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**DEVELOPMENT OF NEW AND/OR REVISION OF EXISTING GUIDELINES,
PROVISIONS, GUIDANCE AND OTHER DOCUMENTS, AS APPROPRIATE, FOR
SUPPORTING THE UNIFORM AND EFFECTIVE IMPLEMENTATION OF THE IMO
NET-ZERO FRAMEWORK**

Draft Guidelines on ZNZ rewards and methodology to determine such rewards

Submitted by ICS and IBIA

SUMMARY

Executive summary: This document sets out in its annex 1 suggested draft guidelines on ZNZ rewards and methodology to determine such rewards using an energy-based approach. Draft regulation 39.2 of MARPOL Annex VI sets out that "ships may receive rewards from the IMO Net-Zero Fund for the ZNZs used, taking into account guidelines to be developed by the Organization" and draft regulation 39.3 stipulates that "no later than 1 March 2027 and every five years thereafter the Committee shall define the reward". Draft regulation 38.6.5 requires that ships record "CO₂eq emissions avoided". The 5-10% ZNZ energy uptake target agreed for 2030 is now a matter of urgency, and so that energy producers and shipowners can have the clarity and confidence necessary to make immediate investment decisions to accelerate the uptake of ZNZs, it is essential that a bold and pragmatic approach is used and that ZNZ reward guidelines are adopted at MEPC 84. To expedite this work, the Working Group is requested to consider annex 1 to this document and recommend to MEPC 84 a simple, practicable and effective approach whereby a reward rate is fixed for ships using ZNZs meeting the GFI threshold in calendar years 2028 to 2032 at a US\$ rate per tonne of CO₂eq avoided.

*Strategic direction,
if applicable:* 3

Output: 3.2

Action to be taken: Paragraph 42

Related documents: MEPC/ES.2/2, MEPC/ES/2/2/2, MEPC/ES.2/3; MEPC 83/7/5, MEPC 83/WP.11 and MEPC 83/17

Introduction

1 MEPC 83 approved draft amendments to MARPOL Annex VI on the IMO Net-Zero Framework (NZF) with a view to adoption at MEPC/ES.2. Document MEPC/ES.2/2 (Secretariat) provides the draft Revised MARPOL Annex VI 2025 for consideration by MEPC/ES.2 with a view to adoption. This document assumes that the IMO Net-Zero Framework will be adopted, as supported by ICS in documents MEPC/ES.2/2/2 and MEPC/ES.2/2/3, which also explain why the issue of rewards to ships for the uptake of ZNZs is considered by industry to be of critical importance if the NZF is to succeed in achieving the goals of the *2023 IMO Strategy on Reduction of GHG Emissions from Ships* (2023 IMO GHG Strategy).

2 Draft regulation 39.2 of MARPOL Annex VI sets out that "ships may receive rewards from the IMO Net-Zero Fund for the ZNZs used, taking into account guidelines to be developed by the Organization", although ICS has suggested, in document MEPC/ES.2/2/2, that the word "may" should be adjusted to "shall" in the final text adopted, consistent with use of mandatory language in MARPOL Annex VI.

3 For the purpose of calculating annual rewards to ships for the use of ZNZs, regulation 38.6.5 stipulates that the IMO GFI Registry shall record for each ship account, for each annual reporting period, "the GHG emissions avoided by the uptake of ZNZs". Moreover, as set out in paragraph 9 of draft Appendix XIII of MARPOL Annex VI, the "Form of Statement of Compliance – Annual GHG Fuel Intensity (regulation 8.5)" will record "for a ship eligible to receive rewards from the IMO Net-Zero Fund, the total amount of GHGs reduced by the uptake of ZNZs was....in tCO₂eq, pursuant to regulation 39 of MARPOL Annex VI".

4 Draft regulation 39.3 of MARPOL Annex VI further provides for a guaranteed five-year period that the reward is defined for, beginning no later than 1 March 2027. Importantly, this provides shipowners with increased certainty for investment decisions and the co-sponsors suggest this five-year period should be for the five annual reporting periods from 2028 to 2032.

5 MEPC 83 also noted the indicative list of guidelines, governing provisions and other guidance accompanying the draft amendments on the IMO Net-Zero Framework, to be developed or to be amended (MEPC 83/17, paragraph 7.46), which includes "Guidelines on the definition of ZNZs, of ZNZs rewards and the methodology to determine such rewards" (MEPC 83/WP.11, annex 2).

Overview of suggested draft guidelines on ZNZ rewards

6 To expedite the rapid development of guidelines on rewards, for adoption as soon as possible, which is a matter of great urgency if the IMO Net-Zero Framework is to be successfully implemented, annex 1 to this document sets out a suggested draft of these guidelines which for brevity are called Guidelines on ZNZ rewards and methodology to determine such rewards. These suggested guidelines update the draft contained in document MEPC 83/7/5 (Bahamas et al.), using terminology intended to be consistent with the draft regulations expected to be adopted at MEPC/ES.2. Furthermore, as the NZF sets out the calculation of GHG fuel intensity in terms of energy, the co-sponsors consider that the calculation of rewards should also be determined on an energy basis and so this is the methodology now suggested in paragraph 12 of the draft guidelines, as set out in annex 1 of this document.

