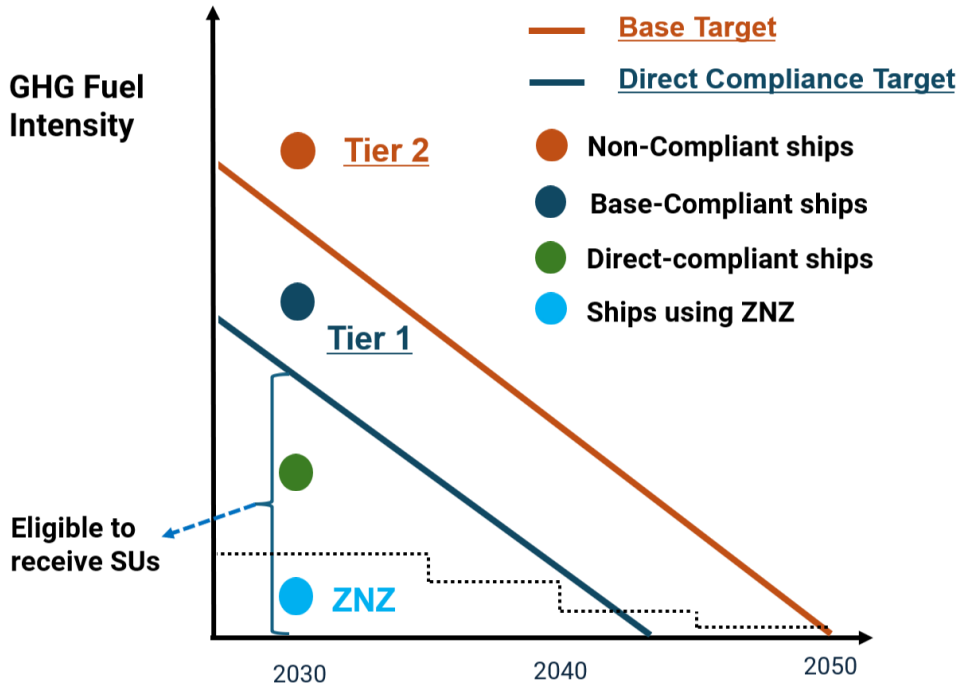
IMO News Flash
MEPC 83

The 83rd session of Marine Environment Protection Committee (hereinafter referred to as MEPC) was convened as a hybrid meeting from 7th April to 11th April 2025 to discuss a wide range of issues under the purview of the Committee. This news final briefs on the outcomes of MEPC 83 on major technical issues.

Executive summary

The following was agreed at MEPC 83:

- **Approval of the amendments to MARPOL Annex VI on IMO Mid-term measures to reduce GHG emissions from international shipping**



- IMO GHG Mid-term measures shall apply to all ships of 5,000 GT and above, and all applicable ships shall collect GFI data starting from 1 January 2028 and report the relevant data to the Administration for GFI verification in early 2029.

- Ships that fail to meet the Direct Target (Tier 1) due to the use of high GHG emission fuels must offset their emissions exceeding the Direct Target by purchasing Remedial Units (RUs) (USD **100** per GHG tonne) from the IMO GFI registry. However, Ships that fail to meet the Base Target (Tier 2) must offset their emissions exceeding the Base Target by purchasing, in addition to the Tier I amount, Surplus Units (SUs) (at market price) from ships using low-GHG fuels or by purchasing RUs (USD **380** per GHG tonne) from the registry.

- Ships using zero or near-zero GHG fuels and technologies can receive incentives to compensate for the capital expenditure put into new building construction and the price gap between alternative fuels and fossil fuels.

- Amendments to MARPOL Annex VI containing the implementation framework for IMO Mid-term measures will be adopted at MEPC extraordinary session which will be held in October 2025 and will enter into force on 1 March 2027.

- **Review of Short-term measures (Carbon Intensity Indicator, CII)**

  - The CII reduction rate for the years 2027 to 2030 has been determined as follows:

Year	2027	2028	2029	2030
Z-factor	13.625%	16.25%	18.875%	21.5%

  - Considering that the fuel consumption occurring during port waiting time and idle time is mostly incidental and beyond the shipowners' control and cannot be considered as transport work based on the ship's movement, it has been agreed that the relevant fuel consumption occurring should be excluded from the Attained CII calculation and the CII reference line. Thus, further discussion on reviewing IMO DCS data, examining CII metric (defining the scope of fuel consumption excluding anchoring, port waiting, and berthing), recalculating the reference lines (amending Guidelines G2), and assessing the possibility of amending other IMO instruments will take place in Phase 2, which will be implemented beyond 2026.

  - The amendments to MARPOL Annex VI related to the differentiation of access rights to IMO DCS data were approved and will be adopted at the next MEPC extraordinary session

    1. Allow the Administrations, ROs, ship/company, general public to access anonymized data of all ships; and
    2. Allow the Administrations, ROs and company(own ship's data only) to non-anonymized data.

- Res.MEPC.397(83) – Amendments to the NOx Technical Code 2008 concerning the use of multiple engine operational profiles for a marine diesel engines
- Res.MEPC.398(83) – Amendments to the NOx Technical Code 2008 concerning the certification of an engine subject to substantial modification
- Res.MEPC.399(83) – 2025 Guidelines on Selective Catalytic Reduction (SCR) Systems
- Res.MEPC.400(83) – Amendments to Guidelines G3 (updates to CII reduction factors for 2027-2030)
- Res.MEPC.401(83) – Amendments to SEEMP Guidelines (definition of Underway and Not underway)
- Res.MEPC.402(83) – Guidelines for Test-bed and onboard measurements of Methane (CH_4) and/or Nitrogen Oxide (N_2O) emissions from marine diesel engines
- Res.MEPC.403(83) – Amendments to 2022 Guidelines on survey and certification of the EEDI
- Res.MEPC.404(83) – 2025 Action Plan to address Marine Plastic Letter from Ships
- Res.MEPC.405(83) – Amendments to the 2023 Guidelines for the Development of the Inventory of Hazardous Materials
- MEPC.1/Circ.916 – Methodology for Submission, Scientific Review and Recommendation of proposed default emission factors by GESAMP-LCA WG
- MEPC.1/Circ.917 – Interim Guidance on the Carriage of blends of biofuels and MARPOL Annex I cargoes by conventional bunker ships
- MEPC.1/Circ.918 – Guidance on the in-water cleaning of ships' biofouling

For further details on the decisions made by MEPC 83, please refer to the following items:

1. Reduction of GHG emissions from ships (Agenda 7)

1.1 Basket of candidate mid-term measures to further reduce GHG emission from international shipping

Discussions on the development of IMO mid-term measures have been underway in accordance with the "2023 IMO Strategy on Reduction of GHG Emissions from Ships (Res.MEPC.377(80))" adopted at MEPC 80, aimed at achieving the goal of "net-zero GHG emissions from international shipping by 2050."

In accordance with the "Milestone" outlined in the 2023 IMO Revised Strategy for GHG Reduction (Res. MEPC.377(80)), the amendment to MARPOL Annex VI for the implementation of IMO mid-term measures (IMO Net-Zero Framework) must be approved at this 83rd session of the MEPC. To advance the development of mid-term measures and bridge the differences surrounding the above issues, ISWG-GHG 18 and 19 sessions continued discussions on the development of a basket of candidate mid-term measures aimed at reducing GHG emissions from international shipping.

