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Evaluation of the Directive on the Deployment of Alternative Fuels Infrastructure (2014/94/EU)

1. Objectives of the study

The European Commission is conducting an evaluation of the <u>Directive on the Deployment of Alternative</u> Fuels Infrastructure 2014/94/EU (henceforth the Directive or AFID).

The Directive was adopted in 2014 and creates a common framework of measures for the deployment of alternative fuels infrastructure (AFI) in the EU.

The Directive requires Member States to set up long-term National Policy Frameworks (NPFs) for the development of the market as concerns alternative fuels and the planning of the deployment of relevant alternative fuels infrastructure. It also stipulates requirements for the rollout of alternative fuels infrastructure along the core network of the Trans-European Transport Network (TEN-T) and its urban nodes - with different milestones for 2020, 2025 and 2030 for different alternative fuels. The Directive sets common technical specifications for recharging and refuelling stations that aim at ensuring interoperability and adequate consumer information. It covers electricity (including shore-side electricity for ships), hydrogen, and natural gas (CNG for light duty road and LNG for heavy duty road, maritime and inland waterway transport).

The Commission has contracted a team led by consultants Ricardo (including Transport and Environmental Policy Research (TEPR) and E3-Modelling (E3M)) to undertake a support study for the European Commission for the evaluation of the Directive.

The objective of the study is to provide a comprehensive evaluation of the Directive and to collect and analyse evidence to help assess whether it has achieved its objectives in an effective and efficient manner. In addition, the study aims to determine whether its objectives and priorities remain relevant with emerging needs and consistent with other EU policies and priorities. It aims to provide an overall assessment of how successful the Directive has been in achieving its objectives and it will examine the progress made across the relevant policy areas.

In the context of the study we are organising surveys with national and local authorities, with direct experience in the development of National Policy Frameworks and the implementation of measures related to the Directive

The objectives of the interviews are to obtain your input and data (where relevant) on the evaluation of the Directive on the deployment of alternative fuels infrastructure.

The roadmap of the evaluation process can be found here.

2. Introduction to the survey

To facilitate the development of the survey in multiple languages, the EU machine translation tool has been used. Therefore, please accept our apologies in advance if you find any errors in translation. Please contact AFInfrastructure. Eval@ricardo.com, if you require further assistance.

This survey is intended to gather feedback from regional/local authorities to support the evaluation of the AFID from national authorities who have experience with the development of National Policy Frameworks since 2014.

It may be the case that not all questions will be relevant for your organisation or you may not be in a position to respond to them. In these instances, you can simply select "Do not know" or "Not applicable".

We appreciate that there may be more than one authority/department in your region/urban or local area that has been involved or are responsible for the implementation of specific measures related to the promotion of alternative fuels infrastructure. Thus, we would like to ask you to forward the invitation email to the appropriate contact point in the other authorities that are responsible and ask them to complete the survey.

Alternatively, if it is considered more appropriate, you can coordinate with them when responding to the question and submit a single response indicating all the organisations involved. However, we expect that this may be particularly challenging, and it may not be possible to prepare the response within the period that the survey will remain open.

The survey is expected to remain open for eight weeks. The deadline for the submission of your answers is **26th March 2020**.

Note: You can only take the survey once (one response per computer). You can save the progress you have made in filling out your survey and complete it at a later time - once you open the link to the survey on the same computer and the same browser you will be directed to the same page of the questionnaire where you left, with your previous responses saved. You can also print a pdf format of the survey if this is convenient in developing your responses.

3. Use of your input

The study team will make use of your contribution (information/data provided) only for the needs of this study and of the underlying evaluation report prepared by the Commission services. Your responses will be shared with the Commission services. Please indicate how you would like us to present the information provided during our discussion and any other information or data you provide to us:

Select one of the following:

Your contribution will be referenced to the organisation represented

Your contribution will be anonymised (i.e. without the name/name of the organisation but with affiliation to industry sector, e.g. "local authority, transport operator representative, environmental NGO")
4. Contact information
4.1 In order to analyse the input to this survey, we would ask you to provide some personal information (name, email address, telephone number, etc.). Undertaking this survey means you are providing consent to Ricardo to store your data for the purposes of the study. Your personal data will not be shared with any third party outside of this study and your responses will be treated as specified in the box above (see 'Use of your input'). You can read our policy on how we process data

4.2 Please identify the policy areas that your administration/department is responsible for (please select all that are applicable):

