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Delegations will find attached document SWD(2021) 238 final.

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COMMISSION STAFF WORKING DOCUMENT

Union submission to the 10th meeting of the International Maritime Organization's Intersessional Working Group on Reduction of GHG Emissions from Ships commenting on MEPC 76/7/15 by Denmark *et al* and proposing a Low GHG Fuel Standard for international shipping

Union submission to the 10th meeting of the International Maritime Organization's Intersessional Working Group on Reduction of GHG Emissions from Ships commenting on MEPC 76/7/15 by Denmark *et al* and proposing a Low GHG Fuel Standard for international shipping

PURPOSE

This Staff Working Document contains a draft Union submission to the International Maritime Organization's (IMO) 10th meeting of the Intersessional Working Group on Reduction of GHG Emissions from Ships (ISWG-GHG 10). The IMO has scheduled ISWG-GHG 10 from 18 to 22 October 2021.

The draft submission suggests that the IMO considers introduction of a low greenhouse gas fuel standard for international shipping as a measure that is part of Phase I of the Work Plan adopted at MEPC 76. Such a standard is an effective measure to ensure renewable and low-carbon fuels are taken up by international shipping by the middle of this decade. It would also enable the sector to meet the ambition set out in the IMO's Initial Strategy to reduce greenhouse gas emissions from shipping.

The low greenhouse gas fuel standard would prescribe a decreasing limit value for the average greenhouse gas (GHG) emissions intensity of fuels used by ships. It would allow ships a high degree of flexibility in choosing how to comply. The standard would ensure a predictable transition towards zero-GHG emission fuels, regardless of price developments of the fuels.

EU COMPETENCE

Regulation (EU) 2015/757[1] (EU MRV Regulation) establishes the legal framework for an EU system to monitor, report and verify (MRV) CO_2 emissions and energy efficiency from shipping. The regulation aims to deliver robust and verifiable CO_2 emissions data, inform policy makers and stimulate the market uptake of energy efficient technologies and behaviours. It does so by addressing market barriers such as the lack of information. It entered into force on 1 July 2015.

Any IMO measure on GHG matters, which will unequivocally require the monitoring, verification and reporting of GHG emissions from shipping, could affect the EU MRV Regulation. Therefore, the EU has exclusive competence for GHG emissions in shipping.

The revised Renewable Energy Directive ((EU) 2018/2001)[2] and the proposal for its revision as part of the 'Fit for 55' package maintain an overall policy for the production and promotion of energy from renewable sources in the EU. The revised Directive entered into force in December 2018 as part of the clean energy for all Europeans package. It aims to keep the EU a global leader in renewables and, more broadly, to help the EU to meet its emissions reduction commitments under the Paris Agreement. This Directive establishes a new binding renewable energy target for the EU for 2030 of at least 32%, with a clause for a possible upwards revision by 2023. A fuel standard would be a component of working towards this aim. Therefore, any IMO measures on a low GHG standard would affect the implementation of the Directive,

In addition, on 14 July 2021, the Commission adopted the Fit for 55 package of proposals to reduce GHG emissions. The package includes a number of Commission's proposals that specifically target

[1] Regulation (EU) 2015/757 of the European Parliament and of the Council of 29 April 2015 on the monitoring, reporting and verification of carbon dioxide emissions from maritime transport, and amending Directive 2009/16/EC, OJ L 123, 19.5.2015, p. 55–76

[2] Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources, OJ L 328, 21.12.2018, p. 82–209

the shipping sector, such as the revision of the EU Emission Trading System (ETS) to include the maritime transport sector (and the corresponding amendments to the EU MRV Regulation) but also the FuelEU maritime proposal, which focuses specifically on the use of renewable and low-carbon fuels in the maritime sector and mandates the uptake thereof by the ships calling EU ports.[3] Under the case-law[4], the risk of affectation concerns not only the rules as they stand, but also their foreseeable future development. These legislative initiatives further lead to exclusive competence of the EU for GHG emission in shipping.[5]

In light of all of the above, the present draft Union submission falls under EU exclusive competence.[6] Therefore, only the Union may act in the IMO to propose measures on GHG emissions. This Staff Working Document is presented to establish an EU position on the matter and to transmit the document to the IMO prior to the required deadline of 3 September 2021.[7]

[3] COM/2021/562 - 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/ECOJ L 328, 21.12.2018, p. 82–209

[4] Opinion 1/03 of the Court of Justice of 7 February 2006, Lugano Convention, point 126.