Following intensive negotiations among member States that culminated in a vote, MEPC 83 approved draft amendments to MARPOL Annex VI, incorporating detailed provisions for the implementation of IMO GHG mid-term measures as outlined below:

Timeline for the implementation of IMO Mid-term measures

Year	Deadline	Responsible Party	Key Compliance Tasks
2027	Oct 1	Ship	Open an IMO GFI Registry account
2028	Jan 1	Ship	GFI calculation and reporting obligations start
	June 30	Ship	Pay annual administrative fee to the IMO GFI Registry
2029	Mar 31	Ship	Submit report for 2028 Attained GFI, Target GFI, Compliance Balance in standard format
	June 30	Administration or RO	Verify reported data and submit to IMO GFI Registry
	July 31	Ship	Select and record GFI compliance approach in IMO GFI Registry
	Aug 31	GFI Registry	Issue ship account statement
	Sep 30	Administration or RO	Issue Statement of Compliance (SoC) based on registry records
	Oct 31	Administration or RO	Register the SoC in the IMO GFI Registry

Details on the requirements of IMO Mid-term measures

Regulation	Main Contents
Applicability	● New chapter 5 of MARPOL Annex VI (IMO GHG Mid-term measures) shall apply to all ships of 5,000 gross tonnage and above, as same as the current IMO DCS reporting framework.
Application date of GHG Fuel Intensity (GFI)	● While IMO Mid-term measures will enter into force on 1 March 2027, given that the attained GFI could only be calculated using data from the full preceding calendar year (1 January to 31 December), all applicable ships shall collect GFI data starting from 1 January 2028 and report the relevant data to the Administration or RO for GFI verification in early 2029.
Attained GFI calculation methodology	**Calculation of GFI based on Well-to-Wake[1] (WtW) GHG emissions of marine fuels** ● The formula below calculates the average GHG intensity of all energy and fuels used by a ship. It multiplies the GHG intensity (EI) of each energy source by the energy used (Energy), sums the results, and divides by the total energy consumption ($Energy_{total}$) to obtain the attained GFI value. A lower value indicates more environmentally friendly energy usage. $$GFI_{attained} = \frac{\sum_{j=1}^{J} EI_j \times Energy_j}{Energy_{total}}$$
Target annual GHG fuel intensity	● Target GHG fuel intensity (GFI) starts at 93.3 gCO_{2eq}/MJ, representing the average GFI of international shipping in the year 2008 ● Target annual GFI consists of two tiers: a Base Target annual GFI (Base Target) and Direct Compliance Target annual GFI (Direct Compliance Target) ● Bast Targets and Direct Targets are as follows:

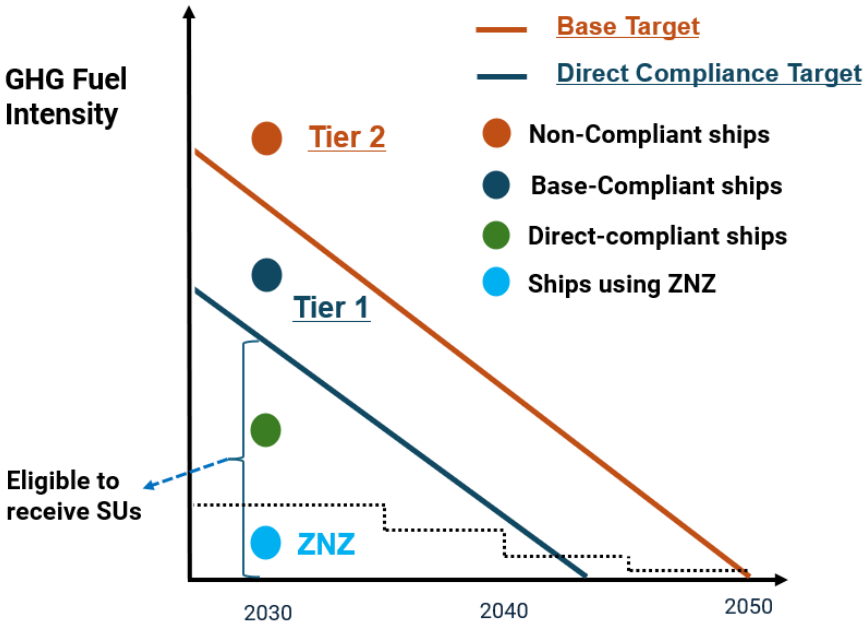
[1] Well-To-Tank emissions factor, also known as upstream or indirect emissions, is an average of all the GHG emissions released into the atmosphere from the production, processing and delivery of a fuel or energy vector.

Year	Base Targets	Direct Targets
2028	4.0%	17.0%
2029	6.0%	19.0%
2030	8.0%	21.0%
2031	12.4%	25.4%
2032	16.8%	29.8%
2033	21.2%	34.2%
2034	25.6%	38.6%
2035	30.0%	43.0%

- The determined Basic Targets and Direct Targets are utilized for the classification of "Tier 1" and "Tier 2" based on the GHG emissions from individual ships, as mentioned in the "Compliance Approaches" section below.
- While the Basic Targets and Direct Targets for the years 2036 to 2040 will be determined by 1 January 2032, Basic Target for the year 2040 shall be set at 65%.

Compliance approaches

- To comply with the GFI requirements, ships may trade GHG emissions among themselves. Ships that are unable to meet the GFI target may offset their excess emissions by purchasing Surplus Units[2] from ships using low-emission fuels or by purchasing Remedial Units[3] at a predetermined price through a registry.
- The following approaches are provided to comply with the GFI requirements:



- Ships with an attained GFI falling within Tier I must offset their emissions exceeding the Direct Target by purchasing Remedial Units (USD **100** per GHG tonne) from the registry. In this case, purchasing Surplus Units from ships low-emission fuels is impossible.
- Ships with an attained GFI falling within Tier II must offset their emissions exceeding the Base Target by purchasing, in addition to the Tier I amount, Surplus Units at market price from ships using low-GHG fuels or by purchasing Remedial Units (USD **380** per GHG tonne) from

[2] Surplus Unit (SU), expressed in CO2eq, means a credit representing a compliance surplus of one tonne of GHG emissions and generated by use of fuels with an average GFI value lower than the target annual GFI for the calendar year.
[3] Remedial Unit (RU), expressed in CO2eq, means a credit obtained by a ship through making economic contributions to the fund, for the use by the ship to remedy a compliance deficit of one tonne of GHG emissions, produced by fuel with an average GFI above the target GFI for that year, used on board during a reporting period.

	the registry. ● Ships using low-GHG fuels (where attained GFI falls outside Tier I and Tier II) will generate Surplus Units and sell them to ships that fail to meet the Base Target, thereby creating a revenue-generating opportunity. In addition, ships employing zero or near-zero GHG fuels and technologies are eligible for incentive benefits.
Uptake of zero or near-zero GHG emission technologies, fuels and/or energy sources	● Zero or near-zero GHG emission technologies, fuels and/or energy sources should meet the following criteria, and ships utilizing such fuels and technologies with GHG emissions below the specified thresholds may qualify for incentives. Year | Until 2034 | From 2035 onward WtW GFI (gCO_{2e}/MJ) | 19.0 | 14.0 ● The details of ZNZ energy sources and technologies, as well as the corresponding compensation amounts, will be reviewed every five years and shall comply with the requirements set forth in the guidelines to be developed in the future.
Disbursement of revenue	● The fund generated from the IMO mid-term measures will be utilized for various uses, including providing incentives for alternative-fuel ships, developing infrastructure for alternative fuel supply in developing country ports, supporting GHG-vulnerable countries such as small island developing states (SIDS) and administrative expenses, etc.

The draft amendments to MARPOL Annex VI, incorporating the key elements outlined above, are expected to be adopted at the MEPC extraordinary session scheduled to take place from 13 to 17 October 2025, and will enter into force on 1 March 2027. MEPC 83 further agreed to hold ISWG-GHG 20 immediately after MEPC extraordinary session and ISWG-GHG 21 before MEPC 84, with the aim of developing a series of guidelines to provide technical and procedural support for the implementation of the IMO mid-term measures. These include: the calculation guidelines for attained GFI, guidelines for implementing the GFI compliance mechanism and guidelines on ZNZ rewards, etc.

1.2 Further consideration of the development of the IMO Life Cycle GHG Assessment (LCA) Framework

GESAMP-LCA working group has discussed various technical issues related to the implementation of the LCA Guidelines such as possible approaches to address Indirect Land Use Change (ILUC), system boundaries of the LCA guidelines in relation to onboard carbon capture systems, whether to reflect regional characteristics where sustainable marine fuels are produced and how to certify actual emission values. In this regard, MEPC 83 agreed on the following key points:

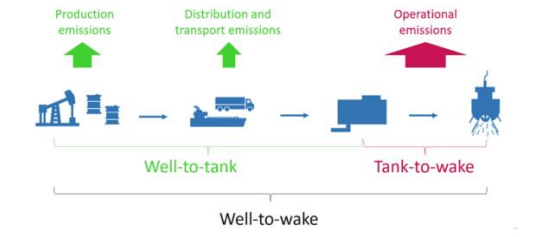


Figure 1-1: Well-to-wake (WtW) accounting encompasses the sum of well-to-tank (WtT) and tank-to-wake (TtW) emissions (Source: IMO)

Source: IMO

1. Approval of MEPC.1/Circ.916 outlining the methodology for the submission, scientific review, and recommendation of proposed default emission factors. This circular ensures a comprehensive assessment of the proposed default emission factors and establishes procedures for their submission and review. Additionally, it includes a flowchart detailing the entire scientific review process of the WtT and TtW GHG default emission factors to be conducted by the GESAMP-LCA Working Group; and
2. It was agreed that the submitted proposals regarding the scientific review of the LCA methodology, standardized emission reporting tool and sustainability themes/aspects and indirect land use change (ILUC) would undergo further review by the GESAMP-LCA Working Group.