7 As well as being fuel and technology agnostic, the methodology suggested in paragraph 12 of the draft guidelines enable the calculation of rewards for ships using any ZNZ that meets the GFI threshold, as set out in draft regulation 39.1 of MARPOL Annex VI, so

allowing these guidelines on rewards to be adopted before the next iteration of the LCA Guidelines is finalized (noting industry concern about the complexity and delay with respect to the ongoing GESAMP process).

8 Subject to the discussion at MEPC/ES.2 on the draft work plan set out in the annex to document MEPC/ES.2/3 (Secretariat), the co-sponsors urge adoption of an initial version of these guidelines for ZNZ rewards no later than MEPC 84.

9 MEPC 85 is scheduled to be held less than six months before entry into force. Whilst the draft regulations identify definition of rewards by 1 March 2027, the co-sponsors consider that adoption of these guidelines at MEPC 85 would be too late for sending the required signal to industry necessary to kick-start and help de-risk critical and urgent investment decisions, if the level of ambition in the 2023 IMO GHG Strategy for at least 5-10% of the energy used by international shipping to come from ZNZ sources by 2030 is realistically to be achieved, so that a pathway to net-zero by or close to 2050 remains plausible.

10 Moreover, to send a clear and immediate signal to industry, it is essential that these guidelines set out a fixed reward per tonne of CO₂eq emissions avoided for any ship using ZNZs in calendar years 2028 to 2032, as stipulated by draft regulation 38.6.5 of MARPOL Annex VI which, as highlighted above, says that for the purpose of calculating annual rewards to ships for the use of ZNZs, the IMO GFI Registry shall record for each ship account, for each annual reporting period, "the GHG emissions avoided by the uptake of ZNZs".

11 The draft guidelines, as set out in annex 1, are intended:

- .1 to provide confidence and certainty to industry, which from 2029 onwards will be contributing US\$ tens of billions each year to the IMO Net-Zero Fund, that a **guaranteed** and **meaningful** level of rewards will be received by those ships that invest in ZNZs which **substantially reduces the price gap** with conventional fuels;
- .2 to ensure, whilst minimizing the administrative burden for governments and for the Organization, that these rewards will be sufficient to rapidly incentivize the accelerated production and uptake of ZNZs, and that these rewards will be efficiently disbursed to ships by the IMO Net-Zero Fund from 2029 onwards; and
- .3 to be fully consistent with draft regulations 38.6.5 and 39.3 of MARPOL Annex VI, by setting out a guaranteed reward **per tonne of CO₂eq avoided, fixed for a five-year period** for ZNZs used in calendar years 2028 to 2032.

12 In view of the great urgency of finalizing and adopting guidelines at MEPC 84 on rewards for use of ZNZs, it is essential that the Committee applies a **bold** and **pragmatic** approach and that these guidelines are kept as **simple** as possible, to provide the industry with the clarity and confidence it needs to take critical and very expensive investment decisions.

13 To assist immediate adoption at MEPC 84, the guidelines set out in annex 1 to this document currently only address rewards for ZNZ fuels and energy sources. The co-sponsors nevertheless emphasize the vital need for guidelines which can be readily amended once a methodology has been developed for calculating the CO₂eq emissions avoided by the use of ZNZ technologies, so as to also allow rewards to be disbursed to ships from 2029 onwards which use such technologies, in addition to ZNZ fuels and energy sources, including most importantly onboard carbon capture. The co-sponsors consider that rewards to accelerate the

uptake of ZNZ technologies, in particular onboard carbon capture, will be essential to ensure that net-zero GHG emissions can be achieved by international shipping by or close to 2050, and that retaining the possibility of rewards to ships for use of ZNZ technologies is of the utmost importance. This point is further elaborated in paragraphs 36 to 39 below.

