

Public consultation concerning the Revision of the Directive 2014/94/EU on the Deployment of Alternative Fuels Infrastructure (AFID)

Fields marked with * are mandatory.

Introduction

Following the policy ambition set out by the European Green Deal for the EU to become a climate neutral economy by 2050, transport emissions have to decrease by 90% by that year. Fuels decarbonisation and the deployment of adequate alternative fuels infrastructure are key necessities in this context. Forecasts foresee a strong increase of market uptake, particularly of alternative fuels road vehicles, post 2020. Recharging and refuelling infrastructure needs to be ready to meet the demand for sustainable alternative fuels in all modes of transport. A lack of interoperable, easy-to-use infrastructure for recharging and refuelling those vehicles, and vessels, should not become a barrier and slow-down market uptake.

An uncoordinated introduction of alternative fuels infrastructure policies in the Member States can lead to fragmentation of market action and a lack of security for long-term public and private investment in vehicle and fuel technologies. Directive 2014/94/EU on deployment of alternative fuels infrastructure (AFID) was adopted in 2014 to ensure a common framework of measures for the deployment of alternative fuels infrastructure in Member States. The central means are national policy frameworks that Member States had to adopt in 2016. Moreover, the Directive sets technical specifications for the interoperability of infrastructure. However, alternative fuels infrastructure is not available evenly across the EU. Member States' national policy frameworks under Directive 2014/94/EU show, on average, a lack of ambition to ensure adequate rollout and easy cross-border usability in the critical period post 2020.

The European Commission is inviting the public and stakeholders to express their opinion and share information on the impact of the existing Directive as well as on possible measures and potential impacts of its revision. Information received in this consultation will support the evaluation and the Impact Assessment that the European Commission is currently carrying out. Respondents are welcome to expand on their answers in the text boxes foreseen for this purpose. At the end of the questionnaire, it is also possible to upload supporting evidence documents to complement the contribution.

About you

* Language of my contribution

- Bulgarian
- Croatian

- Czech
- Danish
- Dutch
- English
- Estonian
- Finnish
- French
- Gaelic
- German
- Greek
- Hungarian
- Italian
- Latvian
- Lithuanian
- Maltese
- Polish
- Portuguese
- Romanian
- Slovak
- Slovenian
- Spanish
- Swedish

* I am giving my contribution as

- Academic/research institution
- Business association
- Company/business organisation
- Consumer organisation
- EU citizen
- Environmental organisation
- Non-EU citizen
- Non-governmental organisation (NGO)
- Public authority
- Trade union
- Other

* First name

Lea

* Surname

Weisbrod

* Email (this won't be published)

lea.weisbrod@shell.com

* Organisation name

255 character(s) maximum

Shell

* Organisation size

- Micro (1 to 9 employees)
- Small (10 to 49 employees)
- Medium (50 to 249 employees)
- Large (250 or more)

Transparency register number

255 character(s) maximum

Check if your organisation is on the [transparency register](#). It's a voluntary database for organisations seeking to influence EU decision-making.

05032108616-26

* Country of origin

Please add your country of origin, or that of your organisation.

- | | | | |
|--------------------------------------|--|-------------------------------------|--|
| <input type="radio"/> Afghanistan | <input type="radio"/> Djibouti | <input type="radio"/> Libya | <input type="radio"/> Saint Martin |
| <input type="radio"/> Åland Islands | <input type="radio"/> Dominica | <input type="radio"/> Liechtenstein | <input type="radio"/> Saint Pierre and Miquelon |
| <input type="radio"/> Albania | <input type="radio"/> Dominican Republic | <input type="radio"/> Lithuania | <input type="radio"/> Saint Vincent and the Grenadines |
| <input type="radio"/> Algeria | <input type="radio"/> Ecuador | <input type="radio"/> Luxembourg | <input type="radio"/> Samoa |
| <input type="radio"/> American Samoa | <input type="radio"/> Egypt | <input type="radio"/> Macau | <input type="radio"/> San Marino |

- Andorra
- Angola
- Anguilla
- Antarctica
- Antigua and Barbuda
- Argentina
- Armenia
- Aruba
- Australia
- Austria
- Azerbaijan
- Bahamas
- Bahrain
- Bangladesh
- Barbados
- Belarus
- Belgium
- Belize
- Benin
- Bermuda
- Bhutan
- Bolivia
- Bonaire Saint Eustatius and Saba
- El Salvador
- Equatorial Guinea
- Eritrea
- Estonia
- Eswatini
- Ethiopia
- Falkland Islands
- Faroe Islands
- Fiji
- Finland
- France
- French Guiana
- French Polynesia
- French Southern and Antarctic Lands
- Gabon
- Georgia
- Germany
- Ghana
- Gibraltar
- Greece
- Greenland
- Grenada
- Guadeloupe
- Madagascar
- Malawi
- Malaysia
- Maldives
- Mali
- Malta
- Marshall Islands
- Martinique
- Mauritania
- Mauritius
- Mayotte
- Mexico
- Micronesia
- Moldova
- Monaco
- Mongolia
- Montenegro
- Montserrat
- Morocco
- Mozambique
- Myanmar /Burma
- Namibia
- Nauru
- São Tomé and Príncipe
- Saudi Arabia
- Senegal
- Serbia
- Seychelles
- Sierra Leone
- Singapore
- Sint Maarten
- Slovakia
- Slovenia
- Solomon Islands
- Somalia
- South Africa
- South Georgia and the South Sandwich Islands
- South Korea
- South Sudan
- Spain
- Sri Lanka
- Sudan
- Suriname
- Svalbard and Jan Mayen
- Sweden
- Switzerland

