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COVER NOTE

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Subject:	COMMISSION STAFF WORKING DOCUMENT Union submission to the seventh meeting of the Intersessional Working Group on Reduction of GHG Emissions from Ships of the IMO in London from 23 to 27 March 2020 on the introduction of lifecycle guidelines to estimate well-to tank greenhouse gas (GHG) emissions of sustainable alternative fuels to incentivise the uptake of sustainable alternative fuels at global level

Delegations will find attached document SWD(2019) 456 final.

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COMMISSION STAFF WORKING DOCUMENT

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PURPOSE

The document in Annex contains a draft Union submission to the seventh meeting of the Intersessional Working Group on Reduction of GHG Emissions from Ships of the IMO. It suggests key principles and concepts for the development of lifecycle guidelines to estimate well-to tank greenhouse gas (GHG) emissions of sustainable alternative fuels. The approach suggests using lifecycle guidelines based on criteria of sustainability and greenhouse gas (GHG) emissions savings.

This draft Union submission is presented with a view to establishing the EU position and thus allowing transmission of the document to the IMO prior to the required deadline of 7 February 2020[1].

In April 2015, the European Parliament and the Council adopted Regulation (EU) 2015/757[2] to establish the legal framework for an EU system to monitor, report and verify (MRV) CO_2 emissions and energy efficiency and other relevant information 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 and started to be implemented in 2018. Related delegated Commission regulations on verification and accreditation of verifiers and on the refinement of monitoring methods were adopted on 22 September 2016[3]. Two additional implementing regulations on cargo parameters and templates were adopted by the Commission on 4 November 2016[4]. The EU MRV Regulation provides for emission factors for fuels used on board.

In addition, the original Renewable Energy Directive (2009/28/EC)[5] establishes an overall policy for the production and promotion of energy from renewable sources in the EU. It requires the EU to fulfil at least 20% of its total energy needs with renewables by 2020—a figure to be achieved through the attainment of individual national targets. All EU Member States must also ensure that at least 10% of their transport fuels come from renewable sources

[1] 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.

[2] OJ L 123, 19.5.2015, p. 55–76

[3] OJ L 320, 26.11.2016, p. 1–4 and OJ L 320, 26.11.2016, p. 5–24

[4] OJ L 299, 5.11.2016, p. 1–21 and OJ L 299, 5.11.2016, p. 22–25

[5] OJ L 140, 5.6.2009, p. 16–62

by 2020. This Directive was revised in 2018 (Directive (EU) 2018/2001)[6] entering into force in December 2018 as part of the Clean energy for all Europeans package. It aims to keep the EU as a global leader in renewables and, more broadly, helping the EU to meet its emissions reduction commitments under the Paris Agreement. The new 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.

In addition, Directive 2014/94/EU[7] of the European Parliament and of the Council of 22 October 2014 on the deployment of alternative fuels infrastructure requires Member States to ensure that LNG is available at EU core ports for seagoing ships as from the end of 2025. EU Member States have finalised national policy frameworks for the market development of alternative fuels and their infrastructure. These put a particular focus on the different supporting measures and initiatives for the promotion and development of LNG refuelling points for sea going ships. The said draft Union submission therefore falls under EU exclusive competence[8].

[6] OJ L 328, 21.12.2018, p. 82–209

[7] OJ L 307, 28.10.2014, p. 1–20

[8] A formal EU position under Article 218(9) TFEU is to be established in due time as regards the subject matter covered by this draft Union submission. The act which the IMO Marine Environment Protection Committee will eventually be called upon to adopt will constitute an act having legal effects. The envisaged act will be capable of decisively influencing the content of the above EU legislation. 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).

INTERSESSIONAL MEETING OF THE
WORKING GROUP ON REDUCTION OF
GHG EMISSIONS FROM SHIPS
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FURTHER CONSIDERATION OF CONCRETE PROPOSALS TO ENCOURAGE THE UPTAKE OF ALTERNATIVE LOW-CARBON AND ZERO-CARBON FUELS, INCLUDING THE DEVELOPMENT OF LIFECYCLE GHG/CARBON INTENSITY GUIDELINES FOR ALL RELEVANT TYPES OF FUELS AND INCENTIVE SCHEMES, AS APPROPRIATE

Introducing lifecycle guidelines to estimate well-to tank greenhouse gas (GHG) emissions of sustainable alternative fuels to incentivise the uptake of sustainable alternative fuels at global level

