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Transposition and implementation of the Directive 2014/94/EU on the Deployment of Alternative Fuels Infrastructure at national level

Executive Summary

Orgalime supports the promotion of a sustainable range of transport solutions and the build-up of interoperable, alternative fuels infrastructure across the EU as a means to stimulate growth, jobs and technology take-up. We therefore welcome the rapid adoption of Directive 2014/94/EU on the deployment of alternative fuels infrastructure at EU level, which is now in the critical phase of transposition and implementation in EU Member States. The European engineering industry is ready and able to provide the full range of technologies that are required for a successful implementation of the alternative fuels infrastructure as identified in this Directive. However, Orgalime thinks that Member States must provide the urgently needed political signal to bring the benefits to European citizens and society.

We promote the following **key messages** for this process:

- The EU cannot afford to waste time by delaying the deployment of alternative fuels infrastructure if it is to realise the objectives of the Directive and its wider energy and climate policy goals. We encourage Member States to start immediately with the transposition and implementation of the Directive.
- Member States should set up compulsory and precise national policy frameworks, including ambitious and clear targets and objectives.
- The European engineering industries are able already today to provide the required infrastructure for deployment, in particular for the electric transport infrastructure for electric vehicles recharging.
- Orgalime urges Member States to consider the highest possible level of interoperability, when drawing their national deployment plans for electric recharging infrastructure.
- Member States should take fully into account smart charging for electric vehicles and its functions regarding the deployment of recharging infrastructure for both, public and private users.
- Member States should consider the deployment of shore side electricity in their national policy frameworks, considering the positive environmental impact in harbour cities that is complementary with other alternative fuels infrastructure deployment, such as LNG.
- During the upcoming implementation of the Directive through Comitology, Orgalime strongly recommends to the Commission to execute a proper stakeholder consultation with experts from the European engineering industry on critical issues for our industry that, it is foreseen, should be decided through a delegated act.

We provide our detailed views and recommendations hereafter regarding the transposition and implementation of this Directive:

Orgalime, the European Engineering Industries Association, speaks for 41 trade federations representing some 130,000 companies in the mechanical, electrical, electronic, metalworking & metal articles industries of 23 European countries. The industry employs some 10 million people in the EU and in 2013 accounted for more than €1,700 billion of annual output. The industry accounts for over a quarter of manufacturing output and a third of the manufactured exports of the European Union.

www.orgalime.org

1. Introduction

Directive 2014/94/EU entered into force on 17 November 2014. Member States have two years to transpose the Directive into national law and notably to develop national policy frameworks and to set up national targets for the deployment of infrastructure for alternative fuels. Orgalime, its national members and associated sector associations provide hereafter our key messages for the implementation of the Directive.

Generally, Orgalime thinks that Member States must provide the urgently needed political signal to promote sustainable range of transport solutions and the build-up of interoperable, alternative fuels infrastructure as a means to stimulate market growth and technology uptake.

2. Transposition in Member States: National Policy Frameworks and Targets

Orgalime believes that the EU cannot afford to waste time by delaying the deployment of the infrastructure for alternative fuels, if it wants to reach the Directive's objectives and its wider energy targets. Therefore Orgalime calls on Member States to rapidly transpose the Directive into national law, deliver the national policy frameworks even before the given deadline, and speed up the implementation of its requirements, in particular those for electric transport (electric vehicle and shore side electricity for ship).

With regard to natural gas, the readiness of technologies make both LNG and CNG complementary alternative fuels provided that the necessary infrastructure is deployed.

We suggest that the development of the national policy frameworks in each Member States starts swiftly as this will guide the development of the market for alternative fuels in transport and the deployment of the relevant infrastructure. Consequently, we request that the national policy frameworks should be compulsory and precise, and include ambitious and clear targets and objectives.

When drawing their national plans, Member States should take into account, the interests of the stakeholders and industry concerned and therefore set in place a good dialogue.

2.1. Member States' National Policy Frameworks: Developing policies built on the specific needs of each transport mode existing in their territories

Orgalime realises that the market progression of all fuels included in this Directive are different and some fuels are already taken up more than others.

For example, there are already many electric vehicle chargers for public and private infrastructure in place in a number of Member States. Orgalime recognises that, given the growing number of electric and plug in hybrid vehicles now being sold across Europe and therefore the demand for electric vehicle infrastructure will be high.

Orgalime also recognises that the infrastructure requirements for hydrogen and natural gas may also be significant and it will take more time to develop a European refuelling network.

The market development of these different fuel types is also dependent on the innovation in the automotive sector and the number of vehicles of different fuel types entering the European market.