- Bosnia and Herzegovina
- Botswana
- Bouvet Island
- Brazil
- British Indian Ocean Territory
- British Virgin Islands
- Brunei
- Bulgaria

- Burkina Faso
- Burundi

- Cambodia

- Cameroon

- Canada
- Cape Verde
- Cayman Islands

- Central African Republic
- Chad
- Chile
- China

- Christmas Island
- Clipperton

- Guam
- Guatemala
- Guernsey
- Guinea
- Guinea-Bissau
- Guyana
- Haiti
- Heard Island and McDonald Islands
- Honduras
- Hong Kong
- Hungary
- Iceland
- India
- Indonesia
- Iran
- Iraq
- Ireland
- Isle of Man
- Israel
- Italy
- Jamaica

- Nepal
- Netherlands
- New Caledonia
- New Zealand
- Nicaragua
- Niger
- Nigeria
- Niue

- Norfolk Island
- Northern Mariana Islands
- North Korea
- North Macedonia
- Norway
- Oman
- Pakistan
- Palau
- Palestine
- Panama
- Papua New Guinea
- Paraguay
- Peru

- Syria
- Taiwan
- Tajikistan
- Tanzania
- Thailand

- The Gambia
- Timor-Leste
- Togo

- Tokelau
- Tonga

- Trinidad and Tobago
- Tunisia

- Turkey
- Turkmenistan
- Turks and Caicos Islands
- Tuvalu

- Uganda
- Ukraine
- United Arab Emirates
- United Kingdom
- United States

- Cocos (Keeling) Islands
- Colombia
- Comoros
- Congo
- Cook Islands
- Costa Rica
- Côte d'Ivoire
- Croatia
- Cuba
- Curaçao
- Cyprus
- Czechia
- Democratic Republic of the Congo
- Denmark
- Japan
- Jersey
- Jordan
- Kazakhstan
- Kenya
- Kiribati
- Kosovo
- Kuwait
- Kyrgyzstan
- Laos
- Latvia
- Lebanon
- Lesotho
- Liberia
- Philippines
- Pitcairn Islands
- Poland
- Portugal
- Puerto Rico
- Qatar
- Réunion
- Romania
- Russia
- Rwanda
- Saint Barthélemy
- Saint Helena Ascension and Tristan da Cunha
- Saint Kitts and Nevis
- Saint Lucia
- United States Minor Outlying Islands
- Uruguay
- US Virgin Islands
- Uzbekistan
- Vanuatu
- Vatican City
- Venezuela
- Vietnam
- Wallis and Futuna
- Western Sahara
- Yemen
- Zambia
- Zimbabwe

* Publication privacy settings

The Commission will publish the responses to this public consultation. You can choose whether you would like your details to be made public or to remain anonymous.

Anonymous

Only your type of respondent, country of origin and contribution will be published. All other personal details (name, organisation name and size, transparency register number) will not be published.

Public

Your personal details (name, organisation name and size, transparency register number, country of origin) will be published with your contribution.

I agree with the [personal data protection provisions](#)

Citizens experience with Alternative Fuels Infrastructure

1. Do you own or regularly drive an alternatively fueled vehicle?

- Yes, an electric car
- Yes, a vehicle running on natural gas
- Yes, other (please specify)
- No

2. Do you have difficulties finding alternative fuels infrastructure to recharge/refuel your vehicle?

- Yes, on a regular basis
- Sometimes
- Seldom
- Never
- No opinion

3. In case you have difficulties finding recharging/refueling infrastructure, what are the main underlying problems?

- There is not sufficient infrastructure in urban areas
- There is not sufficient infrastructure along highways and other large interurban roads
- There is not sufficient infrastructure in rural areas
- Even if there is infrastructure, I have trouble identifying where they are located
- Other (please specify)

4. In case you do not own an alternatively fueled vehicle, would you buy one, if you were certain that there was sufficient recharging or refueling infrastructure available?

- Yes
- Maybe
- No, the price for alternatively fueled vehicles is too high
- No, the technology is not yet mature
- No, the vehicles on the market are not attractive enough

Questions 5 – 9 concern electro-mobility only

5. When you recharge your electric-vehicle, do you feel well informed in advance on the price you will have to pay for the charging service?

- Yes, on a regular basis
- Sometimes
- Seldom
- Never
- I don't know

6. The directive already requires that users can pay ad hoc at the recharging point. However, in practice, many different payment options have developed throughout Europe. How often do you face difficulties when trying to pay?

