

# IMO MEPC 84: REVISITING THE NET-ZERO FRAMEWORK

**Information for:** Ship owners and managers, manufacturers of marine engines and ballast water treatments systems, and fuel suppliers.

 Statutory

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## NEED TO KNOW

- Extensive discussions on the Net-Zero Framework, and agreement to further consider adjustments to ensure consensus
- Adopted amendments to MARPOL Annex VI, designating the North-East Atlantic as an Emission Control Area (ECA) for SO<sub>x</sub>, PM and NO<sub>x</sub>
- Approved amendments to the Ballast Water Management Convention strengthening survey and other mandatory requirements, and adopted the amended MEPC resolution on the 2026 Guidelines for Ballast Water Management and Development of Ballast Water Management Plans
- Approved amendments to the NO<sub>x</sub> Technical Code to enable the certification of engines operating on non-carbon fuels or fuel mixtures
- Approved amendments to MARPOL Annex VI to require tankers carrying crude oil to be fitted with P/V valves having a minimum opening pressure of 0.20 bar
- Approved amendments to MARPOL Annex I concerning the dewatering of oily bilge water, including removal of water by forced evaporation
- Commenced the second phase of the review of the CII and SEEMP, focusing mainly on enhancing the SEEMP



The 84th session of the IMO's Marine Environment Protection Committee (MEPC 84) held extensive discussions on the Net-Zero Framework (NZF). This was the first opportunity to do so following the adjournment of the extraordinary session in October 2025. Although there were divergent positions on key elements such as establishing a fund, MEPC 84

agreed to continue discussions on a revised framework to ensure consensus. MEPC 84 also progressed on key technical guidelines supporting the NZF. As part of the review of the Ballast Water Management (BWM) framework, amendments to the BWM Convention were approved, strengthening survey and other mandatory requirements.

## Adoption of amendments to mandatory instruments

MEPC 84 adopted amendments to MARPOL Annex VI designating the North-East Atlantic as an Emission Control Area (ECA) for SO<sub>x</sub>, PM and NO<sub>x</sub>. This ECA covers the Exclusive Economic Zones (EEZs) and territorial seas of Greenland, Iceland, the Faroe Islands, Ireland, the UK, France, Spain and Portugal. The amendments also include clarification of DCS data reporting and data accessibility, and the use of multiple engine operational profiles for a marine diesel engine.

The amendments will enter into force on 1 September 2027, with the 0.10% sulphur limit taking effect 12 months later. The requirement for NO<sub>x</sub> Tier III engine certification will apply to ships contracted on or after 1 January 2027, or in the absence of a building contract, constructed (keel-laid) on or after 1 July 2027, or delivered on or after 1 January 2031.

## Harmful aquatic organisms in ballast water

### Approved revisions to the BWM Convention

MEPC 84 approved amendments to the Ballast Water Management (BWM) Convention strengthening survey and other mandatory requirements. The revised provisions enhance Regulation E-1 by introducing annual sampling of residual active substances, where applicable; and biological testing at intermediate and renewal surveys to verify compliance with the D-2 discharge standard. Surveys shall also confirm that BWM systems are correctly installed and maintained, including verification of maintenance records. Existing requirements for timely reporting of failures to authorities and implementation of approved, time-bound corrective actions are reinforced.

An amendment to the D-2 discharge standard introduced the already established Maximum Allowable Discharge Concentration (MADC) into the regulatory discharge requirement for BWM systems using active substances. Intermediate and renewal surveys must therefore verify that BWM systems operate within approved MADDC limits as part of D-2 compliance, and any exceedance may now be treated as non-compliance with the discharge regulation.

The type approval certificate format was updated, removing references to the phased-out D-1 standard and enhancing transparency by requiring inclusion of the approval certificate number, date of issuance, and the type-approving administration.

The amendments are subject to adoption at MEPC 85 in November 2026. The entry into force date will be determined at the time of the adoption of the amendments, but is expected to be in spring 2028. The experience-building phase will end upon entry into force of the convention amendments, including the non-penalization approach during this phase.

