

Recent developments within the IMO framework

ISCC Technical Stakeholder Meeting on
Sustainable Marine Fuels – 8 May 2025

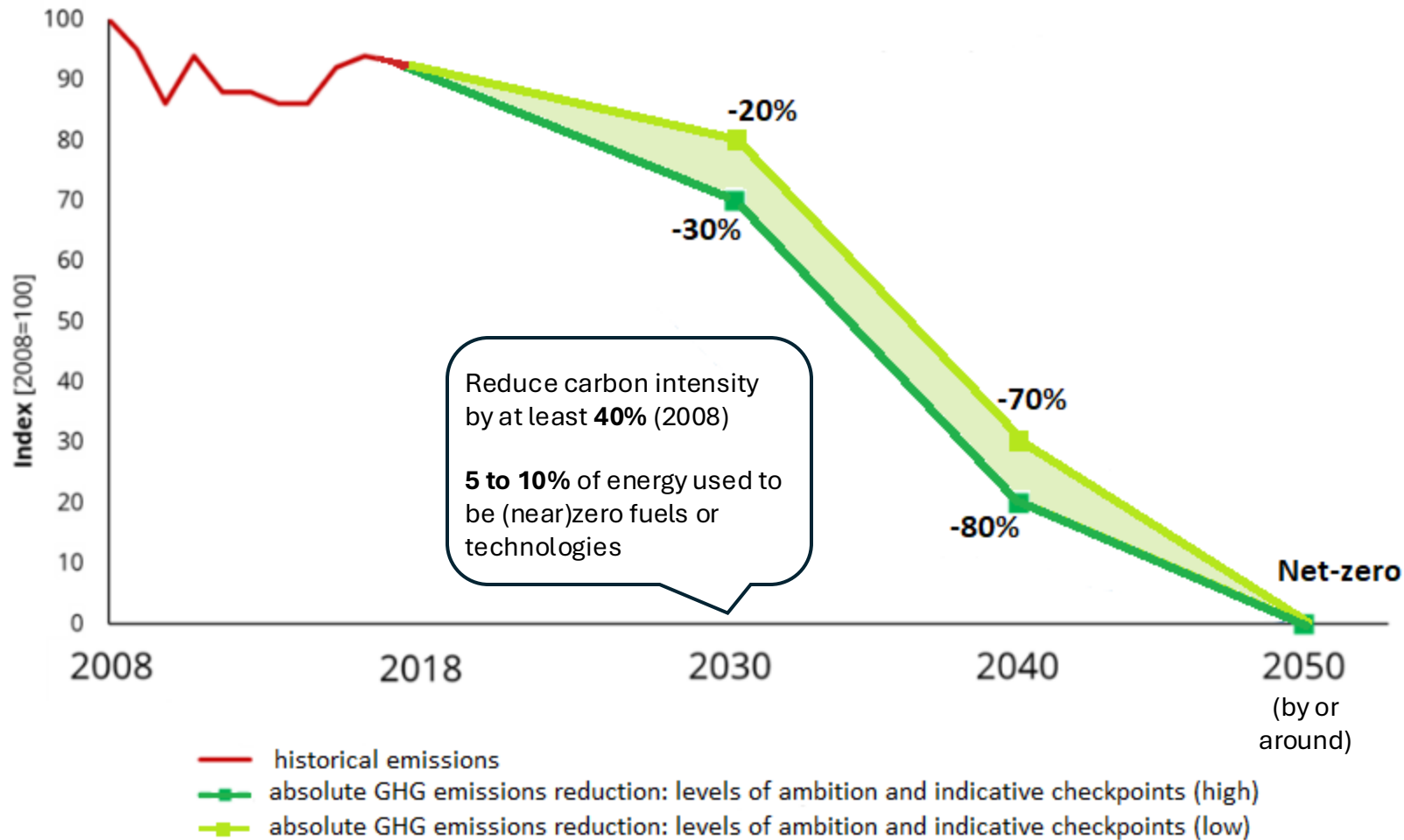


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1. Overview of the 2023 IMO GHG Strategy and MARPOL Annex VI

