

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 [Directive on the Deployment of Alternative 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](#).

If you have any questions, please do not hesitate to contact us at AFInfrastructure.Eval@ricardo.com

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 [here](#).

Member State

- Austria
- Belgium
- Bulgaria
- Croatia
- Cyprus
- Czechia
- Denmark
- Estonia
- Finland
- France
- Germany
- Greece
- Hungary
- Ireland
- Italy
- Latvia
- Lithuania
- Luxembourg
- Malta
- Netherlands
- Poland
- Portugal
- Romania
- Slovak Republic
- Slovenia
- Spain
- Sweden
- United Kingdom

Name of region/urban or local area

Norway, Viken County

Name of responding authority

Viken County Council

Specific department (if relevant)

Department for Climate and Energy

Contact name

Tyra Marie Risnes

Position/role in the organisation

Head of Department

Email address

tyrar@viken.no

Telephone number

+4732300000

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)	<input checked="" type="checkbox"/>
b. Road transport	<input checked="" type="checkbox"/>
c. Maritime transport	<input checked="" type="checkbox"/>
d. Aviation transport	<input checked="" type="checkbox"/>
e. Rail transport	<input checked="" type="checkbox"/>
f. Urban transport	<input checked="" type="checkbox"/>
g. Climate change adaptation/mitigation	<input type="checkbox"/>
h. Environmental policy (air quality, noise, waste etc.)	<input type="checkbox"/>
i. Energy policy	<input checked="" type="checkbox"/>
j. Social/employment policy (including transport sector)	<input type="checkbox"/>
k. Industrial/R&D/Innovation policy	<input type="checkbox"/>
l. Other area (please indicate below)	<input type="checkbox"/>

Other area:

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 objectives, 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
1. Technological and commercial short-comings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
2. Lack of consumer acceptance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Missing adequate infrastructure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

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

Consumer acceptance: People and industry are in general positive to convert to alternative fuels, and want the transition to speed up. Reluctance for BEV solutions in the service sector is due to lack of cars and

dedicated infrastructure. There are still some issues regarding knowledge of how the solutions will meet 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)
1. Increase in level of e-commerce/ increase online purchase	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. New mobility patterns and new business models (e.g. mobility as a service, ride sharing)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
3. Increasing connectivity and digitisation of vehicles	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
4. New alternatively fuelled technologies and increasing use of renewables	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Adoption of restrictions for the use of vehicles in urban and suburban areas	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Smart electricity grid management technologies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
7. Improved quality of vehicles (e.g. increased range of electric vehicles)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Overall reduction in the price of vehicles	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please explain your answer:

A new state support scheme to reduce the costs for new BEV vans has been met with positive response.

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:

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
1. Increase/trigger investments in Alternative Fuels Infrastructure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
2. Ensure interoperability of Alternative Fuels Infrastructure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
3. Increase consumer awareness of alternative(ly) fuelled infrastructure (i.e. location, price, availability)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
4. Increase consumer awareness of alternative(ly) fuelled vehicles	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
5. Ensure integration of electromobility into the electricity system	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

Please explain your answers:

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
1. Exclusion of fuels included in the Directive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
2. Inclusion of other modes of transport or alternative fuels emerging that are not currently covered by the Directive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Please explain your answers:

The directive should focus on fuels that are low or zero emission. These fuels should be excluded: synthetic and paraffinic fuels, biofuels that are not categorised as "advanced biofuels" and liquefied petroleum gas (LPG).

The Directive sets no specific target for hydrogen. The revised directive should define precise targets, as hydrogen is very promising for long distance transport/heavy duty vehicles. The directive should open up for new possible solutions that could be added in the future. (For example there is some development in Norway to start using ammonia in transport.) This will encourages continued research and innovation.

5.6 Do you consider there there is a need to add new/additional objectives relating to the inclusion of other transport modes (e.g. rail and/or aviation)?

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

Please explain your answers:

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. The directive might consider defining optimum use cases for the different fuels, given their production capacity.

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
1. The inclusion of fossil fuels (e.g. CNG/LNG) as part of the Directive for <u>road - LDV/cars</u> - is still justified	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. The inclusion of fossil fuels (e.g. CNG/LNG) as part of the Directive for <u>road – HDVs</u> - is still justified	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. The inclusion of fossil fuels (e.g. LNG) as part of the Directive for <u>inland waterways</u> is still justified	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. The inclusion of fossil fuels (e.g. LNG) as part of the Directive for <u>maritime transport</u> is still justified	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. There is a need to prioritise the adoption of zero tailpipe emission solutions (i.e. electricity and hydrogen)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

Please explain your answers:

Light duty vehicles: Electricity and hydrogen can solve the needs within this group.
HDV, inland waterways and maritime: CNG / LNG will be needed in a transition period. But, CBG / LBG and hydrogen should be prioritised and be given a larger focus.
Zero emission solutions: The directive plays an important role in motivating and forcing the industry to develop the necessary solutions at a faster speed. In order to meet the objectives of the European Green Deal, the directive should prioritise the adoption of zero emission solutions.