1.3 5th IMO GHG Study

MEPC 83 agreed to initiate the 5th IMO GHG Study with the approval of the following terms of reference and timeline at MEPC 84, due to the overall workload of the various GHG work stream, the further clarity on the outline of the basket of mid-term GHG measures, and the further development of the IMO LCA framework:

1. GHG emission inventories: annual GHG emission estimates for the year 2008 (baseline) and 2018-2025, using emission factors consistent with the LCA Guidelines (for both Tank-to-Wake and Well-to-Wake emissions);
2. Estimates of carbon intensity: given a goal to achieve 40% reduction of carbon intensity by 2030, the progress towards that goal by providing carbon intensity estimates for 2008 and 2018 to 2025;
3. Projection of future GHG emissions: progress towards the achievement of the levels of ambition and indicative checkpoints set out in the 2023 revised IMO GHG Strategy by providing updated emission projections for the period 2025-2050 with projection for both TtW and WtW emissions, as well as updated maritime transport demand projections and associated energy consumption projections of the world fleet; and
4. Timelines
   - MEPC 84(Spring 2026) to approve terms of reference of the Study;
   - MEPC 86(Summer 2027) to consider an interim report on the 5 th IMO GHG Study;
   - MEPC 87(Spring 2028) to consider the final report on the 5 th IMO GHG Study with a view to approval.

Implication Analysis

- Regarding the "Mid-term measures to further reduce GHG emissions" as referred in paragraph 1.1 above, it needs to be considered regarding th**e implications and preparations as per introduction of IMO GHG Mid-term measures**. **IMO GHG reduction strategy will be strengthened over time** and **fossil fuels will have significant environmental and economic disadvantage** in terms of more GHG emissions and penalty. However, **early introduction of alternative fuels will have significant environmental and economic benefits** in terms of incentives, and it can secure competitiveness in achieving 2050 net-zero GHG emissions.

- It is essential to use **compliant fuels with lower GFI values** to achieve the base target and direct compliance target of IMO Mid-term measures, while using fuels with higher GFI values results in relatively higher Remedial Units prices, which increases regulatory costs. Since RU cost calculations also **reflect energy consumption,** even fuels with the same GFI value will incur higher costs if consumed in large quantities. Therefore, improving energy efficiency to reduce fuel consumption is a very effective way to lower regulatory costs. In this regard, we have recently published an **FAQ** document to support the general understanding of the **key elements of the IMO Mid-term measures**, including **their potential economic and technological impacts** on the industries. For further details, please refer to the information (**Click to Link**).

- Given that the discussions on the adoption of amendments to MARPOL Annex VI containing IMO Mid-term measures and the further development of technical guidelines to support the implementation of Mid-term measures will be continued by future MEPC ES.2 and ISWG-GHG, readers are invited to note future discussion progress with the terms of references and agendas of ISWG-GHG as follows:
  - **MEPC ES.2 (14 to 17 October 2025) and ISWG-GHG 20 (20 to 24 October 2025)**
    .1 Adoption of amendments to MARPOL Annex VI containing IMO Mid-term measures;
    .2 Development of technical guidelines for supporting the implementation of IMO Mid-term measures;
    .3 Further development of the Life Cycle GHG Assessment (LCA) framework; and
    .4 Finalization of the draft terms of references for the fifth IMO GHG Study.

- With respect to the alternative fuels to reduce GHG emissions from ships, please refer to the information on the use of Hydrogen, Ammonia, Biomass and Methanol (**click to link**).

2. Air Pollution and Energy Efficiency (Agenda 5 and 6)

2.1 Review of short-term measures (reducing carbon intensity from ships)

The review of short-term measures through two-step approach (Phase 1: correction of minor implementation errors, Phase 2: significant modifications to the CII implementation framework) has been carried out, and ISWG-APEE 1 and MEPC 83 reached a consensus on the following outstanding issues:

<table>
<tr><th>Challenge/Gap</th><th>Key decisions</th></tr>
<tr><td>#1 CII does not allow for robust individual ship-based assessment of operational energy efficiency performance</td><td>
● The following recommendations were considered for the robust individual ship-based energy efficiency assessment, but no consensus was reached due to differing opinions. Further discussion was deferred to the Phase 2 review after 2026:
- Expanded implementation of SEEMP Part III annual audit and internal review
- Introduction of Energy Efficiency Implementation Log (EEIL) for the systematic documentation of actions taken to improve energy efficiency
- Changing the current focus on E and D ships to a continuous incremental improvement approach to all ships based on their previous performance
- Development of much more detailed guidance around implementation of company audits such as procedures, auditor qualifications, acceptable timeline, follow-up actions and actions following non-conformities, etc.
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<tr><td>#2 CII reduction (Z) factor is not defined for the year 2027 to 2030</td><td>
● Considering the 40% carbon intensity reduction target by 2030 set in the 2023 IMO GHG Strategy, the CII reduction rate for the years 2027 to 2030 has been determined as follows. The revised Guidelines G3 reflecting this decision have been adopted as Res.MEPC.400(83):
<table>
<tr><td>Year</td><td>2027</td><td>2028</td><td>2029</td><td>2030</td></tr>
<tr><td>Z-factor</td><td>13.625%</td><td>16.25%</td><td>18.875%</td><td>21.5%</td></tr>
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● However, it has been agreed that the reduction rates considering actual CII reduction performance, changes to the CII metric and reference line, the expected impact of GHG Mid-term measures, and the effects of correction factors and voyage adjustments on the CII reduction rate will be further discussed in Phase 2, which will be implemented beyond 2026.
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<tr><td>#3 CII calculation might penalize idle time and port waiting time</td><td>
● The fuel consumption occurring during port waiting time and idle time is mostly incidental and beyond the shipowner's control and cannot be considered as transport work based on the ship's movement, it has been agreed that the relevant fuel consumption occurring should be excluded from the Attained CII calculation and the CII reference line.
● Thus, further discussion on reviewing IMO DCS data, examining CII metric (defining the scope of fuel consumption excluding anchoring, port waiting, and berthing), recalculating the reference lines (amending Guidelines G2), and assessing the possibility of amending other IMO instruments will take place in Phase 2, which will be implemented beyond 2026.
● But, to develop sea voyage-propulsion based CII metrics that exclude fuel consumption related to anchoring, port waiting, and berthing, the revised SEEMP Guidelines were adopted by Res.MEPC.401(83) to introduce the following definitions of 'Underway' and 'Not Underway'.
- 'Underway' is defined as the period between full ahead on passage (FAOP) and end of sea passage (EOSP) as per the guidelines for setting up a maritime single window (FAL.5/Circ.42/Rev.3)
- 'Not underway' is therefore the period between end of sea passage and full ahead on passage
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<tr><td>#4 CII calculation might penalize short voyages</td><td>
● It has been suggested that ships engaged in short voyages would have deteriorated attained CII (1~6% increase in attained CII).
● However, considering that the review of the CII framework mentioned in #3 above can also address this issue, it has been agreed to further discuss this matter in Phase 2, which will be implemented beyond 2026.
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<tr><td>#5 CII calculation might</td><td>
● Considering that cruise passenger ships spending significant periods
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penalize cruise passenger ships spending significant periods of time in port	in ports for tourism and leisure purposes would have deteriorated attained CII, new CII calculation formula for has been discussed, replacing the current "distance travelled" with "operational time" as follows: $cgHRS = \Sigma CO_2 / (GT \times Hours)$ ● Thus, further discussion on reviewing IMO DCS data, recalculating the reference line for use annual operational time of the relevant ship type as a metric (amending Guidelines G2), and assessing the possibility of amending other IMO instruments (Guidelines G1, G4 and G5, etc) will take place in Phase 2, which will be implemented beyond 2026.
#6 CII enforcement mechanism does not provide sufficient incentive to behavior change	● While stronger/enhanced enforcement of CII framework, linked to a penalty regime has been suggested, it has been agreed to keep consideration of this matter in abeyance until analysis of the revised IMO DCS data is carried out and/or outcome of the challenge/gap #1 mentioned above is known.
#7 CII does not incentivize port call efficiency and just-in-time arrival of ships	● While strengthening port call efficiency and just-in-time arrival to improve the CII of individual ships has been suggested, it has been agreed to keep consideration of this matter in abeyance until further concrete proposals are submitted.
#8 CII ratings and the IMO DCS data are not accessible for analysis beyond Parties to MARPOL Annex VI	● It has been raised that the lack of access to the IMO DCS and CII rating data makes it difficult for members to analyze the accuracy of the indicators in assessing the operational efficiency of ships. Thus, it has been agreed to differentiate access right to IMO DCS data, either anonymously or with identification, based on whether the entity is a Party to MARPOL Annex VI, non-Party to MARPOL Annex VI, shipping company, general public, or a RO authorized by the flag Administration, as follows: - Allow the Administrations, ROs, ship/company, general public to access anonymized data of all ships; and - Allow the Administrations, ROs and ship/company(own ship's data only) to non-anonymized data. ● The amendments to MARPOL Annex VI related to the differentiation of access rights to IMO DCS data has been approved and will be adopted at the next MEPC extraordinary session.
#9 CII calculation might penalize self-unloading bulk carrier	● Considering that the 2019 IMO DCS data for self-unloading bulk carriers show approximately 21% higher values compared to the reference line for this ship type, a separate reference line specifically for self-unloading bulk carriers was suggested. However, due to the limited availability of IMO DCS data for this ship type, it has been agreed to keep consideration of this matter in abeyance until further concrete proposals are submitted.
#10 CII calculation might penalize geared bulk carrier	● Since geared bulk carriers are distinct from self-unloading bulk carriers, it was suggested that if a reference line for self-unloading bulk carriers is developed, data from geared bulk carriers should not be included. ● However, considering that the review of the CII framework mentioned in #3 above can also address this issue, it has been agreed to further discuss this matter in Phase 2, which will be implemented beyond 2026.
#11 CII calculation might penalize ships navigating in adverse weather	● It was suggested that operations in adverse weather would require more power, negatively impacting the attained CII for all ship types. ● However, it has been agreed to keep consideration of this matter in abeyance until further concrete proposals are submitted.
#12 CII calculation might penalize ships using bow thrusters	● It was suggested that ships using bow thrusters would have deteriorated attained CII. ● However, considering that the review of the CII framework for port waiting time mentioned in #3 above can also address this issue, it has been agreed to further discuss this matter in Phase 2, which will be