[5] See in particular Commission proposal COM(2021) 551 of 14.7.2021 for a directive of the European Parliament and of the Council amending Directive 2003/87/EC establishing a system for greenhouse gas emission allowance trading within the Union, Decision (EU) 2015/1814 concerning the establishment and operation of a market stability reserve for the Union greenhouse gas emission trading scheme and Regulation (EU) 2015/757. It contains a review clause (Article 3 ge) for possible amendments in relation to the adoption by the International Maritime Organization of a global market-based measure to reduce greenhouse gas emissions from maritime transport. The existence of such a review provision confirms the risk of affectation of the foreseeable EU acquis.

[6] An EU position under Article 218(9) TFEU is to be established in due time should the IMO Maritime Safety Committee eventually be called upon to adopt an act having legal effects as regards the subject matter of the said draft Union submission. The concept of '*acts having legal effects*' includes acts that have legal effects by virtue of the rules of international law governing the body in question. It also includes instruments that do not have a binding effect under international law, but that are '*capable of decisively influencing the content of the legislation adopted by the EU legislature*' (Case C-399/12 Germany v Council (OIV), ECLI:EU:C:2014:2258, paragraphs 61-64). The present submission, however, does not produce legal effects and thus the procedure for Article 218(9) TFEU is not followed.

[7] The submission of proposals or information papers to the IMO, on issues falling under external exclusive EU competence, are acts of external representation. Such submissions are to be made by an EU actor who can represent the Union externally under the Treaty, which for non-CFSP (Common Foreign and Security Policy) issues is the Commission or the EU Delegation in accordance with Article 17(1) TEU and Article 221 TFEU. IMO internal rules make such an arrangement absolutely possible as regards existing agenda and work programme items. This way of proceeding is in line with the General Arrangements for EU statements in multilateral organisations endorsed by COREPER on 24 October 2011.

INTERSESSIONAL MEETING OF THE
WORKING GROUP ON REDUCTION OF
GHG EMISSIONS FROM SHIPS
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CONSIDERATION OF MID-TERM GHG REDUCTION MEASURES IN THE CONTEXT OF PHASE I OF THE WORKPLAN FOR THE DEVELOPMENT OF MID- AND LONG-TERM MEASURES

Comments on MEPC 76/7/15 by Denmark et al and proposing a Low GHG Fuel Standard for international shipping

Submitted by the European Commission on behalf of the European Union

SUMMARY

Executive summary:	This document comments on MEPC 76/7/15 by providing more details on the Low GHG Fuel Standard (LGFS). It follows the Work Plan adopted at MEPC 76. A LGFS is an effective and cost-effective technical measure that could ensure that renewable and low-carbon fuels would start being used in international shipping by the middle of this decade and that the Levels of Ambition of the Initial Strategy are met. The LGFS would prescribe a decreasing limit value for the average GHG emissions intensity of fuels used by ships and would allow ships a high degree of flexibility in choosing how to comply. It would ensure a predictable transition towards zero-GHG emission fuels, regardless of price developments of the fuels.
Strategic direction, if applicable:	3
Output:	3.2
Action to be taken:	Paragraph 31
Related documents:	MEPC 76/7/2, MEPC 76/7/10, MEPC 76/7/15, MEPC 76/7/20

Introduction

1 There is broad recognition that the first zero-emission vessels need to enter the fleet by the middle of this decade, as witnessed in a number of submissions to MEPC 76. Because of the long lifetime of ships and the need to build up fuel production capacity and bunkering infrastructure, a later introduction would jeopardise meeting the Levels of Ambition of the Initial IMO Strategy on Reduction of GHG Emissions from Ships.