Key advantages of suggested draft guidelines on ZNZ rewards

14 As well as being consistent with the regulations, the key advantage of rewards being based on CO₂eq emissions avoided compared to using conventional fuel oil (which the majority of ships will continue to use for at least the next 10 years) with a reward per tonne of CO₂eq avoided fixed for a five-year period (for ZNZs used by ships between 2028 and 2032) is that:

- .1 shipowners and energy producers will have immediate certainty about the guaranteed value of rewards so that they can take rapid investment decisions, which are urgently required, noting that ZNZ fuel projects typically have very long timeframes between inception and implementation;

Explanation: Alternative approaches, such as not announcing the value of rewards until 2029 when ZNZ uptake during 2028 is known, and/or adjusting the reward annually, will **not** provide the necessary certainty to industry and will jeopardise any possibility of the 2030 ZNZ uptake target being achieved, making achievement of net zero by or close to 2050 increasingly unlikely to be achieved (or possible only with far greater economic impacts on Member States);

- .2 the rewards for use of ZNZs will be fuel and technology neutral/agnostic provided that ZNZs to be rewarded meet the definition of ZNZs as set out in regulation 39.1 of MARPOL Annex VI;
- .3 as the value of rewards will be fixed by the IMO guidelines, the administrative burden for Member States and the Organization will be minimized;

Explanation: This is compared to overly complex possibilities such as ships having to compete in "auctions" for rewards, or requiring IMO to establish complex, bureaucratic and resource intensive systems for setting annual "strike prices" for "contracts for difference" which, although perhaps appropriate for national energy markets in some developed economies, would take several years for the Committee to agree upon and establish and which would not be appropriate for the IMO Net-Zero Fund which needs to be managed and administered on a global basis, and which applies to a sector mostly comprising small to medium-sized shipping companies which, unlike energy producers, are not equipped to participate in such complex processes. This is especially the case with respect to small and medium-sized shipping companies in developing countries. Furthermore, the Committee, by fixing the quantum of the reward for a five-year period, would also help to prevent financial speculation;

- .4 the cost to the Organization of establishing and administering a system for disbursement of rewards to ships (which can be linked to the system to be established for the IMO Net-Zero Fund to receive GHG emissions pricing contributions from ships) will be far less expensive, so that the system can be fully established before revenue is initially generated in late 2029;

- .5 the level of rewards for use of ZNZs can be set out in advance by guidelines adopted at MEPC 84, almost a year before the MARPOL amendments enter into force, and more than two years before the IMO Net-Zero Fund is established, **so that valuable time to increase the uptake of ZNZs is not lost to assist achievement of the 2030 ZNZ energy uptake target;**

Explanation: Whilst the IMO Net-Zero Fund will need to be established and partially operational by the end of 2028 in order to receive GHG emissions pricing contributions from ships and to disburse rewards for use of ZNZs during 2029, the Board of the IMO Net-Zero Fund, which cannot be formally established until after entry into force, does not need to have any direct role in setting the level of ZNZ rewards or the method of calculation. This can be a matter for the Committee as, unlike the other disbursement purposes set out in draft regulation 41.1.2, which may involve complex policy/political considerations, the role of the IMO Net-Zero Fund with respect to ZNZ rewards will be purely administrative and can be undertaken by the Secretariat in accordance with the MARPOL regulations and guidelines as decided by the Committee; and

- .6 the energy-based method for determining the reward, as set out in paragraph 12 of the draft guidelines, set out in annex 1, allows the guidelines to be adopted and the reward rate to be set at MEPC 84 without needing to wait for the Committee to finalize WTW default emission factors for all the many varieties and types of ZNZ fuels in the LCA Guidelines (noting industry concern about the complexity and delay with respect to the ongoing GESAMP process).

Calculation of rewards per tonne of GHG avoided

15 For the purpose of calculating rewards to ships for the use of ZNZs, draft regulation 38.6.5 of MARPOL Annex VI stipulates that the IMO GFI Registry shall record for each ship account for each reporting period "GHG emissions avoided by the uptake of ZNZs". Moreover, as set out in paragraph 9 of draft Appendix XIII of MARPOL Annex VI, the "Form of Statement of Compliance – Annual GHG Fuel Intensity (regulation 8.5)" will record "for a ship eligible to receive rewards from the IMO Net-Zero Fund, the total amount of GHGs reduced by the uptake of ZNZs was.... in CO₂eq, pursuant to regulation 39 of MARPOL Annex VI".

16 It is strongly emphasized that calculating rewards based on the CO₂eq emissions "avoided" or "reduced" by the use of ZNZs is consistent with the draft regulations and the simplest, pragmatic and most effective means to calculate rewards for the use of ZNZ fuels to give energy producers and shipowners the clear signal and confidence which they urgently need to make immediate investment decisions.

17 The draft guidelines set out in annex 1 therefore outline how rewards to ships using ZNZs should be calculated for the CO₂eq emissions "avoided" or "reduced" compared to using conventional fuel oil, i.e. the tonnes of CO₂eq which would have been emitted had conventional fuel oil been used by the ship instead to generate the same amount of energy. **For determining the reward, the GHG intensity of conventional fuel oil is taken to be the GFI reference line value equivalent to 93.3 gCO₂eq/MJ, as set out in draft regulation 35.2 of MARPOL Annex VI.**

18 During the first five years of implementation (calendar years 2028 to 2032), during which time an initial reward rate per tonne of CO₂eq avoided shall be fixed (as required by draft regulation 39.3 of MARPOL Annex VI) the majority of ships using ZNZ fuels will most likely be dual-fuel ships which, during a calendar year (reporting period), will also continue to use conventional marine fuel oil for which they may be required to pay GHG emissions pricing contributions for under-compliance with the GFI requirements.

