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| To: | Mr Jeppe TRANHOLM-MIKKELSEN, Secretary-General of the Council of the European Union |
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| Subject: | COMMISSION STAFF WORKING DOCUMENT EXECUTIVE SUMMARY OF THE 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 of the European Parliament and of the Council** |

Delegations will find attached document SWD(2021) 632 final.

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# COMMISSION STAFF WORKING DOCUMENT

# EXECUTIVE SUMMARY OF THE 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 of the European Parliament and of the Council**

{COM(2021) 559 final} - {SEC(2021) 560 final} - {SWD(2021) 631 final} - {SWD(2021) 637 final} - {SWD(2021) 638 final}

## Executive Summary Sheet

Impact assessment on a Proposal for a Revision of the Directive 2014/94 of the European Parliament and of the Council on the deployment of alternative fuels infrastructure

## A. Need for action

### What is the problem and why is it a problem at EU level?

In response to the increased climate ambition for 2030 set out by the European Green Deal and the Climate Target Plan of the Commission, the Sustainable and Smart Mobility Strategy confirms the need for a rapidly accelerated uptake of low and zero-emission vehicles and vessels. A sufficiently dense, widespread network of public accessible recharging and refuelling infrastructure is necessary to support this take-up. The evaluation has indicated that the Directive is not fit for the purpose of serving the recharging and refuelling infrastructure needed in response to the increased climate ambition for 2030. Driven by shortcomings in provisions of the current Directive the main problems include 1) Member States infrastructure planning under the Directive lacks, on average, the level of ambition and coherence needed, leading to insufficient, unevenly distributed infrastructure; 2) interoperability issues persist in terms of physical connections and communication standards, including connection to the electricity grid and 3) there is a lack of transparent consumer information and easy to use payment systems, which impact user acceptance. Without further EU level intervention, such 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 and vessels in view of the increased 2030 climate ambition.

### What should be achieved?

In order to contribute to achieving climate neutrality by 2050 and to contribute to the reduction of air pollution, this initiative seeks to ensure the availability and usability of a dense, wide-spread network of alternative fuel infrastructure throughout the EU. All users of alternatively fuelled vehicles (including vessels and aircraft) shall circulate at ease across the EU, enabled by key infrastructure such as motorways, ports and airports. The specific objectives are: 1) ensuring minimum infrastructure to support the required uptake of alternatively fuelled vehicles across all modes and in all Member States to meet the EU's climate objective, 2) ensuring full interoperability of the infrastructure and 3) ensuring full user information and adequate payment options.

### What is the value added of action at the EU level (subsidiarity)?

Full connectivity and a seamless user experience along the European transport network for low and zero emission vehicles and vessels, ensured through sufficient quantity and full interoperability of infrastructure across borders is a prerequisite to meet the European Green Deal goal on reduction of transport GHG emissions and for the development of a common EU transport market. Those objectives can only be reached by a common European legislative framework. The revision of the Directive will contribute to a coherent development and rollout of vehicles fleets, recharging and refuelling infrastructure and user information and services.

## B. Solutions

### What are the various options to achieve objectives? Is there a preferred option or not? If not, why?

Three policy options (PO) have been analysed that all ensure that sufficient, interoperable and user-friendly recharging and refuelling infrastructure will be available to support the uptake of low and zero emission vehicles by 2030 and beyond. All options include mandatory deployment targets at national level, but vary in terms of prescription of the location of this infrastructure, the level of harmonisation of physical connectors and communication protocols as well as in terms of information and services to be offered to consumers. The preferred choice is PO2 as it ensures sufficient quantity of infrastructure overall as well as sufficient infrastructure on the TEN-T network, while leaving Member States flexibility in terms of precise location and capacity of the infrastructure. Furthermore, full interoperability and access of user to all relevant information and services is ensured.

### What are different stakeholders' views? Who supports which option?

The preferred policy option (PO2) is supported by the automotive industry, many manufacturers and operators of recharging and refuelling infrastructure, the electricity sector and many civil society associations, albeit different views with respect to the quantitative requirements exist. However, ports and airports raised concerns about the additional costs for providing related infrastructure in particular for on shore power supply (OPS) and electricity supply to stationary aircrafts. Public authorities are largely supportive of a revision of the Directive in particular with respect to interoperability and user friendliness but view are more mixed when it comes to mandatory deployment targets, in particular with respect to fleet based targets for recharging infrastructure.