	Select
a. Transport sector policy (general)	
b. Road transport	
c. Maritime transport	
d. Aviation transport	
e. Rail transport	
f. Urban transport	
g. Climate change adaptation/mitigation	
h. Environmental policy (air quality, noise, waste etc.)	
i. Energy policy	
j. Social/employment policy (including transport sector)	
k. Industrial/R&D/Innovation policy	
I. Other area (please indicate below)	V

Other area:

Spatial planning, spatial development, state planning

5. Relevance of the Directive and its provisions

The following set of questions ask you to provide input to help us understand the relevance of the Directive's sobjectives, targets and provisions reflecting on the ongoing political, economic, technological and social developments. Key aspects are the extent to which the scope (in terms of fuels and modes covered) and the approach (based on Member States National Policy frameworks and indicative targets) are appropriate in view of the development, especially in view of the policy objectives concerning the decarbonisation of transport.

- 5.1 At the time of the adoption of the Directive, the identified challenges for the uptake of Alternative Fuels in the EU were:
 - Technological and commercial short-comings: The network for the provision of electricity, hydrogen and natural gas (LNG for trucks and waterborne transport and CNG for road transport vehicles) was considered insufficient compared to a network that would be necessary to enable market uptake of these fuels and was not likely to become available in the near future.
 - Lack of consumer acceptance: Full scale deployment and commercialisation of alternative fuels was considered hampered by poor acceptance by potential consumers, due to perceived distance needs, knowledge of availability of recharging/refuelling stations, longer refuelling times than they are

- accustomed to, high cost of Alternatively Fuelled Vehicles compared to conventional internal combustion engine vehicles.
- Missing adequate infrastructure: The industry was reluctant to invest in alternative fuel vehicles
 due to concern of viability and profitability in the absence of sufficient network of refuelling/recharging
 points (and vice versa). There was a 'chicken and egg' problem between vehicles and investing in
 infrastructure.

In your view, to what extent are the challenges described above are still relevant today?

	Do not know	Not at all	To a limited extent	To some extent	To a significant extent	Fully
Technological and commercial short-comings	0	0	0	0	•	0
2. Lack of consumer acceptance	0	0	0	0	0	•
Missing adequate infrastructure	0	0	0	0	•	0

Please explain your answer (e.g. what is the reason that these challenges may not be as relevant today?):

All problems described above are still relevant. There is insufficient infrastructure, the deployment of supply networks/charging points is happening too slowly to meet .

It is still expensive for consumers to choose more environmentally friendly alternatives and there is still uncertainity about which fuels to invest in. Consumer acceptance requires to take actions taht make it affordable for consumers to buy AF vehicles. Private persons and industry are in general positive to convert to alternative fuels, and want the transition to speed up. However, there are still some issues regarding knowledge of how the solution copes with the needs when it comes to range, payload etc. Costs, safety and second hand value are also important issues.

5.2 Based on your experience, how (if at all) have the following developments affected (positively or negatively) the level of uptake of Alternative Fuels Infrastructure in your region?

	Do not know	Not relevant	Positive impact (increase in uptake)	No impact	Negative impact (decrease in uptake)
Increase in level of e-commerce/ increase online purchase	0	•	0	0	0
New mobility patterns and new business models (e.g. mobility as a service, ride sharing)	0	0	•	0	•
Increasing connectivity and digitisation of vehicles	©	0	0	•	0

4. New alternatively fuelled technologies and increasing use of renewables	0	0	•	0	0
5. Adoption of restrictions for the use of vehicles in urban and suburban areas	0	0	0	0	0
6. Smart electricity grid management technologies	0	0	0	0	0
7. Improved quality of vehicles (e.g. increased range of electric vehicles)	0	0	0	0	0
8. Overall reduction in the price of vehicles	0	0	•	0	0

- 2) Positive, as there are a some "new mobility service providers" (i.e. car sharing) are starting to offer substantial number of BEVs in their fleets.
- 4) In general postive influence, since range of vehicles increases, costs go down, additional use-cases are tested (i.e. last-mile logistics)
- 5) Environmental Zones in urban areas have the potential to contribute positively as has been seen in Norway, but elsewhere the environmental zones are not enough strict or have not yet been implemented.
- 6) in research phase, no application yet.
- 7) see 4)
- 8) Positive tendency but still high difference between AFV and ICE-V. public-private financed price reductions seem to have only limited effect.

5.3 Are there any other technological, economic, societal/behavioural and/ or environmental developments that have played a positive or negative impact not identified above and that are not properly reflected in the Alternative Fuels Infrastructure Directive?