19 To incentivize ZNZs uptake, it is therefore essential that any ship using ZNZ fuels (including blended fuels with a sustainable certified ZNZ component) should also receive rewards for their use, even if the ship under-complies with its annual required GFI as required by draft regulation 35. In practice, however, the rewards which most dual-fuel ships will receive, based on consumption of ZNZ fuels during the previous calendar year, are unlikely to exceed the annual GHG emissions pricing contributions due to be paid by the ship to the IMO Net-Zero Fund for the consumption of non-ZNZ fuels during the same reference period.

Ensuring the IMO Net-Zero Fund generates sufficient revenue to cover the projected total cost of rewards

20 The co-sponsors acknowledge that there is a question with regard to the Committee setting a fixed reward per tonne of CO₂eq avoided for a five year-period and the need to ensure that the IMO Net-Zero Fund will have sufficient revenue from GHG emissions pricing contributions from ships to meet its obligations, as set out in the regulations, to provide for the disbursement of rewards to ships for the uptake of ZNZs. This question is therefore discussed at length in the following paragraphs.

21 The co-sponsors appreciate the concern amongst some Member States that the IMO Net-Zero Fund might not receive sufficient revenue from GHG emissions pricing contributions from ships to cover the maximum likely cost of rewards that might be required for disbursement.

22 However, the co-sponsors observe, due to the very low availability of ZNZs between 2028 and 2032, the total amount of revenue that will be generated for the IMO Net-Zero Fund from GHG emissions pricing contributions by ships between 2029 and 2033 will be much larger than the industry had anticipated. Even in 2029 it is estimated that it will not be less than the US\$10 to US\$15 billion that has been suggested by some commentators.* Based on the GFI trajectory in the NZF approved by MEPC 83, it is evident that many US\$ tens of billions will be collected by the IMO Net-Zero Fund as GHG emissions pricing contributions from ships between 2029 and 2033. Because of the very low anticipated availability of ZNZs in this initial five-year period, the funds collected should therefore be **more than sufficient to cover the maximum likely cost of rewards for the use by ships of ZNZs between 2028 and 2032 whilst still leaving very substantial funds available for other disbursement purposes, as set out in draft regulation 41.1.2 of MARPOL Annex VI.**

23 The price of GHG emissions pricing contributions for under-compliance by ships with annual required GFI is fixed by draft regulations 36.8 and 36.9 of MARPOL Annex VI and could potentially be increased by the Committee for the years 2031 onwards following the review of the price of remedial units, and thus the price of GHG emissions pricing contributions, required by draft regulation 36.10 of MARPOL Annex VI. The co-sponsors therefore assert that it will be relatively simple for the Committee to calculate, with a high degree of confidence, a reliable estimate, **which significantly strays on the side of caution**, with respect to the amount of

* DNV on-demand webinar: Summary of MEPC 83, 24 April 2025.
<https://www.dnv.com/maritime/webinars-and-videos/on-demand-webinars/access/mepc83-summary/>

revenue which will be collected by the IMO Net-Zero Fund in the five-year period between 2029 and 2033.

24 The co-sponsors consider that it will also be possible for the Committee to readily establish a reliable estimate of the maximum amount of funding that might realistically be required for disbursement as rewards between 2029 and 2033 (for ZNZs used by ships between 2028 and 2032) by taking into account the level of ambition in the 2023 IMO GHG Strategy for at least 5% (striving for 10%) of the total energy used by international shipping to come from ZNZ energy sources by 2030. The agreement by the Committee of this specific level of ambition suggests that the expected global availability of ZNZs in any calendar year between 2028 and 2032, for which rewards might need to be disbursed by the IMO Net-Zero Fund for ZNZs used during this five-year period, will be very unlikely to exceed 10% of the total energy used by international shipping (i.e. the upper end of the ZNZ energy uptake target in the 2023 IMO GHG Strategy).

25 Using cautious and realistic estimates of the likely revenue from GHG emissions pricing contributions and the maximum likely uptake of ZNZs, a reward per tonne of CO₂eq avoided by the uptake of ZNZs can then be set by the Committee at an appropriate rate, set by guidelines for a five-year period consistent with draft regulation 39.3 of MARPOL Annex VI, to ensure that sufficient funds will be available for disbursement as rewards via the IMO Net-Zero Fund.

26 Moreover, the first review of the NZF required by draft regulation 44 of MARPOL Annex VI, that is within five years of entry in force of chapter 5 of MARPOL Annex VI, should also take account of ZNZ fuel availability during this five-year period, so that, if necessary, in the unlikely event of any projected future shortfall of revenue after 2032, an adjustment could potentially be made by the Committee to the future reward rate for CO₂eq emissions avoided by the use of ZNZs.