## Revised guidelines for the development of the Ballast Water Management Plan (BWMP)

MEPC adopted revised BWMP guidelines (G4) integrating existing IMO circulars and guidance. The updates ensure that procedures are to be documented within the BWMP, including:

- Contingency measures (BWM.2/Circ.62)
- Management of challenging water quality conditions (MEPC.387(81))
- Temporary storage of treated sewage and/or grey water in ballast water tanks, where applicable (BWM.2/Circ.82)
- Maintenance procedures, maintenance schedules and relevant references to the operational manual of the BWM system

The BWMP requirements have been strengthened by introducing additional specifications into the mandatory section B of the BWM Convention. The application of the revised guidelines is tied to the entry into force of the amended BWM Convention text to be decided at adoption at MEPC 85.

## Progress of the BWM review

MEPC 84 continued discussions on further enhancing the BWMS Code, including high-performance testing with strengthened test water conditions and endurance testing requirements. The Correspondence Group was re-established to finalize amendments to the BWMS Code for type approval at the next MEPC meeting in November 2026, and to continue work on revising existing guidelines and developing new ones for reporting to MEPC 86 in October 2027.

## Air pollution

### NO<sub>x</sub> Technical Code

MEPC 84 finalized and approved draft amendments to the NO<sub>x</sub> Technical Code addressing the certification of engines operating on non-carbon and mixed fuels. These amendments now establish a clear regulatory basis for the certification of NO<sub>x</sub> emissions from ammonia-fuelled engines.

MEPC 84 also approved amendments addressing the use of multiple engine operational profiles and clarifications on engine test cycles. The amendments will apply to new engine groups and engine families certified on or after 1 January 2028.

## Volatile Organic Compounds (VOCs)

As a measure to reduce emissions of VOCs, MEPC 84 approved amendments to Regulation 15 of MARPOL Annex VI to require tankers carrying crude oil to be fitted with pressure-vacuum (PV) valves having a minimum opening pressure of 0.20 bar. The amendments are subject to approval at MEPC 85 in November 2026. This requirement will only apply to crude oil tankers constructed on or after the entry into force date of the amendments.

## Energy efficiency

### Review of the Ship Energy Efficiency Management Plan (SEEMP) and the Carbon Intensity Indicator (CII)

MEPC 84 commenced the second phase of the review of the SEEMP and CII frameworks, to be completed in 2028. There was broad support to work towards a strengthened SEEMP framework to ensure continuous improvement of ships' carbon intensity. The proposed elements include internal reviews, implementation logs and strengthened audit requirements, and will be further discussed and finalized at MEPC 86 in October 2027.

MEPC 84 could not agree on whether to replace the current CII metric for cruise passenger ships measuring emissions per gross ton-mile with a revised metric measuring emissions per hour. The matter will be further discussed at a later session.

## Data Collection System (DCS) reporting

MEPC 84 clarified that, even if data reporting from 2027 is split on underway and not underway, the CII should continue to be calculated based on the total emissions and distance sailed during the calendar year. It was also clarified that reporting of distance should be split on underway and not underway. MEPC 84 revised MEPC.1/Circ.905 stating that as from reporting year 2027, the carbon factor of biofuel blends should be an average weighted by mass rather than energy.

## EEDI/EEXI

MEPC 84 adopted amendments to the EEDI calculation and survey/certification guidelines to clarify the definition of the primary fuel for dual-fuel engines operating on two liquid fuels, in particular methanol and ethanol. The amendments further specify that the determination of engine power and specific fuel consumption is to be based on the maximum continuous rating (MCR) as certified under the NOx Technical Code 2008.

## Measurement of non-CO<sub>2</sub> GHG emissions

MEPC 84 adopted three guidelines related to measurement of methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O) emissions from marine diesel engines:

- Guidelines for test-bed and on-board measurements of methane and nitrous oxide emissions, establishing a protocol for measuring methane slip, fuel-specific emission factors, and crankcase emissions across methane-containing fuels
- Guidelines on engine load monitoring (ELM), intended to be applied together with the test-bed and on-board measurements guidelines, to report actual methane slip and nitrous oxide emissions
- Guidelines for continuous emission monitoring systems (CEMS) for the continuous quantification of methane and nitrous oxide emissions from marine diesel engines

Together, these three guidelines create a toolkit that can be used to determine actual tank-to-wake methane and nitrous oxide emission values. They are currently not connected to any mandatory reporting framework but are anticipated to support the use of actual emission factors under the LCA framework, as well as for calculation of the attained GFI under the NZF. The guidelines can also be used for determining actual methane and nitrous oxide under the EU ETS and FuelEU Maritime.