Overview of the 2023 IMO GHG Strategy



- The “Paris Agreement” for international shipping
- Sets clear timelines for finalization of **mid-term measures**: to be approved and adopted in 2025, for entry into force in 2027
- Many other elements (guiding principles, barriers, supportive measures, safety and human element, etc.): **a framework for action by IMO and the sector as a whole**
- Review in 2028

Overview of MARPOL Annex VI

Chapter 1: General provisions

- Definitions, exemptions, equivalents

Chapter 2: Survey, certification and means of control

Chapter 3: Requirements for control of emission from ships

- Ozone Depleting Substances, Nitrogen Oxides (NO_x), Sulphur Oxides (SO_x), shipboard incineration, fuel oil quality

Chapter 4: Regulations on the carbon intensity of international shipping

- EEDI, EEXI, SEEMP, DCS, CII

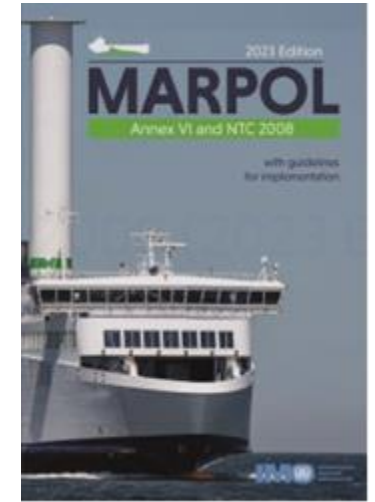
Chapter 5: Verification of compliance with the provisions of this Annex

- Periodic audits of Parties



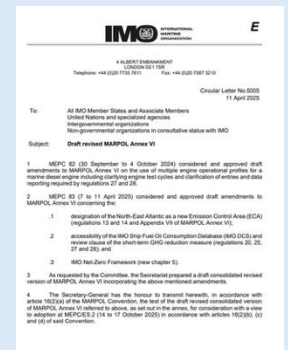
- 11 Appendices
- NO_x Technical Code 2008
- Over 60 technical guidelines and guidance documents
- Unified interpretations

Entered into force in 2005
~97% of world tonnage



Circular Letter No. 5005

‘Draft revised MARPOL Annex VI’:
consolidated version of
amendments to MARPOL Annex VI -
to be adopted by
MEPC/ES.2 (14-17 Oct 2025)



2. The IMO Net-Zero Framework

Development of the IMO Net-Zero Framework

- **Key elements** of the IMO Net-Zero Framework:
 - **Two-tiered GFI** reduction trajectories ('base target' and 'direct compliance target')
 - Covering **well-to-wake** GHG emissions (using IMO LCA Guidelines)
 - GFI calculated on the basis of '**well-to-wake**' emissions
 - Ability to generate/transfer '**surplus units**' in case of overcompliance
 - Ability to use surplus units and/or to purchase '**remedial units**' in case of compliance deficit
 - Transfers to be registered in the ship's account in the **IMO GFI Registry**
 - Ability to receive '**rewards**' for the use of zero/near-zero fuels, technologies,
 - Framework for **certification of sustainable fuels**
- **Other elements** of the IMO Net-Zero Framework:
 - Establishment of the **IMO Net-Zero fund** to provide 'rewards' for the use of zero/near-zero fuels technologies and to support Member States with a range of other initiatives supporting the implementation of the IMO net-zero framework and the energy transition of shipping
 - Enhanced focus on assessing possible impacts on **food security**
 - Explicit support to promotion of **technical cooperation** and **transfer of technology**

