

Council of the European Union

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NOTE

From:	General Secretariat of the Council
To:	Delegations
No. Cion doc.:	11769/24
Subject:	Draft Union submission to the International Maritime Organization's 17th Intersessional Working Group on GHG suggesting a combination of GHG fuel standard and a universal GHG contribution
	 Presidency compromise

In view of the Shipping Working Party meeting on 8 July 2024, delegations will find attached a Presidency compromise proposal.

Changes compared to the Commission proposal are indicated in <u>bold underline</u> (added text) and strikethrough (deleted text). In the annex, the proposed changes are highlighted in yellow.

General scrutiny reservation: all delegations.

Deadline for submission to IMO: 9 August 2024.

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INTERSESSIONAL MEETING OF THE WORKING GROUP ON REDUCTION OF GHG EMISSIONS FROM SHIPS 17th session Agenda item **X2** ISWG-GHG 17/2/XX xxxx 2024 ENGLISH ONLY Pre-session public release: 🖂

FURTHER CONSIDERATION OF THE DEVELOPMENT OF CANDIDATE MID-TERM MEASURE(S)

Proposal on a combination of GHG fuel standard and a universal GHG contribution

Submitted by Austria, Belgium, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands (Kingdom of the), Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and the European Commission, acting jointly in the interest of the European Union

SUMMARY				
Executive summary:	This submission describes the full design of a basket of measures consisting of a GHG Fuel Standard (GFS) and a universal GHG contribution, and explains how it can deliver on all objectives of the 2023 IMO GHG strategy. The proposal is translated in proposals for MARPOL amendments (annex to the submission), following the agreed structure of the IMO net zero framework.			
Strategic direction, if applicable:	3			
Output:	3.2			
Action to be taken:	[Paragraph 52]			
Related documents:	ISWG-GHG 15/3/1, ISWG-GHG 15/3/2, ISWG-GHG 16/2/7, ISWG-GHG 16/2/8, ISWG-GHG 16/2/9, ISWG-GHG 16/2/10, ISWG-GHG 16/2/12,			

Introduction

1 MEPC 81 agreed on a draft possible outline of the "IMO net-zero framework" which could be used as a starting point for consolidating the different proposals into a common structure, for further development of the combination of measures agreed in the 2023 IMO GHG Strategy. The Committee also invited interested Member States and international organizations to work together intersessionally with a view to preparing a consolidated proposal for the basket of mid-term measures for consideration at the next session. 2 The co-sponsors of this submission have developed the annexed draft MARPOL amendments following the agreed structure of the IMO Net Zero Framework. The Coco-sponsors have further contributed to the compilation of a draft text containing all suggested MARPOL amendments tabled so far by proponents. That draft compiled text contains options reflecting the different proposals, including the proposal for MARPOL amendments on both the technical and economic element, as developed by the co-sponsors and annexed to this submission, with the necessary editorial adjustments. At the time of drafting this submission, the draft compiled text was considered for a separate submission to ISWG-GHG 17. The present submission argues in favour of the specific option supported by the co-sponsors, namely the combination of a GHG Fuel Standard with its Flexibility Compliance Mechanism (FCM) ("GFS"), on the one hand side, with a GHG contribution on all GHG emissions on the other hand side.

3 The IMO net-zero framework should deliver on all the goals and objectives of the 2023 IMO Strategy on reduction of GHG Emissions from Ships ("the Strategy"), taking into account other existing measures. Table 1 below illustrates how the combination of a GFS with a GHG contribution complements already existing measures, and is designed to address all the goals and objectives of the Strategy, while minimising negative impacts on states.

Goal/objective	Measures to meet the goal
Further improvement of the technical energy efficiency of new and existing ships	EEDI ¹ , EEXI ² and the GHG contribution.
Reduce CO ₂ emissions per transport work by at least 40% by 2030	CII ³ , EEXI, GHG contribution.
Reduce GHG emissions in line with the agreed levels of ambition and indicative checkpoints: - at least 20% reduction, striving for 30% by 2030; - at least 70%, striving for 80%, by 2040; - Net zero by or around, i.e. close to 2050	GFS with a GHG Fuel Intensity ("GFI") trajectory calibrated to meet the GHG emission reduction goals and checkpoints, in combination with energy efficiency improvement stimulated by the GHG contribution and the short-term measures.
At least 5-10% of the energy by 2030 to come from zero or near-zero GHG emission technologies, fuels and/or energy sources	The system of reward for the use of eligible zero and near-zero GHG emission fuels ("feebate") which, in combination with the co-sponsors' proposal for the GHG contribution, and the FCM, will bring the price of such fuels to the same <u>a</u> <u>similar</u> level as that of low GHG fuels. In addition: increased competitiveness of zero and near-zero technologies and energy sources because of increased fuel prices brought about by the GFS and the GHG contribution.
Contributing to a level playing field	The Flexibility Compliance Mechanism (FCM) and the feebate will spread out the costs of the fuel transition over the entire fleet and avoid that certain parts of the sector are more affected than others. Further, the details of guidelines relating to mid- term measures might be adjusted to address the need for a level playing field.
Address disproportionally negative impacts, as appropriate	A gradually declining GHG Fuel Intensity (GFI) will avoid shocks to the sector and will help minimise the overall transition costs. Potential disproportionate negative impacts are addressed by funding in-sector projects in

¹ Energy Efficiency Design Index, in force since 2013.

² Energy Efficiency Existing ship Index, in force since 2023, element of the "Short term measures".

³ Carbon Intensity Indicator, in force since 2023, element of the "Short term measures".



	impacted countries with revenues from the GHG contribution.
Contribute to a just and equitable transition: leave <i>no one</i> behind	An appropriate part of the revenues from the GHG contribution will be used for capacity building seafarers training and similar projects
Contribute to a just and equitable transition: leave <i>no country</i> behind	Revenues from the GHG contribution will be used to finance, in developing countries, projects related to the energy transition of maritime transport.

Table 1 – explaining how the combination of measures proposed by the co-sponsors addresses all the goals and objectives of the Strategy.

4 The remainder of this submission is structured as follows. Paragraphs 5 and 6 explain the need for the IMO net-zero framework to address the well-to-wake GHG emissions of marine fuels in a sustainable way. Paragraphs 7 through 10 present the advantages of a combination of a goalbased marine fuel standard with a GHG contribution on all emissions. The co-sponsors explain that this combination will be effective in achieving the goals and objectives of the Strategy while minimising negative impacts and overall costs. Paragraphs 11 through 18 present arguments for the selection of the GFS as the technical element in Chapter 5.1 of the IMO Net-zero Framework, while Paragraphs 19 through 44 present arguments for the selection of the complementary universal GHG contribution on all well-to-wake (WTW) GHG emissions as the economic element in Chapter 5.2. Paragraphs 45 through 48 discuss compliance with- and verification of the requirements on ships. Conclusions are in paragraphs 49 through 51.

Measures should address WtW emissions and their sustainability as defined in the LCA guidelines

5 Point 3.2 of the Strategy specifies that the levels of ambition and indicative checkpoints should take into account the well-to-wake GHG emissions of marine fuels as addressed in the *Guidelines on life cycle GHG intensity of marine fuels* ("LCA Guidelines"), and that the overall objective of the Strategy is to reduce GHG emissions within the boundaries of the energy system of international shipping and to prevent a shift of emissions to other sectors. The Strategy states that this is needed in order for the Strategy to adequately contribute to the global efforts to reduce GHG emissions in general, thus supporting the goals of the Paris Agreement and the UN's Sustainable Development Goal 13 "Take urgent action to combat climate change and its impacts".

6 In order to deliver on the Strategy's goal to reduce GHG emissions within the boundaries of the energy system of international shipping and to prevent a shift of emissions to other sectors, the measures in the IMO net-zero framework need to be designed to address the WTW GHG emissions and the sustainability of fuels as defined in the LCA guidelines. Other approaches explored would be less efficient and create the risk of promoting fuels with significant well-to-tank (WTT) emissions, thereby increasing the cost of the transition or shifting emissions.

The combination of a GFS (with its flexibility compliance mechanism) with a GHG contribution on all emissions would meet all the goals of the Strategy in a cost-effective way

7 As illustrated in Table 1, the GFS (with FCM) and the GHG contribution complement each other in addressing the goals of the Strategy. Either of the two elements in isolation would lead to significant challenges and would imply less effective regulation. The following paragraphs explain that in more detail.

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8 A GFS (with FCM), adopted in isolation, could set the mandatory GHG reduction objectives, but would not provide sufficient incentives and resources to achieve them:

.1 The 2030 GHG reduction checkpoint can be achieved more efficiently if significant energy efficiency gains are made, notably, but not only, stemming from operational measures. Without efficiency improvements, the required GHG reductions of at least 20% and striving for 30% would need to be delivered only through the use of sustainable fuels. It will be very challenging to increase the supply and use of such fuels quickly enough to allow for achieving on the checkpoint. Large energy efficiency gains will require economic incentives such as the ones which can be provided by the GHG contribution.

.2 The GFS (with FCM) alone will not provide enough incentives to use the initially more expensive zero- and near zero GHG fuels ("ZNZ fuels"), because, in the first phases of the transition, it will be possible to achieve the required GFI using much cheaper transitional low-GHG fuels, and the impact of the FCM will not cover the full price gap to the ZNZ fuels. The 2030 ZNZ fuel uptake objective requires specific targeted support measures, such as the feebate proposed in the framework of the GHG contribution. Delayed uptake of ZNZ fuels will have severe negative consequences such as increased long-term costs of the transition, over-reliance on biofuels including those with high ILUC risk (because of insufficient supply of sustainable biofuels), and a shock to the industry in the surroundings of 2040 when ambitious GHG reduction targets require the use of ZNZ fuels and technologies, but the supply of these is still very limited.

.3 Finally, the GFS (with FCM) alone will not generate sufficient funds to address possible disproportionate negative impacts and promote a just and equitable transition through investments in developing states, in particular SIDS and LDCs. The only way for the GFS with FCM to generate significant funds would be to allow ships to pay to pollute by buying remedial compliance units. This, however, would counter the spirit and the rationale of the Strategy and undermine the ability of delivering on the GHG targets and checkpoints.

9 A universal GHG contribution without a GFS would provide incentives for greater energy efficiency and support the objective of a just and equitable transition, but would fail in delivering on the other goals:

.1 The GHG contribution alone would not provide a sufficient incentive for the uptake of ZNZ fuels, unless it is set at a level several times higher than suggested by any proponent (which in turn could have disturbing effects on the maritime sector and on global trade). Depending on its level, the GHG contribution might even not be sufficient to promote the use of transitional low-GHG fuels, like 2nd generation biofuels, thus failing to even put the decarbonization of maritime transport in motion.

