

Sustainable maritime fuels

'Fit for 55' package: The FuelEU Maritime proposal

OVERVIEW

In July 2021, the European Commission put forward the 'fit for 55' package of legislative proposals, aimed at ensuring the success of the European Green Deal. The FuelEU Maritime regulation is one of these proposals and, together with four other proposals, it seeks to steer the EU maritime sector towards decarbonisation.

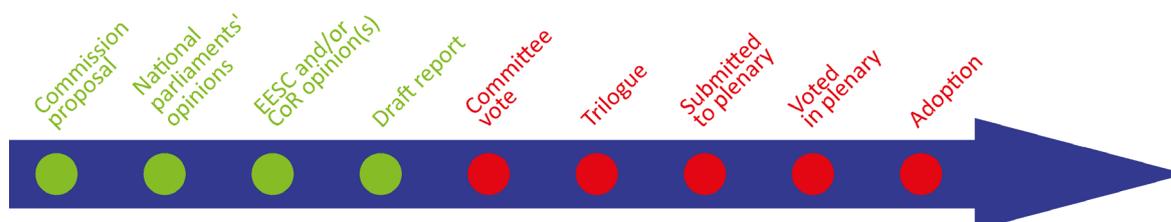
In the European Parliament, the Committee on Transport and Tourism (TRAN) leads the work on this file. On 4 April 2022, the rapporteur Jörgen Warborn put forward his draft report which will be considered during the TRAN meeting later in April.

To support the uptake of sustainable maritime fuels, the Commission proposes to limit the carbon intensity of the energy used on board ships. Accordingly, the proposal sets up a fuel standard for ships and introduces a requirement for the most polluting ship types to use onshore electricity when at berth. It puts the responsibility for compliance on the shipping company.

The legislative outcome of this proposal will be closely linked to the simultaneously proposed rules on including the maritime sector in the EU emissions trading system, as well as those on alternative fuels infrastructure, energy taxation and renewable energy.

Proposal for a Regulation of the European Parliament and of the Council on the use of renewable and low-carbon fuels in maritime transport and amending Directive 2009/16/EC

<i>Committee responsible:</i>	Transport and Tourism (TRAN)	COM(2021) 0562
<i>Rapporteur:</i>	Jörgen Warborn (EPP, Sweden)	14.07.2021
<i>Shadow rapporteurs:</i>	Vera Tax (S&D, The Netherlands)	2021/0210(COD)
	Elsi Katainen (Renew, Finland)	
	Jutta Paulus (Greens/EFA, Germany)	Ordinary legislative procedure (COD)
	Marco Campomenosi (ID, Italy)	(Parliament and Council on equal footing – formerly 'co-decision')
	Johan Van Overtveldt (ECR, Belgium)	
	João Pimenta Lopes (The Left, Portugal)	
<i>Next steps expected:</i>	Committee vote on the draft report	



The biggest challenge for commercial shipping is that zero-carbon fuels, and the propulsion systems required to use them, do not yet exist in a form and scale that can be applied to large ocean-going ships.

FuelEU Maritime – Avoiding Unintended Consequences¹

Introduction

While shipping is one of the least carbon-intensive ways to transport goods, in 2018 it generated [2.9 %](#) of global anthropogenic CO₂ emissions. In the EU, ships generated [13.5 %](#) of all greenhouse gas (GHG) emissions from transport that year, substantially less than did road transport (71 %) and aviation (14.4 %). Despite a drop in activity in 2020 due to the coronavirus pandemic, shipping is expected to grow, fuelled by rising demand for primary resources and container transport.

An international sector by nature, shipping is regulated by the International Maritime Organization (IMO). The IMO is not new to the idea of reducing GHG emissions from shipping: it adopted its [initial strategy](#) in this regard in 2018, setting itself the goal to reduce average carbon intensity (CO₂ per tonne-mile) by at least 40 % by 2030 and by 70 % in 2050, as well as to cut total emissions by at least 50 % by 2050 (compared to 2008) and phase them out as soon as possible. While the IMO is to review its initial strategy in 2023, international pressure has been mounting on it to act faster. Ahead of the [COP26 conference](#) in Glasgow, the UN Secretary-General António Guterres [affirmed](#) that shipping and airlines have failed to cut their GHG emissions and their current commitments are rather aligned with warming way above 3°C than with the 1.5°C goal.