Submitted by the European Commission on behalf of the European Union

SUMMARY

Executive summary:	This document suggests the introduction of lifecycle guidelines to estimate well-to tank greenhouse gas (GHG) emissions. These suggested lifecycle guidelines would be based on sustainability and GHG emissions saving criteria to incentivise the uptake of alternative fuels at global level.
Strategic direction, if applicable:	3
Output:	3.2
Action to be taken:	Paragraph 24
Related documents:	MEPC 75/7/2, MEPC 74/7/6, MEPC 74/18, ISWG-GHG 3/2, ISWG-GHG 1/INF.2, ISWG-GHG 5/5, ISWG-GHG 5/4, ISWG-GHG 6/5, ISWG-GHG 6/5, ISWG-GHG 6/5/1, and ISWG-GHG 6/5/2

Introduction

1 The *Initial IMO Strategy on reduction of GHG emissions from ships* compels the maritime sector to peak GHG emissions and phase them out as soon as possible in this century. Furthermore, the Initial IMO Strategy sets an ambition to decline the carbon intensity of international shipping by at least 40% by 2030, pursuing efforts towards 70% by 2050, compared to 2008.

2 By 2050, total GHG emissions must be cut by at least 50 percent compared to 2008. To meet these mid- and long-term targets, the IMO urgently needs to develop policies to incentivise the uptake of sustainable alternative low-carbon and zero-carbon fuels and the transition to zero-emission ships.

3 In its report to MEPC 75, the ISWG-GHG 6 gave priority to the development of “tank-to-propeller” emission factors for alternative fuels, noting that it was important to be

cognisant of upstream emissions ("well-to-tank"). The Group considered well-to-tank emissions relevant to assess the sustainability of alternative fuels and identify the GHG emissions savings that low-carbon and zero-carbon fuels can bring about in the international shipping sector.

4 In response to the invitation in MEPC 75/5/2 to submit proposals for draft guidelines on lifecycle GHG/carbon intensity for all relevant types of fuels, this submission suggests to clarify a number of concepts and key principles that need to be agreed by the Group before proceeding with the further development of such guidelines. To this end, this submission attempts to reconcile the proposals put forward by ISWG-GHG 6/5 (Norway), ISWG-GHG 6/5/1 (Republic of Korea), ISWG-GHG 6/5/2 (United Kingdom), and CESA/EUROMOT (MEPC 74/7/6).

Definitions and clarifications

5 For the sake of clarity, this submission will use the following categories for describing GHG emissions related to fuels:

.1 Tank-to-propeller (total emissions from combustion on board a ship and potential leakage)

.2 Well-to-tank (total emissions of extracting raw materials, producing, and transporting the fuel)

.3 Well-to-wake (total carbon foot print of the fuel is obtained by adding 1 and 2)

6 The individual value of the three above-mentioned concepts is recognised and it is believed that these are not mutually exclusive. While existing IMO instruments already refer to the tank-to-propeller approach, it becomes clear that its sole use is not sufficient to assess the possible contribution of alternatives fuels to the sector's decarbonisation efforts and their overall GHG implications. Well-to-tank emissions should be taken into account to assess the overall GHG implications of alternative fuels when incentivising the uptake of sustainable low-carbon and zero-carbon fuels by international shipping.

7 In this respect, it is important to recall that the IMO strategy itself calls for the development of *"robust lifecycle GHG/carbon intensity guidelines for all types of fuels, in order to prepare for an implementation programme for effective uptake of alternative low-carbon and zero-carbon fuels"*. The reference to lifecycle GHG/carbon intensity in the IMO strategy clearly suggests that the intended guidelines should cover more than the emissions produced during the on-board combustion process and also reflect the production and distribution of these fuels.

8 The importance of increasing the energy efficiency as a first necessary step to reduce GHG emissions is fully recognised. The need to develop zero-emission propulsion technology and move towards zero-emission marine fuels has also been agreed on. As a result, it is considered of the utmost importance to incentivise the uptake of sustainable alternative fuels that are low- or net zero-carbon. The recognition of these fuels' contribution can only be realised if upstream/well-to-tank emissions are factored into a well-to-wake analysis.

9 This approach does not suggest that IMO should regulate fuel production and supply. At the same time, it is important to recognise that production of marine fuels is also impacted by IMO regulatory fuel quality requirements, as demonstrated by the recent experience of the introduction of 0.50 percent sulphur limit in marine fuel. Thus, the impact of IMO regulations on the fuel production and supply cannot be ignored.

Tank-to-propeller approach and its limitations

10 The tank-to-propeller approach has been central in reflecting carbon emissions from international shipping in existing IMO measures and corresponds to the prevalent use of carbon-based fuels in the sector.

11 By placing emphasis on the emissions from combustion, the tank-to-propeller approach rewards innovation in zero-carbon propulsion technologies. However, its use as a unique metric may also trigger unintended and adverse consequences as it may not directly incentivise ship-owners and operators to choose fuels with an overall low well-to-wake GHG footprint.