## Reduction of GHG emissions

### Net-Zero Framework (NZF)

The GHG discussions at MEPC 84 primarily focused on the further development of the NZF in light of the adjournment of MEPC ES.2 in October 2025. Discussions were limited to a very extensive exchange of views, where previously known positions were largely reiterated. No decisions on NZF design features were expected or forthcoming at the meeting. MEPC 84 agreed on two additional intersessional meetings to continue negotiations, although no timeline was set for when a revised framework might be approved or adopted.

MEPC 84 also finalized Terms of Reference for the 5th IMO GHG study, which is expected to commence later in 2026 and be completed in 2028.

### Guidelines supporting the NZF

MEPC 84 and the preceding meeting of the Intersessional Working Group on Reduction of GHG Emissions from Ships (ISWG-GHG 21) continued the development of guidelines supporting the implementation of the NZF. MEPC 84 agreed using the following draft guidelines and documents as the basis for further work:

- GFI calculation guidelines
- Amendments to the 2022 Guidelines for Administration Verification of Ship Fuel Oil Consumption Data and Operational Carbon Intensity
- Guidance on how to monitor, report and verify the energy derived from wind propulsion systems

- Guidelines on requirements and procedures for recognition of Sustainable Fuel Certification Schemes (SFCS) and reporting certification activities (SFCS guidelines)
- Modules for possible inclusion in guidelines related to zero and near-zero GHG fuels, technologies and/or energy sources (ZNZs)

ISWG-GHG 21 also discussed governing provisions and possible disbursement of revenue of the proposed IMO Net-Zero Fund, as well as the development, management and operation of the IMO GFI Registry.

### Lifecycle GHG Assessment (LCA) framework

ISWG-GHG 21 and MEPC 84 continued work on the LCA framework and held extensive discussions on various topics, including on the understanding of “representativeness” and “conservativeness”, and the determination of well-to-tank (WtT) emission values for fossil fuel pathways. The scientific GESAMP-LCA Working Group (WG) was tasked with considering the use of statistical approaches, such as weighted averages or measures of central tendency, to determine global default WtT emission factors for relevant fossil fuel pathways.

MEPC 84 supported a risk-based approach for ILUC and added new fuel pathway codes on intermediate corn ethanol and LNG with upstream CCS, but decided not to amend the LCA guidelines now. The GESAMP-LCA WG was also tasked with providing further methodological advice on issues such as avoided emissions, ships using cargo as fuel, the accounting methodology for CCU, system boundaries for on-board carbon capture systems, and sustainability topics and aspects.

### Onboard carbon capture and storage (OCCS)

MEPC 84 proceeded its workstream to develop a regulatory framework for the use of OCCS and agreed on the following principles:

- OCCS should in general also include technologies which permanently mineralize CO<sub>2</sub>.
- OCCS-related emissions on board the ship should be verified by the administration, and further work is needed to determine the responsible entity for the certification of downstream emissions after offloading CO<sub>2</sub> from the ship.
- OCCS should be considered on a ship level in the GFI guidelines under the NZF, but further work is needed to develop the method.

Key outstanding issues include the definition of system boundaries under the LCA framework and the evaluation of any OCCS concept with direct or indirect disposal of CO<sub>2</sub> into the sea from a ship according to legal frameworks such as the London Protocol and MARPOL.

The Correspondence Group was re-established to continue progressing the work, including considering guidance on accounting, verification and certification building on the LCA framework, reporting to MEPC 86 in October 2027.

### Pollution prevention and response

#### Exhaust Gas Cleaning Systems (EGCSs)

In accordance with the recommendations from PPR 13, member states considering applications for the designation of Particularly Sensitive Sea Areas (PSSAs) may assess the relevance of an EGCS-related associated protective measure (APM) limiting EGCS discharges. Proposals for further regulatory options on EGCS discharge controls should be submitted to PPR 14 in 2027.