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
1. Electricity for road transport –Light duty vehicles (cars and vans) (electromobility)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Electricity for road transport – Heavy duty vehicles (coaches and trucks)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. On shore supply of electricity for maritime transport	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. On shore supply of electricity for inland waterway transport	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Hydrogen for road transport	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Liquefied Natural Gas (LNG) for road transport	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Compressed Natural Gas (CNG) for road transport	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Liquefied Natural Gas (LNG) for maritime transport/inland navigation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. Electricity supply for use by stationary airplanes at airports	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. Other alternative fuel and mode (identify below)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other alternative fuel and mode:

Hydrogen for rail transport. Ammonia might become a non fossil fuel in the future.

Please explain your answers:

Regarding LNG / CNG: For road transport biomethane (LBG and CBG) are prioritised in Norway. Natural gas is only allowed as a backup or preliminary solution.

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
1. Measures to promote the deployment of Alternative Fuels Infrastructure in the area of electricity for road transport	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Measures to promote the deployment of Alternative Fuels Infrastructure in the area of electricity for maritime/inland waterway navigation	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Measures to promote the deployment of Alternative Fuels Infrastructure in the area of electricity in airports	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Measures to promote the deployment of Alternative Fuels Infrastructure in the area of natural gas for road transport	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Measures to promote the deployment of Alternative Fuels Infrastructure in the area of natural gas for maritime/inland waterway navigation	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Measures to promote the deployment of Alternative Fuels Infrastructure in the area of hydrogen for road transport	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Measures to promote the deployment of Alternative Fuels Infrastructure to promote the deployment of alternative fuels in infrastructure in public transport services	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Measures to promote the deployment of Alternative Fuels Infrastructure to promote the deployment of recharging points not accessible to	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

the public (private electromobility infrastructure (Article 4(3)))				
9. With respect to fuel labelling and graphical expressions at pumps, ensure that relevant, consistent and clear information is made available to consumers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

Please provide information on the specific measures adopted:

For several of these measures (at least for 1, 2, 6, 7) there are both national and regional/urban/local measures adopted. The survey should allow multiple answers.

Regarding LNG / CNG: Biomethane (LBG and CBG) are prioritised in Norway. Incentives are not given to long term natural gas solutions.

The Directive was incorporated into Norwegian law in 2018, and a national policy was not in place until summer 2019.

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
1. In relation to accessibility of recharging/refuelling points	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
2. In relation to ensuring access to information /labelling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

Please explain providing examples:

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
1. Relevant, consistent and clear information about alternatively fuelled vehicles is available to consumers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

2. Prices charged by the operators of publicly accessible recharging points are reasonable, easily and clearly comparable, transparent and non-discriminatory	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Please provide information:

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
1. Electricity for road transport (electromobility)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. On shore supply of electricity for inland and maritime transport	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Hydrogen/fuel cells for road transport	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. LNG/CNG for road transport	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. LNG/CNG for maritime transport/inland navigation	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Aviation ground movement in airports	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. Other alternative fuel and mode	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please explain your answers:

The Directive was incorporated into Norwegian law in 2018, and a national policy was not in place until summer 2019.

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 level of investments are related to national and regional policies and measures adopted before the Directive was adopted in Norway.

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
1. 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 effectiveness of the Directive</u>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
2. 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>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
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	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Please explain your answers:

1. The Directive lack mechanisms which assure the minimum density that is required, i.e. along highways / major roads and in the rural areas.
2. The national ambitions are different, mostly too low, and the directive has not succeeded in stimulating coordinated efforts for alternative fuel infrastructure.
3. The general lack of sufficient national ambitions also impedes cross-border development.

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
1. Regulatory measures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
2. Financial incentives	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
3. Non-financial incentives	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
4. Other	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please explain your answers:

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
1. 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	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. The financial instruments adopted by Member States have favoured investment in Alternative Fuels Infrastructure across core networks and urban nodes (in comparison to other parts of the network)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
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Please explain your answers:

2. Norwegian (national and regional) financial incentives have been instrumental for the development of fast charging stations along main roads and for the development of hydrogen, LBG and Multifuel Energy Stations.

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
1. Economic (e.g. in the alternative fuels and the Alternative Fuel Vehicle market)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
2. Environmental impacts (e.g. impact outside CO2 and pollutant emissions)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
3. Social (e.g. on employment in specific sectors)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
4. Spatial impacts (e.g. in terms of the use of urban space)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

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 the relevant national targets in accordance with the Alternative Fuels Infrastructure Directive?

- Yes
- No
- 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

7.2 Please provide estimate of the total costs (in EUROS) for all **actions/measures that your organisation adopted** to promote the adoption/deployment of Alternative Fuels Infrastructure in your region. Please refer to actions/measures that can be **directly linked** 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
1. 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			

Please provide additional information on types of costs:

Viken County Council was established 2020 with the merging of 3 county municipalities. Therefore, the indicated investment figure is very inaccurate. We estimate the total investments in infrastructure and vehicles for alternative fuels at about EURO 25 million, which also includes investments made by the 3 public transport companies owned or partly owned by the county municipalities.