The EU, in line with its commitment under the Paris Agreement, has decided to become a climate-neutral economy by 2050. It charted its path towards success in the 2019 [European Green Deal](#) and adopted the [European Climate Law](#), which made the goals of keeping the global temperature increase to well below 2°C and pursuing efforts to keep it to 1.5°C legally binding. To get there, it set a new EU target for 2030 of reducing GHG emissions by at least 55 % compared to 1990 levels, which would require contributions from all sectors of the economy.²

In its December 2020 [sustainable and smart mobility strategy](#), the European Commission outlined its planned steps to transforming the EU transport system in line with the goals of the European Green Deal. In July 2021, it published the ['fit for 55' package](#) with a first set of 13 legislative proposals.

Context

At present, the maritime sector relies almost entirely on fossil fuels, mainly heavy fuel oil. Meeting the IMO 2030 reduction target can be done with the technology currently available, through a mix of short- and medium-term measures, including operational ones, such as lower speeds, improvements in operational efficiency through data analytics, limited use of low-carbon fuels and energy efficient designs. Meeting the 2050 goals, however, requires that shipping undergo a global transition to alternative fuels and energy sources. That said, all alternative fuels known today have certain limitations, many solutions are not yet mature and there is no obvious 'one fuel' choice for the global fleet.

Norwegian insurance and risk management company [DNV](#) affirms that except for the electrification of ferries, [alternative fuels](#) used in shipping are still mainly fossil-based and dominated by liquefied natural gas (LNG). In their [Energy transition outlook 2021](#) report, DNV estimate that demonstration projects for on-board use of hydrogen and ammonia can be carried out by 2025, and that these technologies will be ready for commercial use in four to eight [years](#). They see methanol technologies (already put to commercial use for the first time) as more mature, and fuel cells as far less mature than internal combustion engines, for all fuels. Therefore, they recommend that fuel flexibility should be an essential specification for all new-builds, to make the ship ready for several fuel transitions during her lifetime, when there is a business case for it.

However, this is far from being the case. While fuels represent a large part of ship operators' costs, price differences between fossil-based marine fuels and low-carbon alternatives remain high. Decarbonising fuels will require major efforts, investment and time. The [shipping industry](#), while considering the initial IMO strategy a real challenge, is committed to decarbonisation and the 2050 targets. Reaching these targets will also require government action, stakeholders argue.

For now, neither the IMO nor the EU has a mechanism in place (such as a carbon levy or a carbon offsetting scheme) to undo the GHG emissions impact of the sector. In June 2021, the IMO adopted further energy efficiency measures that will start applying from 2023.³

On 5 October 2021, the International Chamber of Shipping ([ICS](#)), the global trade association of shipowners and operators, submitted [plans](#) to the IMO proposing measures to be taken by governments to help the industry achieve net zero CO₂ emissions by 2050, thus doubling initial IMO ambitions. To them, meeting the net zero target with a typical 25-year life of new ocean-going ships means that thousands of zero-emission ships will need to be in the water by 2030. The ICS proposes introducing a carbon levy on shipping to speed up the switch to more expensive zero-carbon fuels and setting up a compulsory R&D [fund](#) to support the development of zero-carbon [technologies](#).

Existing situation

EU maritime transport moves [77%](#) of external trade and 35 % of all trade by value among the EU countries, while around 9 % of the traffic is estimated to be between ports within the same EU country (domestic voyages). Ships ensuring these activities use bunker fuels that are tax exempt, internationally as well as in the EU.

Current EU legislation regulates the following aspects related to shipping fuels:⁴

- The **Alternative Fuels Infrastructure Directive** ('AFID', [2014/94/EU](#))

Member States have to provide infrastructure for alternative fuels on their territory in line with their national policy frameworks. Minimum requirements related to shipping:

- **LNG for ships:** an appropriate number of refuelling points for LNG at maritime ports, to enable LNG inland waterway vessels or seagoing ships to circulate throughout the TEN-T Core Network by the end of 2025 and at inland ports by the end of 2030;
- **shore-side electricity supply** for inland waterway vessels and seagoing ships in maritime and inland ports to be installed in TEN-T Core Network ports by the end of 2025, unless there is no demand and the costs are disproportionate to the benefits.

