



# Public Consultation for the FuelEU Maritime – Green Maritime Space Initiative

Fields marked with \* are mandatory.

## Introduction

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The [European Green Deal communication](#) published by the European Commission in December 2019, emphasised the need to accelerate the transition to a low-emission and climate-neutral economy, including through the shift to sustainable mobility. The Commission has announced a basket of measures as part of this transition, to be proposed in the course of 2020 and 2021.

As part of this, the Commission plans to adopt in 2020 the comprehensive “Strategy on Sustainable and Smart Mobility”, delivering on ambitious sustainability and modernisation objectives, while ensuring the transport sector recovers from the COVID-19 crisis. The Strategy will set out the key areas and initiatives in transport and mobility where the Commission will consider policy actions to be taken in the coming years and beyond.

The 'FuelEU Maritime – Green European Maritime Space' initiative was announced as a legislative initiative in the context of the [2020 Commission Work Programme](#). It will be an important element of the Strategy on sustainable and smart mobility, focusing on ramping-up the production, deployment and uptake of sustainable alternative marine fuels, ensuring technological neutrality (low and zero-emissions sustainable alternative fuels and power, including but not limited to: liquid biofuels, e-liquids, decarbonised gas (including bio-LNG and e-gas), decarbonised hydrogen and decarbonised hydrogen-derived fuels (including methane, and ammonia) and electricity), regulating access of the most polluting ships to EU ports and obliging docked ships to drastically reduce their emissions, including through using shore-side electricity.

By creating a clear pathway for the demand of sustainable alternative fuels (low and zero-emissions sustainable alternative fuels and power) in maritime transport, the 'FuelEU Maritime – Green European Maritime Space' initiative aims to accelerate the achievement of low-emission, climate-neutral shipping and

ports by promoting the uptake of sustainable alternative energy and powertrain systems. This initiative is a first concrete step to bring the maritime sector in line with the European target of reaching climate-neutrality by 2050. It does not address issues related to the energy system and infrastructure, taxation, state aid or the EU Emissions Trading System, which will be subject to specific proposals and policy actions.

This initiative continues the approach already promoted by the 2016 [Low Emission Mobility Strategy](#), with a clear pathway for the maritime sector to contribute to the EU's objectives to reach climate neutrality by 2050 outlined in the [European Green Deal](#), the [Commission's long-term vision for a prosperous, modern, competitive and climate-neutral economy by 2050](#) and the proposal for a Climate Law, as well as the [strategic orientations of Horizon Europe](#). It is also in line with the global Strategy for the reduction of GHG emissions from ships by the [International Maritime Organization](#), which includes candidate measures and recommendations to support the development and uptake of low- and zero-carbon alternative fuels.

This public consultation invites citizens and organisations to contribute to the assessment of how to accelerate the uptake of sustainable alternative energy and power by the shipping sector. The consultation will be open for a period of 10 weeks instead of the standard 12 weeks. The consultation period has been shortened given the importance of the measure including in the recovery from the crisis. A targeted consultation with various stakeholders will complement the public consultation.

Please note that it is not mandatory to reply to all questions.

## About you

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### \* 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

Maria

\* Surname

Karagiannidou-Rosiek

\* Email (this won't be published)

mk@iogp.org

\* Organisation name

*255 character(s) maximum*

International Association of Oil and Gas Producers (IOGP)

\* 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.

3954187491-70

\* Country of origin

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

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| <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        |
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| <input type="radio"/> Australia           | <input type="radio"/> Fiji               | <input type="radio"/> Mauritania       | <input type="radio"/> Slovakia                         |
| <input type="radio"/> Austria             | <input type="radio"/> Finland            | <input type="radio"/> Mauritius        | <input type="radio"/> Slovenia                         |

- Azerbaijan
- Bahamas
- Bahrain
- Bangladesh
- Barbados
- Belarus
- Belgium
- Belize
- Benin
- Bermuda
- Bhutan
- Bolivia
- Bonaire Saint Eustatius and Saba
- Bosnia and Herzegovina
- Botswana
- Bouvet Island
- Brazil
- British Indian Ocean Territory
- British Virgin Islands
- Brunei
- Bulgaria
- Burkina Faso
- France
- French Guiana
- French Polynesia
- French Southern and Antarctic Lands
- Gabon
- Georgia
- Germany
- Ghana
- Gibraltar
- Greece
- Greenland
- Grenada
- Guadeloupe
- Guam
- Guatemala
- Guernsey
- Guinea
- Guinea-Bissau
- Guyana
- Haiti
- Heard Island and McDonald Islands
- Honduras
- Mayotte
- Mexico
- Micronesia
- Moldova
- Monaco
- Mongolia
- Montenegro
- Montserrat
- Morocco
- Mozambique
- Myanmar /Burma
- Namibia
- Nauru
- Nepal
- Netherlands
- New Caledonia
- New Zealand
- Nicaragua
- Niger
- Nigeria
- Niue
- Norfolk Island
- Solomon Islands
- Somalia
- South Africa
- South Georgia and the South Sandwich Islands
- South Korea
- South Sudan
- Spain
- Sri Lanka
- Sudan
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- Svalbard and Jan Mayen
- Sweden
- Switzerland
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- Taiwan
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- Thailand
- The Gambia
- Timor-Leste
- Togo
- Tokelau