	implemented beyond 2026.
#13 CII calculation might impact ballast voyages	● It has been suggested that laden voyages result in additional fuel consumption, which could negatively Impact the attained CII. ● However, it has been agreed to keep consideration of this matter in abeyance until further concrete proposals are submitted.
#14 CII calculation might penalize ships equipped with IGS	● It has been suggested that fuel consumption from inert gas generators currently accounts for the attained CII (by 0.13 to 5.55%) for those equipped with IGS. ● However, considering that the review of the CII framework mentioned in #3 above can also address this issue, it has been agreed to further discuss this matter in Phase 2, which will be implemented beyond 2026.
#15 CII might penalize ships carrying refrigerated cargo below deck	● It has been suggested that the refrigerated cargo ships and ro-ro ships that carry refrigerated trailers would have deteriorated attained CII values. ● However, considering that the review of the CII framework mentioned in #3 above can also address this issue, it has been agreed to further discuss this matter in Phase 2, which will be implemented beyond 2026.
#16 CII calculation might penalize steam driven LNG carriers compared to engine driven LNG carriers	● It has been suggested that LNG carriers over 65,000 DWT, having different propulsion systems and onboard cargo handling equipment, may have higher attained CII values compared to other LNG carriers. ● However, it has been agreed to keep consideration of this matter in abeyance until further concrete proposals are submitted.
#17 CII calculation might penalize ro-ro cargo and ro-ro passenger ships	● It has been suggested that ro-ro cargo ships and ro-ro passenger ships would have deteriorated attained CII. ● However, it has been agreed to keep consideration of this matter in abeyance until further concrete proposals are submitted.
#18 CII reference line does not accurately reflect smaller LNG carriers	● It has been suggested that the CII reference line does not accurately reflect smaller LNG carriers due to the extended periods of stationary condition. ● However, it has been agreed to keep consideration of this matter in abeyance until further concrete proposals are submitted.
#19 CII might overlap with the basket of mid-term measures	● A metric change to adjust the numerator of the CII from gCO_2/tonne-nm to MJ/tonne-nm(energy based) was suggested, in order to ensure a continued focus on energy efficiency improvement not affected by the choice of low carbon fuel. ● However, it has been agreed to further consider this matter in Phase 2, considering the outcome of the development of mid-term GHG reduction measures.
#20 CII does not address fuel emissions on their full lifecycle	● A metric change to adjust the numerator of the CII from Tank-to-Wake (TtW) gCO_2/tonne-nm to Well-to-Wake (WtW) gCO_{2e}/tonne-nm to ensure that reduction of carbon intensity does not lead to increased emissions of other GHGs. ● However, it has been agreed to consider this matter as a part of the work on the challenge/gap #19 (overlap with the basket of mid-term measures) mentioned above.
#21 CII does not allow for pooling	● It has been suggested that a pooling system should be permitted to allow ships with higher and lower CII ratings within the same fleet to be aggregated to achieve at least C rating. ● However, it has been agreed to keep consideration of this matter in abeyance until further concrete proposals are submitted.

In this regard, MEPC 83 approved the following workplan for Phase 2 of the review of the short-term GHG reduction measures to achieve 40% carbon intensity reduction target by 2030 as set out in the 2023 IMO GHG Strategy, ensure consistency and complementarity between the short-term and the mid-term GHG reduction measures, and further consider the role of the short-term measures after 2030:

- Development of the enhanced SEEMP framework (SEEMP Part III annual audit and internal review)
- Development of alternative metric (e.g.: cgHRS) for cruise passenger ships
- Consideration on synergies between the IMO carbon intensity/energy efficiency framework and the IMO Net-Zero Framework (e.g.: energy-based approach), and a possible way forward for the IMO carbon intensity/energy efficiency framework beyond 2030
- Development of other CII metrics (e.g.: alternative metric to address port waiting time, etc.)
- CII correction factors and/or reference line adjustments
- Review and/or revision to CII reduction factors

2.2 Measurements and verification of non-CO_2 GHG emissions and onboard carbon capture

The report of a correspondence group on how to develop a framework for the measurement and verification of TtW emissions of CH_4, N_2O and other GHGs, and onboard carbon capture was submitted, and MEPC agreed on the following key points:

1. Adoption of Res.MEPC.402(83) outlining guidelines for testbed and onboard measurements of CH_4(including methane slip, C_{slip}) and/or N_2O emissions from marine diesel engines, with the following outstanding elements:
   - The guidelines are based on NOx Technical Code 2008 and cover measurements, calculations and reporting of CH_4 and N_2O emission values. The guidelines also cover both testbed and onboard measurements, and additional guidance is provided in some sections for onboard measurements only, using the relevant part of chapter 7 (re-certification of an engine subject to substantial modification, as referred in paragraph 4.2 below) of NTC 2008.
   - Appendix I of the guidelines provides the necessary additions to NTC 2008 to provide specific guidance on the measurements and calculation of CH_4 and N_2O emission values, and Appendix 2 contains the "Engine test report and test data – CH_4/N_2O calculations" based on appendix V to NTC 2008, section 1 – Parent engine test report.
   - Appendix 3 to the guidelines contains the Form of Statement of Compliance to be issued following the satisfactory completion of the verification by the Administration or ROs.

2. Approval of the work plan outlining the objectives and tasks for future development of regulatory frameworks on onboard carbon capture as follows:
   - Avoiding emissions to air and discharges to sea that are harmful to the environment and ensuring traceability of the captured carbon.
   - Consider legal barriers that may hinder the use of OCCS and transportation and transfer of the captured carbon to safe permanent storage or utilization.
   - Facilitate access to the value chain for permanent storage or utilization of captured carbon.
   - Enable recording and reporting of relevant data.
   - Develop options that take into account GHG emission reductions from OCCS in IMO GHG regulatory framework (whether to expand and apply environmental benefits of OCCS to EEDI/EEXI/CII, etc).

MEPC 83 agreed to re-establish the correspondence group to further develop the framework for the measurement and verification of actual TtW CH_4 and N_2O emission factors and C_{slip} value for marine diesel engines, as well as to develop a regulatory framework for the use of OCCS.

2.3 Amendments to 2022 Guidelines on Survey and Certification of the EEDI

MEPC 83 adopted Res.MEPC.403(83) providing the revised 2022 Guidelines on survey and certification of the EEDI to update the guidelines by incorporating the Internation Towing Tank Conference (ITTC) recommended procedures 2024 and ISO 15016:2025, which are used for calculating the EEDI reference speed. The consolidated version of the revised guidelines was approved as MEPC.1/Circ.855/Rev.3.