- On a regular basis
- Sometimes
- Seldom
- Never
- I don't know

7. If you believe that a common payment method should be available at all publicly accessible recharging points, please indicate which payment option should be available?

- Cash Payment (coins / cash payment terminal)
- Payment by debit card / credit card (card payment terminal or contactless payment)
- Payment by Smartphone / Banking App without the need to download a specific app from the operator of that recharging-point
- Payment by specific app from the operator of that recharging-point
- Other (please specify)
- There is no need for a common payment method

8. Do you believe that roaming (payment through the user's electro-mobility service provider) should be available at every publicly accessible recharging point?

- Yes
- No
- I don't know

9. Do you have any general comment on using alternative fuels infrastructure that you would like to share?

500 character(s) maximum

The following questions of the consultation are open to all participants, but address particularly expert views and require more detailed and technical input.

General assessment of the Directive's relevance and scope (questions related to the evaluation)

The Alternative Fuels Infrastructure Directive aims at a coordinated approach for the roll out of alternative fuels infrastructure in Member States by means of setting obligatory requirements for the development of national policy frameworks. Member States had to outline national targets, objectives and supporting actions for the deployment of such infrastructure that should be coordinated and coherent at EU level. Common technical specifications adopted under that Directive should support this approach.

1. In your view, how relevant is a policy on alternative fuels infrastructure at EU level as established by the Alternative Fuel Infrastructure Directive to support the uptake of alternative fuels?

- Very relevant
- Relevant
- Less relevant
- Not relevant
- No opinion

2. Currently, the Directive covers electricity, hydrogen, biofuels, synthetic and parafinic fuels, compressed natural gas (CNG), liquefied natural gas (LNG) and liquefied petroleum gas (LPG) as main alternative transport fuels. In your view, is this scope still appropriate in the context of the long-term objective of the European Green Deal to reduce transport emissions by 90% by 2050?

- It is fully appropriate
- It is appropriate
- It is rather not appropriate
- It is not appropriate
- No opinion

3. Currently the Alternative Fuel Infrastructure Directive covers alternative fuels infrastructure for road and shipping. In your view, is this appropriate?

- the Directive should also cover rail infrastructure
- the Directive should also cover airport infrastructure for ground movements (e.g. vehicles for transport of passenger or for supporting taxiing of aircraft etc.)
- Other (please specify)
- the Directive already covers all relevant transport modes
- No opinion

Please specify

The future Directive should provide for hydrogen and hydrogen-based products and fuels (such as ammonia, hydrogen, e-fuels) to be included in National Policy Frameworks in order to support the uptake of hydrogen and hydrogen based technological solutions.

Besides port infrastructure for inland and maritime ports for LNG and shore -side electricity, the revised Directive should specifically include port infrastructure for hydrogen.

4. The Alternative Fuels Infrastructure Directive currently requires from Member States to establish “National Policy Frameworks” (NPFs). Within this framework, Member States have to develop targets and objectives for the deployment of alternative fuels infrastructure, based on an assessment by the Member States of national, regional or EU-wide demand. In your view, are the NPFs the right instrument to ensure the development of a coherent infrastructure network throughout the EU?

- They are the right policy instrument
- They are the right instrument but the provisions in the directive are not prescriptive enough to avoid diverging interpretation and application by Member States. The provisions in the directive should therefore be strengthened
- They are only partly sufficient. Additional/complementary instruments would be needed to avoid diverging interpretation and application by Member States
- They are not the right instrument because they are not sufficiently stringent. Therefore they should be replaced by alternative, more stringent instruments
- They are not the right instrument and should be abandoned without being replaced by alternative instruments
- No opinion

Please explain briefly your answer in particular what additional/complementary /alternative instruments you would suggest.

500 character(s) maximum

We support the current approach based on National Policy Frameworks as each Member State (MS) has its own demand profile. However, a revised AFID should provide guidance to MSs to undertake their assessment of the market situation for each alternative fuel in a consistent way. Also, all demand assessments should be undertaken with the involvement of industry to avoid having areas with too low density of infrastructure or underutilization of assets as currently exists in the EV industry.

5. Currently the Alternative Fuel Infrastructure Directive addresses publicly accessible fuels infrastructure only. Should it also address infrastructure not accessible to the public?

- It should cover all infrastructure, publicly accessible and not publicly accessible
- It should cover publicly accessible infrastructure only, with distinction required between public infrastructure on public grounds and publicly accessible infrastructure on private grounds (“Semi public” infrastructure)
- The current scope (publicly accessible fuels infrastructure only) is fine
- Other (please specify)
- No opinion

Please specify

We support AFID to cover publicly accessible infrastructure only, with distinction required between public infrastructure on public grounds and publicly accessible infrastructure on private grounds (“Semi public” infrastructure). We recommend that in case of no access limitations to “semi public” infrastructure (e.g. public hospitals, supermarkets), such infrastructure should fall into the same definition as “public chargers” and be subject to the same regulations as a public charger. If the owner of a private charger intends to allow limited access to the owned asset, then AFID should provide a maximum threshold in terms of intended traffic, beyond which the owner should apply for a “public” status and be subject to the same regulations as a public charger.