.2 A very high GHG contribution, on the other hand, would likely have larger impacts on fleets and States, which would be more difficult to entirely and efficiently compensate through the disbursement of the contribution revenues.

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10 Contrary to either the GFS or the GHG contribution adopted in isolation, the combination of both measures can deliver on all the goals and objectives of the Strategy in a cost-effective manner:

.1 The price gaps between fossil-, conventional low-GHG- and ZNZ fuels will be effectively bridged by the joint action of three elements – the GHG contribution, the feebate and the flexibility compliance mechanism (the latter putting an implicit price on under- and over-compliance, ensuring that over-compliance is equally attractive to other options). This will keep the level of the GHG contribution at a more moderate level.

.2 Funds will be available for promoting the energy transition of shipping in developing states, addressing possible negative impacts and financing a just and equitable transition.

.3 GHG reductions will be achieved in the most efficient manner, notably making full use of the low-hanging fruit of energy efficiency measures, and gradually phasing in the supply and use of ZNZ fuels which will be indispensable in the later phases of the transition. This will also allow a less steep curve for the required GFI, allowing to achieve the goals of the Strategy more gradually.



Figure 1: Comparison of the effects of (1) the GFS+FCM alone, (2) the GHG contribution alone, and the combination of the two measures.

The GHG fuel standard with its flexibility compliance mechanism would gradually decarbonize the shipping sector in a predictable manner

11 This section summarizes the proposal for a GHG fuel standard (GFS) with its flexibility compliance mechanism, as previously elaborated in documents ISWG-GHG 15/3/1, ISWG-GHG 16/2/7 and ISWG-GHG 16/2/10, and further refined in the annexed draft MARPOL amendments.

12 It is to be noted that the annexed draft amendments set out a different structure for some provisions and a different terminology than the one used in the previous illustrative MARPOL amendments annexed to ISWG-GHG 15/3/1. These adaptations result from a reflection on the draft MARPOL amendments proposed by other proponents in the meantime, coupled with the goal of ultimately defining concepts used in multiple proposals under a title that represents a common understanding amongst proponents. The co-sponsors will further develop the proposal, including the draft MARPOL amendments, as appropriate, for example on central management and oversight of collected revenues; distribution of revenues; and consider situations such as changes of flag and/ or company. In any case, coherence with the final agreed terminology contained in the LCA Guidelines will need to be ensured.

The GFS requires ships to not exceed a limit value of GHG emissions on a WTW basis 13 per unit of energy consumed during the reporting time period (calendar year). The limit value is called the required Greenhouse Gas Fuel Intensity (GFIreg). It is proposed to decrease gradually⁴ over time towards zero, thus ensuring a gradual decarbonization of the shipping sector to net-zero by or around, i.e. close to 2050. [The trajectory of the required GFI should be fixed for the entire period towards 2050 to provide certainty to all stakeholders. This is why the co-sponsors propose to define the GFI_{req} for each year from the outset in the MARPOL Convention (cf. the draft MARPOL amendments in the Annex). The exact values need to be aligned with the GHG reduction pathway of the Strategy, taking into account energy demand projections as affected by the planned GHG contribution and the short-term measures. This has been elaborated in ISWG-GHG 16/2/8. Table 2 illustrates, based on the DNV report on impact on fleets⁵, what the trajectory for GFI_{req} would look like for a GHG contribution of 100 USD per tonne of CO_{2e}. Such a GHG contribution would improve energy efficiency in 2030 by about 10-15%, according to the Comprehensive Impact Assessment, and thereby reduce emissions. This reduces the needed stringency of the GFI_{req} compared to a situation without a GHG contribution.

⁴ It is important the GFI_{req} goes down gradually, as reductions in large steps could constitute shocks for the economy.

⁵ Comprehensive Impact Assessment of the basket of candidate mid-term GHG reduction measures – task 2: assessment of impacts on the fleet, Draft Final report, DNV, 3/06/2024. Report prepared in the framework of the IMO's Comprehensive Impact Assessment of the basket of candidate mid-term GHG reduction measures.

basket including the univ	
Year	<u>GFI_{req}-Strive</u>
<u>2027</u>	<u>[86]</u>
<u>2028</u>	<u>[81]</u>
<u>2029</u>	[75]
<u>2030</u>	[70]
<u>2031</u>	<u>[65]</u>
<u>2032</u>	[60]
<u>2033</u>	<u>[55]</u>
<u>2034</u>	<u>[50]</u>
<u>2035</u>	<u>[45]</u>
<u>2036</u>	<u>[40]</u>
<u>2037</u>	[35]
<u>2038</u>	<u>[30]</u>
<u>2039</u>	[25]
<u>2040</u>	[20]
<u>2041</u>	<u>[18]</u>
<u>2042</u>	<u>[16]</u>
<u>2043</u>	<u>[14]</u>
<u>2044</u>	[12]
<u>2045</u>	[10]
<u>2046</u>	<u>[8]</u>
<u>2047</u>	[6]
<u>2048</u>	[4]
<u>2049</u>	<u>[3]</u>
<u>2050</u>	[2]

Table 2 – Required WtW GFI d (gC0₂e/MJ) for the proposed

INote: Figures above are illustrative, based on GFI requirement strive scenarios Y5 (scenarios 48 and 52) in DNVs 2nd Final interim report for the IMO Comprehensive impact assessment (Table C-1). Figures will be updated with revised versions of DNV's report.]

14 Particularly in the first years of the transition, low-GHG fuels, energy sources and technologies will not be equally available across all ports and regions, and for all ships. It is important that this does not affect the level playing field in maritime transport. This is why the co-sponsors propose that the GFS is paired with a flexibility compliance mechanism, featuring the following two key elements:

.1 Ships that perform better than the GFI_{req} are entitled to receive Surplus Compliance Units (SCUs). The number of SCUs received will be based on the difference between the required and the attained GFI, multiplied by the amount of energy used. One SCU will be granted for each tonne of CO_{2e} saved by the use of fuels, energy or other technologies on board. Ships that fall short of GFI_{req} would be allowed to comply with the GFS by handing in SCUs. These SCUs could be sourced from other ships (either through a bilateral exchange or from the marketplace) or be generated by the same ship in a previous year and banked, for <u>example [2</u> to 5 years] a limited number of years. The exchange or banking of SCUs will be registered in the GFI registry.

Ships that fall short of GFI_{req} would, as a last and <u>as an less attractive</u> option, also have .2 the possibility of buying Remedial Compliance Units (RCUs) from the GFI Registry. Just like an SCU, an RCU will represent one tonne of CO_{2e} and could be handed in by ships to achieve compliance with GFI_{req}. RCUs will only be valid for the year of compliance ('reporting period') for which they were acquired. The revenues of RCU sales will be earmarked to be used exclusively for purposes which balance out the shortfall in reduction in the emissions, which the remedial compliance units represent, such as:

.A Reward ships that use zero and near-zero GHG fuels (ZNZ fuels). In order to avoid interference with the reward described in paragraphs 30-35 and with the FCM, we propose to target only ships that fall outside of the current scope of the GFS, i.e. ships below 400 or 5000 GT, whichever threshold is applied to the regulation. Based on ISWG-GHG 16/2/12 (Japan), we expect that, in the start, ZNZ fuels will cost around USD 400 per tonne of CO_{2e} saved, and prices may fall with time as production of ZNZ fuels becomes cheaper. This reward should aim at making the ZNZ economically competitive. It should not overcompensate, and the payout in such a mechanism should therefore be, at most, equivalent to the estimated cost per tonne of CO_{2e} reduced for shipping, and diminish with time.

.B Reward ships that use other forms of ZNZ energy, like solar energy and wind propulsion: this should also be done in a way that avoids over-compensation. As the use of these forms of energy is considerably less expensive on an operational level (OPEX) than the use of ZNZ fuels, the reward should be designed to reflect the different cost structures.

.C Reward ships that use ZNZ technologies (i.e. batteries and fuel cells using green fuels), allowing them to be below GFI_{rea}, while avoiding over-compensation.

15 The three abovementioned earmarked purposes financed with revenues from RCUs constitute support provided to ships which fall outside of the scope of the GFS, or support to ships within the scope for technologies not rewarded through the feebate. It must be ensured that ships which are rewarded from the RCU revenues are not entitled to a reward in the framework of the feebate for the rewarded part of abated emissions, nor should they be entitled to claim SCUs for those abated emissions.

16 In this way, an RCU would not be a 'payment to pollute', and it would have a positive impact on reducing the GHG emissions within the boundaries of the energy system of international shipping.

RCUs should remain a remedial solution for the situations where neither compliant fuels, 17 nor SCUs are available to a ship. In order for this to be the case, RCUs must be slightly more expensive than the other options for compliance. As proposed in ISWG-GHG 16/2/7 (Austria et al.), the price of RCUs should be linked to the price of the cheapest eligible ZNZ fuels, after factoring in possible effects of regulations and rewards on prices. Due to the different considerations that need to be accounted for in the adjustment of the RCU price, the latter should be reviewed annually and made known to ships in the beginning of each calendar year.

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18 While ships have to comply with the GFS on an annual basis, it is important that RCUs are available for purchase all through the compliance period. In this manner, when ships, especially tramp ships, have to bunker in ports where fuels with the required GFI are not available, and also cannot readily buy SCUs, they can buy RCUs and invoice the charterer immediately.

A complementary universal GHG contribution would lower costs by providing incentives for energy efficiency and promote shipping's timely energy transition

19 This section summarizes the proposal for a GHG contribution, as elaborated in documents ISWG-GHG 15/3/2 and ISWG-GHG 16/2/9, and further refined in the annexed draft MARPOL amendments.

As explained in paragraphs 7-10, it is essential that the technical measure (GFS) is complemented with a GHG contribution pricing all GHG emissions (on a per tonne CO_{2e} -basis) as the economic element of the basket of mid-term measures. A uniform GHG contribution on all emissions has earlier been suggested in various forms in proposals submitted by Japan (ISWG-GHG 16/2/12), RMI et al (ISWG-GHG 16/2/6), and ICS et al (ISWG-GHG 16/2/3). The GHG contribution will incentivize energy efficiency measures, it will reduce the price gap between ZNZ fuels and fossil fuels, and provide funds for rewarding ZNZ fuels, financing investments in a just and equitable energy transition, and addressing potential disproportionately negative impacts of the measures on states.

The GHG contribution should be set at the level needed to deliver on the objectives of the Strategy, and be adjusted over time to make sure that it continues delivering on those objectives. As a starting point, the co-sponsors propose the level of USD[100] per tonne of CO_{2e} which, according to the literature and the preliminary results of the IMO Comprehensive Impact Assessment, will be enough to incentivize sufficient improvements in energy efficiency⁶. At the same time, such level of the contribution will generate funds to finance the feebate mechanism and to contribute to the energy transition of the maritime sector in developing countries.