12 In order to avoid that ship-owners and operators choose propulsion systems or fuels with a net GHG footprint exceeding that of fossil fuels due to the omission and possibly shifting of emissions to upstream sectors, it is important to consider introducing a system allowing for an overall accounting of the GHG performance of fuels, avoiding a shift of emissions to upstream sectors.

Proposals reflecting upstream emissions with the well-to-wake approach

13 By taking into account emissions related to the production cycle of fuels, the well-to-wake approach could enable a more complete picture of the environmental performance of alternative fuels. Furthermore, it could also incentivise the uptake of existing technologies with a lower GHG footprint than conventional fossil fuels. Because of the global commitment to peak emissions as early as possible in this century, it would indeed be important to start reducing emissions immediately using existing technologies and "drop-in" alternative fuels.

14 The assessment of existing and new technologies that produce low- or net zero-carbon emissions from well-to-wake perspective would require the use of a commonly agreed lifecycle GHG methodology. This would incentivise the uptake of clean, renewable, and sustainable alternative fuels. This methodology should rely on a set of criteria, which should be translated into specific adjustment values, as described below, reflecting upstream emissions in a well-to-wake approach.

15 The guidelines should continue to rely on tank-to-propeller emissions as the primary metric. This will continue to incentivise the use of low- or zero carbon propulsion technologies/fuels. However, the guidelines should define a methodology to adjust this primary metric in order to reflect well-to-wake emissions.

16 The guidelines should apply to all relevant marine fuels. When defining adjustment values, the guidelines should consider criteria on sustainability and GHG emissions savings, which reflect already existing regulatory standards, in particular:

.1 Biofuels, bioliquids or gas, and biomass-derived fuels should fulfil a set of sustainability and GHG emissions saving criteria. This reflects already existing regulatory standards and agreed practices. Note that in the European Union, Directive (EU) 2018/2001 promotes renewable energy and sets a target for its overall share. It defines the sustainability and GHG emissions savings criteria as well as GHG methodology that such bio-based renewable fuels need to fulfil to count towards the renewable targets defined by the directive.

.2 For synthetic, electricity-based fuels (power-to-x) similar sustainability and GHG emissions saving criteria should be developed. Directive (EU) 2018/2001 sets a GHG saving threshold that such fuels have to meet as well as conditions on

additionality of renewable power used in the production of such fuels. A specific GHG methodology for the calculation of the emission savings of such fuels as well as a methodology to provide evidence of additionality will be adopted into law by 2021.

17 The sustainability and climate performance of fuels should be established based on, but not limited to, the above-mentioned criteria, and priority should be given to the least GHG-emitting fuels and propulsion systems, favouring zero emissions solutions, in a well-to-tank perspective.

Principles related to the adjustment values

18 The adjustment values could be used to reflect the performance of fuels in use. In doing so, the values would link to the fuel consumed and therefore incentivise operators to choose less carbon-intensive fuels. Thus, the application of adjustment values is not meant as a design measure directed at manufacturers.

19 Adjustment values applied to the fuel consumed would allow to have a means to compare the environmental performance of different fuel options, allowing to account for GHG emission savings produced by “carbon-neutral” fuels and ensuring that, overall, fuels produced sustainably and with the lowest GHG emissions are rewarded in the transition to truly zero-emission fuels.

20 Adjustment values and the lifecycle guidelines should in principle be applied to alternative fuels. Their possible application to fossil fuels could be further considered. Adjustment values would ensure that zero-emissions fuels produced in a sustainable way from low-carbon/renewable pathways are incentivised as compared to fossil fuels. In addition, it would enable demonstrating savings from sustainable alternative fuels options that on existing technologies (e.g. uptake or blending of biofuels).

21 Adjustment values could primarily be applied to existing default values for tank-to-propeller emissions. In this case, the well-to- wake emissions of a bio-diesel or a blended bio-diesel should first rely on the default downstream emission values set for diesel and proportionally be corrected by its well-to-tank impact. Equally, while tank-to-propeller emissions from hydrogen can be set at zero, its life-cycle analysis may depend on the sustainability pathway for hydrogen production.

22 Applying these adjustment values would be of key importance for low- and zero-carbon fuels, which do not require special technical arrangements (“drop-in fuels”), and of which the usage cannot be “pre-certified” in design/technical measures such as the Efficiency Energy Design Index.

23 The performance and corresponding adjustment values of such fuels could be documented via the Bunker Delivery Note (reflecting the above-mentioned sustainability and GHG-saving criteria). The adjustment values should be included in the Bunker Delivery Note by an amendment as appropriate.

Action of the Working Group

24 The Group is invited to:

.1 take note of the principles suggested in this submission and comment on the suggested approach for the development of the lifecycle GHG/carbon intensity guidelines

.2 consider and comment on paragraphs 14-25 suggesting to reconcile the tank-to-propeller and well-to-tank approaches by introducing adjustment values based on sustainability and GHG emission saving criteria.