POSITION PAPER

Developing and implementing technical and operational measures to reduce GHG emissions from ships (Revision 4)

IACS
International Association of Classification Societies

Our Position

The IMO goal-based regulations are the appropriate means to address GHG reduction measures globally, and IACS will both assist in developing practical detail requirements and implementation of proposed technical and operational measures.

BACKGROUND

The shipping industry contributes 2-3% of global manmade greenhouse gas (GHG) emissions, and is expected to act upon the Paris Agreement to reduce these GHG emissions. In April 2018, the IMO adopted the initial GHG reduction strategy with a vision to decarbonize shipping as soon as possible within this century and, inter alia, reduce total GHG emissions from international shipping at least by 50% in 2050 as compared to 2008 levels.

In 2023, during the MEPC 80, the revised IMO GHG strategy was adopted, significantly elevating the level of ambition and introducing indicative checkpoints to effectively reduce greenhouse gas (GHG) emissions.

The revised IMO GHG Strategy now explicitly addresses life cycle GHG emissions which encompass emissions throughout the entire life cycle of shipping, including fuel production and transportation. It aims to reduce GHG emissions within the energy system boundaries of international shipping while preventing a mere shift of emissions to other sectors. This approach acknowledges the importance of considering the full life cycle impact of shipping activities in the future and encourages measures that effectively mitigate emissions across the entire shipping process.

Overall, the revised strategy demonstrates a stronger commitment to combating climate change within the international shipping industry. By setting more ambitious targets and addressing life cycle emissions, it aims to significantly reduce GHG emissions and promote the adoption of sustainable technologies and practices in the sector.

IMO GHG REDUCTION STRATEGY

IMO has agreed on a roadmap for developing a "Comprehensive IMO strategy on reduction of GHG emissions from ships". The initial strategy was adopted in April 2018, followed by the revision of the IMO GHG strategy in 2023 with the following vision:

"IMO remains committed to reducing GHG emissions from international shipping and, as a matter of urgency, aims to phase them out as soon as possible, while promoting, in the context of this Strategy, a just and equitable transition."

Levels of ambition directing the 2023 IMO GHG Strategy are as follows:

- Carbon intensity of the ship to decline through further improvement of the energy efficiency for new ships
- Reduce CO_2 emissions per transport work, as an average across international shipping, by at least 40% by 2030, compared to 2008
- To reach net-zero GHG emissions "by or around, i.e., close to, 2050."
- Additionally, the revised strategy includes a target to promote the uptake of zero or near-zero GHG emission technologies, fuels and/or energy sources to represent at least 5%, striving for 10%, of the energy used by international shipping by 2030.

The reduction targets are all on a well-to-wake basis.

In addition, the revised strategy includes indicative checkpoints to reach net-zero GHG emissions from international shipping:

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- to reduce the total annual GHG emissions by at least 20%, striving for 30%, by 2030, compared to 2008; and

- to reduce the total annual GHG emissions by at least 70%, striving for 80%, by 2040, compared to 2008.

To ensure the achievement of these shipping goals in the 2023 Revised Strategy, IMO has opted for a comprehensive set of measures. This multifaceted approach encompasses two primary components.

Firstly, the IMO intends to establish a marine fuel standard as part of the technical element. This standard will regulate and progressively decrease the greenhouse gas (GHG) intensity of marine fuels. By implementing this standard, the IMO aims to reduce the environmental impact of shipping by addressing the emissions associated with marine fuel usage.

Secondly, the economic element of the IMO's measures involves the implementation of a maritime GHG emissions pricing mechanism. This mechanism is likely to be linked directly to the GHG intensity regulation mentioned earlier. The purpose of this pricing mechanism is to provide economic incentives for the shipping industry to adopt cleaner and more sustainable practices. By imposing a financial cost on GHG emissions, the IMO aims to encourage the industry to reduce its environmental footprint and transition to lower-emission alternatives.

The development of these measures will continue within the IMO, and based on the agreed timeline, they are expected to be officially adopted in 2025. After adoption, there will be a subsequent period before the measures come into effect, with an estimated timeline of around mid-2027. During this time, the shipping industry will have an opportunity to prepare for and implement the necessary changes to comply with the new regulations and standards set forth by the IMO.