22 <u>The universal contribution would build on structures already familiar to the Organization</u> and the following paragraphs provide an example of how a complementary economic element in the form of a universal contribution could be designed, utilizing what has previously been submitted by others.

23 It is proposed that the annual contribution due for each ship should be based on the enhanced DCS data reported by the ship and verified by the relevant administration. It should be based on the full WTW emissions of the energy used on-board the ship.

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E.g. Devanney (2010) find that a carbon price of USD 50 per tonne will lead to a reduction in emission from a VLCC by 6% and a carbon price of USD 150 would double the effect to 12%. Other studies referenced in ITF (2022) find that carbon prices of 400-500 USD could reduce emissions by 43-50% for VLCC, container ships and tankers. DNV finds that a contribution of USD 30 per tonne will not significantly change the energy efficiency, but that a contribution of USD 150 will reduce the required GFI by 13 percentage points due to lower energy demand.

24 The GHG contribution will be collected by a central entity (The IMO Net Zero Fund, or the "Fund"), which – after registering the full payment of the contribution – will inform the relevant administration that a payment has been made, including its amount and the owed GHG contribution, so that a statement of compliance can be issued for the ship after verification of the correct payment from the Administration in question.

The co-sponsors propose that ships should be allowed, if they wish so, to (partly) pay the contribution in advance, including during the **[compliance]**[reporting period⁷], and that such advance payments are subtracted from the annual GHG contribution calculated following the end of the reporting period. This voluntary feature will notably facilitate the administration of changes in the charterer or owner of the ship in the course of a reporting period.

The relevant Administration will only issue a statement of compliance upon full payment of the [annual] GHG contribution due by the ship <u>[for the compliance period]</u>. Port State Control officers will be entitled to verify that the ship has a valid Statement of Compliance and, in the even they find that the Statement is not in order, will have to ensure that the ship does not sail until the situation is corrected. In case of non-payment or of partial payment, Port State Control officers will be entitled to detain the ship until the payment is made. [The Administration – in addition to recovering the missing amounts on behalf of the Fund – will be entitled to impose on the ship, and retain as an administrative charge, a late payment fee (not higher that XX% or maximum XX.XXX USD).]

27 The collection process as described above will maintain structures in place already under the IMO and the MARPOL Convention as much as possible with reduced administrative burden:

1. The collection of the GHG contribution will be handled by a single institution and could be automated to a large degree;

2. The flag State will retain its administrative role of verifying compliance of ships under its flag; and

3. The flow of information between the Fund and flag State will be automated to the extent possible, in order to allow for a seamless compliance cycle. The collection and certification process proposed above will require robust data systems and reliable verification to ensure the integrity of the measure; this question is further elaborated below and in document MEPC 82/6/XX.

28 The nature of the universal GHG contribution would make it necessary to set up a system for collection of contributions as well as management, oversight and distribution of revenues. The practical issues of a central fund relating to organization, administration, legal status, disbursement, governance etc. are similar across different proposals, irrespective of whether the revenues are derived from a GHG contribution, the feebate, units, voluntary contributions or other. These issues are therefore developed further in a separate submission ISWG-GHG 17/ X/XX.

A universal contribution would provide co-benefits that can advance shipping's energy transition

The co-sponsors suggest that, apart from a minor administration element [1-2%] for all the elements in the combination, the revenues from the GHG contribution are disbursed for three purposes, all aimed to support the Strategy. In particular, these purposes should contribute to reducing the GHG emissions from shipping globally and promote the energy transition, while

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⁷ Reporting period as explained in annexed illustrative MARPOL amendments regulation X4 (*Attained GHG fuel intensity*) meaning the 12-month period from 1 January to 31 December for each calendar year, during which each ship shall calculate the attained GFI on the basis of the data collected in accordance with regulation 27 of Annex VI (IMO DCS data).

addressing potential disproportionately negative impacts of the measures and leaving no country behind. The three purposes are:

.1 Reward for the use of eligible ZNZ fuels and technologies (feebate) while avoiding over-compensation;

.2 Support for the energy transition within the value chain of energy for shipping in **[all countries with emphasis in]** developing countries, in particular in SIDS and LDCs. This also includes funds distributed for addressing potential disproportionate impacts of the IMO GHG reduction measures, as appropriate; and

.3 Promotion of Research, Development and Innovation (R&D&I) related to the energy transition of shipping;

30 <u>Global Reward Scheme for the use of eligible zero and near-zero GHG emission fuels</u> (feebate): As already discussed above, zero- and near zero-GHG fuels (ZNZ fuels) are typically significantly more expensive than low GHG fuels like FAME and HVO, because of their currently higher production costs. In order to reach the Strategy's target for the uptake of such fuels in 2030, there is a need for specific support that will bring their price to levels similar to those of renewable low GHG fuels. Figure 1 shows how the GHG contribution, the feebate and the FCM jointly bring the prices of ZNZ fuels, renewable low GHG fuels and fossil fuels to the same level, thus ensuring a level playing field between ships sailing on any of them.



Figure 2: Illustration of the manner in which the GHG contribution, the flexibility compliance units generated under the FCM and the reward (feebate) jointly bring the prices of ZNZ fuels, renewable low GHG fuels and fossil fuels to the same level.

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31 ZNZ fuels are defined as fuels which emit less than [10] g CO_{2e} per MJ on a WTW basis and meet the sustainability attributes set by the LCA Guidelines.⁸ The feebate should concentrate on promoting the uptake of fuels like e-fuels and most advanced biofuels [and biogases] which, because of their high price, entail high operational costs (OPEX) for the ships, since the uptake of other ZNZ technologies, with low OPEX for the ships, such as wind propulsion and on-board solar energy production have different cost structures that might require much lower operational support. ZNZ tecnologies with high CAPEX could also be supported. Furthermore, it is proposed that on-board carbon capture and storage (OCCS) is not rewarded, as OCCS will be based on continued use of fossil fuels. Having said that, wind and solar energy, as well as OCCS with certified permanent storage, will still contribute to emission reductions, and therefore should count towards the attainment of the required GFI and be eligible for Surplus Compliance Units (SCU) under the FCM. Energy produced using any of these technologies and used on-board of the ship would be subjected to a GHG contribution only on the basis of their (low) WtW GHG emissions calculated in accordance with the LCA guidelines. Furthermore, wind and solar technologies could potentially be supported using a different support structure financed e.g. with revenues from the sale of RCUs, as proposed in paragraph 14 under the alternative reward system.

Based on ISWG-GHG 16/2/12 (Japan), we expect the ZNZ fuels to initially cost USD 400 per tonne of CO_{2e} reduced, which is about USD 250 per tonne of CO_{2e} reduced more than transitional low-GHG fuels. The actual reward level for their use, expressed in USD per tonne of abated CO_{2e} , should be based on the estimated cost/price difference between the cheapest fuel delivering on the currently required GFI and the cheapest eligible ZNZ fuel, after factoring in the cost/price of the GHG contribution and the impact of the SCUs. The reward rate should be reestimated every year to ensure that support remains at an optimal level from a cost-efficiency point of view. Changes in reward rates should be based on input from international experts.

33 Just like the calculation of the annual GHG contribution, the calculation of the total reward to which each ship is eligible will be based on verified data submitted to the IMO DCS. This will allow the reward to be handled and paid out by the same central fund which collects the GHG contribution.

The funding needed to finance the reward of ZNZ fuels will change over time: it is likely to be low in the earliest years of the transition, when such fuels are used by few ships, but rise as their supply and use increases. The co-sponsors propose that, to provide long-term predictability regarding the availability of funds also for the other purposes listed in paragraph 29, the share of revenues earmarked for the reward scheme are capped at [50]%⁹ of the total revenues from the GHG contribution. [The share of revenues earmarked for ZNZ techonogies should be capped to [xx] of the total revenues from GHG contribution]

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⁸ The definition (in particular the number in brackets) might require further adjustments on the basis of progress achieved in the refinement of the LCA guidelines.

⁹ The figure will need to be adjusted once the Committee has taken a decision on the level of the GHG contribution, allowing for an estimation of the total revenues generated.

Box 1. Illustration of the funds needed to finance the reward mechanism

The following example illustrates how the cost of the reward scheme can be handled within the 50% limit of spending of the revenues when uptake increases. Consider a situation in 203X, when total GHG emissions from shipping are reduced to 500 million tons of CO_{2e} . This will, with a GHG contribution of 100 USD per ton of CO_{2e} , generate a revenue of 50 bn USD, leaving up to 25 bn for the reward scheme. Consider further that 25% of the energy consumption by ships (out of a total of appr. 300 million tons fuel oil equivalents) represents ZNZ fuels. That represents an amount of eligible fuels comparable to approximately 75 million tons of fuel oil equivalent (corresponding to more than 250 million tons of CO_{2e} abated). This leaves a financial possibility of a reward for ZNZ fuels of up to 330 USD per ton of fuel oil equivalent, which is probably more than needed.

35 Earlier and wider deployment of ZNZ fuels, supported by the feebate mechanism, will likely lead to economies of scale and thus significantly reduce future production costs, which will lower long-term impacts. In parallel, the price of transitional low-GHG fuels is expected to rise, as demand for them increases while supply remains constrained by limited feedstock availability. When, in the future, ZNZ fuels become a mainstream market solution and the main fuels to comply with the higher GFI_{req}, further support may become unnecessary to ensure that they constitute an economically competitive source of energy. The co-sponsors therefore propose to subject the reward mechanism to a sunset clause after the uptake of zero and near-zero GHG emission fuels reaches [30]% and, in any case, no later than [in 2040]. By that time, the level of the GHG contribution could also be reduced accordingly.

[36 Promotion of the energy transition of shipping in developing states, [in particular SIDS and LDCs] The aim of this scheme is to promote the energy transition of shipping in developing countries, [in particular SIDS and LDCs,] while contributing to leaving no country behind and addressing potential disproportionately impacts from the measures as appropriate. Funds should target the energy transition of the shipping sector and primarily be spent within the value chain of fuels and technologies for shipping. This could include, for instance, investments in fuel production, port infrastructure, bunkering facilities, energy efficiency investment schemes at ports and on vessels, training of seafarers and electrification of ferry routes, etc. [Funds could also target the development of the infrastructures and fuel transport chain in maritime shipping routes]

To ensure a balanced distribution of funds and to take account of the different spending capabilities of parties, the funds for this scheme could be-[split in three][distributed], based on [country groupings] [agreed criteria. A threshold could be applied to certain SIDS and LDCs]. [The country groupings could be: 1) LDCs as well as Low and Middle Income SIDS; 2) Lower Middle Income Countries and 3) Upper Middle Income SIDS.¹⁰]-Funds for specific projects should be distributed on a competitive basis [among countries with similar conditions] [within each grouping. Developed countries should not have access to funding under this scheme]. This proposal, [], has been to a certain degree inspired by the recommendations of the World Bank, as formulated in document ISWG-GHG 16/2/20.