Please explain your answers:

From a Scandinavian perspective there has been a negative impact deriving from the EU definition of biofuels which does not regard national or regional differences in the prerequisites.

Reluctance in private and public organisations as well as among private persons towards alternative fuels due to fear of higher costs and behavioural habits.

5.4 The Directive sets a number of objectives (summarised below). Considering the new issues and challenges identified above, do you think that the objectives are still appropriate?

	Do not know	Not at all	To a limited extent	To some extent	To a significant extent	Fully
Increase/trigger investments in Alternative Fuels Infrastructure	0	0	0	0	•	0
Ensure interoperability of Alternative Fuels Infrastructure	0	0	0	0	•	0

3. Increase consumer awareness of alternative(ly) fuelled infrastructure (i.e. location, price, availability)	0	0	0	0	0	0
Increase consumer awareness of alternative(ly) fuelled vehicles	0	0	0	0	0	•
5. Ensure integration of electromobility into the electricity system	0	0	0	0	0	•

There has been substaintial investments in the infrastructure (to a large extent thanks to grants fom EU) but we dont see a sufficient upscale on the demand side.

- 1) still gaps concerning charging / fast charging, extreme gaps in hydrogen fuelling stations, low progress in LBG/LNG stations
- 2) applies to: plug-in systems, payment systems, security standards, especially across borders
- 3) absolutely, but first infrastructure has to be available, then it should be easily communicated i.e. via mobile apps
- 4) steadily increasing, but still of utmost importance. Price argument decisive (purchase + operation)
- 5) Is an issue before the background of energy storage from renewable sources (wind, solar). Will become an issue, when BEV gain substantial market shares in cities (electricity supply). Electromobility is just one alternative fuel option, the others have to be considered as well, especially for long distance (hydrogen and liquified gas).

5.5 As currently stated within the Directive, the alternative fuels are: electricity, hydrogen, biofuels, synthetic and paraffinic fuels, natural gas (including biomethane, CNG and LNG, and LPG).

Do you consider that there is a need to make changes relating to the following aspects?

	Do not know	Not at all	To a limited extent	To some extent	To a significant extent	Fully
Exclusion of fuels included in the Directive	0	0	0	0	0	0
Inclusion of other modes of transport or alternative fuels emerging that are not currently covered by the Directive	0	0	0	0	0	0

Please explain your answers:

The directive should focus on fuels that are low or zero emission. The directive should provide a level playing field for all fuels, given their optimum use range. A revised directive should define precise targets. The directive should open up for new possible solutions that could be added in the future which encourages continued research and innovation, however regards have to be taken to the fact that OEMs do not have the possibility to produce models for numerous fuels. Consider if gas produced by fossil sources should be included in the directive: for a certain period it will be necessary as bridging fuel, but there need to be clear targets and incentives set to reach zero emission.

5.6 Do y	ou consider	there there	is a need to	add new	/additional	objectives	relating to	the inclusi	on of	othe
transport	t modes (e.ç	g. rail and/or	aviation)?							

- Do not know
- Not at all
- To a limited extent
- To some extent
- To a significant extent
- Fully

There are national differences but all transport mode have to become fossil free, hence alternative fuels needs to be encouraged for all modes. As there is a rapidly increasing focus on low and zero emission solutions within rail and aviation, relevant objectives for these modes should be included in the directive as well; i.e. electricity powered rail transport should be considered as clean fuel transport. For rail lines, where electrification isn't feasible, diesel traction should be replaced by renewable energy traction (i.e. hydrogen). The directive might consider defining optimum use cases for the different fuels, given their production capacity. In the aviation industry, there is room for new solutions like electric planes and higher demands on cleaner fuels both inside and outside the EU.

5.7 The Directive (in Article 2) sets out a broad definition of 'alternative fuel'. It states that an alternative fuel should be able to (at least in part) substitute for fossil oil sources and have the potential to reduce GHG and pollutant emissions from the sector.