## Bilge water

MEPC 84 approved amendments to MARPOL Annex I, including the introduction of new Regulation 12B, permitting controlled dewatering of oily bilge water by forced evaporation. The draft amendments also include consequential updates to the International Oil Pollution Prevention (IOPP) Certificate and the Oil Record Book.

Related amendments to the Guidelines for Integrated Bilge Water Treatment Systems (IBTS), addressing oily waste handling and machinery space operations, were approved in principle, subject to final approval at MEPC 85 in conjunction with the adoption of the MARPOL Annex I amendments.

## Unified Interpretations (UIs)

MEPC 84 approved three UIs:

### Regulation 16.9 of MARPOL Annex VI (incinerators)

The revised UI clarifies that batch loaded incinerators must be designed to reach 600°C in the actual combustion space within five minutes after start-up, and this requirement is verified only during type approval testing. On-board monitoring of the flue gas outlet temperature is intended solely for safe operation and continuous compliance, not for verifying the design requirement.

### Regulation 13.2.3 of MARPOL Annex VI (NOx emissions)

The UI clarifies that for ships constructed on or after the specified dates and operating in the Norwegian Sea or North East Atlantic NOx Emission Control Areas, the three date-based criteria (building contract date, keel laying date or delivery date) must be used to determine “the time the ship was constructed” when determining the NOx Tier level required.

### Regulation 13.2.2 of MARPOL Annex VI (NOx emissions)

The revised UI clarifies that if an engine is installed on board and tested for its intended purpose more than six months after the applicable reference date in Regulation 13.5.1.2 or 13.5.1.3, the actual on-board test date determines which NOx standards apply. If the engine cannot be tested within six months due to unforeseen circumstances beyond the shipowner’s control, the administration may apply the “unforeseen delay in delivery” provisions in a manner consistent with MARPOL Annex I, UI4.

### Regulation D-3.1 of the Ballast Water Management Convention (approval of BWM systems)

The UI clarifies that BWM systems approved taking into account the 2016 G8 guidelines (MEPC.279(70)), shall be deemed to be in accordance with the BWMS Code, and may remain installed on-board ships on or after 28 October 2020.

## Marine plastic litter

### Plastic Pellets

In accordance with the recommendations from PPR 13, MEPC 84 agreed to initiate the development of a new mandatory code for the transport of plastic pellets by sea in freight containers. PPR will be tasked with drafting and finalizing the new code, as well as preparing consequential amendments to MARPOL Annex III and SOLAS. The regulatory instrument(s) under which the code will become mandatory are yet to be determined.

### Marking of fishing gear

MEPC 84 approved a circular promoting the implementation of fishing gear marking systems and the UN’s Food and Agriculture Organization (FAO) Voluntary Guidelines on the Marking of Fishing Gear.

### Underwater Radiated Noise (URN)

The URN guidelines are in an experience-building phase which MEPC 84 agreed to extend until the end of 2028 in order to address the remaining gaps. MEPC 84 also approved a circular on technical guidance on co-optimizing energy efficiency and underwater radiated noise at the design and retrofit stages.

### New work programme output

MEPC 84 agreed to the following new output to the work programme:

- Prohibition of the reintroduction of ozone-depleting substances
- Addressing Maritime Autonomous Surface Ships (MASS) within MEPC instruments

## Recommendations

DNV recommends that our customers note the continued discussion on the Net-Zero Framework in 2026. Companies operating in the North-East Atlantic Ocean are advised to note the establishment of an ECA in this region and the effective dates of the requirements. Companies should also note the approved amendments to the Ballast Water Management Convention and related guidelines, and the end of the non-penalization approach upon entry into force of the amendments in 2028.

We also recommend [signing up](#) to our dedicated [webinar](#) discussing the outcome of MEPC 84, taking place on **6 May 2026**.

For more information about decarbonizing shipping and DNV services relating to GHG emissions, visit:

- [www.dnv.com/decarbonize-shipping](http://www.dnv.com/decarbonize-shipping)
- [www.dnv.com/cii](http://www.dnv.com/cii)
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