The updates in ISO 15016:2025 compared with ISO 15016:2015 and the 2021 version of ITTC Recommended procedure 7.5-04-01-01 have reduced the overall uncertainty of the speed and power trial results through the use of a more consistent method and the following specific improvements:

1. specification of new wind speed limits and wind measurement;
2. additional wind resistance data for modern ship types and sizes;

3. unequivocal application of wave correction methods and wave measurement;
4. replacement of two wave added resistance correction methods with the newer SNNM method; and
5. replacement of the Lackenby method for shallow water correction with the Raven method.

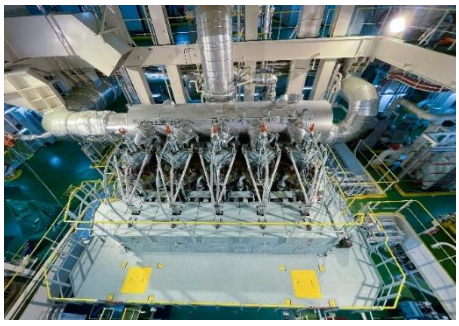
For 2024 ITTC recommendation, the procedures have been updated, including improved hull definitions, modern material usage, and the introduction of Hama strips for turbulence simulation. Key revisions include correcting the torque identify wake fraction in propulsion methods and confirming Raven's method for shallow water correction while removing Lackenby's method. Changes to the Weather Factor (Fw) procedure include editorial updates and clarification on uncertainty for small vessels.

However, in consideration of the recent release of ISO 15016:2025 and the lack of sufficient preparation time and practical application cases, the use of ISO 15016:2015 is permitted until 1 May 2026.

2.4 Amendments to the 2017 SCR (Selective Catalytic Reduction) Guidelines

To eliminate ambiguities in the existing SCR Guidelines (Res.MEPC.297(71), as amended by Res.MEPC.313(74)) and ensure consistent regulatory application, MEPC 83 adopted the revised 2017 SCR Guidelines as Res.MEPC.399(83), incorporating the following key elements:

1. Clarification of requirements for SCR NOx measurement device

   The existing SCR guideline provides unclear requirements for SCR incorporated with NOx measurement device. Therefore, it had been recommended to use CLD or HCLD type sensors in accordance with the Appendix 3 of the NOx Technical Code. However, a NOx measurement device, incorporated in an SCR feedback or feed-forward reductant control system, should not be required to be in compliance with appendix 3 of the NOx Technical Codde 2008 if the allowance is within the 5 % during the test bed measurement between the NOx analyzer (CLD or HCLD type in accordance with the Appendix 3 of NOx Technical Code) and the NOx measurement device. The engine manufacturer (or NOx certification applicant) should provide information on calibration requirements for the measurement devices, along with the certification and management procedures.

2. Clarification of requirements for Spot Check

   The load condition for Spot Checks (75% for propulsion engines, 50% or more for non-propulsion engines) was clarified and additional requirements for the Spot Check procedure were included. It was also clarified that periodical spot checks do not need to be witnessed by the Administration. As a result, the engine manufacturer (or applicant) shall provide detailed information on the NOx measurement device, calibration requirements, test condition, test report templates, sensor installation location, test procedures, record keeping methods, and criteria for assessing catalyst NOx reduction efficiency.

3. Additional requirements for survey related to the Parameter Check Method

   For SCR not incorporated with NOx measurement device, the engine manufacturer (or applicant) should provide detailed information on the correlation between engine load and reductant consumption. This is required to ensure that the reductant is appropriate. During the periodical survey, this can be replaced by verifying the Reductant Delivery Notes, which include information on reductant composition and quality. The NOx Technical File should include proposals for maintaining such records.

4. The revised Guidelines apply to:

   - SCR systems installed on ships, the keels of which are laid or which are at a similar stage of construction on or after 1 November 2025; or
   - SCR systems installed on ships, the keels of which are laid or which are at a similar stage of construction before 1 November 2025 which have a contractual delivery date of SCR systems to

the ship on or after 1 May 2026; or

- In the absence of a contractual delivery date, the actual delivery of the SCR system to the ship on or after 1 May 2026.

Implication Analysis

- Regarding the review of short-term measures, since MEPC 83 agreed to further consider, by 2028, **adjustments to the CII implementation framework** (including correcting manifest errors and improvement of CII disadvantages for ships engaged in port waiting time and short voyage, etc), readers are advised to **closely monitor the progress of these discussions and assess the potential impacts of any future changes to the CII implementation framework on their vessels, to develop appropriate response strategies**.

- In particular, the ships engaged in the **'Port Waiting Time'** and **'Short Voyage'** tend to have longer port stays, shorter sailing distances, and depending on the ship type, a significant proportion of their fuel consumption occurs while not underway, which can have an adverse impact on their CII performance. To address this problem, MEPC 83 reached a consensus to explore excluding fuel consumption during all 'not underway' periods including anchorage from the CII calculation.

- This means that, since the ton-mile indicator reflects transport work for the purpose of calculating CII values, only the fuel consumption that occurs while the ship is 'underway' will be used in the CII calculation. To achieve this, it is to be noted that **the reference lines for each applicable ship type need to be revised**, and **the CII calculation methodology must also be amended** accordingly. Thus, readers are kindly invited to note future discussion progress on this issue.

- As mentioned in paragraph 2.2 above, the onboard methane slop emission factor (C_{slip}) measurement method outlined in the guidelines (Res.MEPC.402(83)) is a method that enables **the practical application and verification of technologies aimed at reducing methane slip from LNG-fueled engines**. This approach was derived based on the document proposed at MEPC 78 (MEPC 78/7/13) through collaboration between the Korean government, HD Hyundai's Engine Technology Development Department, and KR, with the aim of supporting our client shipping companies and the relevant industry in formulating GHG reduction measures. Through this, it should be noted that for engines where methane slip reduction technologies are applied, **the methane slip emission values measured in accordance with the relevant procedures in the guidelines can be used instead of the default C_{slip} values specified in the LCA guidelines**.

- As mentioned in paragraph 2.4 above, while the revised SCR guidelines will, in principle, apply to the SCR installed onboard a ship the keel of which is laid on or after 1 November 2025, it is considered that the provisions concerning the **'Clarification of requirements for Spot Check'** and **'Additional requirements for survey related to the Parameter Check Method'** could be applied retroactively to the SCR systems installed on existing ships under the consultation with the ship's flag Administration. Accordingly, should there be an intention to apply the relevant procedures under the revised guidelines, it is advisable to first consult with the engine and/or SCR equipment manufacturer to confirm the feasibility of retroactive application.

3. Ballast Water Management Convention (Agenda 4)

3.1 2 Final Approval was granted

- ERMA FIRST FLOW® BWMS (Greece)
- OceanGuard® Sim BWMS (Denmark)

3.2 1 Basic Approval was granted

- Blue Ocean Shield Electrolytic Chlorination (EC) BWMS (Denmark)

3.3 Type approved BWMSs reported to MEPC 83 (total 1 unit)

- BSKY™ BWMS (China) which was type approved in accordance with BWMS Code adopted by Res.MEPC.300(72).

3.4 Experience Building Phase (EBP) and Convention Review Plan (CRP) under the BWM Convention

MEPC 83 continued the work with a view to drafting of amendments to the relevant provisions in BWM Convention proposed for revision and/or development in accordance with a Convention review plan as follows:

BWM Convention provision	Revision and/or development
Regulation A-3 (Exceptions)	● Amendments to regulation A-3.4 for allowing circumstances when the ship will discharge unmanaged or partially managed ballast water and sediments on the high seas (challenging water quality, contingency measures and/or PSC requirement on BWE+BWT)
Regulation B-1 (BWMP)	● Amendments to identify ships with BWMS that are type approved in accordance with the BWMS Code as opposed to the older version of the G8 guidelines, create a standardized BWMP template and add a new requirement that ships plan for contingency measures, etc ● Require that the BWMP details the maintenance procedures necessary to keep any BWMS installed in good working order ● Add a new requirement that ships plan for contingency measures according to BWM.2/Circ.62 and the practice of temporary storage of grey and/or treated sewage in ballast water tanks
Regulation B-2 (BWRB)	● Amendments to add a new requirement that a BWMS maintenance log be added to the BWRB, reflecting the OEM manual and maintenance schedule and keep updated and signed by crew involved in each action
Regulation B-6 (Duties)	● Amendments to add a new requirement for crew familiarization of BWMS
Regulation D-2 (Ballast performance standard)	● Amendments to establish a maximum allowable discharge concentration (MADC) for BWMS that use active substances, to ensure that in-service ships regularly discharge effectively neutralized ballast water, for BWMS utilizing active substances
Regulation E-1 (Surveys)	● Amendments to include a requirement that annual surveys confirm required maintenance has been undertaken by verifying the BWRB, including the ballast water maintenance log ● A requirement for a biological efficacy test (sampling and analysis) to be undertaken as part of intermediate and renewal surveys ● Create a new requirement to provide a survey scheme and criteria for designating the BWMS installation data within the IBWM Certificate for ships transitioning their ballast water management method from compliance with regulation D-4 to regulation D-2 under the BWM Convention
Appendix I	● Amendments to appendix I (Form of IBWM Certificate) to include a supplement with additional information in line with the approach of the IOPP Certificate
BWMS Code (Res.MEPC.300(72))	● Include a requirement that the Operational, Maintenance and Safety Manual (OMSM) includes a mandatory maintenance schedule and detailed instructions for the proper operation and maintenance of BWMS as a basis for the development of approved BWMPs ● Include that neutralization be assessed in land-based and shipboard type-approval testing ● Require approval of BWMS maintenance manuals to ensure that manuals contain sufficient and acceptable maintenance schedules
Guidelines G4 (Res.MEPC.127(53)	● Create a new requirement to update a BWMP when a BWMS is upgraded or retrofitted, and ship-specific guidance for conducting onboard sampling which is sufficiently detailed to prevent improper sampling collection (i.e. ship and BWMS particulars that can impact the quality of discharge samples collected)