Please indicate the extent that you agree with each of the following statements:

	Do not know	Strongly disagree	Disagree	Neither disagree or agree	Agree	Strongly agree	Not relevant
The inclusion of fossil fuels (e.g. CNG/LNG) as part of the Directive for <u>road - LDV/car</u> s - is still justified	0	0	0	0	•	0	0
2. The inclusion of fossil fuels (e.g. CNG/LNG) as part of the Directive for <u>road – HDVs</u> - is still justified	0	0	0	0	•	0	0
3. The inclusion of fossil fuels (e.g. LNG) as part of the Directive for inland waterways is still justified	0	0	0	0	•	0	0
4. The inclusion of fossil fuels (e.g. LNG) as part of the Directive for maritime transport is still justified	0	0	0	0	•	0	0
5. There is a need to prioritise the adoption of zero tailpipe emission solutions (i.e. electricity and hydrogen)	0	0	0	0	0	0	0

Zero emission solutions: The directive plays an important role in motivating and forcing the industry to develop the necessary solutions at a faster speed. To meet the goals of the European Green Deal, the directive should prioritise the adoption of zero emission solutions and focus on life cycle emissions. CNG / LNG will be needed in a transition period although we consider LNG/CNG as a bridge for LBG/CBG. However incentives are needed to increase the production of LBG/CBG.

6. Effectiveness of the Directive

The following set of questions aim to obtain input on the type of measures in place at your regional/local level to achieve the objectives of the Directive and their impacts. We also ask your view on the role of specific provisions and measures of the Directive (positive or negative) and any other parameters that have played a role in achieving its objectives.

6.1 How would you characterise the current level of publicly accessible deployment of Alternative Fuels Infrastructure in your region/city in each of the following areas:

	Not relevant	Do not know	Non existent	Very limited	Partly developed	Well developed	Fully developed
Electricity for road transport –Light duty vehicles (cars and vans) (electromobility)	0	0	0	0	•	0	0
Electricity for road transport – Heavy duty vehicles (coaches and trucks)	0	0	•	0	0	0	0
3. On shore supply of electricity for maritime transport	0	0	0	0	•	0	0
4. On shore supply of electricity for inland waterway transport	•	0	0	0	0	0	0
5. Hydrogen for road transport	0	0	0	•	0	0	0
6. Liquefied Natural Gas (LNG) for road transport	0	0	0	0	•	0	0
7. Compressed Natural Gas (CNG) for road transport	0	0	0	0	•	0	0
8. Liquefied Natural Gas (LNG) for maritime transport/inland navigation	0	0	0	•	0	0	0
9. Electricity supply for use by stationary airplanes at airports	0	0	0	0	0	0	0
10. Other alternative fuel and mode (identify below)	0	0	0	0	0	0	0

Other alternative fuel and mode:

Hydrogen for rail traction.

Electric road (Ongoing demoprojects in the Scandria®Corridor)

Please explain your answers:

The deployment of different alternative fuel infrastructure differs along the Scandria Corridor i.e. recharging points are less developed in Northeastern Germany, hydrogen is locally quite developed - i.e. Oslo and Berlin but still in a very early market phase, LNG/LBG is well developed in Norway and Sweden but rather limited in Northeastern Germany.

Regarding LNG / CNG: the aim is a transision to LBG and CBG, which today is more prevailent in the Nordic countries but not enough.

6.2 Have there been measures in your region/urban/local area concerning the deployment of Alternative Fuels Infrastructure since the Directive entered into force (2014)?

These could include legal, financial and non-financial incentives and other administrative measures.

	YES, measures adopted by the national authorities	YES, measures adopted at regional /urban/local level	NO	DO NOT KNOW
Measures to promote the deployment of Alternative Fuels Infrastructure in the area of electricity for road transport	0	•	0	0
2. Measures to promote the deployment of Alternative Fuels Infrastructure in the area of electricity for maritime/inland waterway navigation	0	0	0	0
Measures to promote the deployment of Alternative Fuels Infrastructure in the area of electricity in airports	0	0	0	0
Measures to promote the deployment of Alternative Fuels Infrastructure in the area of natural gas for road transport	0	0	0	0
5. Measures to promote the deployment of Alternative Fuels Infrastructure in the area of natural gas for maritime/inland waterway navigation	0	0	0	0
6. Measures to promote the deployment of Alternative Fuels Infrastructure in the area of hydrogen for road transport	0	0	0	0
7. Measures to promote the deployment of Alternative Fuels Infrastructure to promote the				

deployment of alternative fuels in infrastructure in public transport services	0	0	0	©
8. Measures to promote the deployment of Alternative Fuels Infrastructure to promote the deployment of recharging points not accessible to the public (private electromobility infrastructure (Article 4(3))	•	•	0	•
9. With respect to fuel labelling and graphical expressions at pumps, ensure that relevant, consistent and clear information is made available to consumers	•	0	0	0

Please provide information on the specific measures adopted:

All member regions took measures to foster the deployment of clean fuels along the Scandria®Corridor (i.e. purchasing AFV for public transport, driving restrictions for ICEs / privileges for ZEVs, organisational support, support schemes for SMEs to establish charging stations), which are accompanied by national measures (i. e. tax incentives and government programmes).