Countries should be attributed to specific categories based on an internationally recognised classification. For income categories, this could be the World Bank Country and Lending Groups (<u>https://datahelpdesk.worldbank.org/knowledgebase/articles/906519</u>). For SIDS and LDCs, it could be the UNCTAD classification of economies (<u>https://hbs.unctad.org/classifications/</u>).

38 The co-sponsors propose that [XX]% of the funds dedicated to the <u>promotion of the</u> <u>energy transition of shipping [in developing states]</u>-are earmarked to <u>LDCs as well as Low and</u> <u>Middle Income SIDS</u>. Funds should be disbursed, on a project basis, as grants, soft loans, support for royalty payments to increase technology transfer or other instruments, depending on the nature of the investment needs. [Grants should not exceed [50]% of the project value, and the minimum interest rate of soft loans should be [0]% per annum. Grants and soft loans could be combined, with a minimum 20% co-financing threshold. Disbursement should be subject to a positive project assessment and a credit assessment if appropriate.]

39 **[Remaining funds could be distributed to states in accordance with agreed criteria an thresholds][**[YY]% should be earmarked for Lower Middle Income Countries. Funds in this category should be disbursed] on a project basis .[This would imply that lower Middle income **countries would be eligible to apply for] [**as]grants, soft loans or other instruments depending on the nature of the investment needs. [Grants should not exceed [30]% of the project value and the minimum interest rate of soft loans should be [0]% per annum. Grants and soft loans could be combined, with a minimum of 30% co-financing threshold for public entities, and a higher threshold for private sector projects. Disbursement should be subject to a positive project assessment and a credit assessment-if as appropriate].

40 **[This disbursement model would also imply that][** [ZZ]% should be earmarked for a third group of <u>funds could be distributed to]</u> non-high income countries, not covered by the previous two groupings, and with precise boundaries to be defined on a later stage, notably taking into account the results of the CIA. **[Such f] [F]** unds **[**in this category] should be disbursed only as soft loans with a minimum interest rate of [0]% per annum. For private sector investments, the co-financing threshold should be at least [50]%, and for public investments at least [30]%. Disbursement should be subject to a positive project assessment and a credit assessment if appropriate].

[40bis Funds could also target the development of the infrastructures and fuel transport chain in maritime shipping routes [AA]% should be earmarked for countries with ports in marine routes within their territorial waters and contiguous zones where the traffic of ships from 5000 GT exceeds [XXX] per year, to ensure the availability of eligible fuels. [Funds in this category should be disbursed on a project basis as grants, soft loans or other instruments depending on the nature of the investment needs. Grants should not exceed [30]% of the project value and the minimum interest rate of soft loans should be [0]% per annum. Grants and soft loans could be combined, with a minimum of 30% co-financing threshold for public entities, and a higher threshold for private sector projects. Disbursement should be subject to a positive project assessment and a credit assessment if appropriate.]]

41 Funds could be disbursed in a competitive manner via different funding [windows] [**purposes**] and potentially via existing funding institutions and funding mechanisms. Funding should be available at least until 2050 and as long as funds are available after that date.

42 <u>Global R&D&I scheme for the energy transition of shipping:</u> The aim of the R&D&I scheme is to promote investment in relevant pre-competitive R&D&I to accelerate the energy transition of shipping and lower its cost. This includes among others support to novel, efficient technologies for fuel production, bunkering technologies, ZNZ technologies and cutting-edge energy efficiency improvements in shipping. R&D&I expenditure is expected to induce innovation, which will contribute to quicker maturing of technologies, and therefore to reducing their long-term costs and thereby the economic costs of the energy transition.

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43 Funds for R&D&I should be awarded on a project basis to academia, public entities and private companies in a competitive manner. Clear criteria should be developed against monopolizing the results, which should be freely available to assist the global shipping sector in its decarbonization effort. Furthermore, the scheme should concentrate on break-through innovation and not fund the [general] deployment of established technologies, as this could distort competition on the market. Special funding windows for R&D&I in developing states could be considered to ensure a more equitable distribution of funds.

In order to ensure that funds for R&D&I can be absorbed efficiently, they should be capped at the level of [1] billion USD per year. R&D&I support can continue at least until 2050 and as long as funds are available after that date.

Adjusting the DCS to ensure a robust framework for compliance and verification

45 Previous sections of this documents have shown that the application of both the technical element, namely the GFS, and the economic element, namely the GHG contribution, should be based on data submitted to the IMO DCS in order to perform the necessary calculations, ensure compliance and provide a stronger foundation for future reviews of strategy and measures.

In both cases, as it is already the usual practice in IMO-set regulations, compliance will be the result of a multi-step process, involving diverse stakeholders: shipping companies, the IMO, flag states administrations or recognized organizations to which tasks are delegated by the flag state administrations, and possibly port states. It is essential to ensure that there is a robust framework for compliance and verification, so that each step is secured to avoid gaps, errors or fraudulent behaviors which could lead to undermining the quality and integrity of data and therefore the functioning and enforcement of the measures and to distorting fair competition in the shipping sector.

⁴⁷ In this context, a robust, high quality and verifiable set of data is essential to ensure the environmental integrity of the relevant regulations as well as a level playing field across the world fleet for all GHG measures relying on such data. This implies a continuous process of improvement of the IMO DCS, which has already started at the last MEPC meetings. The co-sponsors recall that document MEPC 81/6/5 identified relevant elements of the DCS, which require further investigation and development. Document MEPC 82/6/XX presents a tentative action plan to progress on the continuous improvement of the DCS data quality. In parallel, an in-depth reflection will have to take place on the specific role in the verification process of recognised organisations to guarantee a level playing field.

48 Finally, it should be reminded that it will eventually be the role of states to upgrade their legal framework and control processes, including through international cooperation, to ensure that the compliance of ships is timely and effective.

Conclusion

49 This proposal presents in detail how the combination of the GFS with an FCM and of a universal GHG contribution can be designed to effectively deliver on the objectives of the IMO 2023 GHG strategy while keeping impacts on states to a minimum.

50 The GFS will ensure a gradual reduction in emissions within the boundaries of the energy system of international shipping, while its flexibility compliance mechanism will allow ships that cannot sail on fuels with the required GFI to nevertheless contribute to the achievement of the emissions reduction. Thanks to their earmarking to emission reductions support, the revenues from the sale of RCUs will equally contribute to the energy transition of the shipping sector, and the remedial compliance units will not upset the environmental integrity of the GFS.



51 The universal GHG contribution of USD [100] per tonne of CO_{2e} emitted will promote energy efficiency and reduce the fuel price gap. Revenues will be used to ensure the uptake of zero and near-zero GHG fuels, as well as to fund R&D&I, facilitate the energy transition of shipping in developing countries, in particular SIDS and LDCs, and to address potential disproportionally negative impacts of states, as appropriate.

Action requested of the Working Group

52 The Group is invited to consider the proposals set out in this document as well as the associated draft MARPOL amendments presented in the annex, and to take action as appropriate.

ANNEX DRAFT AMENDMENTS TO MARPOL ANNEX VI

Basket of measures consisting of a GHG Fuel Standard (GFS) and a universal GHG contribution

(transposed, as much as possible, into the "Illustration of a draft possible outline of the 'IMO Net-Zero Framework'" annexed in Annex 12 to MEPC 81/16/Add.1)

[Deletion of existing MARPOL text shown as strikethrough, addition of suggested MARPOL text shown <u>underlined.]</u>

Chapter 1 – General

.1 Definitions (regulation 2)

For the purpose of chapter 4 and 5:

- .1 Fuel means any energy used for propulsion or for the operation of any equipment on board a ship, whose greenhouse gas intensity and sustainability attributes can be measured and certified using the guidelines on life cycle GHG intensity of marine fuels (LCA guidelines, Resolution MEPC.376(80));
- .2 Greenhouse gas (GHG) emissions means any release of carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (N₂O) into the atmosphere;
- .3 CO₂ equivalent (CO_{2eq}) means the metric measure used to compare the emissions of CO₂, CH₄ and N₂O on the basis of their 100 year global-warming potential (GWP), by converting the amounts of CH₄ and N₂O to the equivalent amount of CO₂ with the same global warming potential.
- .4 GHG fuel intensity (GFI) means the mass of GHG emissions per unit of energy used on board a ship on a Well-to-Wake basis, in accordance with the guidelines on life cycle GHG intensity of marine fuels (LCA guidelines, Resolution MEPC.376(80), expressed in terms of grams of CO_{2eq} per unit of energy (gCO_{2eq}/MJ).
- [.4 bis Compliance Period means the calendar year running from January 1st to December 31st, or only in the event of a transfer of a vessel or change of Company, or Administration, part thereof. In the event of a transfer of a vessel or change of Company the Compliance Period shall be split into two Compliance Periods, one covering the period up to the date of the transfer and the second covering the period after the transfer. At the discretion of the Administration and the option of the Company the Compliance Period may be split into 2 or more sequential Partial Compliance Periods. The total duration of the Partial Compliance Periods must be equal to the duration of the Compliance Period]:
- .5 Compliance surplus means the amount of over-compliance by a ship with the required annual GFI mentioned in regulation X5.2 of this Annex, expressed in tonnes of CO_{2eq} on a Well-to-Wake basis, in accordance with the guidelines to be developed by the Organization¹¹;

¹¹ see Guidelines on life cycle GHG intensity of marine fuels (LCA guidelines, Resolution MEPC.376(80)) and see draft Guidelines for the calculation of the attained Greenhouse Gas Fuel Intensity, as set out in Annex 1 to ISWG-GHG 16/2/7 (Austria et al.), updated as necessary.