6. The Alternative Fuels Infrastructure Directive currently requires from Member States to ensure that relevant, consistent and clear information is made available to consumers/users as regards those motor vehicles which are fueled with alternative fuels. Such information has to be made available in motor vehicle manuals, at refueling and recharging points, on motor vehicles and in motor vehicle dealerships in their territory (Article 7). In your view, are the current provisions in AFID effective

in ensuring that consumers/users receive relevant, consistent and clear information on the compatibility of their vehicle engine/model with the alternative fuels /recharging options available at each refueling/recharging point?

- These provisions in the directive are effective
- These provisions in the directive are only partly or not at all effective and additional/complementary provisions are needed
- The directive is not the right instrument and corresponding provisions should be replaced by more effective instrument(s)
- The directive is not the right instrument and corresponding provisions should be abandoned without being replaced by alternative instruments
- No opinion

Please explain briefly your answer.

500 character(s) maximum

Current provisions in AFID are effective in ensuring clear information of compatibility of vehicles and recharging/ refueling points. Regarding the fuel price comparison methodology in Art 7, we suggest moving to internet-based information instead of the provision of physical information on petroleum retail sites. This would allow the information to be available to consumers all the time and be more easily updatable.

Main problems

1. A rapid uptake of alternatively fuelled vehicles and vessels is expected in the next decade. For example, the European Green Deal considers it likely that by 2025 around 13 million zero and low emission vehicles will circulate on roads. In your view, are the National Policy Frameworks the adequate instrument to ensure that a sufficient number of publicly accessible infrastructure will be deployed over the next decade?

	Fully adequate	Adequate	Rather not adequate	Not adequate	I don't know
Electric rechargers for cars and light duty vehicles in urban/suburban agglomerations	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Electric rechargers for cars and light duty vehicles along the main highways	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Electric rechargers for trucks / heavy duty vehicles in urban/suburban agglomerations	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Electric rechargers for trucks / heavy duty vehicles along the main highways	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Electric rechargers for busses	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
CNG refuelling stations in urban /suburban agglomerations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
CNG refuelling stations along the main highways	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
LNG refuelling stations at maritime ports	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
LNG refuelling stations at inland ports	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
LNG refuelling stations along the main highways	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hydrogen refuelling stations in urban /suburban agglomerations	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hydrogen refuelling stations along the main highways	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
On Shore Power Supply in inland waterway ports	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
On Shore Power Supply in maritime ports	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. In your opinion, do users of electric vehicles face problems when it comes to payments when charging their vehicles at re-charging points operated by an entity with which the user does not have a contract?

- Yes, frequently
- Sometimes
- Seldom
- Never
- I don't know

3. In your view and experience, is the information that is currently provided on location, availability, etc. of re-charging and re-fuelling points sufficient to cover the needs of the user?

- Information to users is fully sufficient
- Information to users is largely sufficient
- Information to users is rather insufficient
- Information to users is insufficient
- I don't know

4. The Commission assessment of the national policy frameworks developed under the Directive shows a variety of approaches to setting targets, objectives and supportive actions. Please indicate to what extent do you agree with the following observations?

	Fully agree	Largely agree	Rather disagree	Completely disagree	No opinion
"There is uneven and insufficient deployment of alternative fuels infrastructure within a Member State because the Directive does not specify in sufficient detail the requirements for the roll out of alternative fuels infrastructure, with respect to the required number and technical requirements."	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
"There is uneven and insufficient deployment of alternative fuels infrastructure across Member States because the Directive does not ensure that Member States cooperate with stakeholders and with other Member States to deliver a sufficiently dense and interoperable network throughout the EU."	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
"Users cannot easily recharge or refuel their vehicles/vessels throughout the EU because the directive does not ensure a uniform approach towards the use of alternative fuel infrastructure and subsequent payments."	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5. In your view, are there are other causes of the limited impact of the Directive? Please explain.

1000 character(s) maximum

To decarbonise the transport sector in line with EU's ambitions of climate neutrality by 2050, there needs to be close coordination and integration between policies that impact vehicles, fuels, infrastructure and customer choice:

- demand side measures for consumers and vehicles should be introduced, e.g. fiscal support to consumers and incentives to automakers to build more, affordable and better alternative fuelled vehicles to satisfy consumer demand. Infrastructure projects need to be better aligned with demand centres.
- better alignment and synergies need to be ensured with EU decarbonisation policies that impact the transport sector such as RED II, CO2 standards, Electricity Market Design, Energy Performance of Buildings Directive as well as a revised Energy Taxation Directive. For instance, there is currently no alignment across EU countries on excise duty treatment for low carbon alternative fuels which hinders investments in cross-border transport projects.

6. Are there other aspects you would like to underline regarding the functioning and /or impact of Directive 2014/94/EU? Are there issues that could be simplified?