- Burundi
- Cambodia
- Cameroon
- Canada
- Cape Verde
- Cayman Islands
- Central African Republic
- Chad
- Chile
- China
- Christmas Island
- Clipperton
- Cocos (Keeling) Islands
- Colombia
- Comoros
- Congo
- Cook Islands
- Costa Rica
- Côte d'Ivoire
- Croatia
- Cuba
- Curaçao
- Hong Kong
- Hungary
- Iceland
- India
- Indonesia
- Iran
- Iraq
- Ireland
- Isle of Man
- Israel
- Italy
- Jamaica
- Japan
- Jersey
- Jordan
- Kazakhstan
- Kenya
- Kiribati
- Kosovo
- Kuwait
- Kyrgyzstan
- Laos
- Northern Mariana Islands
- North Korea
- North Macedonia
- Norway
- Oman
- Pakistan
- Palau
- Palestine
- Panama
- Papua New Guinea
- Paraguay
- Peru
- Philippines
- Pitcairn Islands
- Poland
- Portugal
- Puerto Rico
- Qatar
- Réunion
- Romania
- Russia
- Rwanda
- Tonga
- Trinidad and Tobago
- Tunisia
- Turkey
- Turkmenistan
- Turks and Caicos Islands
- Tuvalu
- Uganda
- Ukraine
- United Arab Emirates
- United Kingdom
- United States
- United States Minor Outlying Islands
- Uruguay
- US Virgin Islands
- Uzbekistan
- Vanuatu
- Vatican City
- Venezuela
- Vietnam
- Wallis and Futuna
- Western Sahara

- Cyprus
- Latvia
- Saint Barthélemy
- Yemen
- Czechia
- Lebanon
- Saint Helena Ascension and Tristan da Cunha
- Zambia
- Democratic Republic of the Congo
- Lesotho
- Saint Kitts and Nevis
- Zimbabwe
- Denmark
- Liberia
- Saint Lucia

\* 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](#)

\* Please specify which interests you (the organisation on behalf of which you respond) represent

- National public authorities (transport ministries, agencies)
- Regional or local public authorities
- Ship owning and ship management
- Short sea shipping
- Ports management and administrations
- Port terminal operator or other port services provider
- Inland waterways sector
- Shipbuilding and marine equipment manufacturers
- Academia, research and innovation
- Investment and financing

- Energy producers and fuel supply (including alternative / sustainable fuel sources)
- Technical standardization bodies and class societies
- Logistics suppliers, shippers and cargo owners
- Interest organisations representing societal interests, particularly on environmental and social topics
- Other

## General assessment and policy context

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1. Various studies have described key options for decarbonising the maritime sector. These include the potential of energy efficiency improvements (i.e. less fuel consumed per a given volume of transported cargo or passengers) and the uptake of sustainable alternative fuels (i.e. use of low- and zero-carbon fuels).

In your view, how relevant is the uptake of sustainable alternative fuels and diversifying the fuel mix of maritime transport in order to accelerate the decarbonisation of shipping?

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

2. While energy efficiency improvements have occurred over the past decade in shipping, the uptake of sustainable alternative fuels or propulsion technologies remained negligible.

What are your expectations concerning the uptake of sustainable alternative fuels in maritime transport in the nearest future, i.e. by 2025 (under the existing regulatory framework)?

- It will increase significantly
- It will increase moderately
- It will remain the same
- It will decrease

- No opinion

3. The EU has already set up a regulatory framework for the deployment of alternative fuels infrastructure for maritime transport. The framework includes provisions for equipment of the necessary infrastructure in ports on the [Trans-European Transport Network \(TEN-T\)](#) in particular through the provisions of the Directive on the deployment of alternative fuels infrastructure ([Directive 2014/94/EU](#)). Yet the existing regulatory scope is limited to the supply of Liquefied Natural Gas (LNG) and on-shore power supply (non-mandatory) and does not contain provisions related to their use in operations.