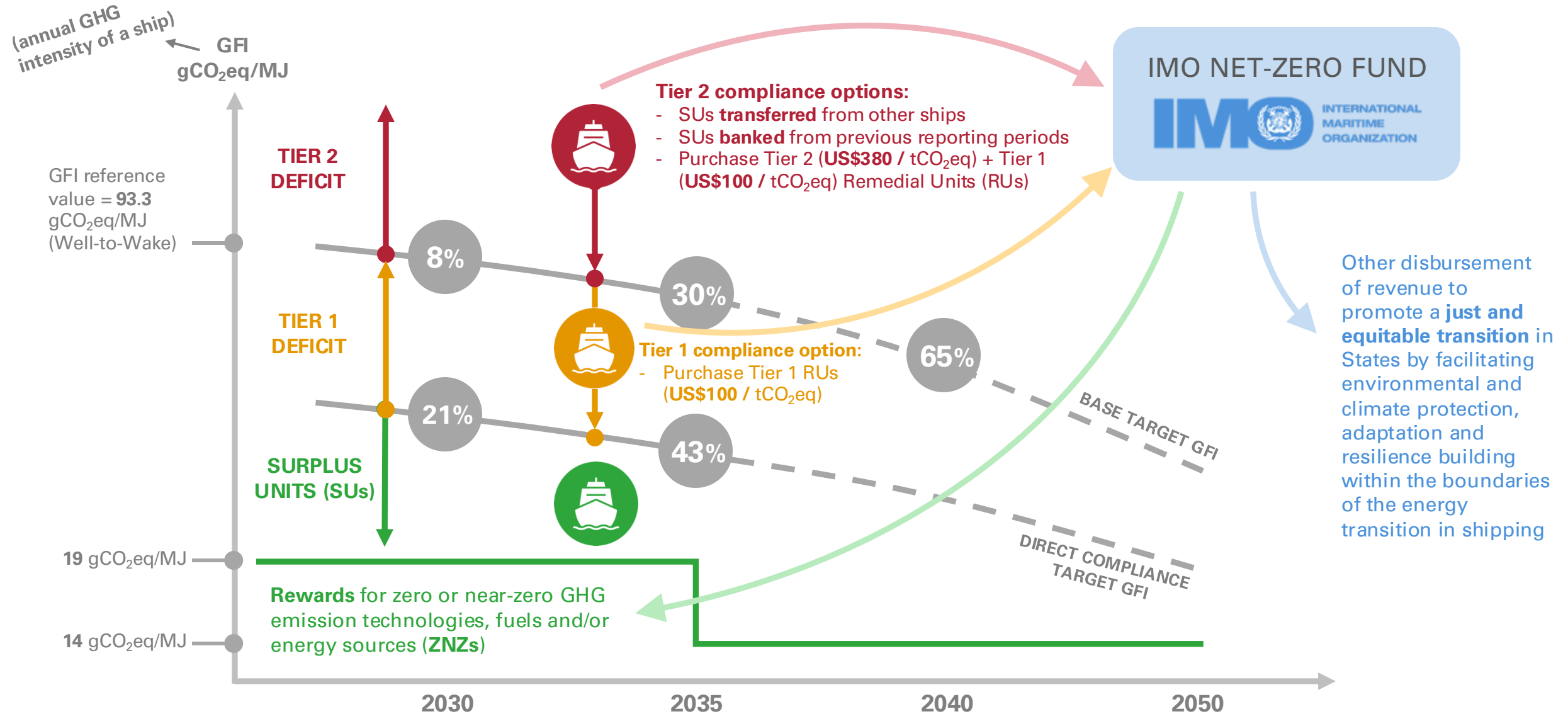
World's first regulatory framework to combine mandatory emissions limits and GHG pricing across an entire industry sector

Mandatory for all ships > 5,000 tons from 2028 (~85% of emissions)

Amendments to be formally adopted in October during **MEPC extraordinary session**