- .6 Compliance deficit means the amount of under-compliance by a ship with the required annual GFI mentioned in regulation X5.2 of this Annex, expressed in tonnes of CO_{2eq} on a Well-to-Wake basis, in accordance with the guidelines to be developed by the Organization¹²;
- .7 [Annual] [Compliance Period] GHG fuel contribution means the amount of [units of account] made by ships to the IMO Net-Zero Fund in accordance with regulations X10 and X11 of this Annex;
- .8 [Annual][Compliance Period] fuel reward means the amount of monetary reward made by the IMO Net Zero Fund to ships in accordance with regulation X14 of this Annex.
- <u>.9</u> Eligible fuel means the type of fuel that qualifies for the annual fuel reward, determined in accordance with the guidelines to be developed by the Organization¹³;
- .10 Surplus Compliance Unit (SCU) means a credit issued by the GHG fuel intensity Registry established under regulation X8 (the GFI Registry) for use by the ship in accordance with regulation X7.2, representing a compliance surplus of one tonne of GHG emissions, expressed in CO_{2eq}, and generated by the use of fuels with an average GFI below the required [annual] GFI for th[eat calendar] year [of Compliance period], used on board during-[a reporting] [that compliace]- period;
- .11 Remedial Compliance Unit (RCU) means a credit issued by the GHG fuel intensity Registry established under regulation X8 (the GFI Registry), for use by the ship to remedy a compliance deficit of one tonne of GHG emissions, expressed in CO_{2eq}, produced by fuel with an average GFI above the required annual GFI for that year, used on board during a reporting period;
- .12 Company means the owner of the ship or any other organization or person such as the manager, or the bareboat charterer, who has assumed the responsibility for operation of the ship from the owner of the ship and who on assuming such responsibility has agreed to take over all the duties and responsibilities imposed by the International Management Code for the Safe Operation of Ships and for Pollution Prevention, as amended;
- .13 [Unit of account means the Special Drawing Right as defined by the International Monetary Fund. The amount mentioned in regulations X7.6, X10.2, X11.2 and X14.2 shall be converted into national currency on the basis of the value of that currency by reference to the Special Drawing Right on the date of establishment of the IMO Net Zero Fund under [regulation X13]. The value of the national currency, in terms of the Special Drawing Right, of a State which is a member of the International Monetary Fund shall be calculated in accordance with the method of valuation applied by the International Monetary Fund in effect on the date in question for its operations and transactions. The value of the national currency, in terms of the Special Drawing Right, of a State which is not a member of the International Monetary Fund shall be calculated in a manner determined by that State, in such a way as to express in that national currency as far as possible the same real value for the amounts in regulations X7.6, X10.2, X11.2 and X14.2 as would result from the application of the first three sentences of this definition. States shall communicate to the Organization the manner of calculation at the time of adoption of the relevant regulations.]

[...]



see Guidelines on life cycle GHG intensity of marine fuels (LCA guidelines, Resolution MEPC.376(80)) and see draft Guidelines for the calculation of the attained Greenhouse Gas Fuel Intensity, as set out in Annex 1 to ISWG-GHG 16/2/7 (Austria et al.), updated as necessary.
 Guidelines to be developed by the Organization of the set of the developed by the Organization.

¹³ Guidelines to be developed by the Organization on the determination of eligible fuels under the annual fuel reward.

Chapter 2 - Survey, certification and means of control

.2 Surveys (regulation 5)

4 Ships to which <u>both or either chapters 4 and 5</u> of this Annex apply shall also be subject to the surveys specified below, taking into account the guidelines adopted by the Organization:

[...]

.6bis The Administration shall ensure that, for each ship to which regulations X4 applies, the SEEMP complies with regulation 26.4 of this Annex. This shall be done prior to 1 January [2027]. Confirmation of compliance shall be provided to, and retained on board, the ship;

.3 Certificates and Statements of compliance (regulation 6)

Issue or endorsement of Certificates and Statements of Compliance related to fuel oil consumption reporting<u>. and</u> operational carbon intensity rating<u>, the annual GHG fuel intensity and the annual GHG fuel contribution</u>

[Two new titles and paragraphs 9 and 10 are inserted after paragraph 8:]

Statement of Compliance related to the [annual] GHG fuel intensity

- <u>9 Upon receipt of the attained annual GFI pursuant to regulation X4.2 of this Annex, the Administration, or any organization duly authorized by it, shall:</u>
 - .1 verify that the attained [annual] GFI reported is based on the data submitted in accordance with regulation X4.2 of this Annex;
 - .2 determine whether the attained [annual] GFI of each ship is equal to, higher or lower than the required [annual]–GFI [for the compliance period] in accordance with regulation X5.3 of this Annex;
 - .3 for ships to which regulation X7 applies, verify that an adequate amount of Surplus <u>Compliance Units or Remedial Compliance Units, as applicable, has been cancelled by</u> <u>the GFI Registry in accordance with regulation X7.3 of this Annex to remedy the</u> <u>compliance deficit of that</u> [Compliance] [reporting]-period;
 - .4 verify that the annual administration fee according to regulation X8.2 of this Annex has been paid; and
 - .5 issue a Statement of Compliance related to the [annual]-GHG fuel intensity no later than six months from [the beginning of the calendar year],[the end of the Compliance Period] upon determination and verification pursuant to paragraphs 1 to 4 of this regulation. In every case, the Administration assumes full responsibility for this Statement of Compliance.

Statement of Compliance related to the [annual] GHG fuel contribution

- 10 Upon receipt of the electronic confirmation of receipt of the [annual] GHG fuel contribution pursuant to regulation X11.4, including in cases where the annual GHG fuel contribution is made pursuant to regulations X10.3 and X11.2, the Administration or any organization duly authorized by it shall:
 - .1 verify that the [annual] GHG fuel contribution is based on the data verified in accordance with regulation 6.9 of this Annex;
 - .2 determine that the [annual]–GHG fuel contribution corresponds to the well-to-wake GHG emissions produced by the fuel used on board the ship; and
 - <u>.3</u> issue a Statement of Compliance related to the [annual] GHG fuel contribution no later than eight months from the [-beginning of the calendar year], [end of the compliance period] upon verification pursuant to paragraph 10.1 of this regulation. In every case, the Administration assumes full responsibility for this Statement of Compliance.
 - .4 Form of certificates and Statements of compliance (regulation 8)

Form of Certificates and Statements of Compliance related to fuel oil consumption reporting<u>and</u>, operational carbon intensity rating, the annual GHG fuel intensity and the annual GHG fuel <u>contribution</u>

[Two new titles and paragraphs 3bis and 3ter are inserted after paragraph 3:]

Statement of Compliance related to the [annual] GHG fuel intensity

<u>3bis</u> The Statement of Compliance pursuant to regulation 6.9 of this Annex shall be drawn up in a form corresponding to the model given in appendix X to this Annex and shall be at least in English, French or Spanish. If an official language of the issuing Party is also used, this shall prevail in case of a dispute or discrepancy.

Statement of Compliance related to the annual GHG fuel contribution

<u>3ter</u> The Statement of Compliance pursuant to regulation 6.10 of this Annex shall be drawn up in a form corresponding to the model given in appendix Xbis to this Annex and shall be at least in English, French or Spanish. If an official language of the issuing Party is also used, this shall prevail in case of a dispute or discrepancy.

.5 Duration and validity of Certificates and Statements of compliance (regulation 9)

Duration and validity of Certificates and Statements of Compliance related to fuel oil consumption reporting,<u>and</u> operational carbon intensity rating, the annual GHG fuel intensity and the annual GHG fuel contribution

[Two new titles and paragraphs 13 and 14 are inserted after paragraph 12:]

Statement of Compliance related to the annual GHG fuel intensity

13 The Statement of Compliance issued pursuant to regulation 6.9 of this Annex shall be valid for [[18] months of the end of the compliance period to which it relates][the calendar year in which it is issued and for the first [six] months of the following calendar year]. All Statements of Compliance shall be kept on board for at least five years.

Statement of Compliance related to the annual GHG fuel contribution

14 The Statement of Compliance issued pursuant to regulation 6.10 of this Annex shall be valid for **[[20] months from the end of the Compliance Period to which it is issued][**the calendar year in which it is issued and for the first eight months of the following calendar year]. All Statements of Compliance shall be kept on board for at least five years.

.6 Port State Control (regulation 10)

- 5bis In relation to Chapter 5 of this Annex, any port State inspection may verify, when appropriate, that there is a valid Statement of Compliance related to the [annual] GHG fuel intensity and a valid Statement of Compliance related to the [annual] GHG fuel contribution in accordance with article 5 of the present Convention. In the event where it is found that the Statements above are not in order, the Party shall ensure that the ship does not sail until the situation has been brought to order in accordance with the requirements of Chapter 5. Each Party to this Annex shall ensure that the above Statements are in force in respect of any ship, irrespective of its flag, entering or leaving a port in its territory, or arriving at or leaving an offshore terminal in its territorial sea.
- 6 Notwithstanding the requirements in paragraph 5 of this regulation, any port State inspection may inspect whether the Ship Energy Efficiency Management Plan is duly implemented by the ship in accordance with regulations 28, X4 and X5 of this Annex.

Chapter 4 - Regulations on the carbon intensity of international shipping

.7 SEEMP (regulation 26)

[A new paragraph 4 is inserted after paragraph 3:]

- 4 In the case of a ship to which Chapter 5 applies:
 - .1 On or before 1 January [2027], the SEEMP shall include:
 - .1 a description of the methodology that will be used to collect the data required by regulation 27 and to calculate the ship's attained [annual] GFI required by regulation X4 of this Annex; and
 - .2 the processes that will be used to report the data required by regulation 27 to the ship's Administration.

[additional information to be included as necessary]

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.8 Data Collection System (regulation 27)

Collection and reporting of [ship fuel use oil consumption data]

- 1 From calendar year <u>2027</u> 2019, each ship <u>to which both or either chapters 4 and 5 apply of</u> 5,000 gross tonnage and above shall collect the data specified in appendix IX to this Annex, for that and each subsequent calendar year or portion thereof, as appropriate according to the methodology included in the SEEMP.
- 2 Except as provided for in paragraphs 4, 5<u>, and</u> 6 <u>and 6bis</u> of this regulation, at the end of each calendar year, the ship shall aggregate the data collected in that calendar year or portion thereof, as appropriate.
- 3 Except as provided for in paragraphs 4, 5<u>, and</u> 6 and 6bis of this regulation, within [three] months after the end of each calendar year, the ship shall report to its Administration or any organization duly authorized by it, the aggregated value for each datum specified in appendix IX to this Annex, via electronic communication and using a standardized format to be developed by the Organization.

[...]

- 6bis For the purposes of Chapter 5 of this Annex, data on fuel used on board collected pursuant to paragraphs 3, 4, 5 and 6 of this regulation shall be reported to the Administration, or any organization duly authorized by it, in a disaggregated format that will allow the verification of compliance of the ship pursuant to regulations X5 and 6.10 of this Annex, taking into account the guidelines to be developed by the Organization¹⁴. The disaggregated data that underlies the reported data noted in appendix IX to this Annex shall be readily accessible for a period of not less than 10 years from the end of that calendar year and be made available to the Administration and the IMO Net Zero Fund upon request.
- [...]
- 9 The Administration shall ensure that the reported data noted in appendix IX to this Annex by its registered ships to which this regulation applies are transferred to the IMO Ship Fuel [Use <u>Oil Consumption</u>] Database via electronic communication and using a standardized format to be developed by the Organization not later than one month after issuing the Statements of Compliance of these ships.
- <u>9bis</u> For the purposes of Chapter 5.2 of this Annex, the Secretary General of the Organization shall ensure that the data reported to the IMO Ship Fuel [Use] Database pursuant to regulation 27.9 are transferred automatically to the IMO Net-Zero Fund established by the Organization [under regulation X13].