- **Regulation on the monitoring, reporting and verification of CO₂ emissions from maritime transport** ('EU MRV', Regulation [2015/757/EU](#)). Since 2018, ships above 5 000 gross tonnes calling at EEA ports have had to monitor and report fuel consumption, CO₂ emissions and transport work per voyage and on an annual basis. The CO₂ emissions of ships within EEA ports are reported separately. Shortly after, the IMO adopted the global GHG data collection system ([DCS](#)), operational since 2019. The two [monitoring systems](#) are not [aligned](#) yet; this results in overlaps and extra paperwork for shipping operators.

- **Directive on a reduction in the sulphur content of certain liquid fuels** ([2016/802/EU](#))

To reduce emissions of sulphur oxides (SO_x), which are harmful to human health, the EU adopted the already existing IMO limits for maximum sulphur content in marine fuels in 'emission control areas' into its [law](#), making them legally binding. Once the availability of compliant fuels was confirmed, the IMO announced in 2016 a global '[sulphur cap](#)' in all waters from 2020. To comply, ships can either install an exhaust cleaning system (scrubber), use a low-sulphur fuel or switch to LNG. The choice of approach and the responsibility for

compliance rest with shipping companies. However, while this measure limits SOx emissions, it does not address GHG emissions from shipping.

➤ The recast **Renewable Energy Directive** ('RED', [2018/2001/EU](#))

The directive asks Member States to ensure that the share of renewable energy within the final consumption of energy in the transport sector is at least 14 % by 2030.⁵ It also sets a specific sub-target for advanced biofuels of 3.5 % and caps on some biofuels. Sustainably produced maritime fuels are counted as 1.2 times their energy content.

Five proposals in the Commission's '**fit for 55 package**' are going to impact on shipping:

- **A revised EU emissions trading system directive** (EU-ETS, [COM\(2021\) 551](#)) aims to involve shipping in EU carbon trading.⁶ It targets vessels of at least 5 000 gross tonnes, regardless of flag, coming to EU ports. It covers emissions occurring at berth in an EU port, all intra-EU voyages, and 50 % of emissions from voyages sailing in and out of an EU port. Only emissions generated on board ships are considered ('tank-to-wake').
- **FuelEU Maritime** (the present proposal, see below) – a new regulation on sustainable maritime fuels that seeks to drive the shift towards low carbon maritime fuels. While the geographical scope is identical to the EU-ETS, this regulation would take into account GHG emissions from the whole supply chain ('well-to-wake').⁷
- **A revised directive on alternative fuels infrastructure** (AFID, now proposed as a regulation, [COM\(2021\) 559](#)) seeks to raise the availability of LNG by 2025 and shore-side electricity supply in main EU ports (determined by number of port calls a year) by 2030.
- **A revised directive on energy taxation** ([COM\(2021\) 563](#)) aims to end the tax exemptions for conventional marine fuels and incentivise the uptake of alternatives. Bunker fuels sold in the EU for voyages within the EU would no longer be tax exempt.
- **A revised renewable energy directive** (RED II, [COM\(2021\) 557](#)) sets up the new EU economy-wide target of an at least 40 % share of energy from renewable sources in 2030 and the new renewables target of GHG intensity reduction of at least 13 % by 2030 in the transport sector. It maintains the multiplier for renewable energy used by ships.

The forthcoming negotiations between the European Parliament and the Council on these proposals are likely to be complex and lengthy.

Parliament's starting position

In its resolution of 27 April 2021 on technical and operational measures for more efficient and cleaner maritime transport ([2019/2193\(INI\)](#)), the Parliament called on the Commission to apply the 'polluter-pays' principle and promote the use of alternatives to heavy fuels, including through tax exemptions. Furthermore, the Parliament voiced its support for a gradual phase-out of heavy fuel oil in shipping and for technological neutrality, provided it is consistent with EU environmental targets. Warning against carbon leakage, it underlined the need to preserve the competitiveness of the European maritime transport sector. Finally, it insisted that all readily deployable options in reducing maritime emissions should be used, including transitional technologies such as LNG.