27 In view of the very low current and anticipated availability of ZNZs for international shipping, until at least 2032, even if the Committee decided to use very optimistic estimates of ZNZ uptake for the years 2028 to 2032, it is therefore now possible for the Committee to determine with a high degree of confidence that the substantial GHG emissions pricing contributions which will be made by the industry to the IMO Net Zero-Fund should be more than sufficient to cover the maximum and realistically likely cost of disbursements for rewards, which the industry considers should be the primary use for the funds initially raised between 2029 and 2033 if the transition to net zero is to succeed.

Process for disbursement of rewards to ships

28 Based on the co-sponsors' understanding of the draft regulations, the calculation and disbursement of annual rewards can be administered by the IMO Net-Zero Fund based on verified data about the consumption of fuel by the ship, including verified data on use by a ship of ZNZ fuels, reported to the IMO GFI Registry in accordance with draft regulation 37 of MARPOL Annex VI. This data can be automatically transferred by the IMO Secretariat to the IMO Net-Zero Fund which can administer the disbursement of annual rewards to ships as part of the same process used to receive GHG emissions pricing contributions from ships.

29 If the rewards mechanism is to be successful in immediately incentivizing the uptake of ZNZs, energy producers and shipowners will only be likely to have confidence in the system, and begin to make necessary investments in ZNZs, if they have certainty that rewards will start to be disbursed from 2029 onwards for ZNZs used in 2028, and that they have certainty about the guaranteed quantum of the reward from 2026 (i.e. following agreement on this at MEPC 84).

30 Based on the co-sponsors' understanding of the draft regulations to be adopted, payment for GHG emission pricing contributions with a reduction for rewards using a "net contribution" system, as previously suggested in document MEPC 83/7/5 (Bahamas et al.) will no longer be possible. The co-sponsors nevertheless propose that ships should be able to receive rewards for the use of ZNZs as soon as they have received a Statement of Compliance, recorded on the GFI Registry, confirming that any GHG emissions pricing contributions due from the ship (for any under-compliance with annual required GFI in the previous calendar year) have been received by the IMO Net-Zero Fund. This is the approach which is therefore suggested in the draft guidelines, as set out in annex 1.

Setting the reward rate for ZNZs used (2028 to 2032)

31 The co-sponsors reiterate that to immediately incentivize and help de-risk critical investment decisions to accelerate ZNZ uptake, the Committee should take a **bold** and **pragmatic** approach to setting the reward per tonne of CO₂eq avoided, which should be agreed no later than MEPC 84. The co-sponsors emphasize if there is any significant under-achievement of the 2030 ZNZ uptake target for 5-10% of the energy used by international shipping to come from ZNZ energy sources, the achievement of net zero by or close to 2050 will become increasingly implausible and far more expensive to achieve, with much larger economic impacts on States.

32 Recognizing that the best can sometimes be the enemy of the good, the co-sponsors reiterate the need to have a reward that is readily comprehensible to the shipping industry and energy producers, based on CO₂eq emissions avoided/reduced compared to the use of conventional liquid fuel oil, which to help de-risk expensive investment decisions should provide a **guaranteed level of reward for a fixed period of at least five years**, i.e. for ZNZs used between 2028 and 2032. To quickly establish an effective system which can immediately start incentivizing first movers globally, **the co-sponsors strongly caution against too much complexity**.

33 Pursuant to regulation 39.3 of MARPOL Annex VI, before the end of the initial five-year period of rewards being disbursed, the method of defining and calculating rewards, and the level of the reward per tonne of CO₂eq avoided can be revisited by the Committee, especially if the level of ambition for at least 5-10% of the energy used by international shipping to come from ZNZ sources has been achieved and the Committee determines that a commercial market for ZNZ marine fuels has successfully been established.

34 The Working Group should therefore consider the need for a bold and pragmatic approach and recommend that the Committee immediately set a guaranteed reward rate for the use of ZNZs which is as high as reasonably possible to substantially reduce the price gap, consistent with avoiding giving an unfair economic competitive advantage to any type of ZNZ. Key factors to be considered in setting the reward per tonne of CO₂eq avoided include:

- .1 sufficient to substantially reduce the cost gap with conventional marine fuels to incentivize accelerated uptake of ZNZ fuels, in combination with the value of surplus units (that a ship in direct compliance with draft regulation 35.2 of MARPOL Annex VI is eligible to receive in accordance with draft regulation 36) but which on their own, without rewards, will not be adequate to sufficiently reduce the cost gap;
- .2 ensuring that the IMO Net-Zero Fund has adequate funds to cover the maximum level of total rewards which are likely to be disbursed between 2029 and 2033; and

- .3 ensuring the reward is not set at a level which might provide an unfair economic advantage to any particular type of ZNZ, creating market distortion or unfair competition.