6.3 Have there been specific measures in your region/urban/local area aiming to address the needs of people with disabilities and older people in relation to the following aspects?

	YES, measures adopted by the national authorities	YES, measures adopted at regional/urban/local level	NO	DO NOT KNOW
In relation to accessibility of recharging/refuelling points	©	•	•	0
In relation to ensuring access to information /labelling	•	•	•	0

6.4 Considering the current situation in your region/urban/local area, please indicate your level of agreement with the following statements:

	Do not know	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Relevant, consistent and clear information about alternatively						

fuelled vehicles is available to consumers	0	0	0	•	0	0
2. Prices charged by the operators of publicly accessible recharging points are reasonable, easily and clearly comparable, transparent and non-discriminatory	•	•	•	•	•	•
3. All publicly accessible recharging points provide for the possibility for electric vehicle users to recharge on an ad-hoc basis without entering into a contract with the electricity supplier or operator concerned	•	•	•	•	•	•

Please provide information:

- 1) Information is rather scattered, easily only availble to interested / expert public.
- 2) There is no consistent information available. On fueling stations, information (i.e. given for hydrogen per kg) is hardly comparable.
- 3) Certainly it is not possible to access all RCPs via one EMP, however CPOs grant access to their RCPs via platforms or bilateral contracts.

6.5 Has the adoption of measures in the context of the Directive led to the increase in the level of investment in Alternative Fuels Infrastructure in your area?

	Not relevant	Do not know	Not at all	To a limited extent	To some extent	To a significant extent	Fully
Electricity for road transport (electromobility)	0	0	0	0	0	0	0
On shore supply of electricity for inland and maritime transport	0	0	0	0	0	0	0
Hydrogen/fuel cells for road transport	0	0	0	0	0	0	0
LNG/CNG for road transport	0	0	0	0	0	0	0
5. LNG/CNG for maritime transport/inland navigation	0	0	0	0	0	0	0
6. Aviation ground movement in airports	0	0	0	0	0	0	0
7. Other alternative fuel and mode	0	0	0	0	0	0	0

The development achieved is not considered to be particularly linked to the DAFI, rather the financial possibilities through grants from EU or national level seems to have played a significant role by speeding up transition towards alternative fuels.

- 6.6 To what extent can the change in the level of investment for Alternative Fuels Infrastructure be attributed to the adoption of the Directive and the associated National Policy Framework and the measures adopted?
 - 1. Do not know
 - 2. Not at all
 - 3. To a limited extent
 - 4. To some extent
 - 5. To a significant extent
 - 6. Fully

Please explain your answers:

The Directive is relevant and has contributed to arised awarness both on political and consumer level. However, we consider it to have rather low impact concerning concreate measures as they primarily follow national priorites, which not always are consistent transnationally.

6.7 To what extent do you agree with each of the following statements concerning the role of the targets set in the effectiveness of the Directive in terms of attracting higher levels of investment on Alternative Fuels Infrastructure?

	Do not know	Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree	Not relevant
The absence of specific and binding targets in the Directive on the level of deployment of Alternative Fuels Infrastructure at EU level <u>limits the</u> <u>effectiveness of the Directive</u>	0	•	•	•	0	•	•
The absence of and specific and binding targets in the Directive on the level of deployment of Alternative Fuels Infrastructure at national level <u>limits the effectiveness of the Directive</u>	0	0	0	•	0	•	0
3. The targets set in the Directive on the level of deployment of Alternative Fuels Infrastructure at national level are not ambitious enough and limit the effectiveness of the Directive	0	0	0	0	0	•	0

- 1) although investment has been fostered, there are no mechanisms that assure a minimum density required
- 2) national ambitions differ widely and are not defined for all fuels making the deployment of a AF-infrastructure based upon a multifuel apporach ineffective, especially cross borders.
- 3) German NPF sets very low ambitions with regard to LNG. Other countries have not included targets for hydrogen (i.e. Denmark).

6.8 In your view, how effective have measures taken (in your region) to promote the deployment of recharging points not accessible to the public been?

	Do not know	Not effective at all	To a limited extent	Somewhat effective	To a significant extent	Extremely effective
Regulatory measures	•	0	0	0	0	0
2. Financial incentives	0	0	0	0	•	0
3. Non- financial incentives	0	0	0	•	0	•
4. Other	•	0	0	0	0	0

Please explain your answers:

Along the Scandria Corridor the measures differ, regulatory measures have been taken in Norway but are discussed only (i.e. use of bus lanes by EVs) in other regions.