In your view, how relevant is it to complement the existing regulatory framework with policy measures focusing on the demand side (i.e. addressing the use of sustainable alternative fuels by operators) in order to achieve a better deployment or further uptake of such fuels?

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

4. The development and deployment of sustainable alternative fuels requires coordination among different economic actors (e.g. operators, fuel suppliers, ports, technology providers, etc.). It also requires a consistent approach to ensure availability of the fuel and guarantee the well-functioning of the internal market.

The Green Deal foresees that EU action needs to be coordinated with action at global level, in particular the International Maritime Organization (IMO). However, what would be, in your opinion, the governance level best suited to address these objectives in the European Union?

- The objectives would be best addressed at the EU level
- The objectives would be best addressed by Member States individually
- The objectives would be best addressed at regional level
- The objectives would be best addressed by individual stakeholders with no public intervention
- No opinion

5. The [European Green Deal](#) as well as the proposal for a European Climate Law set the objective of achieving climate neutrality by 2050 and the maritime transport sector should contribute to this decarbonisation effort. This means that most of the fuel consumed by EU maritime transport will have to be low- or zero-carbon at the latest by 2050.

In your view, how likely is it that – without specific policy intervention - a significant uptake of such low or zero-carbon fuels will take place in the following periods?

Please rate the options listed in the table below from 5 (very likely) to 1 (very unlikely). Not all options need to be rated (e.g. in case of “no opinion”).

**A significant use of sustainable alternative fuels to occur:**

	1	2	3	4	5
Before 2030	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Between 2030 and 2040	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
After 2040	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

6. The 'FuelEU Maritime' initiative focuses mainly on the decarbonisation of the maritime sector. In your view, how relevant is it to complement this initiative with policy measures dedicated to inland navigation (provision of on-shore power supply, uptake of new sustainable alternative fuels for inland waterway vessels in operation, etc.)?

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

If very relevant, relevant or somewhat relevant, please specify:

*400 character(s) maximum*

Based on our knowledge, the blending of biodiesel for example is not possible for inland vessels. They can use AdBlue, but in inland navigation the use of other sustainable alternative fuels (e.g. LNG, hydrogen, ammonia) is preferable. The Commission should consider the differences between the maritime and inland navigation.

## Barriers to the uptake of sustainable alternative fuels in maritime transport

7. According to the data on emissions from maritime transport collected under the [EU Monitoring, Reporting and Verification \(MRV\) Regulation](#), the vast majority of the 44 million tonnes of fuel consumed in 2018 concerned conventional fossil fuels such as heavy fuel oil, gas oil, diesel oil, etc. Despite the existing framework for supporting corresponding infrastructure development, sustainable alternative fuels were only a small fraction of the fuels consumed by the monitored fleet. How would you explain this situation?

Please rate the potential barriers listed in the table below from 5 (most important) to 1 (least important). Not all options need to be rated (e.g. in case of “no opinion”).

### Reasons for the low uptake of sustainable alternative fuels

	1	2	3	4	5
Lack of predictability of the regulatory framework	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
High risk of investment in vessels technology and port infrastructure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Lack of mature technologies (e.g. on ships and on shore)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Higher price of sustainable alternative fuels	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of communication between actors and lack of transparency on the environmental performance, incl. of the fuel performance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Insufficient supply (fuel production and infrastructure) of sustainable alternative fuels or on-shore power supply	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Insufficient demand for sustainable alternative fuels or on-shore power supply	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Bunkering (i.e. fuel supply) of ships outside the EU	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Presence of split incentives in the sector (i.e. situations where the benefits of an investment do not entirely accrue to the investor. Example: a ship owner that is not also the ship manager may have less incentive to invest in green technologies)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Other reasons, please specify	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

If “other reasons”, please specify:

*400 character(s) maximum*

Ship operators are sensitive to fuel prices. Around 80% of the whole cost of the freight is fuel, therefore the price will play a significant role in the choice of alternative fuel.  
Many of the potential alternative low-carbon fuels lack comprehensive fuel specifications, such as ISO, or codes (similar to the IGC/ICF codes for LNG).

8. In your opinion, which of the identified barriers should be addressed as a matter of priority at EU level?

Please rate the items in the table below from 10 (highest priority) to 1 (lowest priority). Not all options need to be rated (e.g. in case of “no opinion”).