IACS POSITION

1. IACS has the view that the IMO is the appropriate and technically competent body to address GHG reduction measures globally.

2. IACS supports goal-based regulations with clear objectives and transparent requirements, that can be followed-up and uniformly implemented as ship specific, technical and operational requirements.

3. IACS will use its knowledge and expertise to strive for a practical implementation of any proposed measures in order to support that all new regulations are technically feasible and capable of being applied globally and consistently.

4. IACS shall aim at ensuring all proposed measures satisfy IMO requirements regarding safety.

5. MARPOL and other IMO instruments provide a familiar and well-established framework for setting and enforcing international requirements and IACS should engage closely with the IMO in the development and technical implementation of regulations.

6. IACS will assist with and support the proper and timely implementation of the 'three step approach' (collect data, analyse, develop measure – for example in consideration of EEDI (in terms of the introduction of further phases).

7. IACS will support that any measures developed, agreed and implemented are based on scientific and transparent evidence;

8. IACS will not engage in the political or commercial aspects of the GHG discussions.

9. IACS is willing to work with the industry on the implementation of GHG reduction measures and provide the necessary technical support to enable international shipping to meet the emission reduction targets as soon as possible.

10. IACS will monitor proposals raised to the IMO related to power limitation as a measure for technical energy efficiency of existing ships and the development of the guidelines on shaft/engine power limitation system to comply with the EEDI or EEXI requirement

11. IACS will actively assist and support the continued development of the ''Guidelines on Life Cycle GHG Intensity of Marine Fuels", with a particular focus on addressing implementation-related challenges.

12. IACS will closely monitor the progress of mid and long-term measures aimed at reducing GHG emissions, with a specific emphasis on the development of the GHG Fuel standard

13. IACS will actively assist and support the MEPC 80's agreed plan for reviewing the short-term GHG reduction measures, the CII, and EEXI. This plan involves a comprehensive data-gathering phase until MEPC 82 in autumn 2024. Subsequently, the collected data will be analyzed to finalize any necessary amendments to the measures by MEPC 83 in summer 2025.

SUMMARY OF WORK CARRIED OUT BY IACS ON THIS ISSUE TO DATE

1. IACS has assisted IMO in collection of data for the database which is used in the negotiations at IMO for the review of EEDI;

2. IACS as a co-sponsor, has submitted a paper MEPC 74/6/2(OCIMF, IACS) which provides information on possible analysis of data from the IMO Ship Fuel Oil Consumption Database;

3. IACS has submitted a paper MEPC 74/5(developed by MP) which provides information related to technical consequences of the EEDI on the ship machinery design etc;

4. After ISWG-GHG 6, five experts were presented as IACS representative to informal group on technical measures based on EEXI proposal and operational approach for CII reduction;

5. IACS submitted a commenting paper (ISWG-GHG 7/2/28) to ISWG-GHG 7 on the proposed hybrid short-term measures;

6. IACS submitted two papers (MEPC 75/3/4 and MEPC 75/6/11) to MEPC 75 regarding mandatory submission of data into EEDI database;

7. IACS submitted a document MEPC 75/6/7, proposing updating MEPC.1/Circ.795/Rev.4 to clarify the application date for a revised EEDI Phase 3;

8. IACS assigned an expert to represent IACS to an external quality assurance and quality control (QA/QC) review of the draft Final Report of the Fourth IMO GHG Study;

9. IACS organized experts acting as IACS representatives to participate in IMO Correspondence Group after MEPC75 and MEPC76 on the development of technical guidelines on carbon intensity reduction.

10. IACS participated in meetings and technical discussions of the new European Sustainable Shipping Forum's sub-group on ship energy efficiency and provided technical opinions for consultations on relevant alternative fuel legislative initiatives from the EU.

11. IACS submitted two papers (MEPC 76/6/4 and MEPC 76/INF.28) to MEPC 76, regarding the updating amendments to 2015 industry guidelines on calculation and verification of Energy Efficiency Design Index.