In 2020, the Parliament's resolution ([2019/2956/RSP](#)) on the European Green Deal called for measures to move away from the use of heavy fuel oil and for investments in research into new technologies to decarbonise shipping, and in the development of zero-emission and green ships.

In its resolution of 25 October 2018 on the deployment of infrastructure for alternative fuels in the EU ([2018/2023\(INI\)](#)), the Parliament called on the Commission to support the decarbonisation of the maritime sector with a clear focus on innovation, digitisation and adaptation of ports and ships. It also supported the deployment of shore-side electricity supply at both inland and maritime ports.

Preparation of the proposal

The Commission ran an open [public consultation](#) between July and September 2020 and received 136 responses. All stakeholder groups favoured technology neutrality and preferred a goal-based approach to a prescriptive one, which could lead to technology lock-in and stranded assets.

The FuelEU maritime proposal is accompanied by an impact assessment (IA). External consultants Ecorys and CE Delft conducted a [study](#) in support of the IA. Between August and September 2020, they carried out a targeted consultation with experts from the European Sustainable Shipping Forum (ESSF) and a parallel series of interviews with stakeholders, including industry representatives and national authorities. Moreover, in September 2020, the Commission organised a roundtable with ESSF members and the European Ports Forum. Stakeholders agreed that the biggest barriers were high fuel and investment costs together with uncertainty for investors, and asked for more certainty in terms of planned climate and environmental requirements for shipping.

The above-mentioned study pointed to the need for EU policy action. Given that ships would have the possibility to bunker outside the EU, the study recommended that the policy target fuels used on voyages to and from EU ports, rather than fuels sold in the EU. As the lack of demand for clean fuels was seen to be the main problem, the policy should target the demand side rather than supply.

The [impact assessment](#) takes as its starting point the need to provide legal certainty, focus on the demand side to stimulate production and use renewable and low-carbon fuels while addressing the issue of carbon leakage. It considers three policy options, each using a different approach to the choice of technology and the way the required performance is to be achieved. The first option is a prescriptive approach involving the use of shares of specific fuels; here, the regulator chooses the technology. By comparison, both the second and the third options are goal-based, leaving the choice of technology to market operators but setting maximum GHG intensity limits for the energy used on board a ship. In addition, the third option includes a flexibility mechanism allowing for pooling and multipliers for zero-emission technologies. All options require freight and passenger ships to use shore-side electricity supply or an equivalent zero-emission technology. The third option was evaluated as the preferred one, as it has the best balance between objectives and costs, accommodates the need for flexibility, and would bring €58.4 billion in net long-term benefits.

The changes the proposal would bring

The [proposal](#) seeks to drive the uptake of low-carbon fuels by introducing limits on carbon intensity of the energy used on board ships and mandates the use of onshore power supply (OPS) in EU ports.

Reductions of annual average **GHG intensity of energy** used on board would start from 2025 with a modest 2 % improvement compared to a 2020 baseline. However, the requirements would get increasingly stringent over time, with a 6 % improvement required in 2030 and a 75 % cut in 2050.

The above requirements would apply to all of the energy used on board a ship in or between EU ports, but to only 50 % of the energy used by ships arriving at or departing from EU ports on voyages to third countries. They would apply to commercial vessels above 5 000 gross tonnes, regardless of flag.⁸ While the geographical scope is the same as in the proposed EU-ETS extension, the present proposal applies a full lifecycle approach to determine CO₂ emissions equivalents (including methane and nitrous oxides) from the energy used.

Shipping companies would be responsible for compliance. The new fuel standards would apply to ships using fuels bought within the EU, but also to fuels purchased outside the EU.

The proposal introduces a methodology for lifecycle analysis of fuels and common principles for fuel monitoring, reporting, verification and accreditation. The proposed system would be separate from and additional to the existing [EU MRV system](#), but should build upon the existing EU THETIS reporting database. Ships would have to carry a valid FuelEU compliance certificate. Flexibility is envisaged for both ships and companies through averaging and pooling.