1000 character(s) maximum

Current uncertainty about allowed business models are hindering investment decisions:

- The refuelling connections for LNG, EVs and FCEVs should be standardized to allow all vehicles to be refuelled at all stations.
- Technical and safety standards for LNG and H2 stations should be consistent across the EU with minimum thresholds for compliance and clear responsibilities of obligated parties.
- Interoperable networks – all public EV charging infrastructure should have open access to all customers. Each network should accept the payment methods of all network providers.
- EV charge posts at home, office or commercial locations, should support smart charging.
- AFID should follow the lead of RED II to ease planning applications, including facilitated permitting and approval procedures.
- A better definition and clarity of roles and responsibilities of the various roles involved in providing EV charging e.g. grid operator, charge post operator, service provider, power retailer.

Policies

This section aims at identifying potential policy measures to overcome identified problems related to the uptake of alternative fuels.

1. In your opinion, how important is it to revise the following parts of the Alternative Fuels Infrastructure Directive?

	Very important	Important	Less important	Not important	I don't know
Scope with respect to fuels addressed in the directive	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Scope with respect to transport modes addressed in the directive	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Provisions on ensuring an appropriate infrastructure coverage	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Provisions on monitoring and reporting	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Provisions on interoperability and user information	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Provisions on technical specifications	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Provisions on market access	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Provisions on interlinkages between the electric vehicles and their infrastructure and electricity markets	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Targets to achieve a coherent network

2. Right now, Member States are obliged to establish targets for the roll out of alternative fuels infrastructure through their national policy frameworks. However, those national targets are being set without using a common methodology. In your view, how useful are mandatory deployment targets for Member States that are derived by using a common methodology to ensure a coherent minimum alternative fuels infrastructure roll out in the following areas:

	Very useful	Useful	Less useful	Not useful	No opinion
Electricity for cars & vans	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Electricity for heavy duty vehicles	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Electricity for busses	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Electricity for inland waterway	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Electricity for short-sea shipping	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Hydrogen for cars & vans	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hydrogen for heavy duty vehicles	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hydrogen for inland waterway	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hydrogen for short-sea shipping	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
CNG for cars & vans	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
LNG for heavy duty vehicles	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
LNG for inland navigation	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
LNG for maritime vessels	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
On shore power supply at inland waterway ports	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
On shore power supply at maritime ports	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hydrogen for rail	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Electricity for aviation ground movement	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Electricity for port service provisions (pilotage, towage, cargo handling equipment)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please explain your answer.

1000 character(s) maximum

Mandatory deployments targets according to a common methodology across Member States might be considered along trans-European routes (TEN-T) and its comprehensive network which are mainly used for industrial activities. This would allow a cross-EU transit of goods along the TEN-T core networks as well as to and from industrial hubs including ports. Any targets should be supported by other measures to ensure uptake of new alternative fuelled vehicles. If Member States choose a deployment target along TEN-T routes, they should demonstrate that the level of target is aligned with other policies in place to address consumer behaviour and vehicle fleets. As already mentioned further above, hydrogen and hydrogen-based products and fuels (such as ammonia, hydrogen, e-fuels) should in any case be included in National Policy Frameworks.

Reply to questions 3-10 only in case you believe that mandatory deployment targets are useful for at least some of the above mentioned areas.

3. In your view, should such mandatory targets be applicable throughout the whole transport network or only for specific parts of it?

- Applicable to the TEN-T core network (including the most important transport connections and nodes in the EU represented by the core network corridors (railway lines, roads, inland waterways, maritime shipping routes, ports, airports and railroad terminals))
- Applicable to the TEN-T core and comprehensive network (covering important transport connections and nodes in all EU regions)
- Applicable throughout the whole transport network
- Other (please specify)

4. In your view, who should set mandatory deployment targets?

- Member States under national law but following a common European methodology set out in EU legislation
- European legislation to set binding targets for Member States following a common methodology
- Other (please specify)

5. In your view, which power should be required in case of mandatory targets for publicly accessible recharging infrastructure for passenger cars and light duty vehicles along the TEN-T network?

- 50 kW
- 100 kW
- 150 kW
- 350 kW
- Other (please specify)

6. In your view, which power should be required in case of mandatory targets for publicly accessible recharging infrastructure for heavy duty vehicles along the TEN-T network?

- 350 kW
- 1000 kW
- >1000 kW
- Other (please specify)

Please specify

While we consider that mandatory deployment targets can incentivize the roll out of heavy-duty charging infrastructure along TEN-T routes, the power requirement will need to correspond with the demand from the technology chosen for heavy duty battery electric vehicles.

7. In your view, which power should in case of mandatory requirements shall apply for onshore power supply in maritime ports of the TEN-T network?

- >100 kW
- >500 kW
- >1 MW
- Other (please specify)

Please specify

Each port has its unique profile of vessels hence each port should assess required power demand on a case basis and make appropriate investments.

8. In your view, which alternative fuel should - in case of mandatory targets - port service providers (pilotage, towage, cargo handling equipment) have to offer in ports of the TEN-T network?