2 MEPC 76 adopted a work plan for the development of mid- and long-term measures which as its first phase will collate and initially consider proposals for measures. The first phase should be concluded in spring 2022.

3 MEPC 76/7/15 proposed three types of measures that can ensure that shipping decarbonises and that zero-emission vessels enter the fleet by the middle of the decade. This document comments on MEPC 76/7/15 by providing more details on the Low GHG Fuel Standard (LGFS). It follows the outline proposed in the agreed Work plan.

4 The European Union is of the view that it is essential that the LGFS and/or another measure proposed in MEPC 76/7/15 be adopted by the middle of this decade. Only by implementing the measures in the next years will private enterprises have an incentive to continue to invest in the development of technology and infrastructure.

5 In order to ensure a globally effective and fair transition, there may be a need for complementary support to the development and deployment of economically viable sustainable fuel/technologies in developing countries, in particular in SIDS and LDCs. In addition, support could be necessary for the development of alternative marine fuels production capacities and distribution infrastructures, port competitiveness and sustainable domestic shipping in these countries.

Main characteristics and features of a low GHG fuel standard

6 A LGFS would prescribe a limit value for the yearly average GHG emissions intensity of fuels used by ships, expressed in e.g. grams CO_2eq/MJ. The value would be gradually reduced over time in order to phase out emissions of GHGs as envisaged in the Initial Strategy. A fuel standard could be extended to all energy used on-board ships so that also batteries and other energy sources are included.

7 The standard would apply to all ships[8]. Initially, the standard would be set at the average well-to-wake GHG emissions of the fuel used in international shipping in a historic or reference year, e.g. the last year for which IMO DCS data are available before adoption of the measure. Using data from the Fourth IMO GHG Study, the estimate for the global fleet for 2018 is 90.1 g CO_2e/MJ on a well-to-wake (WTW) basis.

8 Such standard is, by essence, a regulatory measure. It could be set in MARPOL Annex VI and be lowered in a predictable way over time. The reduction could be linear or slightly lower at the beginning and increasing later, e.g. in order to allow the build-up of production capacity and infrastructure.

9 Ships could demonstrate compliance with the measure in three ways:

.1 by proving that they have exclusively used fuels with a GHG emissions intensity at or below the limit value during the compliance period (e.g. blends of traditional fuels and renewable fuels);

.2 by proving that they have used both traditional and renewable fuels in such a way that the average GHG emissions intensity of the fuels used during a compliance period is at or below the limit value; and

.3 by entering into pools with overachieving ships in such a way that the average GHG emissions intensity of the fuels used by the pool during a compliance period is at or below the limit value, or by using other possible flexibility

[8] Alternatively, the standard could apply to ships at or above a certain threshold limit, e.g. 5000 GT

mechanisms such as the possibility to borrow a limited amount of compliance surplus to be compensated the year after.

Impacts of the low GHG fuel standard on fuel choice and emissions

10 The LGFS would ensure that ships collectively use fuels which have lower GHG emissions per unit of energy on average. When the standard is zero, only zero emission fuels should be used.

11 For ships that choose to comply individually and that are not equipped with dual fuel engines, the rational choice would initially be to blend zero-and low-GHG fuels with conventional fuels. These could for example be blends of liquid biofuels with fuel oil; and blends of biogas with LNG as a starting point. As the standard becomes more stringent, the share of the low-GHG fuel in the blend would need to increase. When non-carbon fuels are more widely available, blends may contain hydrogen from renewable sources or sustainable e-derived fuels that are drop-in capable, or on new ships, ammonia or methanol produced from green hydrogen and biogenic carbon.

12 For ships that participate in pools, a rational choice may be for some ships to convert to zero-GHG emission fuels, like hydrogen, ammonia and synthetic carbohydrates (net-zero emission fuels). This choice could be attractive for ships which sail predictable routes and have secured supply of these fuels in one or more ports they visit regularly. Other ships may then continue to sail on conventional fuels and comply by relying on the compliance surplus from zero-GHG ships. As the standard becomes more stringent, and zero-GHG fuels become more widely available, the number of ships sailing on zero-GHG fuels should increase. When the standard is zero, all ships should use zero-GHG emission fuels continuously.