MEPC 83 agreed to continue the correspondence group activity with a view to developing amendments to the relevant provisions in BWM Convention and associated instrument for revision and/or development as above, and its report will be submitted to MEPC 84. According to the Convention Review Plan (CRP) for experience building phase of the BWM Convention, as approved in BWM.2/Circ.79, draft amendments to BWM Convention

and its associated instruments will be approved by MEPC 84 (Spring 2026) and adopted by MEPC 85 (Autumn 2026).

3.5 Public access to the contact information of the person in the coastal State authority responsible for granting pre-emptive bypass agreements

If a ship regularly calls at ports with challenging water quality, it may conduct a pre-emptive bypass through prior bilateral agreement with the destination port authority. However, due to a lack of clarity regarding the relevant port authority officials responsible for such agreements, ships and their flag Administrations face significant practical difficulties in obtaining approval for pre-emptive bypass agreements from the destination port States.

Accordingly, to address these challenges, MEPC 83 agreed to establish a publicly accessible section within the IMO Website to provide information on the responsible officials and institutions (including contact details) of port authorities for pre-emptive bypass agreements and approvals.

Implication Analysis

- In connection with the experience-building phase and the Convention Review Plan of the BWM Convention as referenced in paragraph 3.4 above, the draft amendments to the BWM Convention and its associated guidelines discussed at MEPC 83 are scheduled for approval at MEPC 84 and subsequent adoption at MEPC 85 in 2026. The specific modalities for implementation and the corresponding preparatory measures for industry stakeholders are expected to be further elaborated through future decisions of the MEPC. Accordingly, shipping companies and related industries are advised to follow **the development of the proposed amendments** and to review **their current readiness in view of potential procedural and technical changes that may be introduced such as standardization of the BWMP and BWRB, BWMS maintenance log, crew training requirements, and contingency plan, etc**.

4. Adoption of amendments to mandatory IMO instruments (Agenda 3)

4.1 Amendments to NOx Technical Code 2008 concerning the use of multiple engine operational profile for a marine diesel engine

MEPC 83 adopted Res.MEPC.397(83) providing amendments to NOx Technical Code 2008 concerning the use of Multiple Engine Operational Profile [4] (MEOP) for a marine diesel engine, and these amendments will enter into force on 1 March 2027.

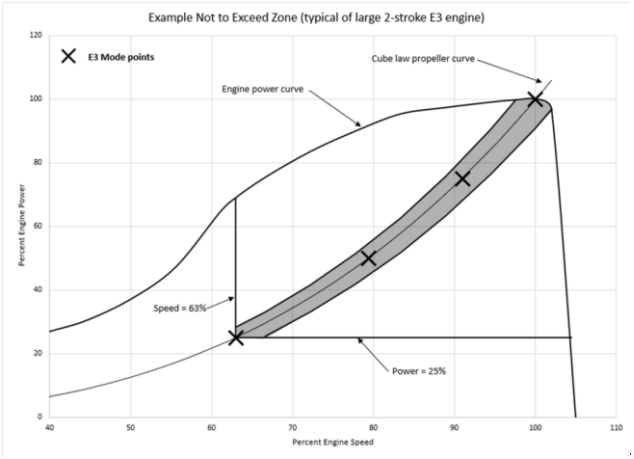


Figure 1 Not to Exceed Zone example (Typical of large 2-stroke E3 engine)

These amendments, including clarifying the engine test cycles, were prepared to allow for multi-operational profiles for marine diesel engine and will apply to individual marine diesel engine or an engine group/family on or after the date of entry into force of the amendments. The emissions at additional load points (beyond the current four load points according to NOx Code test cycles) will be required to be demonstrated, as the emissions in "not-to-exceed zones [5]" need to be verified. The engine designer clearly needs to document "auxiliary control devices", which are functions or control strategies to protect the engine and/or its ancillary equipment against operating conditions that could result in damage or failure.

[4] Engine Operational Profile means a particular set of NOx influencing settings applied in the base emission control strategy which influences the NOx emission performance. Those settings may relate to, but are not limited to, fuel injection, inlet and exhaust valve operation, charge air management, exhaust bypass/wastegate or exhaust after treatment controls and auxiliary control devices.

[5] Not-to-exceed zone means the power or torque and speed area of a marine diesel engine within the limit area of the not to exceed zone as declared by the applicant that the engine is certificated to operate within under steady state conditions.

For the amendments above, the detailed application date for individual marine diesel engines is as follows:

1. For a new individual engine or a parent engine of an engine family or engine group that has not been previously certified, the new requirements apply no later than 1 January 2028, based on the issue date of the EIAPP Certificate for the individual engine or parent engine.
2. In the case of a new member engine to an engine family or engine group for which the parent engine was certified before 1 January 2028, prior to the certification of that member engine it would need to be shown that the engine family or engine group met the new requirements at a date no later than 1 January 2030 based on the issue date of the EIAPP Certificate for that member engine.
3. The new requirements do not apply to a marine diesel engine which already has an EIAPP Certificate except:
   - In the case of an engine that is subject to substantial modification on or after 1 January 2028, the new requirements would apply as specified in the definitions of "substantial modification" set out in amended paragraph 1.3.2 of the NOx Technical Code 2008 based on the issue date of the EIAPP Certificate for that engine.
   - In the case of an identical replacement engine installed on or after 1 January 2028, the version of the NOx Technical Code at the time of issuance of the EIAPP Certificate to the original engine applies, unless the replaced engine is already equipped with multiple engine operational profiles, in which case the provisions of the new chapter 8 of the NOx Technical Code 2008 apply.

4.2 Amendments to NOx Technical Code 2008 concerning re-certification of an engine subject to substantial modification

MEPC 83 adopted Res.MEPC.398(83) providing amendments to NOx Technical Code 2008 concerning re-certification of an engine subject to substantial modification, and these amendments will enter into force on 1 September 2026.

The amendments define the procedures and the emission tests to be conducted for existing engines after the retrofitting of modern engine technologies which improve the energy efficiency whilst maintaining the levels for NOx emission regulations, along with a flowchart illustrating the certification process for an engine subject to substantial modification. Moreover, it was further agreed that an additional MEPC Circular document will be approved before the entry into force of these amendments to provide guidance as to the extent and detail of information to be included in the Engine Emission Test Plan, which would be beneficial to both Administrations and applicants in outlining the planning required prior to an onboard engine emission test and thereby assisting in a uniform application of the process.

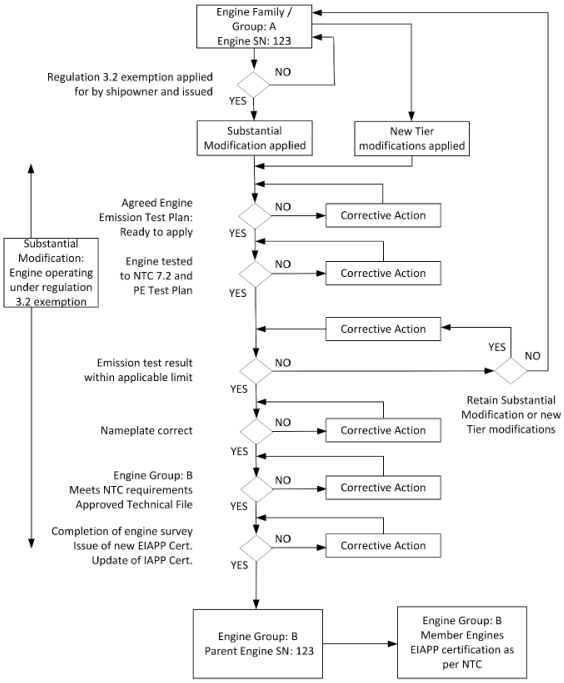


Figure 2 Certification of an engine subject to substantial modification

The relevant examples of retrofit include, but are not limited to, retrofits of the engines for dual fuel or multi-fuel operation, i.e. operation on alternative fuels, extensive de-rating of engines, cut-off of turbochargers or complete engine cylinders or retrofit of new NOx abatement technologies to optimize fuel consumption.

