POSITION PAPER

ROADMAP / INCEPTION IMPACT ASSESSMENT

‘AMENDMENT OF THE REGULATION SETTING CO2 EMISSION STANDARDS FOR CARS AND VANS’

The eFuel Alliance welcomes the opportunity to comment on the Inception Impact Assessment on the ‘Amendment of the Regulation setting CO2 emission standards for cars and vans’. We fully support the European Commission’s assessment that all sectors will have to strengthen their efforts in reducing greenhouse gas (GHG) emissions significantly in order to achieve climate-neutrality by 2050. Especially road transport has to play a key role as it accounts for a fifth of today’s GHG emissions in the EU. Given the huge potential of promising climate-protection technologies, such as renewable hydrogen and its derivate products, which has not yet been exploited, we believe that road transport can make a significant contribution to the defossilisation efforts in Europe.

One instrument to achieve GHG reductions in the transport sector is the upcoming revision of the CO2 emission standards for cars and vans. We are convinced that a balanced mix of strict but achievable CO2 emission standards and a level-playing-field among the diversity of emission-reduction technologies will have the most positive impact on our climate. To determine the real contribution to climate protection a technology can make, the carbon footprint of a vehicle must be assessed on the basis of its entire life cycle.

Especially in the light of the Commission’s plan to raise the climate targets for 2030, it is even more important to allow a wide range of compliance options to fulfil the CO2 emission standards and to promote a diversity of climate-protection solutions helping to reach climate neutrality by 2050. With road transport being the sector with the greatest potential to use and an urgent need for climate neutral fuels, the current evaluation of the EU fleet target regulation offers a huge opportunity for a market ramp-up of hydrogen and hydrogen-derived products. In this way the enormous climate protection potential can be exploited. If the EU sets the right course in promoting the wide and cross-sectoral use of climate-neutral fuels now, a large-scale industrial production of hydrogen and hydrogen derived products like eFuels could begin shortly.

IMPLEMENTATION OF A CREDITING SYSTEM FOR RENEWABLE FUELS

To achieve that, introducing a crediting mechanism for vehicle manufacturers to comply with their fleet targets is crucial. Without such a mechanism in place, there is no incentive for car manufacturers to invest in climate neutral synthetic fuels. Manufacturers are currently forced to deploy only one technology in order to avoid the high penalties laid down in Regulation 2019/631 for failing to meet their fleet targets, which is ultimately at the expense of other climate protection technologies. It is therefore important to strengthen the demand-side of eFuels and at the same time considering more flexibility options by allowing vehicle manufacturers to credit synthetic and advanced alternative fuels against their fleet targets.

There are already feasible proposals regarding the practical implementation of such a crediting system, in particular the report 'Crediting System for Renewable Fuels in EU Emission Standards for Road Transport.'[1] by Frontier Economics and Flick Gocke Schaumburg from May 2020, drafted for the German Federal Ministry for Economic Affairs and Energy (BMWi). The eFuel Alliance strongly supports the proposal and invites the European Commission to incorporate the presented crediting system in the amended Regulation setting CO2 emission standards for cars and vans.

MAIN ADVANTAGES AND PRINCIPLES OF A CREDITING SYSTEM

Car manufacturers' participation in such a system would be voluntary. Participants would be able to purchase certain amounts of alternative fuels, which have to be additional to existing amounts and have to meet the RED II sustainability criteria. Fuel suppliers are eventually responsible for supplying these fuels to the end customer. It is guaranteed that the amount of renewable fuels, which corresponds with the credits generated when purchasing the renewable fuels, is indeed brought to the market and therefore making an actual contribution to the reduction of GHG emissions in the transport sector.

Any crediting model should be aligned with existing regulations for the automotive and fuel sectors and should be based on its positive contribution to climate protection. It is therefore important to stress that the proposed crediting mechanism does not allow for double counting, i.e. that credits can only be counted either against the renewable share under RED II or against the fleet targets under the EU CO2 emission standards regulation. This means that car manufacturers and distributors of renewable fuels will have to decide which targets the credits will be counted towards. The crediting mechanism ensures thereby effective climate protection and additional CO2 reductions in the transport sector.

Further climate benefits can be achieved by introducing a "front-loading". In that case, the OEM has to guarantee that the whole amount of renewable fuels is brought into the market at the time of the registration of the new vehicle. Hereby, the CO2 reduction of the whole lifetime is brought forward by approx. 6 years. That helps member states to reach short-term climate targets and enables immediate investments.

Maintaining affordable individual mobility is also a very important point when revising any EU transport legislation. More options to meet the requirements under the fleet target regulation will also reduce the fulfilment-costs of OEMs, which ultimately has a positive effect on the prices for end customers in all EU member states. Renewable fuels can contribute the to a significant reduction of GHG effectively and affordably – right up to climate neutrality. With increased quantities of eFuels being added gradually to conventional fuels (drop-in capability) and production costs falling thanks to economies of scale, eFuels would be affordable for consumers in every phase and also for hard-to-abate sectors like aviation and shipping.