7.3 Please provide estimate of the costs (in EUROS) for other **actions/measures that your organisation adopted** 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
1. Measures adopted to promote the deployment of Alternative Fuels <u>Infrastructure in public transport services</u>			
2. Measures adopted to promote the <u>deployment of recharging points not accessible to the public</u>			
3. Measures adopted to ensure that <u>relevant, consistent and clear information is made available to consumers</u> 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 information on types of costs:

The 7.2 figure also covers the figure for question 7.3.

7.4 Considering the total costs of the measures/actions that you have been involved in, do you think that they are justified by the benefits resulting from them?

	Do not know	Not at all	To a limited extent	To some extent	To a significant extent	Fully
1. Benefits to your organisation	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Benefits to society	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please explain your answers:

We consider that the benefits vary, but that it is too early to judge to what degree.

7.5 Are there any of the measures/actions that you consider that the costs incurred were not justified by the benefits derived (for your organisation; for society)?

- Yes
- No
- Do not know

If you answered YES, please identify the specific measure/action and explain your answer. If possible, please provide evidence on the relevant costs and benefits.

8. Coherence

The coherence questions ask you to comment on the coherence of the Alternative Fuels Infrastructure Directive provisions and requirements of the Directive internally (with each other) and externally (with other EU legislation and policy and relevant EU strategies).

8.1 Are you aware of any overlaps, inconsistencies or contradictions among the different provisions /requirement of the Directive?

- Yes
- No
- Do not know

Please explain your answer - How important are they?

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
1. CO2 emission performance standards for light and heavy-duty vehicles	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
2. CO2 emissions reporting, monitoring and verification from ships	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
3. Provisions on emissions of oxides of sulphur (SOx) from ships	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
4. Provisions related to the procurement of clean vehicles under Directive 2009/33 /EC	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
5. Requirements related to the energy performance of buildings (Directive 2010/31 /EU)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
6. Renewable Energy Directive (Directive 2018/2001/EU), 14% renewables target in transport	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
7. Governance Regulation (EU2018/1999), reporting required for National Energy and Climate Plans (NECPs)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

Please explain your answers:

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
1. TEN-T network implementation	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
2. Implementation of intelligent transport systems	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
3. Actions to promote of sustainable urban mobility	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
4. The electricity market design initiative	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
5. The EU batteries action plan and the related EU batteries alliance initiative	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
6. The European Disability Strategy	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
7. The UN Convention on the Rights of Persons with Disabilities	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

Please explain your answers:

8.4 Based on your experience, are there any overlaps, inconsistencies or contradictions between the Directive provisions and the provisions under the EU financing instruments?

	Yes	No	Do not know
1. Connecting Europe Facility	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
2. Horizon 2020	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
3. European Structural and Investment Funds	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
4. European Fund for Strategic Investments	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
5. Other funding instrument (identify below)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

Other funding instrument:

Please explain your answers:

9. EU Added Value

The following set of questions ask you to provide input on the specific added value that has come from the presence of EU action, beyond that which would have been possible on the basis of national or sub-national action.

9.1 In your view, are there any actions/measures related to the promotion/development of alternative fuel infrastructure adopted in your region/local area which could not have been implemented without the presence of the Directive?

	Yes	No	Do not know	Not applicable
1. Actions/measures adopted in relation to the investment/ deployment in Alternative Fuels Infrastructure	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Actions/measures adopted in relation to increasing awareness of alternative fuels	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Actions/measures adopted to promote the deployment of alternative fuels infrastructure in public transport services	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. Actions/measures to promote the deployment of recharging points not accessible to the public (private electromobility infrastructure)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
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If YES, please indicate which initiatives:

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
1. Ensuring the facilitation of interoperability at national /regional level	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Ensuring product standards and interoperability of infrastructure	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Ensuring availability of appropriate consumer information and awareness regarding alternative fuels	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please explain your answers:

A strong commitment from the EU level is important to increase awareness and focus in industry and in private individuals. This is also essential to stimulate interregional collaboration to provide alternative fuels infrastructure, and to promote the use of alternative fuels in a corridor perspective.

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.

In order to be an effective instrument for early and rapid introduction of fossil-free transport in Europe, the revised DAFI Directive should have the following characteristics:

1. The Directive must have a better multi-fuel approach and binding targets for all of the alternative fuels - and set targets to aid a development that will end of the use of the remaining fossil fuels. It should be flexible and able to incorporate new fossil-free fuels if they emerge.
2. The Directive should cover all relevant parts of the transport sector.
3. The Directive needs defined targets in terms of minimum density /geographic criteria / transnational

coordination.

4. The Directive must secure that a sufficient monitoring system is established.

5. The Directive should introduce mechanisms that promote involving of regional stakeholders.

Thank you for completing this survey.

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

Contact

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