- Electricity
- Hydrogen
- LNG
- CNG
- LPG
- Other (please specify)
- Any of the above, chosen freely by the port service provider

Please specify

Electricity, hydrogen and LNG will play a role in decarbonizing ports and should be offered by port service providers.

9. In your view, which power should - in case of mandatory targets - be required for recharging infrastructure for inland waterways vessels along the TEN-T network?

- 350 kW
- 1000 kW
- >1000 kW
- Battery swapping technology
- Other (please specify)

10. In your view, how could the compliance with mandatory targets be best monitored?

- Through reporting of public authorities in Member States to the EU
- Through direct monitoring of infrastructure roll out at EU level
- Other (please specify)

Other deployment measures for publicly accessible and non publicly accessible recharging points

11. Do you believe that owners of an electric vehicle should be entitled to have a re-charging point installed in their neighborhood?

- Yes
- No
- No opinion

12. How useful would you consider the following measures to facilitate and accelerate the development of recharging points not accessible to the public (such as private re-charging points in apartment buildings, offices, etc.)?

	Very useful	Useful	Rather not useful	Not useful	No opinion
Mandatory installation of recharging points in car parks of non-residential buildings (e.g. office buildings) that go beyond existing provisions in the Energy Efficiency for Buildings Directive	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Mandatory installation of recharging points in apartment buildings	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Right for individuals who rent an apartment/garage to install recharging points	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Right for individuals who own an apartment to install recharging points in apartment buildings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please comment

1000 character(s) maximum

In accordance to the Energy Efficiency for Building Directive, we support the installation of the right pre-cabling and capability for installation of public chargers in residential areas to avail charging options to residents in multi-dwellings without dedicated parking and/or residents in rental units.

Interoperability

Technical Specifications

In order to ensure technical interoperability between vehicles/vessels and the infrastructure throughout Europe, the directive already sets certain technical specifications, e.g. with respect to socket outlets at recharging points, and enables the Commission to adopt secondary legislation with respect to technical specifications.

13. Do you believe that further mandatory technical requirements/standards are required to ensure full interoperability of infrastructure and services across Europe?

- Yes
- No
- No opinion

14. If "yes" to the previous question, in which areas would technical requirements/standards be needed?

- Physical interfaces between vehicles/vessels and the infrastructure
- Identification and authentication of electric vehicles
- E-roaming protocols
- Interface to energy networks and / or building management systems to enable electric vehicles to provide electricity back to the grid
- Communication security
- Others

- No opinion

Please explain briefly your answer

1000 character(s) maximum

We support the harmonization of technical minimum requirements at EU level to allow:

- non-discriminatory implementation;
- a safe and efficient charging session;
- all actors in the EV charging system to have a level playing field to provide current and future services, e.g. vehicle battery as storage, vehicle to supply power back to grid. We believe that the standards for the interface to the energy network should be set by the local transmission operator and power regulator and not AFID;
- personal data privacy regulations to be respected and enforced;
- vehicles and infrastructure to communicate effectively and the charging requirement to allow efficient charging and minimize impact on power grid;
- commercial agreements to be in place for different charging networks to agree for e-roaming to improve asset utilization and improve customer user experience;

User Information

15. In your view, should EU legislation ensure that certain information on alternative fuels infrastructure is made available to the user by digital means (e.g. through an app)?

- Yes
 No
 No opinion

16. If you replied yes to the previous question, which information should be provided?

- Location of re-charging/re-fueling points
- Operator of recharging/refueling points
- Opening hours Refueling / recharging prices
- Type of re-charging/re-fueling points (e.g. max. power of a recharging point, installed capacity of a recharging station, available connector type, e.g. CCS))
- Compatibility of re-charging/re-fueling points with the user's engine/car model
- Comparable (e.g. €/100km) refueling / recharging prices of different fuels
- Real Time Availability of recharging/refueling points
- Accessibility for persons with disabilities
- Other (please specify)

Please specify

We agree that the above information will be valuable to the customers and should be made available by the service provider via digital means. However, dynamic real time information, like real time availability, is commercially sensitive information and valuable data, that should be owned by the service provider. The choice as to whether this information is to be shared or how the information is shared, should be a decision owned by the service provider and not be mandated via AFID.

17. In your view, should the EU legislation ensure that certain information is made available to the user by physical means?

- Yes
- No
- No opinion

18. If you replied yes to the previous question, which physical means are you referring to?

- Road signs on highways
- Road signs on all streets
- Other (please specify)

19. In your view, how often are the prices charged at publicly accessible re-charging points clearly identifiable?

- Always
- Sometimes
- Seldom
- Never
- I don't know

20. Currently many different concepts and price components exist to price electric recharging services, e.g. initial fee, time fee, kWh fee, possibly roaming fee. Should there be a harmonization of the display of recharging fees required at EU level?