[1] For more information, also see: https://www.bmwi.de/Redaktion/DE/Downloads/C-D/crediting-system-for-renewable-fuels.html

Potential concerns about the crediting approach, including a reduction in incentives for efficiency improvements or creating a loophole for the automotive industry, are misguided. The methodology has been developed by an official institute and electric mobility remains a promising solution meeting a variety of mobility needs. Introducing a crediting system will make more climate-neutral choices available without prompting an 'either or' in European climate protection policy. Further to this, if a vehicle lacks efficiency, more fuels are needed to compensate for the CO2 footprint over lifetime. Therefore, efficiency efforts remain important for the automotive industry.

ADDRESSING THE FLEET STOCK THROUGH THE USE OF eFUELS

Further to this, promoting the use of synthetic and advanced alternative fuels produced from renewable energy will support the market ramp-up for these fuels, which can then also be used to make the existing fleet stock climate-neutral. The CO2 emission standards regulation applies to all new vehicles registered annually in the EU, setting an EU fleet-wide target for the annual average emissions of new passenger cars and for light commercial vehicles.

There are currently more than 300 million motor vehicles (thereof approx. 270 million passenger cars) in the EU and more than 1.3 billion vehicles worldwide, most of them powered by internal combustion engines (ICE) with only a small percentage being powered by other powertrains. Given that, even in the case of a high uptake of battery electric vehicles, the current fleet stock will continue to form the basis for mobility in the coming decades and that millions of cars with an ICE will still be on Europe's roads post 2030, a holistic strategy is needed to address both new cars as well as existing fleets. eFuels are just such a solution to substitute fossil energy carriers by renewables. They are compatible with all current ICE and therefore suitable for all vehicles and means of transport.

EXISTING INFRASTRUCTURE CAN BE USED, NEW JOBS CAN BE CREATED

Since eFuels can be deployed in existing engines and infrastructures, including the global filling station network, consumers are not being burdened with additional conversion costs and will not face problems in adapting to new technologies. Important supply chains can be kept; the investment and job potential along the value-added chain of synthetic fuels is huge. The production and export of Power-to-X technologies and equipment could generate significant amounts of additional added value and create numerous new jobs in Europe as well as in partnering countries. The large dimension of that potential will be further specified by a soon to be published study by IW Köln.

Synthetic fuels from renewable energy sources, hydrogen and CO2 have more considerable advantages: they can be easily stored and transported over long distances without energy loss, thus making it for the first time possible to produce renewable electricity in remote regions rich in wind and sun, but to use it flexibly worldwide. For that reason, eFuels are not in competition with electric mobility. The production of eFuels will mainly rely on using renewable energies that are not available for direct electrification. Greater exploitation of renewable electricity plants in the

respective regions would compensate for the efficiency losses of eFuels compared to battery electric vehicles. In addition to that, eFuels have a volumetrically high energy density and can be added in any quantity to conventional liquid fuels, such as petrol, diesel, or kerosene, without any problems, and can even replace fossil fuels completely in the long run.

Promoting the use of eFuels in the road transport will also have a positive effect on deploying eFuels in the aviation and shipping sector. A wide use of synthetic and advanced alternative fuels will reduce the price of these energy carriers for all sectors significantly thanks to economies of scale. Limiting the use of eFuels to very few sectors only will most likely lead to expensive eFuels for those sectors that are very hard to electrify, e.g. the aviation and shipping sector. Affordable clean fuels will only be available if they can be produced in quantities that allow for an economic production of these fuels.

BROADER ASSESSMENT OF CARBON FOOTPRINT NEEDED

In its Inception Impact Assessment, the European Commission states that a higher uptake of zero emission vehicles is needed and that necessary investment needs to be channelled to increase the uptake. We support the promotion of battery electric vehicles as one option to reduce GHG emissions. However, a narrow focus on ‘zero emission vehicles’ will not lead to the best results possible for our climate, both from an economic but also ecological point of view.

Given that ‘zero emission’ is currently measured from ‘tank-to-wheel’, only a specific and limited part of the vehicle’s lifecycle is actually taken into account when measuring the GHG emissions. GHGs coming out of the tailpipe are considered whereas GHG emissions occurring at earlier or later stages, i.e. during the vehicle production or its disposal are being ignored. For climate protection it is irrelevant at what stage of a car’s lifecycle CO2 emissions occur. Policy decisions should therefore only be taken based on a lifecycle approach. A first, important, step to achieving a more holistic approach is to provide a bridge between fuel regulation and vehicle regulation.