Potential implications on the shipping industry

13 Like all measures that incentivise the use of low- and zero-GHG fuels, the LGFS would incentivise:

.1 new types of fuels that are not yet used in shipping and some of which have different chemical and physical properties and different environmental and safety profiles;

.2 Investments in ships that can use these fuels; and

.3 Investments in production capacity and possibly bunkering infrastructure for new sustainable fuels.

14 Renewable and low emission fuels are currently more costly than current fuels but prices are expected to decline as supply increases.

15 The LGFS could be regarded as a technical measure to decarbonise the sector via the use of cleaner fuels and technologies. It has the advantage of kick-starting the use and development of zero-GHG emission fuel and technologies that the sector needs. Additionally, the concept does not entail an outflow of money from the shipping industry (other than from the purchase of zero-GHG emission fuels). As such, the effort is likely to translate into relatively greater resources and economic incentives for the various actors in the maritime cluster (maritime fuel suppliers and distributors, marine technology developers). Complementary efforts and measures such as carbon pricing may be needed to help ensure a globally effective and fair transition and to address disproportionally negative impacts on states, as appropriate.

Implementation and enforcement aspects

16 Like many measures aiming to ensure a transition towards zero-GHG emission fuels, the LGFS would be based upon a determined method defining the life cycle carbon footprint of fuel used, including sustainability criteria, as proposed with more details in ISWG-GHG 9/2 by the EU. More specifically, it requires calculating well-to-tank (WTT) GHG emissions during the production of a fuel, up to the point of bunkering, as well as default values for fuels that do not have certified emissions. The proposed measure would require that the information on WTT GHG emission intensity is communicated to the ship, e.g. in the Bunker Delivery Note (BDN) and it would be based upon a determined method to calculate emissions of all GHGs on board.

17 Building on this regulatory framework, the IMO would set a regulatory limit value for the GHG emission intensity of fuels used on board ships and a reduction pathway for the limit value over time.
In line with the methodology proposed in ISWG-GHG 9/2, the IMO would provide a methodology, default values for all relevant fuels' pathways. Fuel suppliers would use this list to indicate the CO_{2eq} value of the fuel on the bunker delivery note (BDN), based on the closest corresponding production pathway. Further, depending on a certification scheme to be developed and endorsed by the IMO, fuel producers may alternatively certify the GHG impact of fuel production.

18 Ships would receive information on the well-to-tank emissions as part of their BDN. Based on this information, on the amount of energy used in a compliance period, and on calculations of GHG emissions generated on-board (the tank-to-wake emissions), ships would calculate their well-to-wake (WTW) GHG emissions and the emissions intensity of the fuel or energy used in the compliance period. Ships should submit a verified report to the relevant Administration (or recognised organisation duly authorised by it), possibly as part of their submission of data to the IMO Ship Fuel Consumption Database.

19 When ships, either individually or as part of a pool, meet the requirements of the measure, the relevant Administration (or recognised organisation duly authorised by it), should issue a certificate of compliance (CoC). For overachieving ships, it may be possible to use compliance surplus for the following reporting period. When the emission intensity of the fuel used by a ship or a pool is higher than the limit value, the relevant Administration would not issue a statement/certificate of compliance unless the ship can borrow sufficient compliance surplus to make up for its shortfall.

20 Ships would be allowed to sail only when they have a document/certificate of compliance and Port States would be allowed to inspect this document. The compliance system should ensure an equal treatment of all actors, including on the same route.

21 In order to safeguard the integrity of the system for pooled compliance, including to avoid double counting, an international compliance registry would need to be established. This registry would allow tracking the performance and compliance balance of all eligible ships and pools. Such registry could be administered by the IMO.