Financial incentives, mainly from national level have supported market uptake of BEVs to some extent but not created a breakthrough (with the exception of Norway where BEVs / HEVs have market shares up to 50%)

Non-financial incentives, i.e. purchase of AFVs for public fleets stimulated the market.

6.9 To what extent do you agree with each of the following statements?

	Do not know	Strongly disagree	Disagree	Neither disagree or agree	Agree	Strongly agree	
The focus on core networks and urban nodes in the Directive has attracted higher level of private sector investment than it would have without such focus	0	•	•	•	0	©	
The financial instruments adopted by Member States have favoured investment in Alternative Fuels Infrastructure	0	0	0	•	0	0	

across core networks and urban nodes (in comparison to other parts of the network)						
3. The focus on core networks and urban nodes has led to significant gaps created at other parts of the network and less densely populated areas	•	•	•	•	•	•

- 1) The concept of urban nodes and core network / core network corridors is helpful as it increases awareness and eases communication with stakeholders. It is due to the EU-grants destinated to the core network that higher private investments are seen in those areas
- 3) It can be seen that there is lower deployment of AF infrastructure in rural areas, but it is difficult to say what is the reason for the gaps in the rural area. It might be several reasons (i.e. operator, low demand, availability of ressources)
- 6.10 Are you aware of any unintended or unexpected (positive or negative) effects as a result of the implementation of the Directive in any of the following domains:

	Yes	No	Do not know
Economic (e.g. in the alternative fuels and the Alternative Fuel Vehicle market)	0	•	0
2. Environmental impacts (e.g. impact outside CO2 and pollutant emissions)	0	•	0
3. Social (e.g. on employment in specific sectors)	0	•	0
4. Spatial impacts (e.g. in terms of the use of urban space)	•	0	0

Please explain your answers:

Spatial impacts: We have seen a challenge on local level to find suitable areas for the location of infrastructure (Multifuel Energy Stations). Regulation processes and lack of suitable locations may hinder the deployment of alternative fuels, especially when it comes to hydrogen and biomethane / natural gas.

7 Efficiency

The focus of the analysis of the efficiency is on the costs and resources allocated to the implementation of the Directive and the extent to which they are justified by the benefits achieved, or expected to be achieved.

7.1 Have you been involved in the development of the National Policy Framework and the development of)f
the relevant national targets in accordance with the Alternative Fuels Infrastructure Directive?	

	Yes
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Do not know
If YES, please provide us with an estimate of the total costs incurred by your organisation/department for the participation in the development of the National Policy Framework and the development of the relevant national targets in accordance with the Alternative Fuels Infrastructure Directive (please consider human /personnel costs and other financial resources):
Do not know
No costs incurred
<10,000 Euro
10,000 to 100,000 Euro
100,000 to 1 million Euro
>1 million Euro

■ No

7.2 Please provide estimate of the total costs (in EUROS) for all <u>actions/measures that your organisation adopted</u> to promote the adoption/deployment of Alternative Fuels Infrastructure in your region. Please refer to actions/measures that can be <u>directly linked</u> with the implementation of the Directive. Please consider one-off and/or ongoing costs that may include human/personnel costs and other financial resources allocated.

	One-off costs to introduce the relevant measure(s)	On-going (annual) costs	Do not know / not applicable / no costs incurred - Please indicate
Measures adopted to promote the adoption of			
Alternative Fuels Infrastructure in the area of electricity			
for road transport			
2. Measures adopted to promote the adoption of			
Alternative Fuels Infrastructure in the area of electricity			
for maritime/inland waterway navigation			
3. Measures adopted to promote the adoption of			
Alternative Fuels Infrastructure in the area of electricity			
in airports			
4. Measures adopted to promote the adoption of			
Alternative Fuels Infrastructure in the area of natural gas			
for road transport			
5. Measures adopted to promote the adoption of			
Alternative Fuels Infrastructure in the area of natural gas			
for maritime/inland waterway navigation			
6. Measures adopted to promote the adoption of			
Alternative Fuels Infrastructure in the area of hydrogen			
for road transport			
Total costs for adoption/deployment of Alternative			
Fuels Infrastructure			

Pleas	e provide additional information on types	of costs:	

7.3 Please provide estimate of the costs (in EUROS) for other <u>actions/measures that your organisation adopted</u> that can be directly linked with the implementation of the Directive in each of the following areas:

