strategy - putting European transport on track for the future. COM(2020) 789 final. {SWD(2020) 331 final} In:

<https://ec.europa.eu/transport/sites/transport/files/legislation/com20200789.pdf>, <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52020DC0789>, 9.12. 2020, retrieved 12 March 2021

European Commission: COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE EUROPEAN COUNCIL, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS The European Green Deal. COM/2019/640 final. In:

<https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1588580774040&uri=CELEX:52019DC0640>, 11.12. 2019, retrieved 22 March 2021

European Commission: COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS Towards the broadest use of alternative fuels - an Action Plan on Alternative Fuels Infrastructure under Article 10(6) of Directive 2014/94/EU, including the assessment of national policy frameworks under Article 10(2) of Directive 2014/94/EU {SWD(2017)365final}. COM(2017) 652 final. In:

<https://ec.europa.eu/transparency/regdoc/rep/1/2017/EN/COM-2017-652-F1-EN-MAIN-PART-1.PDF>, retrieved 12 March 2021

European Commission: Report on EU-wide alternative fuels infrastructure deployment - increased level of ambition, but still no comprehensive and complete network across EU. In:

[https://ec.europa.eu/transport/themes/urban/news/2021-03-09-report-eu-wide-alternative-fuels-infrastructure-deployment\\_en](https://ec.europa.eu/transport/themes/urban/news/2021-03-09-report-eu-wide-alternative-fuels-infrastructure-deployment_en), 09/03/2021, retrieved 17 March 2021

REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND THE COUNCIL on the application of Directive 2014/94/EU on the deployment of alternative fuels infrastructure. COM/2021/103 final. In:

<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52021DC0103>, 8. 3. 2021, retrieved 12 March 2021