Furthermore, from January 2030, freight and passenger ships staying at EU ports for more than two hours will also have to connect to **shore-side electricity supply** (also known as 'onshore power supply', [OPS](#)) and use this electricity for all energy needs while at berth, unless they use zero-emission technologies or are in an emergency situation. Until the end of 2034, exemptions would be allowed for cases when ships cannot connect to OPS due to unavailable connection points in port or because the port installation is not compatible with the on-board OPS equipment. From 2035 onwards, this flexibility would be significantly reduced. Harmonised penalties are envisaged for non-compliance with both the fuel standards and with the OPS requirements. The money collected will feed into the Innovation Fund⁹ and help finance the production of renewable maritime fuels and other greening activities in the maritime sector.

Implementing the proposal would cost ship operators €89.7 billion (increased capital costs: €25.8 billion, fuel costs: €63.9 billion), and save €2.3 billion from lower operating costs. Ports would need to spend €5.7 billion for extra bunkering infrastructure. There would be administrative costs for ship operators (€521.7 million) to collect data and for ports to set guidelines on safe handling of alternative fuels (€1.8 million); public authorities would run enforcement costs worth €1.5 million.

Advisory committees

This legislative procedure requires that both the European Economic and Social Committee (EESC) and the European Committee of the Regions (CoR) give their opinions. The EESC in its [opinion](#) of 8 December 2021 (rapporteur Constantine Catsambis, Employers - Group I, Greece) considers that the proposal should be harmonised with IMO regulations, including on the safety of fuels used by ships. Moreover, it cautions that energy transformation and decarbonisation of shipping can only be successful if there is social acceptance and the *modus operandi* of shipping and other sectors are safeguarded. The EESC regards the impact of the FuelEU Maritime proposal on shipping as disproportionate compared to other industries, and the long-term measures needed for the 2030-2050 GHG reductions as 'largely target-shooting' based on technologies yet to be developed and matured. Therefore, it calls for concentrated R&D support, some flexibility for the industry to be able to adapt and for fuel choice neutrality.

National parliaments

National parliaments were invited to scrutinise the proposal for any subsidiarity issues by [8 November 2021](#). The Irish Houses of Oireachtas, in their [reasoned opinion](#) on six of the 'fit for 55' proposals, argue that these do not contain sufficient quantitative and qualitative indicators to allow a full assessment of all the implications, and therefore fall short on the principle of subsidiarity.

Stakeholder views¹⁰

Before the publication of the 'fit for 55' package, [FuelsEurope](#), representing EU **refineries**, recommended that regulation of fuels should be based on their well-to-wake carbon intensity. They suggested setting a carbon intensity limit for maritime transport and making the ship's operator responsible, as technology-neutral steps incentivising the development of clean fuels. EU **maritime ports** ([ESPO](#)) called for a goal-based and technology-neutral approach, to support innovation and avoid stranded assets. They also insisted on recognition for the role of LNG as a transition fuel and on certainty about the support for investments made from 2021 to at least 2027. Both organisations pointed out the need for cooperation with the IMO in view of adopting a global approach.

Stakeholders' reactions following the July publication of the 'fit for 55' systematically consider not only the Fuel EU Maritime proposal but also its linkages to other proposals in the package. The inclusion of the maritime sector into the EU-ETS and the FuelEU Maritime proposal have been [criticised](#) by the ICS for imposing unilateral regional measures on international shipping, potentially undermining progress towards IMO rules.

Having expressed their preference for an international (IMO) solution, European **shipowners (ECSA)** agree with the objective to increase the uptake of cleaner fuels in shipping but point at the lack of consistency among the 'fit for 55' package proposals. As to the FuelEU Maritime proposal, the ECSA points out that, for fuel purchased outside the EU, the calculation of carbon savings would be based on documents from non-EU fuel suppliers. Besides making enforcement problematic, this could also distort competition between fuel suppliers and raise safety issues linked to the biofuels' flashpoint. Moreover, they propose making EU fuel suppliers, as opposed to shipping companies, responsible for meeting the fuel standards. Further, they regard the setting-up of a new monitoring and verification system as burdensome and suggest extending the existing MRV. Finally, shipowners consider that ships should not be penalised when OPS is not available in ports.

A May 2021 [study](#) commissioned by the ECSA and the ICS cautioned that the existing multiplier of 1.2 for renewable fuels is not enough to incentivise the uptake of clean shipping fuels and recommended a higher multiplier and concrete targets on fuel suppliers to make clean shipping fuels and energy available. It recommended making fuel suppliers responsible for ensuring that low-carbon fuel blends are safe, fit for purpose and available in sufficient quantities in EU ports.