## C. Impacts of the preferred option

**What are the benefits of the preferred option (if any, otherwise of main ones)?**

**Societal benefits** will result from the reduction in $CO_2$ and air pollutant emissions. In general, investments in quantity and quality of infrastructure will not directly lead to a greater uptake of low- and zero-emission vehicles which is rather triggered by other policies, e.g. the $CO_2$ emission performance standards for cars and vans. However, only if sufficient and interoperable infrastructure is available that provides minimum services to consumers, it can be expected that the vehicles will make it into the market to the extent necessary to achieve the EU's Climate Target Plan objective. The reduction in the external costs of $CO_2$ emissions is estimated at around €445 billion relative to the baseline over the 2021-2050 period, expressed as present value, while the reduction in the external costs of air pollution at €75 billion. These reductions are driven by other policies, but enabled by the uptake of infrastructure. The preferred option is expected to have a positive impact on innovation, particularly in the area of low and zero-emission vehicle and vessel development, innovative user services building on a common data infrastructure, related business models but also in the development of more innovative recharging and refuelling technologies. Those innovations are likely to strengthen the competitiveness of European industry.

**What are the costs of the preferred option (if any, otherwise of main ones)?**

Total infrastructure costs, including capital and operation costs for fully interoperable and user-friendly infrastructure, are expected to amount to €67.1-70.5 billion compared to the baseline over the 2021-2050 period, expressed as present value, of which €60.3-63.7 billion will be for road infrastructure, €5.9 billion for waterborne transport and €0.9 billion for aviation. There are no significant direct negative impacts in economic, social or environmental areas.

**What are the impacts on SMEs and competitiveness?**

The policy options increase certainty of long-term market demand in all Member States. This will generally benefit all enterprises that are active in this market. Especially in electric mobility market, new market actors are often SMEs who will benefit from the accelerated deployment of recharging infrastructure under the Directive and from the provisions for data sharing through national access points of Member States Competitiveness of enterprises active in installing and operating recharging and refuelling infrastructure will increase under all policy options, as higher demand for recharging and refuelling practice as triggered by the $CO_2$ emission performance standards for cars and vans, but also for heavy-duty vehicles, will lead to better profitability of operations, complemented by decreasing cost of technologies.

**Will there be significant impacts on national budgets and administrations?**

The costs to public authorities from the requirements to review and update the national policy frameworks (NPFs) and report on the implementation are the same as in the baseline. In the baseline they are estimated to be €3,400,000 (€126,000 per Member State) for each reporting circle under the National Policy Frameworks that is planned for every three years. Monitoring costs may increase to some extent to report on compliance with the strict targets set. The additional costs relative to the baseline cannot however be quantified; and the provision of standardised data formats, digitised data transfer and a common system of reporting to national access points of Member States will simplify overall reporting under the Directive. Investments into infrastructure are expected to be largely covered by private investments. However, especially in the early phase of market development, public authorities will have to financially support some of the market investments with decreasing aid intensities over time. Up to 2030, it is expected that public authorities will have to contribute €0.64 billion per year on average (41% of the total investments). For the period 2031-2050, the public support is projected at €0.45 billion per year on average (10% of the total investments).

**Will there be other significant impacts?**

Consumers will have access to sufficient and fully interoperable infrastructure, related information and services that will make travelling with low and zero emission vehicles across the EU more convenient and predictable as the issues of ensuring full user information and adequate payment options will be addressed. However, those benefits can't be quantified.

**Proportionality**

None of the policy options goes beyond what is necessary to reach the overall policy objectives. The proposed intervention ensures the uptake of sufficient infrastructure for recharging and refuelling of alternative fuels vehicles in the Union necessary for delivering on the increased climate and energy ambition for 2030 and the overall objective of reaching climate neutrality by 2050.

## D. Follow up

| When will the policy be reviewed? |
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| The policy will be reviewed end of 2026 to assess the deployment level of alternative fuels infrastructure in relation to the uptake of low and zero emission vehicles and the technology developments, in particular in waterborne transport and aviation, but also rail, to determine the need for alternative fuels infrastructure in those sectors. |