Implication Analysis

- Regarding the amendments to MARPOL Annex VI and the NOx Technical Code 2008 concerning the use of multiple engine operational profiles for marine diesel engines as referred to in paragraph 4.1 above, manufacturers of marine diesel engines and their relevant stakeholders are advised to take particular note that the requirements to designate a **'Not-to-Exceed Zone'** and conduct **emissions tests for additional load points** to verify compliance with the requirements (in consultation with the engine manufacturers and

the Administration), along with the **documentation detailing auxiliary control devices** have been included in the NOx emissions verification process. These amendments are set to enter into force in mid-2027, in alignment with the IMO's mid-term measures for reducing GHG emissions. Please refer to the forthcoming Technical Information for further details on the applicability of these amendments, clarifications regarding the affected ships and/or marine diesel engines, and specifics on the emission test methods, among other information.

- Regarding the amendments to NOx Technical Code 2008 concerning re-certification of an engine subject to substantial modification as referred in paragraph 4.2 above, international shipping has recently shown **significant interest in retrofitting existing diesel engines onboard ships into dual-fuel or multi-fuel engines for the purpose of reducing GHG emissions and improving energy efficiency**. As mentioned above, with the procedure for re-certification of marine diesel engines scheduled to be introduced as a mandatory requirement, shipowners and relevant stakeholders interested in such retrofitting are advised to refer the related procedures. In this regard, please refer to the forthcoming Technical Information for further details on the applicability of these amendments, clarifications regarding the affected ships and/or marine diesel engines, and specifics on the emission test methods.

- **Administrations** are invited to note their rights and obligations arising from the amendments; and **consider** establishing their own national legislation to properly implement them, including necessary actions against confirmed non-compliant cases.

5. Marine Plastic Litter from ships (Agenda 8)

5.1 2025 Action Plan to address Marine Plastic Litter from Ships

After MEPC 73 adopted Res.MEPC.310(73) on Action Plan to address Marine Plastic Litter from Ships, aimed at preventing plastic waste from entering the oceans through ship-based activities, a review was conducted to assess the effectiveness of the actions in achieving the intended outcomes. As a result, MEPC 83 adopted Res.MEPC.404(83), introducing the 2025 Action Plan to address Marine Plastic Litter from Ships, which includes the following key elements:

Outcome	Measures
Reduction of marine plastic litter generated from, and retrieved by, fishing vessels	● Mandatory IMO Ship Identification Number Scheme for all fishing vessels over 24 metres in length ● Mandatory Goal-based measures under MARPOL Annex V for the marking of fishing gear
Reduction of shipping's contribution to marine plastic litter	● Enhancement of the enforcement of MARPOL Annex V ● Development of mandatory measures to reduce the environmental risks of plastic pellets transported by sea in freight containers
Improvement of the effectiveness of port reception and facilities and treatment in reducing marine plastic litter	● Requirement for port reception facilities to provide separate garbage collection for plastic waste from ships, including fishing gear, if appropriate, to facilitate reuse or recycling ● Mechanism to enhance the enforcement of MARPOL Annex V requirements for the delivery of garbage to reception facilities
Enhanced public awareness, education and seafarer training	● Monitoring the progress of the comprehensive review of the STCW to ensure familiarization of all seafarers of the minimum requirements for marine plastic litter
Improved understanding of the contribution of ships to marine plastic litter	● Extending the reporting requirement in regulation 10.6 of MARPOL Annex V to include reporting data on discharge or accidental loss of fishing gear by the flag State to IMO via GISIS
Strengthened international cooperation	● Continuation of the work with other United Nations bodies and agencies, as well as with international forums

6. Report of PPR Sub-Committee (Agenda 10)

6.1 Interim Guidance on the carriage of blends of biofuels and MARPOL Annex I cargoes by conventional bunker ships

Conventional bunker ships certified for the carriage of oil, marine residual or distillate fuel oils and MARPOL Annex I cargoes cannot carry biofuels and their blends of more than 25% by volume of biofuels since those bunker ships should be certified to comply with the carriage requirements in accordance with IBC Code and the *2019 Guidelines for the carriage of MARPOL Annex I cargoes and biofuels* (MSC-MEPC.2/Circ.17) as a chemical tanker. Thus, for the purpose of supporting the efforts by international shipping to reduce carbon intensity and GHG emissions, MEPC 83 approved MEPC.1/Circ.917 providing interim guidance on the carriage of blends of biofuels and MARPOL Annex I cargoes by conventional bunker ships, with following outstanding elements:

1. A “conventional bunker ship” refers to an oil tanker, as defined in regulation 1.5 of MARPOL Annex I, that is engaged in the transport and delivery of fuel oil for use by ships
2. Conventional bunker ships may transport blends of not more than 30% by volume of biofuel, where all residues or tank washing are discharged ashore unless the ODME is approved for the biofuel blends being shipped
3. IOPP certificate issued to a conventional bunker ship carrying blends between 25% and 30% by volume of biofuel does not need to be modified

6.2 Guidance on the in-water cleaning of ships’ biofouling

MEPC 83 approved MEPC.1/Circ.918 providing guidance on the in-water cleaning of ships’ biofouling. This guidance was developed based on the 2023 Biofouling Guidelines (Res.MEPC.378(80)) to shipowners, operators, crew members, in-water cleaning service providers, national and regional authorities responsible for in-water cleaning regulations and approvals, manufacturers of in-water cleaning system (IWCS) and anti-fouling coating products. Above all, this guidance provides recommendations for in-water cleaning procedures as follows:

1. Cleaning Plan Development: determining the cleaning method (capture-biofouling waste is collected and treated onshore/without capture-only allowed under specific conditions e.g., low risk of environmental contamination) and reviewing environmental risks
2. Inspection: assessing the ship’s condition and level of biofouling to determine the areas eligible for cleaning
3. Approval Process: some jurisdiction may require regulatory approval before in-water cleaning operations can begin
4. Post-cleaning inspection & reporting: documenting cleaning effectiveness and assessing whether biofouling was fully removed. Service providers must retain cleaning records for at least two years and provide them upon request from authorities. Ships must update their biofouling record book with relevant cleaning details

6.3 Revision to the 2023 Guidelines for the development of the Inventory of Hazardous Materials

MEPC 83 adopted Res.MEPC.405(83) containing the amendments to the 2023 Guidelines for the development of the Inventory of Hazardous Materials to further clarify the relevant thresholds in respect of Cybutryne as follows:

1. “Material Declaration” provided in appendix 6 of the Guidelines should be developed by anti-fouling system manufacturers, in this case, the applicable threshold should be 200 mg/kg in accordance with relevant provisions in Res.MEPC.358(78) as the samples are taken from wet paint containers; and
2. When developing the Inventory of Hazardous Materials, two methods (one is the samples taken from the hull, another is the samples taken from wet paint containers) can be used, those two thresholds were included in “Table A – Materials listed in appendix 1 of the Annex to the Convention” of the guidelines.

Implication Analysis

- As mentioned in paragraph 6.1 above, the interim guidance on the carriage of biofuel blends by convention bunker ships is the result of continued cooperations and negotiations with other member State and international organizations, initiated by this classification society in collaboration with the Korean Government. It was **first proposed at MEPC 81 as a document aimed at assisting our clients and the related industry in meeting carbon intensity requirements and preparing for IMO Mid-term measures**. This classification society actively participated as part of the Korean government delegation in ESPH 30 and PPR 12, engaging in discussions and coordination to achieve this outcome. Moving forward, we remain committed to fully support our clients and the related industry in enhancing their competitiveness in GHG reduction efforts.

- Above all, this interim guidance only applies to **convention bunker ships that are engaged in the transport and delivery of fuel oil for use by other ships**, and thus oil tankers and chemical tankers engaged in general cargo transport remain subject to the existing requirements for the carriage of biofuel blends. In this case, it should be noted that **biofuel blends of more than 25% by volume of biofuels shall be transported by the chemical tankers that comply with the relevant carriage requirements under the IBC Code and the *2019 Guidelines for the carriage of MARPOL Annex I cargoes and biofuels* (MSC-MEPC.2/Circ.17)**.