We therefore ask national and European legislators to consider the following when developing and assessing the national policy frameworks:

- **Electric vehicle recharging infrastructure**

In Article 4, Member States are asked to set national targets to ensure that an appropriate number of recharging points accessible to the public are put in place by 31 December 2020. Orgalime believes that Member States should give a clear investment signal for both, private and public investors: this is required to drive a significant deployment and for our industry, that develops and manufactures the technologies. Moreover, an ambitious number of recharging points would increase confidence of electric vehicle users and is crucial for further development of the market for electricity as one of the alternative fuels.

For sizing the infrastructure, it is usually agreed that there need to be, on average, two charging points per electric vehicle and that the large majority of those points will be private. As a consequence, there should be typically two public charging points per ten vehicles, which is consistent with the indication given in recital 23 of the Directive of “at least one (public) recharging point per ten cars.

As for the estimated 90% of private charging points, some may be simple domestic sockets without energy management capability. Therefore, Orgalime advises strongly that Member States should take fully into account smart charging for electric vehicles, when drawing their national plans for the deployment of recharging infrastructure for both public and private users.

We believe electric vehicle infrastructure is a key element to the development of a smart grid and therefore it is important that any recharging points installed should be compatible with the smart grid. Given the likely growth in electric vehicles, especially for the plug-in hybrid market, it is recommended that Member States consider how voluntary standards and building regulations for new build are developed to account for the future growth in demand for home and office charging infrastructures.

Additionally, Member States should keep in mind the access of the electric vehicles to all recharging points within their territory (and preferably beyond), when designating the urban/suburban areas that are meant to be equipped with recharging points and refuelling stations and that are subject to this Directive. It is important for national policy makers to take this into account, as innovation in technologies will increase, for example the range and performance of the electric vehicles over time. The infrastructure must be scalable and prepared for this development.

Orgalime urges Member States to consider seriously the need for interoperability, and ensure to take into account the highest possible level of interoperability when drawing their national deployment plans for electric recharging infrastructure. For example, publicly accessible recharging point should be equipped with intelligent metering system and use interoperable payment system. Member States should define within their national policy frameworks, how they will address interoperability issues, keeping in mind the need to make it simple for electrical vehicles users and also encourage the roll-out of private recharging infrastructure.

We recommend that Member States ensure user friendliness, for example by making the location and the practical characteristics (such as charging power or payment system) of each publicly accessible recharging point available as open data, by means of a directory of existing spots. Member States should ensure that user information and labelling is easy to understand, for example to recognise the range of different fuel types, where there is no European standard for a given alternative fuel.

Orgalime points out that a mix of different vehicle models already exists on the market, enabling DC recharging, some fitted with Combo2, other with CHAdeMO. In view of this, equal access to recharging point for users of both modes must be ensured, when planning infrastructure deployment.

- **Shore side electricity supply and LNG**

Orgalime urges Member States to establish and deploy ambitious plans for shore side electricity infrastructures in harbours. The technology that implies such infrastructure is already available and ready to be broadly deployed. National plans should include not only the specific legislation but also, as required, proper incentives programmes, depending on the national particularities.

Orgalime points out that the deployment of shore side electricity supply goes hand in hand with the deployment of other alternative fuels infrastructure, such as with LNG, and that both should be developed: LNG enables emissions reduction of ships at sea, while shore side electricity enables to cut local emissions of ships at berth.

A cruise ship that turns off its engines at berth reduces the amount of NOx (nitrogen oxide) emissions in the harbour city equivalent to 10.000 cars because it is supplied by shore side electricity.

Orgalime encourages Member States to stimulate the demand of vessels for shore side electricity supply by implementing active policies, such as:

- Port fees reduction for ships using shore side electricity supply (as implemented on a voluntary basis by around 20 ports already over the world, under the Environmental Ship Index initiative).
- Tax free electricity for ships using shore side electricity (as is possible under Directive 2003/96/EC, and implemented by Sweden and Germany already).
- Reduction of dues for renewable power put on electrical power prices (for example, “EEG-Umlage” in Germany) for ships using shore side electricity.
- Shore side electricity technology allows to completely cut emissions, noise and vibrations from ships in ports. However, the lack of stringent environmental standards in some locations reduces the financial attractiveness for investment by local governing bodies, port authorities or ship operators. Therefore, policies based on incentives stemming from environmental benefits and positive societal externalities of shore side electricity should be equally devised and included in national policy frameworks.

Orgalime welcomes that, according to article 4.5 of the Directive, Member States shall prioritise the installation of shore power in ports welcoming sea going ships (which are the major polluters) and/or in berths located in a very close proximity to urban areas (where the ships emissions have the biggest negative impact), including in ports of the TEN-T core network.