Legal aspects

22 MARPOL and its Annex VI work together with Articles 2 and 38 of the IMO Convention to provide a solid international legal basis for the proposed LCFS measure. Additional discussion was presented in MEPC 76/7/11 and MEPC 76/INF.22 (both by Belgium, Marshall Islands and Solomon Islands), Importantly, MEPC has precedent in the realm of fuel mandates, and the LGFS resembles elements of regulations currently in force,

including MARPOL Annex VI regulations 14 and 18 related to fuel sulphur content and fuel oil quality.

23 A LGSF would be adopted as amendments to MARPOL Annex VI, including at least:

.1 a regulation to set the standard, the flexibility mechanism and the reduction pathway over time; and

.2 monitoring, verification and reporting obligations for ships including an international registry;

.

24 In common with other measures aiming to increase the use of zero-GHG emission fuels, this measure would also require to include:

.1 a methodology for fuels life-cycle assessment, i.e. the calculation of WTW emission factors of fuels and possibly on the certification of compliant fuels; and

.2 sustainability and eligibility criteria that need to be met by fuels that are used for compliance.

Indication of the total workload for the Organization

25 The measure should enter into force by 2025 so that the first zero-GHG fuelled ships enter the fleet well before the end of this decade.

26 The work can be expedited by ensuring that there are at least three parallel tracks, one on the regulatory infrastructure for all measures aiming to incentivise the use of zero-GHG emission fuels, one on the LGFS and other measures, and one on the assessment of impacts on States for each measure under development.

27 The table below displays a list of possible (and non-exhaustive) tracks and corresponding outcomes required for the development of this measure:

Tracks	Expected outcomes
1. Design of the measure	Definition of the scope, in particular which ships and which GHG are included, whether exemptions are needed, etc.
	Definition of the method for calculating the GHG emissions intensity of fuels used for all sources of energy on board and for defining sustainability and eligibility criteria.
	Choice of the reference year and calculation of the average GHG emissions intensity of the fuel used in international shipping on the reference year
	Choice of reduction targets of the standard over time
	Design of rules and mechanisms for pooled compliance, management of compliance surplus
	Design of enforcement rules: data verification process, certification instruments
	Development of texts of amendments to MARPOL Annex VI and of other supporting instruments (such as guidelines)
2. Assessment of impacts on States	Development of the complete impact assessment as per the different steps detailed in the *Procedure for assessment of impacts on States* (MEPC.1/Circ.885)

Tracks	Expected outcomes
3. Pre-requisite before entry into force of the measure	Finalise the methodology for fuels life-cycle assessment as also proposed in ISWG-GHG 9/2, i.e. the calculation of WTW CO_{2eq} emission factors of fuels and on the certification of compliant fuels, also taking into account sustainability criteria
	Determine whether the IMO DCS needs to be amended to support the implementation of the measure and, if so, amend it.
	Set up an international compliance registry

Conclusion

28 The Low GHG Fuel Standard would help to ensure that the use of sustainable fuels with low or zero GHG emissions increases over time to decarbonise the sector. The measure would help provide long-term certainty to the shipping sector and to fuel producers alike by predictably quantifying the demand for these fuels. It also provides a sufficient signal that potential investors in production capacity can start immediately.

29 The Low GHG Fuel Standard would help ensure that the transition to low or zero GHG emissions fuels commences immediately after the implementation of the measure begins. It would allow for a gradual expansion of the production and bunkering infrastructure and help to ensure that shipping would not be interrupted by disruptions in fuel production or supply.

30 The Low GHG Fuel Standard can stand-alone but could also co-exist with other measures, including measures that raise revenues. Such measures may help to support complementary efforts that may be needed to address disproportionally negative impacts on states and to help ensure a globally effective and fair transition.

Action requested of the Working Group

31 The Working Group is invited to

.1 consider this document and take the LGFS into account in the initial consideration of proposals for measures as part of Phase I of the work plan; and

.2 on the basis of this consideration, advise the Committee on follow-up actions that should be undertaken by the Organisation for an efficient and inclusive development of this measure, in particular regarding the three parallel tracks identified in paragraph 7.