[Transport&Environment](#) (T&E), an **environmental NGO**, warns that despite the electrification ambitions, ports risk fossil gas lock-in. If no green fuels are available for refuelling in European ports, the switch to low-carbon fuels cannot happen. They underline the important link between the FuelEU Maritime proposal and the revised proposal on alternative fuels infrastructure, and consider that the Commission is 'betting on the wrong horse' when promoting LNG. Instead, the T&E suggests that the EU legislation should set binding targets only for the refuelling infrastructure for green fuels, to accelerate the uptake of truly sustainable fuels in shipping, such as green hydrogen and ammonia, as these are indispensable for making the sector decarbonised by 2050. They insist that the proposed LNG mandate should be removed and investment into fossil infrastructure avoided. Finally, they also suggest speeding up the ambition for the electrification of ports, as the OPS supply technology is far from new and all ship types can technically be equipped with it.

The DNV sees the future of shipping as determined by an interplay of three drivers: regulations and policies, access to investors and capital, as well as cargo-owner and consumer expectations. In their series of [industry insights](#), they estimate that while the revised EU-ETS would increase the costs of emitting CO₂ significantly, the FuelEU Maritime proposal, once adopted, would mandate the shift to lower carbon fuels, with a potentially significant technical impact on ships. However, this impact would largely depend on the kind of fuels that become available. Given the way the calculation is set up, the DNV affirms that conventional energy-saving devices that simply reduce fuel consumption would not be enough to make ships compliant. They expect that, at least initially, the new EU set of rules regulation would encourage the uptake of LNG and drop-in biofuels.

Expert views

In a trio of 2021 reports, **World Bank** experts address the uncertainty about the general benefits or 'disbenefits' of [using LNG](#) as maritime bunker fuel. They recall that the LNG controversy lies in the fact that, when used as shipping fuel, LNG has an immediate positive impact on air quality, but its capability to contribute to both short- and long-term GHG reductions is questionable. They find that there is a consensus across the literature and industry that LNG, due to its carbon intensity, cannot form a large proportion of the bunker fuel mix in 2050. Therefore, they work with three infrastructure scenarios: that of a transitional role for LNG ('use it now and reuse it later with other fuels'), a temporary one ('use it and then stop') and a limited one ('limited use overall').

As a conclusion, they [recommend](#) that, given the uncertainties surrounding the GHG benefits of LNG, 'new public policy for LNG as a bunker fuel should be avoided'. By this, they mean both policies that give LNG a regulatory advantage over oil-delivered shipping fuels and measures covering only well-to-tank GHG emissions. They also suggest cutting existing policy support to LNG and regulating methane emissions both in the LNG supply chain and in the use of LNG on board ships. Public

support should focus on research, development and deployment of zero-carbon bunker fuels. The report recommends that shipowners opt for investments into increased energy efficiency and make sure their future investments are compatible with multiple zero-carbon candidate bunker fuels, among which they regard [ammonia and hydrogen](#) as the most promising.

Legislative process

The Commission presented the proposal to the Council Working party on Shipping on [25 August](#). The proposal has been analysed by the Working Party on Shipping. On 12 November, the Permanent Representatives Committee (Part I) held an exchange of views on the three transport files. The Slovenian Presidency then sent a first version of its compromise text to Member States, comprising only technical and editorial changes. This text was adopted as a progress report by the [Transport Council](#) meeting on 9 December. As regards the maritime sector, Council emphasis has been on fully assessing its contribution to emissions reductions and on the impacts of the changes proposed on the sector and its competitiveness. Given the interlinkages between the Fit for 55 proposals, Member States called for an assessment of the cumulative impacts of the proposals on ETS, ReFuelEU Aviation, FuelEU Maritime and on energy taxation.

In the European Parliament, the Committee on Transport and Tourism (TRAN) takes the lead (rapporteur: Jörgen Warborn, EPP, Sweden), while the Committee on Environment, Public Health and Safety (ENVI) and the Committee on Industry, Research and Energy (ITRE) are both associated under Rule 57.