35 To further assist the Working Group's consideration of the suggested draft guidelines and method for calculating the reward, as set out in paragraph 12 of these draft guidelines, an example calculation of the annual reward to a ship for use of an example ZNZ fuel is set out in annex 2 to this document, which, for **illustrative purposes only**, uses a reward rate of US\$100 per tonne of CO₂eq avoided on a well-to-wake basis, although the reward rate which will be necessary to substantially reduce the price gap so as to incentivize the production and uptake of ZNZs will almost certainly need to be significantly higher.

Use of carbon capture and other technologies

36 Draft regulation 2.3.19 of MARPOL Annex VI (definitions for use with new chapter 5) reads as follows: "Zero or near-zero GHG emission technologies, fuels and/or energy sources (ZNZs) means the type of ZNZs that qualifies for the annual fuel reward in accordance with regulation 39." Regulation 2.3.19 of MARPOL Annex VI therefore makes it clear that rewards should not be limited to ships using ZNZ fuels and energy sources only and should therefore apply also to ZNZ technologies such as onboard carbon capture and should also be disbursed to ships that use such technologies from 2029 onwards.

37 The co-sponsors recognize that the issues involved are complex which is why the current focus of draft guidelines, set out in annex 1, is the method of calculating rewards for use of ZNZ fuels. It is nevertheless most important that the IMO guidelines ensure that provision of rewards for use of onboard carbon capture and other ZNZ technologies can be agreed by the Committee, as soon as practicable, without requiring the MARPOL regulations to be amended.

38 As well as being consistent with the terms used in the 2023 IMO GHG Strategy, it is important that the regulations allow ships using technologies such as onboard carbon capture, and other technologies, to be eligible for rewards, to incentivize their uptake when the methodology for calculating the CO₂eq emissions avoided by their use has been agreed by the Organization. If international shipping is to achieve net-zero emissions by or close to 2050, it is vital that incentives for the use of onboard carbon capture and other ZNZ technologies should not be ruled out.

39 The co-sponsors reiterate that they are fuel/technology neutral with respect to the types of zero/near-zero GHG fuels, energy sources and technologies, including carbon capture, that should receive annual rewards for the CO₂eq emissions avoided by their use, provided they meet the definition of ZNZs set out the regulations. The aim of the 2023 IMO GHG Strategy is to phase-out GHG emissions rather than phasing-out the use of fossil fuels, and those who may question rewards to ships for the use of onboard carbon capture are encouraged to avoid taking an ideological approach at this stage, given that such technologies are likely to prove to be a very effective means of reducing GHG emissions to help international shipping achieve net zero.

Conclusion

40 Assuming the IMO Net-Zero Framework is adopted at MEPC/ES.2, incentivizing the accelerated uptake of ZNZs will be essential to ensure the success of the IMO Net-Zero Framework. Unless energy producers and shipowners have immediate certainty and clarity about the quantum of the rewards they will receive, to help reduce the price gap with conventional marine fuels, they will likely delay their investment decisions with respect to ZNZs,

and the construction of ships that use ZNZs, so jeopardizing achievement of the IMO's GHG reduction goals, including the 2030 ZNZ uptake target, and resulting in tonnage shortages and disruptions to international seaborne trade.

41 It is therefore essential that the Working Group takes a bold and pragmatic approach towards rapidly finalizing draft guidelines on rewards, similar to those set out in the annex 1 to this document, with a view to their adoption by the Committee no later than MEPC 84 and making significant progress on developing these guidelines at ISWG-GHG 20.

Action requested of the Working Group

42 The Working Group is invited to consider the suggested draft guidelines set out in annex 1 of this document, including the energy-based methodology for determining rewards for use of ZNZs that is set out in paragraph 12 of these draft guidelines, and the example calculation set out in annex 2 to this document, and to recommend to MEPC 84 that:

- .1 in view of the urgent need for energy producers and shipowners to have confidence and certainty to make critical investment decisions Guidelines on ZNZ rewards and methodology to determine such rewards should be adopted at MEPC 84;
- .2 the draft guidelines set out in annex 1, subject to the discussion at ISWG-GHG 20, should be used as a base document for finalization and adoption at MEPC 84;
- .3 to send an immediate signal to energy producers and shipowners, a guaranteed reward per tonne of CO₂eq avoided by the use of ZNZ fuels should be fixed at MEPC 84 for a five-year period for ZNZs used by a ship in calendar years 2028 to 2032;
- .4 as the NZF sets out the calculation of GHG fuel intensity in terms of energy, the calculation of rewards should also be determined on an energy basis and that the methodology set out in paragraph 12 of the suggested draft guidelines should be used;
- .5 rewards to ships for use of ZNZs used in 2028 should be disbursed as soon as possible in 2029, as soon as the ship has been issued with a Statement of Compliance, recorded on the GFI Registry, confirming that any GHG emission pricing contributions due from the ship (for any under-compliance with Annual Required GFI in the previous calendar) have been received by the IMO Net-Zero Fund; and
- .6 the Committee should ensure when setting a reward rate, fixed for a five-year period for ZNZs used in calendar years 2028 to 2032, that:
 - .1 the IMO Net-Zero Fund is certain, within reasonable probability, to have sufficient revenue to cover the total cost of the rewards for which ships might be eligible to receive during the five-year period from 2029 to 2033; and
 - .2 a significant and substantial proportion of the total GHG emissions pricing contributions collected between 2029 and 2033 will also be allocated for those other purposes as set out in draft regulation 41.1.2 of MARPOL Annex VI; and