In some cases, shore side electricity and electric car charging stations could even share elements of electrical infrastructures.

- **Hydrogen**

We suggest that Member States should keep on investing in R&D that target fuel cells.

Orgalime recommendations for Member States' national policy frameworks:

- Rapidly develop the national policy frameworks.
- Set up ambitious and clear targets and objectives.
- Give a clear investment signal for both, private and public investors.
- There should be typically two public charging points per ten vehicles.
- Consider for the electric vehicles recharging infrastructure that the large majority of the recharging points will be private.
- Enable smart charging for both, public and private recharging points.
- Consider the highest possible level of interoperability regarding publicly accessible recharging points.
- Pursue user friendliness and make available as open data the location and the practical characteristics of each public accessible electric vehicle recharging point.
- Ensure equal access to recharging points for electric vehicle users of all existing modes in Member States, when planning infrastructure deployment.
- Establish and deploy ambitious plans for shore side electricity infrastructures in harbours with the proper incentives schemes. This is complementary to the deployment of other alternative fuels infrastructure deployment, such as LNG.

3. Coordination between Member States

Orgalime encourages Member States to coordinate their national policy frameworks with each other and to share best practices ensuring a swift EU-wide implementation of the Directive. The envisaged European Commission's guidelines (article 9), concerning the reporting of Member States on the elements of their national policy framework, could serve as a template for this exchange. The adoption of these guidelines should therefore happen rapidly, in consultation with relevant stakeholders. Recommendations and findings of EU-projects, such as the Green-e-motion project, should be taken into account.

Orgalime recommendations for coordination between EU Member States:

- Share best practices to ensure a swift EU-wide implementation of the Directive.
- Take into account findings from existing EU-initiatives, for example on electric vehicles.

4. Review of implementation and possible amendment of the Directive

Orgalime would like to raise regulator's awareness that articles in the Directive subject to future delegated acts are addressing critical areas for our industry.

Therefore, we ask Member States to support that in any amendments proposed under a delegated act, appropriate consultation of experts, including those with industrial practice, is undertaken. Orgalime and its national members' network are prepared to collaborate in this respect.

The European Commission's selection process of competent experts acting as technical advisors in applying delegated acts is also essential and must be based on transparent and appropriate criteria including representativeness. The potential for the European Commission to not consult on changes made under delegated acts which are critical for the market in Orgalime members' opinion, is of concern, and therefore Orgalime offers support in the implementation and in any review of this Directive.

By 31st December 2020, the European Commission will have to review the implementation of the Directive and may submit a proposal to amend it. When doing so, Orgalime recommends that the Commission should consult stakeholders and consider missing elements of the Directive, in particular with regard to electricity as an alternative fuel.

Orgalime believes that the implementation of the Directive is one important element to reach the EU's wider energy and climate goals and to boost the electric vehicles market in Europe. However, we underline that more significant barriers exist for the deployment of electric vehicles today, such as the development of high performance, reliable batteries for electric vehicles and their costs, overcoming the low acceptance of customers and many more regulatory and economic barriers, such as:

- **Regulatory framework and energy market**

Foremost, a reliable regulatory framework to drive the development and market uptake of innovative technologies in and around electric vehicles is needed. This will encourage investors, whether private households, businesses or local authorities, cities and regions.

We agree that there should be multiple solutions for promoting sustainable, low carbon transport and that the market needs to evolve to accommodate a variety of competitive technology options available for consumers to take up. The Directive is one important step, but we believe the European Commission and the EU Member States should pursue their policy of ever more sustainable "green" cars with reduced fuel consumption, and towards reducing the CO₂ emissions in the transport sector overall.

A fully functioning internal energy market is required, so as to also ensure a fair competition and allowing all relevant market parties, including service providers, non-discriminatory and convenient access to public recharging infrastructures.

- **Smart charging and relation of electric vehicles to smart grids**

Orgalime believes the charging of the electric vehicles needs to be managed because it will impact the electricity grid. If properly implemented, electric vehicles will in fact have a positive impact on the grid and facilitate the use of renewable energy sources. Smart grids are useful for the efficient integration of electrical vehicles into the energy system, which we consider a most relevant use case of future smart grids.

In the end, through this approach, smart charging of electric vehicles would act as catalyst of smart grids as the fundamental aim of smart charging is to bring energy optimally to electric vehicles, considering systems capacities and the organisation of supply markets taking into account three key elements: electrical systems constraints and costs, energy price, and energy mix.