- Yes
- No
- I don't know

21. In your view, where should information on the refueling/re-charging price be displayed?

- At the refueling/re-charging station

- In every app that provides information on charging infrastructure
- In every vehicle information system
- Other (please specify)

Please specify

The current methodology as laid down in Art 7 should move to internet-based information in each country instead the information to be shown physically on petrol retail sites. This would allow the information to be available to consumers independent of the fact whether the consumer uses the infrastructure or not and it can also be easily updatable and in a cost-effective manner.

For EVs, public charging prices as well as final end user prices should be easily accessible for the customer to ensure price transparency. We also recognise that there is a need to provide pricing that is comparable across the EU network. In setting the relevant price display format / units of measure, we would like regulators to consider the difference in decision making when a customer is going for a direct current (DC) fast charger vs an extended alternating current (AC) charging session at a parking lot. In the former, the price per kWh may be more relevant but for AC charging, the component of duration and time is also relevant for consumer decision. In the latter, the customer is also not just paying for energy but capacity occupancy with associated opportunity loss.

Semi Public chargers

Currently the Directive only distinguishes between publicly accessible and non publicly accessible recharging infrastructure (private infrastructure located in apartment buildings or offices). However, some publicly accessible infrastructure is not located on public grounds along roads but on private property, e.g. chargers on supermarket parking lots, hotels or private car parks. It is being debated if such “semi public” infrastructure would need to be defined separately in a revision of the Directive. On that basis “semi public” infrastructure could be exempted from fulfilling some minimum requirements applicable to publicly accessible infrastructure.

22. On the possible exemption of recharging points from certain minimum requirements, to what extent, do you agree with the following statements?

	Strongly agree	Agree	Rather disagree	Strongly disagree	No opinion
Re-charging points that are located on private properties to which access can be restricted by the owner (such as charging points located on supermarket car parks, hotels, etc.) should be exempted from certain minimum requirements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Recharging points where the recharging service is free of charge should be exempted from certain minimum requirements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
All publicly accessible recharging points should fulfil all minimum requirements	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Are there any other re-charging points that should be exempted from certain minimum requirements? Please explain.

500 character(s) maximum

As per above, we recommend for all freely accessible charging points to be subject to AFID. If such operations decide to offer a free charging service to their customer, then obvious exemptions from payment modes / price displays will apply. If the owner of a private charger intends to allow limited access to the owned asset, then AFID should provide a maximum threshold in terms of intended traffic, beyond which the owner should be subject to the same regulations as a public charger.

23. In case you believe that some recharging points should be exempted from fulfilling some minimum requirements, which requirements should those be?

- Location and other static information
- Availability, and other dynamic information
- Information on re-charging prices
- Ad hoc payment functions
- Interoperability requirements with regards to the physical interface
- Interoperability requirements with regards to communication protocols
- Other (please specify)

Please specify

Per response above, if the service is free of charge, then payment related requirements shall not apply. For private workplace / apartment block chargers that are non-public, then all the requirements should be exempted.

Market Access (e-mobility markets)

24. In your view, are there currently problems that e-mobility service providers face when they want to offer their services on charging points that are operated by a third party?

- Yes
- No
- I don't know

If you answered yes, please explain.

500 character(s) maximum

The ability for e-mobility service providers to offer services at 3rd party charging points is currently limited by the communication software of the charging points. There is currently no harmonized minimum requirement

stipulated by AFID. Some charge points are using a roaming platform to allow such commercial arrangements. We recommend using an open source, peer-to-peer (P2P) communication standard as the most flexible and cost-effective means for roaming.

25. In your view, should policy measures be introduced at the EU level to provide for the following as regards to market access for service providers?

- All e-mobility service providers should be allowed to offer their services at any charge-point free of charge
- All e-mobility service providers should be allowed to offer their services at any charge-point for a fee set by the legislator
- All e-mobility service providers should be allowed to offer their services at any charge-point at a non-discriminatory price set by the charge point operator
- Other measures (please specify)
- No additional regulation required at the EU level
- No opinion

Integration of electro-mobility into the electricity system

26. In your view, which policy measures listed below are essential to ensure that the efficient integration of electro mobility into the electricity system is possible and fully aligned with the electricity market rules?

- Mandatory requirement for all publicly accessible recharging points (existing and new) to be equipped with smart metering systems
- Mandatory requirement for newly installed publicly accessible recharging points to be equipped with smart metering systems
- Mandatory requirement for newly installed publicly accessible recharging points to have smart charging functionalities, such as the ability to react to price and grid signals, respond to local renewable electricity generation and the ability to be controlled
- Mandatory requirements for charging points not accessible to the public to have smart charging functionalities
- Mandatory interoperability requirements for the communication between the electric vehicle and the recharging point to enable smart charging
- Mandatory interoperability requirements for the communication between the electric vehicle and the recharging point to enable vehicle to grid services
-

Ensure that necessary battery data is available to authorized third parties for the provision of smart charging services and vehicle to grid services

- None
- Other (please specify)

Please specify

To facilitate the integration of e-mobility into the grid, the local grid operator and electricity market regulator should develop rules for non-discriminatory access to network infrastructure, including minimum technical requirements for smart charging services.