- .7 the guidelines on rewards adopted at MEPC 84 should be designed so that they can be readily updated in due course to provide rewards for CO₂eq avoided by the use of ZNZ technologies, including onboard carbon capture, when the methodology for doing so has been approved by the Committee.

ANNEX 1**DRAFT MEPC RESOLUTION****[2026] GUIDELINES ON ZNZ REWARDS AND METHODOLOGY TO DETERMINE SUCH REWARDS****Introduction**

1 The *[2026] Guidelines on ZNZ rewards and methodology to determine such rewards* have been developed to assist with the calculation and disbursement of rewards to ships required by regulation 39 of MARPOL Annex VI. For the purpose of calculating annual rewards to ships for the use of ZNZs, regulation 38.6.5 of MARPOL Annex VI stipulates that the IMO GFI Registry is required to record for each ship account, for each annual reporting period, "the GHG emissions avoided by the uptake of ZNZs".

2 Any ship using ZNZs should receive annual rewards for their use, even if the ship under-complies with its annual required GFI, as required by regulation 35 of MARPOL Annex VI, for which it must make GHG emissions pricing contributions to the IMO Net-Zero Fund.

Definition of ZNZs for determining rewards to ships from the IMO Net-Zero Fund

3 Regulation 2.3.19 of MARPOL Annex VI defines ZNZs as follows:

"19 Zero or near-zero GHG emission technologies, fuels and/or energy sources (ZNZs) means the type of ZNZs that qualify for the annual fuel reward in accordance with regulation 39."

4 Regulation 39.1 of MARPOL Annex VI requires that ZNZs shall include technologies, fuels and energy sources and be evaluated on a well-to-wake basis, taking into account guidelines to be developed by the Organization. The GFI threshold for ZNZs shall be set at not greater than 19.0 gCO₂eq/MJ for an initial period until 31 December 2034, and from 1 January 2035, the threshold shall be set at not greater than 14.0 gCO₂eq/MJ taking into account guidelines developed* and to be developed by the Organization.

Reporting of GHG emissions avoided by the uptake of ZNZs

5 To be eligible to receive a reward, and as required by regulation 37.1 of MARPOL Annex VI, the ship must report to its Administration, for each annual reporting period, verified use of ZNZ fuels and, using the calculation method set out in paragraph 12 of these guidelines, the verified CO₂eq emissions avoided by the use of ZNZ fuels compared to the use of conventional marine fuel oil which, for purpose of these guidelines, will be the GFI reference line value equivalent to 93.3 gCO₂eq/MJ as set out in regulation 35.2 of MARPOL Annex VI.

6 By 30 April after each annual reporting period, the CO₂eq emissions avoided or reduced by the use by the ship of ZNZs should be recorded on the Statement of Compliance to be issued to the ship by the Administration, consistent with the "Form of Statement of Compliance – Annual GHG Fuel Intensity (regulation 8.5)" as set out in Appendix XIII (paragraph 9) of MARPOL Annex VI.

* Refer to *2024 Guidelines on Lifecycle GHG intensity of marine fuels* (resolution MEPC.391(81)).

Role of the IMO GFI Registry and IMO Net-Zero Fund

7 By 30 September after each annual reporting period, the record for each ship on the GHG emissions avoided by the uptake of ZNZs held under the IMO GFI Registry in accordance with regulation 38.6.5 of MARPOL Annex VI should automatically and immediately be transferred by the Organization to the IMO Net-Zero Fund.

8 From 2029, immediately if practicable, but in any case within 1 month of the record on the CO₂eq emissions avoided by the uptake of ZNZs for a ship being transferred by the Organization to the IMO Net-Zero Fund, the reward due to the ship should be calculated by the IMO Net-Zero Fund and made accessible to the ship or company online, and, when applied for online, be disbursed immediately or as soon as practicable to the ship or company, as defined in regulation 2.1.11 of MARPOL Annex VI, as applicable, pursuant to regulation 39.2 of MARPOL Annex VI.