In his [draft report](#) of 25 March 2022, the rapporteur supports the level of ambition proposed by the Commission, as well as the ship type and geographical scope. He warns, however, that the added significant costs in the transport phase will be passed on to the manufacturing and retail phases, ultimately hitting consumers.

To stop increasing the total level of regulatory burden, he wants to oblige the Commission to present measures offsetting the new compliance costs introduced, following the 'one in - one out' principle.

Considering the proposed regulation to be a tool to push ahead with IMO negotiations on global GHG standards, the rapporteur proposes a review clause that would allow fully aligning the EU rules with future international ones, and thereby remove any competitive disadvantage for European shipping companies.

While the Commission proposed, in annexes, tables with default reference values to calculate emission factors for fuels from well-to-tank and from tank-to-wake, the rapporteur suggests a complementary measure, where the shipowner or operator could use the actual value of emissions, if these are certified by means of laboratory testing or direct emissions measurements. In this way, frontrunners in clean shipping solutions can be rewarded if they outperform the default values.

As for the OPS, the rapporteur insists that the relevant provisions in FuelEU Maritime and AFIR have to be fully aligned, and proposes that the obligation to connect to OPS supply should apply to ships calling on ports falling within the scope of AFIR (big ports on the TEN-T core and comprehensive network) and not on all EU ports. Furthermore, he supports a permanent tax exemption on electricity supplied through OPS.

While the Commission wanted to consider biofuels and biogas produced from food and feed crops to have the same emission factors as the least favourable fossil fuels, the rapporteur does not support this approach. Neither does he want to grant the Commission the powers to adopt delegated acts to adapt penalties, emission factors and references to new technologies.

Further changes suggested by the rapporteur include clarifications on counting emissions for ice-breaking ships.

The deadline for tabling amendments to the draft report is 26 April 2022, 12:00.

EP SUPPORTING ANALYSIS

Erbach G., [Monitoring, reporting and verification of CO2 emissions from maritime transport](#), EPRS, European Parliament, October 2020.

Pape M., [Decarbonising maritime transport: The EU perspective](#), EPRS, European Parliament, October 2020.

Soone J., [Towards a revision of the Alternative Fuels Infrastructure Directive](#), EPRS, European Parliament, July 2020.

[Research for TRAN Committee – The aviation and maritime sectors and the EU-ETS: challenges and impacts](#), Policy Department for Structural and Cohesion Policies, European Parliament, July 2021.

OTHER SOURCES

[Sustainable maritime fuels \(FuelEU Maritime Initiative\). 'Fit for 55 package'](#), Legislative Observatory, European Parliament.

ENDNOTES

- ¹ [FuelEU Maritime – Avoiding Unintended Consequences](#), A preliminary study commissioned by the European Community Shipowners' Associations (ECSA) and the International Chamber of Shipping (ICS).
- ² The maritime sector is the only one without specific GHG reduction commitments in the EU.
- ³ The measures adopted by the [June 2021 MEPC](#) include the new Energy Efficiency Existing Ship Index ([EEXI](#)), the enhanced ship energy efficiency management plan (SEEMP) and the Carbon Intensity Indicator (CII) rating scheme.
- ⁴ While the title of the Commission proposal announces upcoming modifications to the [Directive 2009/16/EC](#), this directive does not deal with fuels but with the way EU port states control a ship's compliance with a large set of EU rules.
- ⁵ European Environmental Agency ([EEA](#)): the share of energy from renewable sources consumed in EU transport increased from under 2 % in 2005 to almost 9 % in 2019 and 10.1 % in 2020 (preliminary data).
- ⁶ The EU established in 2003 an emissions trading scheme ([EU ETS](#)) for GHG emissions generated by industry. Since 2012, the ETS also applies to the aviation sector. The ETS works as a cap and trade scheme.
- ⁷ It takes into account GHG emissions from production, transport, distribution and on-board use, including combustion.
- ⁸ Exempted: warships, naval auxiliaries, fish-catching or fish-processing ships, wooden ships of a primitive build, ships not propelled by mechanical means, or government ships used for non-commercial purposes.
- ⁹ As defined in [Directive 2003/87/EC](#).
- ¹⁰ This section aims to provide a flavour of the debate and is not intended to be an exhaustive account of all different views on the proposal. Additional information can be found in related publications listed under 'EP supporting analysis'.

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