[...]

11 The Secretary-General of the Organization shall grant the Administration of a ship to which regulations 28 and Chapter 5 of this Annex applies access to all the reported data for all the preceding calendar years in the IMO Ship Fuel [Use] Database for that ship.

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¹⁴ see Guidelines to be developed by the Organization on methods for determining, collecting and storing [ship fuel use] data under regulation 27 of Annex VI for the purposes of compliance with Chapter 5 of Annex VI.

[New Chapter 5 - Regulations on the IMO net-zero framework

.9 New Chapter 5.1: Goal-based marine fuel standard regulating the phased reduction of the marine fuel's GHG intensity

.1 Application (regulation X1)

- <u>1</u> This chapter shall apply to all ships of [5,000] gross tonnage and above and from calendar year [20XX], to all ships of 400 gross tonnage and above.
- 2 The provisions of this chapter shall not apply to ships solely engaged in voyages within waters subject to the sovereignty or jurisdiction of the State the flag of which the ship is entitled to fly.
- 3 For the purposes of compliance with Chapter 5.1., a ship which is entitled to fly the flag of a State which is not a Party to this Annex may submit to any Administration of a Party to this Annex or any organisation duly authorised by it the data noted in appendix IX of this Annex. In that case, that Administration or any organisation duly authorised by it shall apply Chapter 5.1 after determination that the data has been reported in accordance with regulation 27 and shall ensure that the reported data are transferred to the IMO Ship Fuel [Use] Database within the period mentioned in regulation 27.9. Nothing in this regulation relieves any Party from its obligations under Article 5.4 of this Convention and regulation 10 of this Annex.
- [4 National or Regional Agreements on the implementation of measures on marine fuel standards regulating the phased reduction of GHG intensity adopted by the parties may compensate ships in order to avoid an excess of payments of monetary units of CO_{2eq} in accordance with IMO resolution (MEPC XXX(YY)]

.2 Goal (regulation X2)

[There is no Goal regulation for Chapter 5.2. Therefore, present Goal regulation, if retained, should cover both elements of the basket of measures, i.e. the whole Chapter 5.]

The goal of this Chapter is to reduce the GHG emissions of international shipping, working towards the levels of ambition set out in the 2023 IMO Strategy on reduction of GHG emissions from ships.

.3 Functional requirements (regulation X3)

[As per above comment, the Functional requirements regulation (X3), if retained, should cover both parts of new Chapter 5.]

- <u>1</u> In order to achieve the goal set out in regulation X2 of this Annex, a ship to which this chapter applies shall:
 - .1 reduce its greenhouse gas fuel intensity (GFI) in accordance with regulations X4 and X5; and
 - <u>.2</u> make an annual GHG fuel contribution in accordance with regulations X10 and X11 of this Annex.

[2bis. Notwithstanding the requirements of this chapter, the entity responsible for supplying the ship with fuel or that directs the commercial operation of the ship or both should be responsible for meeting the cost related to the GHG fuel contribution and providing any required SRU or GRU as appropriate. When a ship is operating under a charter party contract which, inter alia, requires the charterer to pay for the fuel and/or to direct the commercial operation of the ship, the charterer should be required to reimburse the ship for any costs incurred by the ship in complying with the requirements of this chapter. For the purposes of this paragraph, commercial operation of the ship shall mean determining the cargo carried and the loading and discharge ports and/or the route and/or the speed of the ship.]

.4 Attained GHG fuel intensity (GFI) (regulation X4)

- <u>After-[the end of calendar year [2027] and for every calendar year thereafter, each ship shall calculate the attained annual GFI over a 12-month period from 1 January to 31 December for the preceding calendar year (reporting period)][for that compliance period], using the data collected in accordance with regulation 27 of this Annex and in accordance with the guidelines to be developed by the Organization¹⁵.</u>
- 2 Within three months after the end of each [reporting][compliance] period, the ship shall report to its Administration, or any organization duly authorized by it, the attained [annual] GFI for that [reporting][-Compliance P][p]eriod together with the data specified in appendix IX via electronic communication and using a standardized format to be developed by the Organization for the purpose of verifying the compliance of each ship with regulation X5.
- [2 bis For ships that have voluntarily elected to report based on Partial Compliance Periods, within [one] month after the end of each Partial Compliance Period the ship shall report to its Administration, or any organization duly authorized by it, the attained GFI for that Partial Compliance Period together with the data specified in appendix IX via electronic communication and using a standardized format to be developed by the Organization for the purpose of verifying the compliance of each ship with regulation X5. This does not relieve the ship from the obligation to report for the whole Compliance Period as per Regulation X4.2.]
- In the event of any transfer of a ship addressed in regulations 27.4, 27.5 or 27.6 completed after 1 January 2027, a ship shall, after the end of the calendar year in which the transfer takes place, calculate and report the attained annual GFI for the full 12-month period from 1 January to 31 December in the calendar year during which the transfer took place, in accordance with paragraphs 1 and 2 of this regulation, for verification in accordance with regulation 6.9 of this Annex, taking into account the guidelines to be developed by the Organization¹⁶ Nothing in this regulation relieves any ship of its reporting obligations under regulations 27, X5, X7 or this regulation of this Annex.]

.5 Target/Required GFI (regulation X5)



¹⁵ see draft Guidelines for the calculation of the attained Greenhouse Gas Fuel Intensity, as set out in Annex 1 to ISWG-GHG 16/2/7 (Austria et al.), to be updated as necessary.

¹⁶ see draft Guidelines for the calculation of the attained Greenhouse Gas Fuel Intensity, as set out in Annex 1 to ISWG-GHG 16/2/7 (Austria et al.), to be updated as necessary.

- <u>1</u> Each ship shall have an attained [annual]-GFI[for the Compliant Period and optionally for each compliance period] which is equal to or lower than the required [annual] GFI [for that compliance period or partial compliance period] in accordance with this regulation.
- 2 The required [annual] GFI for each ship to which this regulation applies shall be determined as follows:

required [annual] GFI = (1 - Z /100) • GFI_R, where,

- <u>.1</u> GFI_R is the GFI reference value representing the attained [annual]–GFI of ships to which this regulation applies at the end of calendar year [2025], determined on the basis of the annual reports produced in accordance with regulation 27.10 of this Annex for the calendar years [2023, 2024 and 2025], using the methodology contained in the Guidelines on life cycle GHG intensity of marine fuels (LCA guidelines, Resolution <u>MEPC.376(80)</u>; and
- .2 Z is the [annual]-reduction factor specified in Table X1 for the required [annual] GFI compared to the GFI reference value, that ensures that the average GFI of international shipping is in line with regulation [X2] of this Annex:

1

Table V1 Reduction factors for the required				
annual GEI relative to the GEI reference value				
Year	Z factor			
2027	7.5			
2028	13			
2029	19.5			
2030	24.5			
<u>2031</u>	30			
<u>2032</u>	35.5			
<u>2033</u>	41			
<u>2034</u>	46			
<u>2035</u>	51.5			
<u>2036</u>	57			
<u>2037</u>	62.5			
<u>2038</u>	67.5			
<u>2039</u>	73			
<u>2040</u>	78.5			
<u>2041</u>	80.5			
<u>2042</u>	83			
<u>2043</u>	85			
<u>2044</u>	87			
<u>2045</u>	89			
<u>2046</u>	91.5			
<u>2047</u>	93.5			
<u>2048</u>	95.5			
<u>2049</u>	97			
<u>2050</u>	98			

1

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- 3 Within [one] month after the reporting of the attained [annual] GFI [for the compliance period] in accordance with regulation X4.2,[and optionally each partial compliance period in accordance with regulation X.4.3][including in cases where the reporting takes place pursuant to regulation X4.3] the Administration, or any organization duly authorized by it, shall determine, on the basis of the data reported pursuant to regulation 27, whether the attained-[annual] GFI of each ship is equal to, higher or lower than the required annual GFI set for that [reporting period][Compliance Period] in accordance with paragraph 1, and verify the compliance surplus or compliance deficit, if any, taking into account the guidelines to be developed by the Organization¹⁷.
- 4 Where the verified attained [annual] GFI [for a Compliance Period] is higher or lower than the required [annual]-GFI, [for that Compliance Period] regulation X7 of this Annex shall apply.

.6 GFI data collection and reporting (regulation X6)

[please see comment in regulation 26 (SEEMP); propose deletion]

.7 Alternative compliance approaches (regulation X7)

- <u>1</u> A ship with a verified compliance surplus may receive Surplus Compliance Units (SCU), issued by the GFI Registry established pursuant to regulation X8 and credited to that ship's account in the GFI Registry. The amount of SCU to be issued and credited shall be equal to the amount requested by that ship and, in any case, not surpassing the verified compliance surplus of that ship for that [reporting] compliance period, communicated to the GFI Registry in accordance with regulation X8.3.
- 2 The SCU credited to the account of a ship in the GFI Registry can be:
 - .1 transferred, at the request of the ship in whose account they are credited, to any other ship's account that they designate;
 - [.2 banked for use in the following reporting periods, subject to the conditions of paragraph 5; or]
 - .3 cancelled by the GFI Registry in accordance with paragraph 3.1;
- <u>3</u> By 31 May [each]-[of the] calendar year [following a compliance period], a ship with a verified compliance deficit, [for a compliance period] communicated to the GFI Registry in accordance with regulation X8.3, shall comply with regulation X5 through the use of [valid] SCU or Remedial Compliance Units (RCU), concurrently or alternatively, in an amount determined in accordance with paragraph 4:
 - .1 through the use of SCU, whereby the GFI Registry cancels SCU credited to a ship's account in accordance with paragraph 1, equal to the amount of SCU requested by that ship and subject to the conditions of paragraph 5.
 - .2 through the use of RCU, whereby:
 - .1 The GFI Registry issues and credits RCU to a ship's account upon its request, equal to the amount of RCU requested by that ship;

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¹⁷ see Guidelines to be developed by the Organization on the Flexibility Compliance Mechanism and method of calculation of compliance surpluses and compliance deficits for ships.