Smart charging functions are key enablers for energy management in homes and buildings as well as in public charging stations. Thus, users should be allowed to join vehicles to the grid options (V2G), and get rewarded for offering their flexibility.

Orgalime members can demonstrate that smart charging is technically feasible today. What is still limiting smart charging functionality are the commercial and regulatory arrangements that would support demand side flexibility from large loads such as electric vehicles. We therefore urge Member States to engage in discussions on this subject with the European Commission and to set in place the relevant national regulatory and commercial arrangements for boosting demand side response.

- **Incentives**

In the long run electric vehicles must be able to compete with other mobility solutions. Orgalime assumes that the purchase costs of electric vehicles will reduce over time and that the vehicle and battery lifetime will increase. However, incentives and public support will most likely be essential in the beginning as an impetus.

Orgalime believes that Member States should consider other time-limited supportive measures to kick off further developing the market into a mass market, such as:

Examples of financial measures

- The exemption of electric vehicles from vehicle tax
- Reduced VAT (for electric vehicles and chargers)
- The exemption of electricity for electric vehicle charging from tax and other charges
- Financial schemes that foster company fleets compounded of electric vehicles, such as vehicle fleets for governments, local services, taxis, urban transportation, delivery, waste collection
- Special depreciation rules for business use
- Incentives for installation of chargers and sockets

Mobility measures

- Preferred (reserved) parking in cities
- Free parking during charging
- Use of special bus and taxi lanes
- Exemption from congestion charges and parking fees in cities
- Incentives for market players to sell mobility as a service (car sharing, car rental)
- Attractive combinations of public transport and individual mobility such as support for e-mobility strategies of different railways, park & ride, e-bikes and others.
- Include in the vehicle fleets of public authorities, taxis, buses a certain percentage of electric vehicles

Infrastructures

- Simplification of administrative and permits procedures (charging infrastructure)
- Obligation to equip all new buildings with charging facilities
- Public parking facilities should install charging infrastructures

- **Research & Development**

Orgalime strongly calls on all European and national institutions and Member States to continue supporting Research & Development & Innovation around electric mobility, to speed up innovation, particular in batteries, and reduce costs.

Smart specialisation strategies and the EU's smart specialisation platform RIS3¹ would also be appropriate mechanisms to foster the deployment of public infrastructure for alternative fuels.

We therefore welcome the European Union's Research programme Horizon 2020 and suggest that support for alternative fuels and, in particular electrification of transport, should be strengthened.

- **Other initiatives**

Through article 10 of the Directive, the European Commission has also the option to adopt an Action Plan for the implementation of its strategy "Clean Power for transport: A European alternative fuels strategy" in order to achieve the broadest possible use of alternative fuels for transport. Orgalime believes such a plan could be a good supporting tool and could already tackle the points made above, and include our recommendations for the national policy frameworks, especially for electricity as an alternative fuel.

We, however, would suggest to start this work as soon as possible and preferably adopt the action plan before the suggested date in 2018.

Orgalime recommendations for the revision and possible amendment of the Directive:

- The European Commission should consult stakeholders, including Orgalime, for any amendments proposed under the delegated acts set out in this Directive.
- Member States should take into account the more significant barriers for the deployment of electric vehicles, including regulatory and economic barriers.
- Member States should consider national regulatory and commercial arrangements for demand side response and engage with the European Commission.

5. Financing the deployment of alternative fuels infrastructure

The Directive states that it is not intended to place an addition financial burden on Member States or on regional and local authorities. It suggests that it should be possible for Member States to implement this Directive by making use of a wide range of regulatory and non-regulatory incentives and measures, in close cooperation with private sector actors.

Orgalime recognises that financing of the proposed targets remains a challenge for all actors involved, in particular Member States. Therefore, our industry supports investments from the private sector.

The public sector should nevertheless be leading by example. National policy frameworks should include targets for government, public and local authorities to introduce a certain percentage of electric vehicles, including utility vehicles that could help to trigger the necessary first impulse for investment into e-mobility. Such an investment push from the public sector will increase consumer confidence and help to create a second hand market for electric vehicles, which will then make them more affordable to private consumers.

¹ <http://s3platform.jrc.ec.europa.eu/home>

We recommend that Member States make use of the proposed EU funding measures such as the Connecting Europe Facility, the European Structural and Investment funds, in particular the European Regional Development fund, the Cohesion Funds and Horizon 2020.

Orgalime recommendations to Member States regarding financing:

- Include in the national policy frameworks, targets for government, public and local authorities to introduce a certain percentage of electric vehicles to give a first impulse for investment into e-mobility.
- Exploit all existing EU funding measures that are proposed by the Directive.



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