- With regard to the revision of the 2023 Guidelines for the Development of the Inventory of Hazardous Materials, as mentioned in paragraph 6.3 above, please refer to the technical information titled ***"Considerations for Compliance with the Hong Kong Convention for Ship Recycling (Rev.2)"*** (**2025-IMO-07 click to link**) for details on the corresponding implementation measures.

7. Identification and protection of Special Areas, ECAs and PSSAs (Agenda 12)

7.1 Designation of the North-East Atlantic Ocean as an Emission Contril Area for sulphur oxides, particulate matter and nitrogen oxides

For the North-East Atlantic Ocean, which has over 1,500 marine protected areas, 17 key marine mammal habitats, and 148 UNESCO sites, MEPC 83 agreed to designate the area as an emission control area for nitrogen oxides, sulfur oxides, and particulate matter. Thus, draft amendments to regulations 13, 14, and Appendix VII of MARPOL Annex VI were approved, with a view to adoption at next MEPC extraordinary session.

Tier III NOx requirement will apply to ships constructed on or after 1 January 2027[6] (with 3-date criteria) and operating in this area, while 0.1% SOx requirement will apply to ships operating in this area on or after 1 March 2028.

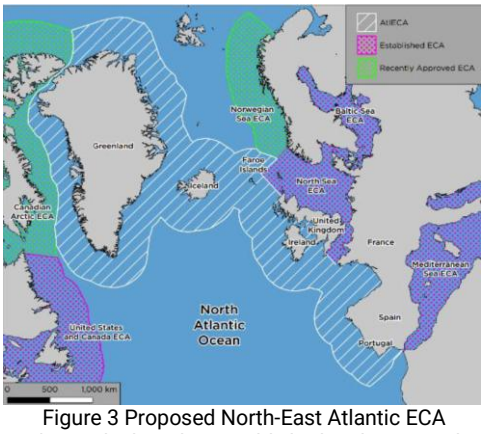


Figure 3 Proposed North-East Atlantic ECA alongside the other established and proposed ECAs

8. New Output (Agenda 14)

8.1 Assess implementation of the Hong Kong Convention through an experience-building phase, and develop clarifications and amendments to the Convention as appropriate

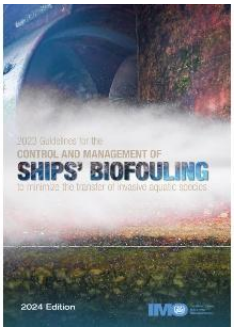
[6] 'Constructed on or after 1 January 2027' means:
- For which the building contract is placed on or after 1 January 2027; or
- In the absence of a building contract, the keels of which are laid or which are at the similar stage of construction on or after 1 July 2027; or
- The delivery date of which on or after 1 January 2031.

The Hong Kong Convention (Ship Recycling Convention) was adopted in 2009 and will enter into force on 26 June 2025. In this regard, the following needs have been raised to ensure the safe and environmentally sound recycling of ships:

1. Initial implementation phase of the Convention may face challenges related to compliance, enforcement, and procedural clarifications (e.g. certification of ship recycling facilities, hazardous materials inventories, and enforcement mechanisms, as well as clarifications on the interaction between the Hong Kong Convention and Basel Convention[7]);
2. Drawing from past IMO Conventions (e.g. the BWM Convention), an experience-building phase (gathering implementation data, identifying key challenges, and assessing potential amendments, as well as reviewing findings and considering formal revisions to the Convention and its guidelines) is necessary; and
3. Possible amendments may be required to improve clarity and effectiveness.

Following consideration, MEPC 83 agreed a new output on the implementation, experience-building and possible updates of the Hong Kong Convention, assigning the PPR Sub-Committee as the associated organ, with four sessions needed to complete the work.

8.2 Development of a legally binding framework for the control and management of ships' biofouling to minimize the transfer of invasive aquatic species



Source: IMO

It has been recognized that ships' biofouling is a major cause of the spread of invasive aquatic species, leading to ecological disruption, economic losses (fisheries, tourism, maritime infrastructure), and potential human health risks. The 2023 Biofouling guidelines (Res.MEPC.378(80)) were introduced, but without legal enforcement, their effectiveness remains limited. Thus, to ensure that the mandatory biofouling management will contribute to global marine ecosystem protection and climate change mitigation, MEPC 83 agreed a new output on the development of a legally binding framework for the control and management of ships' biofouling to minimize the transfer of invasive aquatic species, assigning the PPR Sub-Committee as the associated organ, with four sessions needed to complete the work. The development will be led by the MEPC and PPR Sub-Committee for 4 years (from 2026 to 2029).

8.3 Amendments to the NOx Technical Code 2008 to provide a means for certification of marine diesel engines using non-carbon-containing fuel or mixtures of carbon-containing and non-carbon-containing fuels

As part of the mid-term GHG reduction measures, IMO is promoting the use of zero and low-carbon fuels (e.g., ammonia, hydrogen). However, the current NOx emission calculation method (carbon-balance method) is based on carbon-containing fuels, making it inapplicable for non-carbon fuels.

In this regard, the need for revision of NOx Technical Code 2008 has been raised to enable NOx emission certification for engines operating on non-carbon-containing fuels and mixed fuels. MEPC 83 agreed with a new output to review and revised the NOx Technical Code 2008 to provide a means for certification of marine diesel engines using non-carbon-containing fuel or mixtures of carbon-containing and non-carbon-containing fuels, assigning the PPR Sub-Committee as the associated organ, with two sessions needed to complete the work.

8.4 Development of Guidelines for the management of ammonia effluent from ships using ammonia as fuel

[7] Basel Convention is an international treaty adopted in 1989 and entered into force in 1992 to regulate the transboundary movement of hazardous wastes and ensure their environmentally sound management. Its primary objectives are to prevent the export of hazardous waste to developing countries without proper treatment, minimize waste generation, and promote safe disposal practices.

Among the various alternative fuels considered for achieving carbon neutrality in international shipping by 2050 under the IMO's 2023 GHG reduction strategy, ammonia fuel is gaining increasing attention due to its low liquefaction temperature (-33°C), high storage and transportation efficiency. However, it is highly toxic, corrosive, and poses environmental risks, necessitating stringent management measures.

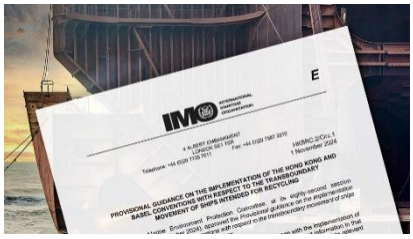
Existing IMO safety guidelines for ammonia-fueled ships focus on safety measures, but there are no international guidelines for managing ammonia effluent, which is an inevitable byproduct of ammonia fuel use. Above all, ammonia effluent is generated during fuel supply, pressure relief, and water-based mitigation system designed to prevent direct atmospheric emissions.

Thus, MEPC 83 agreed with a new output to develop Guidelines for the management of ammonia effluent from ships using ammonia as fuel, assigning the PPR Sub-Committee as the associated organ, with two sessions needed to complete the work.

9. Any other business (Agenda 16)

9.1 Implementation of the Hong Kong and Basel Conventions with respect to the transboundary movement of ships intended for recycling

It has been identified that when a ship issued with an International Ready for Recycling Certificate (IRRC) under the Hong Kong Convention completes its final voyage and moves to a recycling facility, it may be considered as a transboundary movement of waste regulated under the Basel Convention. To address the legal inconsistency between the two conventions, MEPC 82 approved the Provisional guidance on the implementation of the Hong Kong and Basel Conventions with respect to the transboundary movement of ships intended for recycling" as HKSRC.2/Circ.1.


Source: BIMCO

In this regard, MEPC 83 agreed to forward the provisional guidance approved by MEPC 82 to the Basel Convention Secretariat and BC COP 17 meeting for further work and collaboration. Additionally, MEPC 83 agreed to invite the Basel Convention COP to consider establishing a collaboration process to refine the provisional guidance, aiming to enhance clarity and certainty in implementing the Basel and Hong Kong Conventions concerning the transboundary movement of ships intended for recycling.

For the preparation of the implementation of Hong Kong Convention, please refer to the Technical Information **"Considerations for Compliance with the Hong Kong Convention (Rev.2) (2025-IMO-07 click to link)"**.

Should you have any questions, please contact P.I.C. Thank you.

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