- .2 Each RCU is compensated for through the IMO Net-Zero Fund [established under regulation 13] in accordance with paragraph 6;
- .3 The GFI Registry cancels RCU credited to a ship's account, equal to the amount of RCU requested by that ship, only after proof of compensation thereof is furnished to the GFI Registry, subject to the conditions in paragraph 6.
- 4 The total amount of SCU and RCU used for the purposes specified in paragraph 3 of this regulation shall be determined as follows, taking into account guidelines to be developed by the Organization¹⁸:

(verified attained [annual] GFI [for the compliance period]– required [annual]–GFI [for the compliance period]) *

total amount of energy generated by the fuel used on board during the [reporting][compliance] period

[If a ship requests the exclusion of the additional energy consumption due to both or either sailing in ice conditions and the technical characteristics of the ship having an ice class, an amended version of the attained annual GFI shall be used for the determination of the total amount of SCU and RCU].

- 5. Each SCU shall have a validity of [XX2][5] years after the date of their issuance from the GFI Registry. SCU not used by the ship in whose account they are credited by the date of expiry of their validity will be cancelled as expired and cannot be used by any ship for any purpose under this Chapter.
- 6 The compensation for one RCU [for obligations relating to a Compliance Period in that calendar year] shall be determined [annually] in accordance with guidelines to be developed by the Organization and announced by the Secretary-General of the Organization before the start of each [reporting period] [calendar year]¹⁹. Each RCU shall be valid for compliance [only for the reporting period for which it is issued] [obligations relating to the calendar year of the compliance period for which it was issued]. For each RCU compensated for by a ship, the IMO Net-Zero Fund shall issue proof of compensation to that ship. The GFI Registry shall cancel as expired RCUs where no proof of compensation is made available in the account where the RCU is credited within the period mentioned in paragraph 3.

[6bis RCUs for obligations relating to a Compliance Period in a calendar year may be purchased at any time during the relevant calendar year and up to 31 May of the following calendar year].

7 The entity responsible for compliance [with paragraph 3.1.2]-shall be the company [at]-[for] the [time mentioned in paragraph 1 of this regulation]-[compliance period]

[Additional conditions to be inserted]

¹⁸ see Guidelines to be developed by the Organization on the Flexibility Compliance Mechanism and method of calculation of compliance surpluses and compliance deficits for ships.

¹⁹ see Guidelines to be developed by the Organization on the determination of the price of Remedial Compliance Units under the Flexibility Compliance Mechanism.

.8 Central GFI Registry (regulation X8)

- <u>1</u> From calendar year [2027], the Secretary-General of the Organization shall maintain the GHG Fuel Intensity Registry (the GFI Registry) to facilitate the implementation of regulations X4, X5 and X7, in accordance with the guidelines to be developed by the Organization²⁰.
- 2 Each ship shall maintain an account with the GFI Registry. By 31 May each year, each ship shall submit an annual administration fee of [XXX units of account] to the IMO Net Zero Fund to compensate the administration cost of the GFI Registry. [In the event of a transfer or change of company the ship shall open a new additional account without the requirement to pay additional administration fees for the year in which the transfer of Company took place] The entity responsible for compliance with this paragraph shall be the company [at the time mentioned in this paragraph].
- <u>3</u> Within four months after the end of each [-calendar year] [compliance period], the outcome of verification of regulation X5.3 in respect of each ship shall be transmitted by the Administration to the GFI Registry.
- 4 The GFI Registry shall maintain the following information per ship:
 - .1 the verified attained [annual] GFI of each ship [for each Compliance Period];
 - .2 the verified compliance surpluses and verified compliance deficits for each [reporting] [compliance] period and the total amount of Surplus Compliance Units (SCU) and Remedial Compliance Units (RCU) held by the ship in its account;
 - .3 the outcome of verifications under regulation X5.3; and
 - .4 a transaction log of SCU and RCU used under regulation X7.3 and administrative fees submitted under paragraph 2.
- 5 On the basis of the information maintained in accordance with paragraph 4 of this regulation, the Secretary-General of the Organization shall produce an annual report to the Marine Environment Protection Committee summarizing the data collected, transaction patterns in the issuance, transferring, usage and cancellation of SCU and RCU and such other relevant information as may be requested by the Committee.
- 6 For the purposes of regulation X5 and X7 of this Annex, the Secretary General of the Organization shall ensure that the GFI Registry has access to the information retained by the IMO Net Zero Fund relating to the compensation of RCU by ships under regulation X7.3.2.2.Access shall be granted by the Secretary-General of the Organization to the Administration of a ship or any organization duly authorized by it in respect of all ship accounts in the GFI Registry which belong to ships registered by that Administration and to all the recorded data pursuant to paragraphs 1 to 6 of this regulation for all the preceding calendar years for that ship.

[Additional conditions to be inserted].



see Guidelines to be developed by the Organization on the development and management of the GHG Fuel Intensity Registry, as set out in Annex 2 to ISWG-GHG 16/2/7 (Austria et al.), to be updated as necessary.

.10 New Chapter 5.2 - Economic mechanism(s) to incentivize the transition to net-zero

.1 Application (regulation X9)

- <u>1</u> This chapter shall apply to all ships of [5,000] gross tonnage and above and from calendar year [20XX], to all ships of 400 gross tonnage and above.
- 2 The provisions of this chapter shall not apply to ships solely engaged in voyages within waters subject to the sovereignty or jurisdiction of the State the flag of which the ship is entitled to fly.
- 3 For the purposes of compliance with Chapter 5.2., a ship which is entitled to fly the flag of a State which is not a Party to this Annex may submit to any Administration of a Party to this Annex or any organisation duly authorised by it the data noted in appendix IX of this Annex. In that case, that Administration or any organisation duly authorised by it shall apply Chapter 5.2 after determination that the data has been reported in accordance with regulation 27 and shall ensure that the reported data are transferred to the IMO Ship Fuel [Use] Database within the period mentioned in regulation 27.9. Nothing in this regulation relieves any Party from its obligations under Article 5.4 of this Convention and regulation 10 of this Annex.

[4 National or Regional Agreements on the implementation of measures on economic mechanisms to incentivize the transition to net-zero adopted by the parties may compensate ships in order to avoid an excessive payments of fees in accordance with IMO resolution (MEPC XXX(YY)].

.2 Calculation of economic contribution by ships (regulation X10)

- <u>1</u> After the end of **[each Compliance Period][**calendar year [2027] and after the end of each following calendar year,] each ship to which this chapter applies shall make [an annual]-a GHG fuel contribution corresponding to the GHG emissions resulting from fuel used on board over [a 12-month period from 1 January to 31 December of the preceding calendar year (reporting period)]-[that compliance period] in accordance with the provisions set forth in this regulation and regulation X11, using the data collected and verified in accordance with regulation 27 of this Annex, taking into account the guidelines to be developed by the Organization²¹.
- <u>2</u> Upon receipt and on the basis of data specified in appendix IX transferred to the IMO Net Zero Fund pursuant to regulation 27.9bis, the IMO Net Zero Fund shall notify to the ship the required [annual]GHG fuel contribution [each year][—for each compliance period]. The required annual GHG fuel contribution shall be determined as follows, taking into account guidelines to be developed by the Organization²²:

[Required [annual] GHG fuel Contribution = V_{contribution} * T, where:

<u>V_{contribution}</u> is the value of the contribution rate per tonne of CO_{2eq} emitted based on fuel used on board set at [XX] units of account;



²¹ see Guidelines to be developed by the Organization on the determination of the annual GHG fuel contribution for ships.

²² see Guidelines to be developed by the Organization on the determination of the annual GHG fuel contribution for ships.

<u>T is the mass of GHG emitted, in tonnes of CO_{2eq}, on Well-to-Wake basis, as reported in accordance with Appendix IX²³ [If a ship requests the exclusion of the additional GHG emitted due to both or either sailing in ice conditions and the technical characteristics of the ship having an ice class, the additional GHG emitted shall be subtracted from the mass of GHG emitted used for the determination of the required annual GHG fuel Contribution.]</u>

In the event of any transfer of a ship addressed in regulations 27.4, 27.5 or 27.6 completed after 1 January [2027], a ship shall, after the end of the calendar year in which the transfer takes place, make an annual GHG fuel contribution corresponding to the full 12-month period from 1 January to 31 December in the calendar year during which the transfer took place, in accordance with paragraphs 1 and 2 of this regulation for verification in accordance with regulation 6.10, taking into account guidelines to be developed by the Organization²⁴. Nothing in this regulation relieves any ship of its obligations under regulation 27, X11 or this regulation of this Annex.]

.3 Collection of economic contribution by ships (regulation X11)

- <u>1</u> Within [seven] months after the end of each-[calendar year] [compliance period], each ship shall make an annual GHG fuel contribution to the IMO Net-Zero Fund established by the Organization under regulation X13 equal to the amount calculated in accordance with regulation X10.2 [for each compliance period], taking into account the guidelines to be developed by the Organization²⁵.
- 2 The [annual]-GHG fuel contribution can be made in installments, provided that the total amount of the [annual]-GHG fuel contribution [for a compliance period] is made within the period mentioned in paragraph 1. [In case the total amount of GHG fuel contribution is not made within the period mentioned in paragraph 1, the Administration is entitled to recover from the ship the amount not collected by the IMO Net-Zero Fund, together with an administrative fee [not higher than [XX]% of the amount of the annual GHG contribution thus recovered and maximum of XXXXX [units of account]. The Administration shall transfer to the IMO Net-Zero Fund the amount of the annual GHG contribution recovered from the ship pursuant to this paragraph as soon as possible.]]
- <u>3</u> Upon receipt of the [annual]GHG fuel contribution [for the compliance period]in accordance with paragraph 1, including in cases where the [annual]GHG fuel contribution is made pursuant to regulation X10.3 and paragraph 2 of this regulation, the IMO Net Zero Fund shall issue an electronic confirmation of receipt in respect of each ship.
- 4 The electronic confirmation of receipt in respect of each ship shall be communicated to the Administration or to any organisation duly authorised by it and be automatically transferred to the IMO Ship Fuel [Use] Database. Access to this information shall be granted to that ship, the Administration or to any organisation duly authorised by it and to the officers duly authorized by a Party to this Annex to perform a port State inspection under regulation 10.5bis.

²³ see proposal to amend Appendix IX, taking into account LCA Guidelines (MEPC 376(8), as amended) and other Guidelines to be developed by the Organization.

²⁴ see Guidelines to be developed by the Organization on the determination of the annual GHG fuel contribution for ships.

²⁵ see Guidelines to be developed by the Organization on the collection by the IMO Net Zero Fund of the annual GHG fuel contribution for ships.

- 5 [The entity responsible for compliance with this regulation shall be the company at the time mentioned in regulation X11.1]-[The entity responsible for compliance with this regulation shall be the company for the relevant Compliance Period]
- [...]