12. IACS submitted one paper MEPC 76/6/9, proposing amendments to the 2018 Guidelines on the method of calculation of the attained Energy Efficiency Design Index (EEDI) for new ships.

13. IACS submitted two commenting papers (MEPC 76/7/37 and MEPC 76/7/47), regarding the report of the Correspondence Group on the Development of Technical Guidelines on Carbon Intensity Reduction.

14. IACS developed guidance for performing and validating the numerical calculation of EEXI reference speed Vref, which be published as a new IACS Rec.

15. IACS developed EEXI implementation guidelines, which have been published as REC.172 by IACS to support the global and consistent implementation of the IMO EEXI framework. IACS is working towards converting this Rec to a new IACS Procedural Requirment for unified implementation.

16. IACS has appointed two (2) experts to participate in the revision work of ISO 15016:2015 (Guidelines for the assessment of speed and power performance by analysis of speed trial data) carried out by ISO/ TC 8/SC 6/WG 17.

17. IACS developed a Recommendation on the term "heavy load carrier" for the application of EEDI/EEXI and CII, which has been published as REC.170.

18. IACS submitted two papers (MEPC 77/7/7 and MEPC 77/7/26) in relation to the use of biofuels and suggestions/comments on the in-service performance measurement method to obtain EEXI Vref respectively.

19. IACS assigned an expert to represent IACS to participate in the Ad-hoc expert workshop on impact assessments.

20. IACS assisted IMO Secretariat in obtaining estimates of EEXI/CII compliance rates ahead of the entry into force of the new regulations.

21. IACS submitted two papers (MEPC 78 78/INF. 16 and INF. 27) to communicate the draft IACS EEXI implementation guidelines and the draft IACS Guidelines on Numerical Calculations for the purposes of deriving the Vref in the framework of the EEXI Regulation.

22. IACS assigned an expert team to work with OCIMF for developing an information paper on the risks associated with Engine/Shaft power limitation.

23. IACS assigned two experts to participate in the IMO Correspondence Group on Marine Fuel Lifecycle GHG Assessment.

24. IACS submitted a paper (MEPC 79/7/24) to seek clarifications on several issues relating to the of Regulations 8, 26.3.1 and 28 of MARPOL Annex VI and proposes unified interpretations to deal with these issues.

25. IACS submitted a paper (MEPC 79/7/5) to propose a revision of MEPC.1/Circ.795/ Rev.6 to clarify boil-off gas consumed on board ships and to be reported via the Data Collection System (DCS).

26. IACS participates to the following work streams under ESSF Sub-Group on Ship Energy Efficiency: Energy Efficiency Design Index (EEDI), Data Collection System (DCS) and IMO Carbon Intensity Measures.

27. IACS has been actively engaged in the various ISWG-GHG by appointing experts to participate to the discussion.

28. IACS developped a Recommendation for implementing CII and SEEMP requirements, calculating and verifying CII and ratings, conducting company audits, and revising Part III of the SEEMP in case a corrective action plan needs to be developed. A paper was submitted to MEPC 80 to inform about the publication (MEPC 80/ INF.20).

29. IACS submitted a paper (MEPC 80/INF.5) with the updated industry guidelines ”2022 industry guidelines for calculation and verification ofthe Energy Efficiency Design Index (EEDI)” to reflect the renumbering of MARPOL Annex VI regulation as well as to clarify the determination of SFC and CF concerning paragraph 2.2.1 of resolution MEPC.308(73) in order to facilitate consistent implementation.

30. IACS submitted a paper (MEPC 80/6/1) seeking clarification of definition of the term “filling rate for gas fuel tanks” for EEDI calculations. The paper prompted the adoption of the MEPC.364(80) with the amendements to Guidelines of Survey and Certification of the Energy Efficiency Design Index (EEDI)(MEPC.365(79)).

31. IACS submitted a paper (MEPC 80/6/8) proposing an amendment to the sample format for the Confirmation of compliance – SEEMP part II (MEPC.1/Circ.876) to update the reference to regulation 26.2 of MARPOL Annex VI in view of the revision adopted by resolution MEPC.328(76).

32. IACS is working on upgrading the Recommendation 172 ‘’EEXI Implementation Guidelines” to a Procedural Requirement.

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