The Commission criticises, as the most obvious market failure, that car manufacturers do not directly experience the cost of CO2 emissions to society and therefore do not necessarily take into account the CO2 emissions in their production decisions. With the currently applied tank-to-wheel approach, vehicle manufacturers are actually incentivised to ignore the CO2 emissions occurring during the production of a vehicle and to only look at the tailpipe-emissions in order to meet the CO2 emissions standards laid down in Regulation (EU) 2019/631. To reduce the overall GHG emissions, a comprehensive look at the actual CO2 emissions of a vehicle is needed.

INCREASING INVESTMENT INCENTIVES – MAINTAINING TECHNOLOGICAL LEADERSHIP

The Commission also intends to amend the current regulatory framework to provide the market with long term investment security and to maintain the technological leadership and competitiveness of the EU’s automotive value chain. The eFuel Alliance strongly agrees with the assessment of the Commission that additional security for investors is needed to strengthen the European automotive value chain. A long-time planning perspective is crucial to attract and to

channel investments. This is especially true for hydrogen and its derivatives, which is why the provision of added security should not be limited to only one climate protection technology.

If Europe focuses too narrowly on the promotion of only one technology, we are likely to lose technological leadership in areas where Europe has been at the forefront of innovation over the last century. A voluntary crediting system would provide the automotive industry with additional flexibility to comply with the regulative goals. A fair competition between climate-protection technologies is vital. Especially where the market ramp up of the electric mobility faces challenges and difficulties (e.g. infrastructural issues, increase of the power price, customer acceptance) other climate-neutral options need to be available.

eFUELS - A SOLUTION THAT CAN BE DEPLOYED THROUGHOUT THE EU

A market ramp-up of eFuels can also be supported in the short term by promoting projects on an industrial scale or by tendering procedures and commitments to volume orders. It is equally important to continue to promote the market uptake of e-mobility. However, not all European countries have comparable possibilities to deploy e-mobility and make it accessible to most of their population.

To achieve our ambitious climate targets, we need solutions that work everywhere, regardless of a country's economic power, geography or technical requirements. If climate-protection solutions are only applicable in a few member states that can afford the complete exchange of the current fleet stock and infrastructure, the EU misses out on a great opportunity to reduce CO2 emissions in the transport sector. A mix of e-mobility, advanced biofuels, eFuels, fuel cells and potentially other climate-protection technologies will not only reduce GHG emissions effectively, it will also help to safeguard the single market for vehicles.

We need to keep in mind that the energy transition needs to be affordable and should not overwhelm European citizens, especially people with lower incomes or people living in rural or economically weaker regions. If climate-protection measures do not receive broad support from the European citizens, the EU runs the risk of missing the ambitious climate targets.

The second-hand vehicle market mentioned in the EU Commission's impact assessment is also very important in that context. Consumers in lots of European countries simply cannot afford to replace their (potentially older) car by a new one. Since eFuels help to defossilitate the stock, without the need to replace the current car or infrastructure, the energy transition can be made affordable for all people. Therefore, an uptake of climate-neutral fuels in the near future is needed. The revision of the CO2 emission standards for cars has the potential to be one of the main drivers for such a market uptake.

CONSIDERING THE INTERNATIONAL DIMENSION

One issue often debated in the context of eFuels is their efficiency. It is suggested that by using electric energy directly, battery electric vehicles always have a higher degree of efficiency. However, this perspective does not take into account the international dimension of the production of hydrogen and hydrogen-derived products such as eFuels and is therefore misleading. The efficiency of the electricity's end usage is not the only criteria to assess the actual efficiency. It is even more important how efficiently electricity can be produced from renewable energies, and then made usable. If eFuels come from regions that are rich in sun and wind, the usage efficiency shows that battery-powered electric vehicles are almost on par with vehicles powered by eFuels.[2] In order to achieve a global energy transition and to leverage the potential from regions where large amounts of climate-neutral electricity are available, international cooperation and an import strategy on a global scale is needed.

CONCLUSION

As a CO2-neutral alternative to conventional fossil energy carriers, eFuels can make a decisive contribution to the global energy transition. With the CO2 emission standards regulation being one of the decisive regulations to promote or prevent the use of renewable fuels, the EU should take the opportunity to introduce a crediting mechanism for renewable fuels in the fleet target regulation.

ABOUT THE eFUEL ALLIANCE

The eFuel Alliance is an interest group committed to promoting the political and social acceptance of eFuels and to securing their regulatory approval. We aim to win broader recognition of the significant contribution eFuels can make in the drive for sustainability and climate protection. Our goal is to facilitate the industrial production and widespread use of carbon neutral fuels made from renewable energy sources.

[2] For more information, also see: 'Comprehensive efficiency of technologies in the transport sector', study by Frontier Economics, October 2020. https://www.frontier-economics.com/media/4297/rpt-frontier-uniti_mwv_effizienz-antriebssysteme_26-10-2020-stc.pdf