.4 Flexible compliance mechanism(s) (regulation X12)

[Covered under point 9.7; propose deletion]

.5 Central management/oversight of collected revenue (regulation X13)

[To be further developed]

.6 Distribution of revenue (regulation X14)

[Annual] [Compliance Period] fuel reward

- After the end of calendar year [2027], within [six] months after the end of each subsequent calendar year until the uptake of eligible fuels in international shipping reaches [30%] and, at the latest, by 2040, each ship can make a request to the IMO Net Zero Fund for [an annual][a] monetary reward which corresponds to the amount of eligible fuels used by the ship [in the relevant compliance period] [over a 12-month period from 1 January to 31 December for][during] the preceding calendar year ([compliance period][annual] fuel reward) in accordance with paragraphs 2 to 5 of this regulation, using the data collected and verified in accordance with regulation 27 of this Annex, taking into account the guidelines to be developed by the Organization²⁶. The request for an [compliance period][annual]-fuel reward shall be made via electronic communication and using a standardized format to be developed by the Organization.
- 2 The **[compliance period]**[annual] fuel reward shall be determined as follows:

Annual Fuel Reward = $\sum_{i=1}^{I} E_i \times R \times ([10] - GHG_i)$, where:

<u>i is the type of eligible fuel used during the reporting **[compliance]** period, in accordance with the guidelines to be developed by the Organization</u>

I is the total number of eligible fuel types used during the reporting period

 E_i is the total amount of energy consumed by the ship by using fuel i, expressed in MJ, calculated according to the LCA Guidelines

R is the value of the reward rate, expressed in [units of account] per each unit of energy consumed (units of account/MJ), calculated in accordance with paragraph 3

[10] is the threshold value of eligible fuels in g CO_{2eg}/MJ²⁷

<u>GHG</u>_i is the GHG **[well to wake]** intensity of eligible fuel i, expressed in CO_{2eq}/MJ, calculated according to the LCA Guidelines

see Guidelines to be developed by the Organization on the determination by the IMO Net Zero Fund of the annual fuel reward.
 The definition (in particular the number in baseles to in the determination of the interview).

²⁷ This definition (in particular the number in brackets) might require further adjustments on the basis of progress achieved in the refinement of the LCA guidelines.

- 3 The value of the reward rate mentioned in paragraph 2 shall be determined annually and made publicly available by the IMO Net Zero Fund on [1 January] of each calendar year. The value shall be [based on the estimated cost difference between the cheapest fuel delivering on the required annual GFI and the cheapest eligible fuel, in accordance with the guidelines to be developed by the Organization.²⁸].
- <u>After receipt of the data transferred to it pursuant to regulation 27.9bis of this Annex, the IMO</u> <u>Net Zero Fund will verify the use of eligible fuels by the ship, taking into account the guidelines developed by the Organization.</u>
- 5 Within [eight] months after the end of the calendar year, each ship who has requested an [annual] [compliance period] fuel reward and whose use of eligible fuels has been verified in accordance with paragraph 4, shall be granted an annual fuel reward equal to the amount calculated in accordance with paragraph 2.
- In the event of any transfer of a ship addressed in regulations 27.4, 27.5 or 27.6 completed after 1 January [2027], a ship intended to make a request to the IMO Net Zero Fund for annual fuel reward shall, after the end of the calendar year in which the transfer takes place, make its request for annual fuel reward on the basis of the eligible fuels used for the full 12month period from 1 January to 31 December in the calendar year during which the transfer took place, in accordance with regulation X14.1, taking into account guidelines to be developed by the Organization].

[Promotion of technology

Other objectives with regards to distribution of revenues towards ZNZ technologies will be included, including where to best provision them (MARPOL Convention or elsewhere)].

GFS integrity financing

7 Any revenues received pursuant to regulation X7.3.2.2 shall be disbursed by the IMO Net Zero Fund exclusively on initiatives that reduce the GHG emissions within the boundaries of the energy system of international shipping, in accordance with guidelines to be developed by the Organization²⁹.

[Additional conditions to be inserted]

Promoting a Just and Equitable transition

- 8 [Under further examination Other objectives with regards to distribution of revenues towards effecting a just and equitable transition will be included, including where to best provision them (MARPOL Convention or elsewhere). In particular, this objective should address
 - **Disproportionately Negative Impacts (DNI), if any**: Estimations of the possible financial needs for addressing DNI, if any, are not available at this stage; the comprehensive impact assessment will bring clarity on this;
 - Support for climate transition in LDCs and SIDS, within the value chain of energy for shipping.]

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see Guidelines to be developed by the Organization on the determination by the IMO Net Zero Fund of the annual fuel reward, which shall provide, amongst others, for the value of the reward rate to be determined in accordance with regulation X14.3 after factoring in the annual GHG contribution for each ship and the impact of the SCUs in reducing the price gap between eligible fuels and fuels which comply with the required annual GFI.

²⁹ see Guidelines to be developed by the Organization on the distribution of revenues sourced from the [Alternative compliance approaches] to the Goal-based marine fuel standard.

[Promotion of the deployment and supply of eligible fuels for the maritime sector

Other objectives with regards to distribution of revenues towards the development of the supply of eligible fuels.

In particular, this objective should address the funding of projects with ports with proximity to shipping routes crossing their territorial waters and contiguous zones at a number above [XXX] ships from 5000 GT per year. Funds in this category should be disbursed on a project basis as grants, soft loans or other instruments depending on the nature of the investment needs. Grants should not exceed [30]% of the project value and the minimum interest rate of soft loans should be [0]% per annum. Grants and soft loans could be combined, with a minimum of 30% co-financing threshold for public entities, and a higher threshold for private sector projects. Disbursement should be subject to a positive project assessment and credit assessment].

Research, Development and Innovation (R&D&I)

9 [Under further examination - Other objectives with regards to promoting the energy transition of shipping through **Research, Development and Innovation (R&D&I)** will be included. This objective includes among others support to novel, efficient technologies for fuel production, bunkering technologies, <u>use of zero or near zero energies</u>, zero- and near-zero technologies and cutting-edge energy efficiency improvements in shipping. Special funding windows for R&D&I in developing states could be considered to ensure a more equitable distribution of funds.]

[...]

.11 Review of the chapter]

- 1 A review shall be completed by 1 January [20XX] by the Organization to assess:
 - .1 the effectiveness of the regulations in this chapter in promoting the energy transition of shipping and providing the world fleet a needed incentive while contributing to a level playing field and a just and equitable transition;
 - .2 the effectiveness of regulations X4, X5, X7 and X13 in reducing the average GFI of international shipping in line with regulation [X2] of this Annex [, taking into account the technological and market developments on the uptake of fuels delivered and used on board ships]; and
 - .3 [the need for revision of the functions of the IMO Net Zero Fund as defined in regulation X13 of this Annex.]
- 2. Notwithstanding paragraph 1, the Organization shall review the value of the contribution rate per tonne of CO_{2eq} emitted mentioned in regulation X10.2 every [five] years.
- 3 If based on the review the Parties decide to adopt amendments to regulations of this chapter, such amendments shall be adopted and brought into force in accordance with the provisions of article 16 of the present Convention.

Appendi<u>xc</u>es

.1 Appendix V (BDN)

[New paragraphs are inserted after paragraph 10:]

- 11 [reference to the Fuel Lifecycle Label (FLL) in accordance with the LCA Guidelines to be inserted.]
- <u>12</u> In case of blending different products, information under points 5 to 11 shall be included in the bunker delivery note in for each product delivered.

[other elements to be inserted as necessary.]

.2 Appendix IX (DCS)

Information to be submitted to the IMO Ship Fuel [Use] Database (regulation 27)

Fuel <u>use oil consumption</u>, by fuel <u>oil</u> type in metric tonnes <u>on a per voyage basis</u> and methods used for collecting fuel <u>use oil consumption</u> data

.....

[New parameters are inserted after "EEOI (gCO₂/t•nm or others)":]

For ships to which Chapter 5 of MARPOL Annex VI apply:

company name and contact details

Port of registry

attained annual greenhouse gas fuel intensity (attained annual GFI) (g CO_{2eg} /MJ)³⁰

<u>.....</u>

Number of Surplus Compliance Units already credited in the account of the ship with the GFI Registry :

Number of Surplus Compliance Units or Remedial Compliance Units needed for compliance with the required greenhouse gas fuel intensity (required annual GFI):

Voyages within the period for which the data is reported per voyage completed, as follows:

port of origin date and time of departure

port of destination..... date and time of arrival

Power capacity of other energy conversion systems installed onboard (to be stated in MW).....

Standards and characteristics of equipment to allow on shore power supply

Other on board power sources, not listed above, by energy carrier type (to be stated in MW) and methods used for collecting relevant data

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³⁰ Not applicable in the event of any transfer of a ship addressed in regulations 27.4, 27.5 or 27.6.

Well-to-Wake emission factors covering all GHG emissions, split in Well-to-Tank, Tank-to-Wake and fugitive emissions, of fuels used on board per fuel type and amount, including fuel oil

annual Greenhouse gas emissions resulting from fuel used on board (to be stated in tonnes of CO_{2eq})

[other data to be inserted as necessary.]

.3 Appendix X (Statement of Compliance <u>related to the annual GHG fuel intensity</u>)

[To be further developed]

.3bis Appendix Xbis (Statement of Compliance <u>related to the annual GHG fuel</u> <u>contribution</u>)

[To be further developed]

+ Possible accompanying new guidelines and consequential amendments to existing guidelines

- 1 <u>Guidelines on methods for determining, collecting and storing [ship fuel use] data under</u> regulation 27 of Annex VI for the purposes of compliance with Chapter 5 of Annex VI
- 2 <u>Guidelines for the calculation of the attained Greenhouse Gas Fuel Intensity (GFI) (see</u> <u>ISWG-GHG 16/2/7 by Austria et al)</u>
- 3 Guidelines on Administration verification of the attained annual GHG intensity
- 4 <u>Guidelines on the development and management of the GHG Fuel Intensity Registry (see</u> <u>ISWG-GHG 16/2/7 by Austria et al)</u>
- 5 Guidelines on the operation of the GHG Fuel Register
- 6 <u>Guidelines on the Flexibility Compliance Mechanism and method of calculation of</u> <u>compliance surpluses and compliance deficits for ships</u>
- 7 <u>Guidelines on the determination of the price of Remedial Compliance Units under the</u> <u>Flexibility Compliance Mechanism</u>
- 8 Guidelines on the determination of the annual GHG fuel contribution for ships
- 9 <u>Guidelines on the collection by the IMO Net Zero Fund of the annual GHG fuel contribution</u> for ships
- 10 Guidelines on the determination of eligible fuels under the annual fuel reward
- 11 Guidelines on the determination by the IMO Net Zero Fund of the annual fuel reward
- 12 <u>Guidelines on the distribution of revenues sourced from the [Alternative compliance approaches] to the Goal-based marine fuel standard</u>

[Consequential amendments to existing guidelines to be inserted once the structure of the basket is more stable.]]

[To be further developed]

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