	One-off costs to introduce the relevant measure(s)	On-going (annual) costs	Do not know / not applicable / no costs incurred - Please indicate
Measures adopted to promote the deployment of			
Alternative Fuels Infrastructure in public transport			
services			
2. Measures adopted to promote the deployment of			
recharging points not accessible to the public			
3. Measures adopted to ensure that relevant,			
consistent and clear information is made available			
to consumers as regards to those motor vehicles which			
can be regularly fuelled with individual fuels			
4. Measures adopted to address the needs of people			
with disabilities and older people in relation to access to			
Alternative Fuels Infrastructure			

Please provide additional info	ormation on	types of c	costs:			
7.4 Considering the total cos			-	ave been involv	red in, do you thir	nk that
	Do not know	Not at all	To a limited extent	To some extent	To a significant extent	Fully
Benefits to your organisation	0	0	0	0	0	0
2. Benefits to society	0	0	0	0	0	0
venefits derived (for your org	e identify the	specific n	neasure/action a	and explain you	ır answer. If poss	ible,
3. Coherence						
The coherence questions as Directive provisions and requestion and policy and	uirements of	the Direct	tive internally (w			
8.1 Are you aware of any over requirement of the Directive Yes No Do not know	-	nsistencies	s or contradiction	ns among the d	lifferent provision:	S
Please explain your answer	- How impor	tant are th	ney?			
The definition of Biogas a	nd their origi	n differs an	nong MS and EU			

8.2 Based on your experience, are there any overlaps, inconsistencies or contradictions between the Directive provisions and the provisions of existing legislation in the following areas:

	Yes	No	Do not know
CO2 emission performance standards for light and heavy-duty vehicles	0	0	0
2. CO2 emissions reporting, monitoring and verification from ships	0	0	0
3. Provisions on emissions of oxides of sulphur (SOx) from ships	0	0	0
4. Provisions related to the procurement of clean vehicles under Directive 2009/33 /EC	0	•	0
5. Requirements related to the energy performance of buildings (Directive 2010/31 /EU)	0	•	0
6. Renewable Energy Directive (Directive 2018/2001/EU), 14% renewables target in transport	0	0	•
7. Governance Regulation (EU2018/1999), reporting required for National Energy and Climate Plans (NECPs)	0	0	•

ease e	explain your answe	ers:		

8.3 Based on your experience, are there any overlaps, inconsistencies or contradictions between the Directive provisions and requirements and the actions related to the implementation of policy and relevant legislation in the following areas:

	Yes	No	Do not know
TEN-T network implementation	©	0	•
2. Implementation of intelligent transport systems	0	0	•
3. Actions to promote of sustainable urban mobility	0	0	•
4. The electricity market design initiative	©	0	•
5. The EU batteries action plan and the related EU batteries alliance initiative	0	•	0
6. The European Disability Strategy	©	0	•
7. The UN Convention on the Rights of Persons with Disabilities	0	0	•

Please explain your answers:

	Yes	No	Do not know			
. Connecting Europe Facility	0	0	0			
2. Horizon 2020	0	0	0			
B. European Structural and Investment Funds	0	0	0			
European Fund for Strategic Investments	0	0	0			
5. Other funding instrument (identify below)	0	0	0			
explain your answers: I the above mentioned instruments are relevant ordination at strategic level, i.e. relevant NPF	, regional	strateg	ies are not suffi	ciently o	coordinate	
I the above mentioned instruments are releva	, regional evel (i.e. to foster amline N	strateg with foc clean fo FPs and latforms	ies are not sufficts on fuel type uel market(s). T d regional strate s. Could be sup	ciently of prioritienth priorit	coordinate s, spatial network onis mainly by CEF (h	ed with the corridors calls for owever
I the above mentioned instruments are relevant ordination at strategic level, i.e. relevant NPF m, to enable solutions that work at European striubution of infrastructure but also incentives them to be a very good functional model to stream to be a very good functional policies and research and policies and research and policies and research	, regional evel (i.e. to foster amline N	strateg with foc clean fo FPs and latforms	ies are not sufficts on fuel type uel market(s). T d regional strate s. Could be sup	ciently of prioritienth priorit	coordinate s, spatial network onis mainly by CEF (h	ed with the corridors calls for owever
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1. Actions/measures adopted in relation to the investment/

deployment in Alternative Fuels Infrastructure

2. Actions/measures adopted in relation to increasing awareness of alternative fuels	0	0	0	0
3. Actions/measures adopted to promote the deployment of alternative fuels infrastructure in public transport services	0	0	0	0
Actions/measures to promote the deployment of recharging points not accessible to the public (private electromobility infrastructure)	0	0	0	0

If YES, please indicate which initiatives:

The member regions of Scandria Alliance all have experiences, promote and initiate such projects. They are financed both nationally, regionally and other (i.e. European) sources. Hence some are part of realising regional or national targets, the impact of DAFI on these Project is difficult to estimate.