**Reasons for the low uptake of sustainable alternative fuels**

	1	2	3	4	5	6	7	8	9	10
Lack of predictability of the regulatory framework	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
High risk of investment in vessels technology and port infrastructure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of mature technologies (e.g. on ships and on shore)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Higher price of sustainable alternative fuels	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of communication between actors and lack of transparency on the environmental performance, incl. of the fuel performance	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Insufficient supply (fuel production and infrastructure) of sustainable alternative fuels or on-shore power supply	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Insufficient demand for sustainable alternative fuels or on-shore power supply	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bunkering (i.e. fuel supply) of ships outside the EU	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Presence of split incentives in the sector (i.e. situations where the benefits of an investment do not entirely accrue to the investor. Example: a ship owner that is not also the ship manager may have less incentive to invest in green technologies)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other reasons, please specify	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

If “other reasons”, please specify:

*400 character(s) maximum*

Alternative fuels infrastructure eligibility for support should be provided through public, private and EU financial instruments and grants in a way that minimizes the administrative burden for investors and owners of the infrastructure.

9. From your experience, can you give an example of a successful introduction of sustainable alternative fuel or power supply in maritime transport?

- Yes
- No

If 'Yes', can you identify the main reasons that proved to be essential to succeed?  
Can you identify the main challenges to overcome?

*1500 character(s) maximum*

IOGP's members are working on a number of projects that facilitate the decarbonisation of the shipping sector, such as:

Total and CMA CGM have signed an agreement covering the supply of around 300,000 tons of liquefied natural gas (LNG) a year for 10 years starting in 2020. This unprecedented volume in the history of LNG bunker will fuel CMA CGM's nine newbuild container ships, scheduled for delivery beginning 2020 onwards. More information: <https://www.total.com/media/news/press-releases/Strategic-Agreement-between-Total-and-CMA-CGM-on-Liquefied-Natural-Gas-Fuel-Supply-for-CMA-CGM-New-Build-Container-Ships>

10. From your experience, can you give an example of a failed attempt to introduce sustainable alternative fuel or power supply in maritime transport?

- Yes
- No

## Possible policy options

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11. The table below presents possibly policy measures – both regulatory and non-regulatory – which could be taken at the EU level to address the barriers to the uptake of sustainable alternative fuels and power in the maritime sector.

Please rate them in the table below from 5 (most important) to 1 (least important). Not all policy measures need to be rated (e.g. in case of “no opinion”).

### Policy measures to accelerate the uptake of sustainable fuels

	1	2	3	4	5
Accelerate research and innovation enabling the use of sustainable alternative fuels and power (demonstration and deployment)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Set a clear regulatory pathway for decarbonising the current marine fuel mix	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Increase public funding and incentivise private investment to overcome the high investment risk in vessels powered by sustainable alternative fuels or propulsion systems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Increase public funding and financial support to overcome the high investment risk in sustainable alternative fuel supply or on-shore power supply infrastructure	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Establish economic incentives to reduce the price differential between conventional and sustainable alternative fuels	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Define objectives for the supply of sustainable alternative fuels and power to the maritime sector	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Define objectives and provisions for the use of sustainable alternative fuels and power in the maritime sector	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Develop standards related to sustainable alternative fuels (incl. fuels, machinery, infrastructure, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Increase transparency by establishing a certification mechanism for sustainable alternative fuels	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Other measures (please specify)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

If “other measures”, please specify:

*400 character(s) maximum*

It is important to support, through policy and funding, the appropriate alternative fuel infrastructure such as LNG and hydrogen in maritime ports. It is also important to ensure a level playing field between the different alternative fuels.

12. How should requirements for the use of sustainable alternative fuels and power be set in your view?

a. For ships in navigation:

- Requirements on the share of specific sustainable alternative fuels to be used in ships fuel mix
- Performance requirements based on the carbon-intensity of energy used in marine operations
- Other (please specify)
- No opinion

b. For ships at berth:

- Requirements on the share of specific sustainable alternative fuels to be used in ship's fuel mix while at berth (incl. use of on-shore power)
- Performance requirements based on the carbon-intensity of energy used by ships at berth
- Other (please specify)
- No opinion

13. In case new requirements on the use of sustainable alternative fuels and power are proposed, to whom should these apply in your view?

a. Types of ships:

- To all ships
- To certain ship types (e.g. highest emitters) or types of trade
- Other (please specify)
- No opinion

If "other", please specify:

*400 character(s) maximum*

The regulation should apply first to the highest emitters (larger ships) and gradually expand to all vessels.

b. Scope coverage:

- Ships calling at ports of the European Union
- Ships bunkering in ports of the European Union
- Ships sailing in the territorial waters and Exclusive Economic Zones of EU Member States
- Other (please specify)
- No opinion

14. In your view, how should the environmental performance of sustainable alternative fuels for maritime transport be calculated?