9 The IMO Net-Zero Fund should only disburse the annual reward due to the ship after the ship has been issued with a Statement of Compliance (as set out in appendix XIII of MARPOL Annex VI concerning the "Form of Statement of Compliance – Annual GHG Fuel Intensity (regulation 8.5)" related to the annual GHG fuel intensity and confirming that any required GHG emissions pricing contributions for the previous calendar year (reference period) have been transferred by the ship to the IMO Net-Zero Fund.

Rewards disbursed to ships by the IMO Net-Zero Fund

10 Pursuant to regulation 39.2 of MARPOL Annex VI, each ship using ZNZs, as determined by the Organization, should receive a reward, disbursed by the IMO Net-Zero Fund. The reward should be determined using a reward rate of US\$ [XXX] per tonne of CO₂eq emissions avoided/reduced each calendar year, calculated on a life cycle basis, based on the CO₂eq which would have been emitted had the ship used conventional fuel oil which, for the purpose of these guidelines, will be the GFI reference line value equivalent to 93.3 gCO₂eq/MJ as set out in regulation 35.2 of MARPOL Annex VI.

11 To apply for and receive the reward, the ship must notify IMO Net-Zero Fund online and confirm that the verified data held by the IMO Net-Zero Fund (as transferred from the GFI Registry) about CO₂eq emissions avoided by the ship by use of ZNZs in the previous calendar year is correct.

Calculation of rewards to ships disbursed from IMO Net-Zero Fund

12 For ZNZs used by a ship in calendar years 2028 to 2032, pursuant to regulation 39.2 of MARPOL Annex VI, the annual reward for using ZNZs, per tonne of ZNZ fuel used, should be determined on a life cycle basis as follows:

Equation 1: *Calculation of Tonnes CO₂eq avoided*

The total tonnes of CO₂eq emissions avoided is calculated by taking the GHG intensity of conventional marine fuel oil set at the GFI reference line value equivalent to 93.3 gCO₂eq/MJ and subtracting the GHG intensity of the ZNZ fuel used, multiplying that by Lower Calorific Value of the ZNZ fuel used, and then multiplying by total tonnes of the ZNZ used, and is determined as follows:

$$CO_{2eq\ avoided} = \sum_i^{n\ ZNZ} ((93.3 - GFI_{ZNZ_i}) \times LCV_{ZNZ_i} \times t_{ZNZ_i})$$

where:

GFI_{ZNZ} is the GHG intensity (gCO₂eq/MJ) of the ZNZ fuel used;

LCV_{ZNZ} is the Lower Calorific Value (MJ/g) of the ZNZ fuel used;

t_{ZNZ} is the tonnes of ZNZ fuel used;

i is the index corresponding to each different ZNZ fuel used by the ship during the relevant calendar year; and

n is the total number of ZNZ fuels used by the ship during the relevant calendar year.

Equation 2: **Calculation of Annual Reward**

The total Annual Reward is calculated by multiplying the total CO₂eq emissions avoided, determined using Equation 1, by the rate of reward (R), and is determined as follows:

$$Annual\ Reward\ (US\$) = CO_{2eq\ avoided} \times R$$

where:

R is the rate of reward set at US\$ [XXX] per tonne of CO₂eq emissions avoided/reduced.

13 Whilst the calculation method above concerns rewards for the use of ZNZ fuels, these guidelines may be amended, as appropriate, to set out calculation methods for rewards for the use by ships of other energy sources and ZNZ technologies, including onboard carbon capture.

ANNEX 2

EXAMPLE CALCULATION FOR DETERMINING A REWARD

Explanation: For **illustrative purposes only**, the following example uses of a reward rate of US\$ 100 per tonne of CO₂eq avoided (although to reduce the cost gap with conventional fuels it will almost certainly need to be higher to incentivize the uptake of ZNZs). Whilst the agreed reward per tonne of CO₂eq emissions avoided will be the same for all types of ZNZs, due to the different energy densities of different ZNZ fuels the reward **per tonne of fuel** consumed will vary according to the ZNZ.

An example calculation is set out below, where 1,000 tonnes of a certain type of ZNZ fuel is used by the ship during a calendar year:

Reward rate (R) = US\$ 100 per tonne of CO_{2e} avoided

GFI reference value of 93.3 gCO₂eq/MJ (regulation 35.2 of MARPOL Annex VI)

Example ZNZ fuel:

Certified WTW GHG intensity	=	10 gCO ₂ eq/MJ ¹
Lower Calorific Value	=	0.0186 MJ/g ²

Equation 1: Tonnes of CO_{2e} avoided = $(93.3 - 10) \times 0.0186 \times 1,000 = 1,561$ tonnes

Equation 2: Annual Reward for using 1,000 tonnes of this ZNZ fuel = $1,561 \times 100 =$
US\$ 156,100

¹ For illustrative purposes only.

² Lower Calorific Value of 0.0186 MJ/g is for ammonia (2024 LCA Guidelines).