Expected to provide **regulatory certainty** for industry and fuel providers

Illustration of the IMO Net-Zero Framework

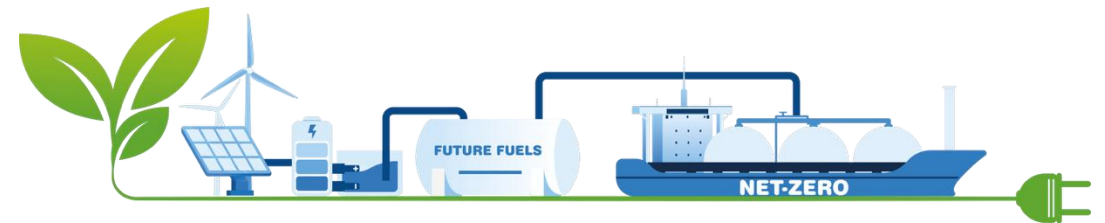


3. Update on the development of the IMO LCA framework

Update on the development of the IMO LCA framework



- The **IMO Net-Zero Framework** introduces two new concepts contributing to the determination of the GHG intensity of marine fuels:
 - “GHG emission factors and sustainability themes or aspects of a fuel as documented on the Fuel Lifecycle Label (FLL) shall be certified, as appropriate, by a recognized Sustainable Fuels Certification Scheme (SFCS)” (regulation 34)
- **FLL:**
 - technical tool to collect and convey information relevant for the LCA of a marine fuel
- **SFCS:**
 - A scheme, recognized by MEPC, which certifies that a fuel is compliant with the IMO Net-Zero Framework
 - Recognition subject to renewal every 5 years and periodic review
 - Yearly report of data by SFCS relevant to their activity to ensure transparency, traceability and environmental integrity of the certification process
- Guidelines to be developed



Update on the development of the IMO LCA framework



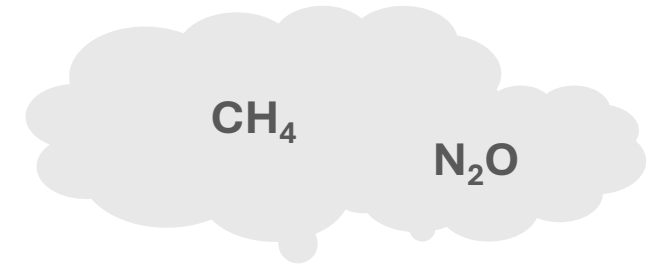
- *2024 Guidelines on life cycle GHG intensity of marine fuels (2024 LCA Guidelines)*
- Establishment of the **GESAMP-LCA WG** to undertake a scientific review of the IMO LCA framework – independent expert group
- MEPC 83 approved the *Methodology for submission, scientific review and recommendation of proposed default emission factors by GESAMP-LCA WG* (MEPC.1/Circ.916)
 - Member States can submit proposed WtT and TtW emission values, supported by underlying LCA calculations, for any fuel pathway
 - Excel tool to standardize the reporting of parameters and the calculation of proposed default emission factors
- First values to be reviewed in July 2025 by GESAMP-LCA WG, for consideration by MEPC 84 (spring 2026)
- GESAMP-LCA WG will continue to review the IMO LCA methodology
 - develop a common understanding of “representativeness” and “conservativeness”
 - approaches to ILUC risk classification, etc.



GESAMP
Joint Group of Experts on the
Scientific Aspects of Marine
Environmental Protection

4. Other relevant regulatory developments

Non-CO₂ GHG emissions



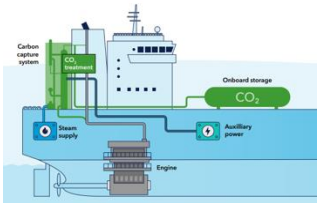
- The IMO Net-Zero Framework covers **CO₂, CH₄ or N₂O** released into the atmosphere
- MEPC 83 adopted *Guidelines for test-bed and onboard measurements of methane (CH₄) and/or nitrous oxide (N₂O) emissions from marine diesel engines* (resolution MEPC.402(83))
 - Emission measurement protocol
 - Procedures for documentation and verification of emission values
 - Based on the NO_x Technical Code 2008
- Correspondence Group re-established to develop guidelines for “engine load monitoring” (ELM) method and continuous emissions monitoring systems (CEMS)
- Report to MEPC 84 (Spring 2026)

Other relevant decisions by MEPC 83



Energy efficiency of ships

- **CII rating reduction factors** for 2027 to 2030 (-21.5% in 2030 compared with 2019)
- Work plan for **Phase 2 of the review of the short-term GHG reduction measure** (2026 to 2028): enhancing the SEEMP framework; further developing CII metrics; and synergies between IMO carbon intensity/energy efficiency framework and the IMO Net-Zero Framework
- Further accessibility of the **IMO Data Collection System**