- On a "tank-to-wake" basis, accounting total emissions from combustion on board a ship and potential leakage
- On a "well-to-wake" basis, taking into account emissions on board and potential leakage, but also emissions resulting from producing the fuel and making it available for use in ships
- Other (please specify)

- No opinion

If “other”, please specify:

*400 character(s) maximum*

The EU should facilitate a well-to wake recognition at IMO level to facilitate the up-take of low-carbon fuels, and create incentives for process related emissions reductions (such as CCS/CCU, or renewable hydrogen).

15. In your view, what emissions should be considered in assessing the environmental performance of sustainable alternative fuels for maritime transport (including ships at berth)?

- CO<sub>2</sub> emissions
- CO<sub>2</sub> emissions and emissions of other greenhouse gases: methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O)
- CO<sub>2</sub> emissions, methane (CH<sub>4</sub>) emissions, nitrous oxide (N<sub>2</sub>O) emissions and relevant emissions of air pollutants
- No opinion

16. In accordance with data collected in 2018 under the EU Monitoring, Reporting and Verification (MRV) system, emissions from ships at berth (in port) amounted to around 6% of the total CO<sub>2</sub> emissions reported in MRV. In addition, ships at berth can become a significant source of air pollution, in particular for port cities. In your view and experience, how relevant is it to establish a regulatory framework specifically addressing emissions produced by ships at berth?

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

17. Reducing emissions produced by ships at berth may require significant investments, for instance to install on-shore power connections. With this in mind, do you have any views on how these requirements for ships at berth should apply?

- Addressing all ships at berth
- Prioritising the ships and the ports already equipped with zero-emissions technologies (including on-shore power supply)
- Prioritising the highest emitters (e.g. specific ship segments)

- Taking action once critical infrastructure is made available in majority of EU ports
- Other (please specify)
- No opinion

## Additional information

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18. Are there other key aspects which you did not find reflected in the questions and you would like to comment upon?

Please give details.

*1500 character(s) maximum*

We recommend a holistic approach to the decarbonisation of shipping that is both appreciative of the strong interdependencies between supply infrastructure and fuel production, and considers the full basket of available technologies from energy efficiency measures and innovations in ship design, to the development of alternative, low-carbon, low-emissions fuels (like LNG/bio-LNG, synthetic LNG, hydrogen, ammonia, methanol, liquids such as bio- and e-fuels or hybrid options). Commission should consider a wide range of existing and emerging solutions that could assist with decreasing carbon and help reduce overall emissions. It's important to ensure a level playing field between the different alternative fuels. All low-/zero-carbon fuels should be considered including LNG and low-carbon hydrogen as a mid and long-term decarbonization options. LNG is the only market ready, available fuel at reasonable cost that can ensure a smooth transition towards lower carbon solutions. Maritime sector is particularly vulnerable to carbon leakage as Europe develops its decarbonisation agenda. We recommend that solutions are sought at IMO level, and that maintaining a global competitive playing field, as well as integrating any European solution into a global system, is a central consideration in the policy design framework going forward. Any such framework will need to navigate the complexity of industry structure, which will add to the governance challenge when policies are to be enforced.

Please feel free to upload documents, such as additional evidence supporting your responses, such as a policy brief or a position paper here. Please note that the uploaded document will be published alongside your response to the questionnaire which is the essential input to this open public consultation. The document is an optional complement and serves as additional background reading to better understand your position.

The maximum file size is 1 MB

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

19. Please provide references to any studies, reports or other documents that you think are relevant for this consultation, with links for online download where possible.

1) The thinkstep (now Sphera) study on lifecycle emissions of LNG compared with conventional marine fuels.

This is the definitive study on this topic, published to date and is based on primary data from all major engine manufacturers. It has been downloaded more than 1,300 times since April 2019.

<https://sphera.com/reports/life-cycle-ghg-emission-study-on-the-use-of-lng-as-marine-fuel/>

2) The study commissioned from CE Delft on the potential availability and cost of liquefied biomethane and synthetic methane

This supports the case for LNG providing a pathway for decarbonising the global shipping industry.

[https://sea-lng.org/wp-content/uploads/2020/03/CE\\_Delft\\_Key-takeaways\\_FINAL-APPROVED.pdf](https://sea-lng.org/wp-content/uploads/2020/03/CE_Delft_Key-takeaways_FINAL-APPROVED.pdf)

3) The DNV GL study assessing the commercial and operational viability of alternative marine fuels commissioned from DNV GL

[https://sea-lng.org/wp-content/uploads/2019/10/Alternative-Marine-Fuels-Study\\_final\\_report\\_25.09.19.pdf](https://sea-lng.org/wp-content/uploads/2019/10/Alternative-Marine-Fuels-Study_final_report_25.09.19.pdf)

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