The role of the grid operator should be to create the market, through a combination of network access rules and market-based approaches to solve network congestion for smart charging. The grid operator shouldn't own or operate charging infrastructure or control when and how smart charging is undertaken. Such a business model may still require some years to become commercially viable. We therefore recommend that the minimum requirements for communication standards are harmonized across the EU as a first step. This could ensure that when there is the required economies of scale for EVs to participate meaningfully in the power market all legacy infrastructure can be compatible.

The resale of locally produced or stored energy via a charge point for both consumers and offices needs to be enabled in future regulatory frameworks (e.g. allowing to sell rooftop solar energy from the office into the EV parked in the parking garage in the basement). There is a need for clear regulations for exporting electricity back to the grid. Double taxation for Battery Energy Storage System (BESS) currently undermines the business case to do so.

Impacts

[The Inception Impact Assessment](#) discusses possible impacts of potential measures for the review of this Directive. Those measures relate to a) expanding the scope of the directive to other transport modes, b) strengthening requirements on Member States to ensure the deployment of an adequate number of recharging and refuelling stations and c) ensuring user friendliness and interoperability. Please indicate your view on the impact of such measures aimed at accelerating the deployment of interoperable infrastructure and the uptake of alternative fuels in the following questions.

27. To what extent do you agree with the following statements on the likely economic impacts of measures outlined in the Inception Impact Assessment?

	Fully agree	Agree	Rather disagree	Completely disagree	No opinion
They will lead to growth and jobs in in the production of vehicles/vessels and manufacturers of alternative fuels infrastructure	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
They will contribute to a bigger market in the EU for alternative fuels	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
They will improve international competitiveness of European industry	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

They will have a positive impact on research and innovation	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
They will initially put a strain on investment budgets of citizens and transport operators due to higher purchase cost of alternatively fuelled vehicles	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
They will reduce overall expenditures of citizens and transport operators due to low maintenance cost and over time reduced investment cost	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

28. To what extent do you agree to the following statements on environmental impacts of measures outlined in the Inception Impact Assessment?

	Fully agree	Agree	Rather disagree	Completely disagree	No opinion
They will lead to less emissions of CO ₂ from vehicle/vessel fleets	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
They will lead to less emissions of air pollutants from vehicle/vessel fleets	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
They will have positive effects on human health	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

29. To what extent do you agree to the following statements on administrative burden and simplification?

	Fully agree	Agree	Rather disagree	Completely disagree	No opinion
Expanding the scope of the Directive will lead to an increased administrative burden	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Replacing the National Policy Frameworks with mandatory targets will increase administrative burden	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Introducing more detailed requirements on interoperability and user information will increase administrative burden	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

30. Do you have any comment on other potential impacts (not mentioned above) of the possible policy measures?

1000 character(s) maximum

Relevance of other action at European level

31. To what extent do you agree with following statements?

	Fully agree	Agree	Rather disagree	Completely disagree	No opinion
The objectives of the revision of the Directive could be better accomplished through deployment of non-legislative tools based on guidance or recommendations by the Commission	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
The objectives could be achieved better if policy measures discussed for the revision of the Directive were implemented through an Alternative Fuels Infrastructure Regulation that would replace the current Directive	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please explain your answer.

1000 character(s) maximum

As per above, we support the current approach of the Directive based on National Policy Frameworks as this allows each Member State (MS) to roll out alternative fuels infrastructure on their own demand profile. However, a revised AFID should provide guidance to MSs to undertake their assessment of the market situation for each alternative fuel in a more consistent way. Also, all demand assessments should be undertaken with the involvement of industry to avoid having areas with too low density of infrastructure or underutilization of assets as currently exists in the EV industry.

Final remarks

32. Please indicate any reports or other sources of information that provide evidence to support your responses. Please provide the title, author and, if available, a hyperlink to the study/report.

The companies in which Royal Dutch Shell plc directly and indirectly owns investments are separate legal entities. In this consultation "Shell", "Shell Group" and "Royal Dutch Shell" are sometimes used for convenience where references are made to Royal Dutch Shell plc and its subsidiaries in general. Likewise, the words "we", "us" and "our" are also used to refer to Royal Dutch Shell plc and its subsidiaries in general or to those who work for them. These terms are also used where no useful purpose is served by identifying the particular entity or entities. "Subsidiaries", "Shell subsidiaries" and "Shell companies" as used in this consultation refer to entities over which Royal Dutch Shell plc either directly or indirectly has control. Entities and unincorporated arrangements over which Shell has joint control are generally referred to as "joint ventures" and "joint operations", respectively. Entities over which Shell has significant influence but neither

control nor joint control are referred to as “associates”. The term “Shell interest” is used for convenience to indicate the direct and/or indirect ownership interest held by Shell in an entity or unincorporated joint arrangement, after exclusion of all third-party interest.

You may also want to upload some supporting documents

The maximum file size is 1 MB

Only files of the type pdf,txt,doc,docx,odt,rtf are allowed

Contact

Axel.VOLKERY@ec.europa.eu