Work plan on the development of a regulatory framework for the use of Onboard Carbon Capture Storage systems (**OCCS**)



Designation of the **North-East Atlantic Ocean** as an Emission Control Area (ECA) for Sulphur oxide emissions (SO_x), particulate matter (PM) and nitrogen oxide emissions (NO_x)

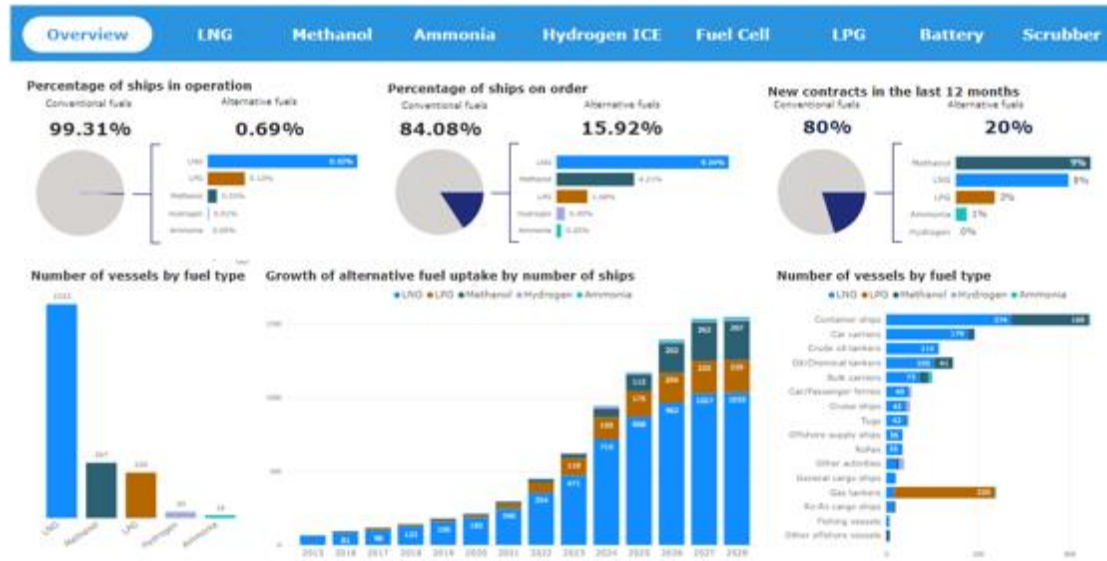
5. Next steps

Next steps



- 30 June-4 July: **GESAMP-LCA WG 2**
- 14-17 October: extraordinary session of MEPC (**MEPC/ES.2**) to formally adopt the revised MARPOL Annex VI
- **Remaining tasks** ahead of implementation of the IMO Net-Zero Framework (non-exhaustive list):
 - IMO Net-Zero Fund governance
 - Complete life cycle assessment of main fuel pathways
 - Determination of reward amount for ZNZs
 - Recognition of fuel certification schemes
 - Establishment and operation of the IMO GFI Registry
- MEPC/ES.2 will consider a draft **work plan** to prepare for the entry into force of the IMO Net-Zero Framework (March 2027, first reporting period: 2028)
- 20-24 October: **ISWG-GHG 20**
- 3-7 November: **GESAMP-LCA WG 3**

IMO Future Fuels and Technology project (FFT)



Latest Information

The most up-to-date data on alternative fuels uptake and supply, current fuel prices, and information from the IMO Data Collection System (DCS).

Fuel Uptake

The latest developments in vessel uptake of alternative fuels provided by DNV's Alternative Fuel Insight (AFI) platform.

Discover More

Fuel Supply

The latest developments in bunkering infrastructures for alternative fuels provided by DNV's Alternative Fuel Insight (AFI) platform.

Discover More

Fuel Prices

The global alternative marine fuel price premiums and historical trends from Argus Media.

Discover More



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Thank you.

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