9.2 If EU level intervention in the form of the Alternative Fuels Infrastructure Directive were to stop, how would that affect the capacity to address the following issues in your area?

	Do not know	Significant negative impact	Small negative	No impact	Small positive impact	Significant positive impact
Ensuring the facilitation of interoperability at national /regional level	0	•	0	0	•	0
Ensuring product standards and interoperability of infrastructure	0	•	0	0	•	0
3. Ensuring availability of appropriate consumer information and awareness regarding alternative fuels	0	0	0	•	0	•

Please explain your answers:

A strong commitment from EU level is important to raise the awareness and focus in industry and private persons. This is essential also to stimulate interregional cooperation to provide infrastructure for alternative fuel, and to foster the use of alternative fuels in a corridor perspective. Main concern is the interoperabilty in international context, along the corridor; i.e. concerning payment systems (transnational platforms needed) but also the question of transnational market for AFV / AF (i.e.

making sure that AF are available in all relevant regional markets along the Core Network Corridors, otherwise it will be difficult to establish the fuels in international transport - i.e. HDV / LDV).

We need the EU to ensure that the standards are the same in all of Europe and to remove bottlenecks between countries. Individual countries will not be able to meet the environmental goals on their own. We must work together to develop a common orientation and common standards both within the EU and towards third countries.

10. Final comments

Please use the space below to leave any other comments that are relevant to the evaluation of the Directive on the Deployment of Alternative Fuels Infrastructure.

The objectives set up in the directive on the Deployment of Alternative Fuels Infrastructure (2014/94/EU) still are appropriate, i.e. increase investments in Alternative Fuels Infrastructure, ensure interoperability of Alternative Fuels Infrastructure, increase consumer awareness of alternative(ly) fueled infrastructure, increase consumer awareness of alternative(ly) fueled vehicles and ensure integration of electromobility into the electricity system. A holistic perspective is needed to cope with the transition in the fuel industry. We believe that there is a need to make changes in the directive regarding inclusion of new environmental friendly fuels to encourages continued research and innovation. We also consider that there is a need to include other transport modes, for example rail and aviation. The main challenges regarding a well-used alternative fuel infrastructure are the lack of consumer acceptance and the lack of adequate infrastructure.

On the effectiveness of the Directive we see:

- Insufficient multi-fuel approach: DAFI currently does not equally treat most relevant fuels (electromobility, LNG and hydrogen) as no binding targets have been defined for hydrogen
- Missing target definitions: No target values in terms of minimum density or geographic criteria. Lack of binding mechanisms for European / transnational coordination of NPFs to guarantee minimum and realistic targets (i.e. LNG in Germany is not prioritized and it can be questioned whether measures are sufficient, German target if 1.000.000 EVs in 2020 seems unrealistic)
- Lack of monitoring implementation of NPFs: No instruments have been defined to address implementation deficits (i.e. geografically imbalanced infrastructure investments as in the case of charging stations along East German highways). Continuous monitoring of market development, infrastructure development is needed. Better coordination of NPFs along Core Network Corridors with the aim to guarantee a continuous AF-infrastructure and regional AF-markets covering all alternative fuels covered by DAFI.
- Lack of involvement of regional stakeholders: No mechanisms to involve regional stakeholders in the elaboration and transnational coordination of NPFs. Regions have been identified as drivers for alternative fuel deployment with their regional policies

Although it is difficult to directly attribute efforts along the Scandria corridor to the directive, we believe it is important to have a directive on the issue that can support the transition to carbon-free vehicle fleet in Europe.

This survey has been filled in by the Capital Region Berlin-Brandenburg as chair of the Scandria®Alliance in close collaboration with Region Skane as leader and the Eastern Norway County as co-leader of the Scandria®Alliance working group on clean fuels and represents a common statement on the Directive on the Deployment of Alternative Fuels Infrastructure of Scandria®Alliance member regions.

Thank you for completing this survey.

If you have any questions, please contact the study team at: AFInfrastructure.Eval@ricardo.com

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