

INTERSESSIONAL MEETING OF THE
WORKING GROUP ON REDUCTION OF
GHG EMISSIONS FROM SHIPS
15th session
Agenda item 3

ISWG-GHG 15/3/6
12 May 2023
ENGLISH ONLY
Pre-session public release:

**FURTHER CONSIDERATION AND FINALIZATION OF THE ASSESSMENT AND
SELECTION OF MEASURE(S) TO FURTHER DEVELOP IN THE CONTEXT
OF PHASE II OF THE WORK PLAN FOR THE DEVELOPMENT
OF MID- AND LONG-TERM MEASURES**

**Possible draft amendments to MARPOL Annex VI to implement a Global GHG Fuel
Standard**

Submitted by ICS

SUMMARY

Executive summary: ICS supports the development and finalization of a Global GHG Fuel Standard (GFS) as a technical measure to reduce the GHG intensity of marine fuels, e.g.: by 5% by 2030 with an aggressive tightening of this standard after 2030, provided this is also supported by an economic measure that will incentivize the production and uptake of the low- and zero-GHG fuels necessary to accelerate transition to net zero by mid-century. To avoid excessive complexity and ensure a strong and unambiguous signal is sent to fuel producers and suppliers, ICS suggests a measure simpler in design than that proposed in document ISWG-GHG 13/4/7 (Austria et al.). To assist a decision on which measures to prioritize in Phase III of the Work plan, ICS sets out possible draft amendments to MARPOL VI in terms of maximum permitted GHG intensity of fuels in 2030, with a final decision on further reductions of permitted GHG intensity after 2030 to be taken by the Organization once it has been assessed that the economic measure has succeeded in establishing sufficient availability of the low- and zero-GHG fuels which will be required for ships to comply.

*Strategic direction,
if applicable:* 3

Output: 3.2

Action to be taken: Paragraph 21

Related documents: Resolution MEPC.304(72); MEPC 80/WP.6; MEPC 79/15, MEPC 79/WP.5; ISWG-GHG 13/4/7; ISWG-GHG 12/3/10, ISWG-GHG 12/3/8, ISWG 12/3/3; ISWG-GHG 10/5/3 and ISWG-GHG 10/5/6

Introduction

1 Documents ISWG-GHG 13/4/7 and ISWG-GHG 13/4/8 (Austria et al.) contain further information about a proposal for a Global GHG Fuel Standard (GFS) as a technical measure within a basket of mid-term measures comprising also a levy-based economic measure. In combination with an economic measure, ICS supports, as a separate measure, the development of a GFS as a "fuel neutral" technical measure to help to establish global demand from international shipping for low and zero GHG fuels, on a pathway to transition to net zero GHG emissions as soon as possible.

2 As a technical measure, the GFS is a performance standard, independent of fuel type, which may help increase the production and uptake of all types of low- and zero-GHG fuels, including methanol, ammonia, hydrogen and synthetic fuels, which some ships may start to use before 2030, as well as sustainable biofuels (with the sustainability criteria for sustainable biofuels with a biological origin¹ to be established taking account of the LCA Guidelines to be adopted at MEPC 80). It is emphasized, however, that significant production and availability of such fuels is only likely to occur after 2030 and will only be possible if the GFS is complemented by an economic measure, such as the Fund and Reward (feebate) mechanism as set out in documents ISWG-GHG 14/3 (ICS) and ISWG-GHG 14/3/1 (Japan).

3 ICS supports the development and finalization of a GFS, but the measure described in document ISWG-GHG 13/4/7 seems excessively complex and appears to incorporate elements of an economic measure.

Suggested possible draft of new chapter to MARPOL Annex VI

4 To help progress the discussion among Member States during the final part of Phase II of the Work plan, ICS currently suggests an approach which is similar to that used for the IMO 2020 global sulphur limit as set out in regulation 14.1 of MARPOL Annex VI. To demonstrate how this would work, ICS sets out in the annex to this document a possible draft new chapter to MARPOL Annex VI.

5 The possible draft amendments in the annex to this document use a similar approach to that used for the IMO 2020 standards regulating the global sulphur content of marine fuel, which were adopted with a requirement that a review of fuel availability would be undertaken two years ahead of implementation by 2018. However, given the concern about the potential for disproportionately negative impacts on States, it is proposed that this review, to be undertaken by 2028, should also take into account the cost of compliant fuels, as well as their availability.

6 Compliance with the GHG intensity requirement could also be achieved using technologies such as carbon capture and storage, pursuant to regulation 4 of MARPOL Annex VI on "Equivalents" – and a provision for this has been included in the suggested draft regulatory text in the annex to this document.

7 Rather than combining such a technical measure with an economic measure within the same set of regulations, which would be significantly challenging to do from a drafting perspective, ICS suggests that this technical measure should be developed in parallel to an economic measure as a separate chapter within MARPOL Annex VI.

¹ i.e. biofuel, comprising biogas, manufactured from residues and waste sustainable biomass, seed oil from tree species that do not compete for food and fodder, and certified as a sustainable fuel as per recognized international standard such as International Sustainability and Carbon Certification Scheme (ISSC) or the Roundtable on Sustainable Biomaterials Scheme (RSB).

Feasibility, effectiveness and impacts on States

8 ISWG-GHG 14 recalled that in accordance with the Work plan for the development of mid-term GHG reduction measures, the decision at MEPC 80 on measures to be developed as a priority should be based on an assessment of the proposed measures, in particular their feasibility, their effectiveness to deliver the long-term levels of ambitions of the GHG Strategy and their potential impacts on States.

Feasibility

9 To assist the Group's understanding of the proposed GFS measure and demonstrate its feasibility, including rapid approval and adoption, the annex to this document sets out possible draft amendments to MARPOL Annex VI to implement the GFS.

10 The simplified approach suggested by ICS, at least until 2030, will minimize the need for the Organization to develop large sets of new guidelines so ensuring the measure can be uniformly and smoothly implemented.

11 As explained above, to assist rapid adoption, the simplified approach suggested by ICS will make the necessary comprehensive impact assessment far easier to conduct, as for many States this assessment may be concerned with the additional costs of using compliant fuels in 2030, in combination, at the same time, with a comprehensive impact assessment of the economic measure. To expedite rapid adoption of the measure, Member States will also have the comfort of the suggested review of fuel costs and availability in 2028 before a final decision is taken to enforce the required GHG intensity standards in 2030.

12 As the use of fuels required to comply with the standard can be recorded on the Bunker Delivery Note², which can be checked by the Administration and port State control, there will be no need for an additional system of verification or the establishment of additional databases, thus minimizing the administrative burden on both the ship's Administration and the Organization.

Effectiveness to deliver the long-term ambitions of the GHG Strategy

13 The simplified measure suggested by ICS would send a strong and unambiguous signal to fuel producers about the need to produce the required compliant fuels, and could achieve a 5% reduction in the GHG intensity of marine fuels by 2030, equivalent to reducing emissions by about 50 million tonnes of CO₂eq per year from 2030. Moreover, the regulatory architecture would also be in place to mandate further reductions in the GHG intensity of fuels that would be necessary after 2030 to achieve a net zero goal mid-century.

14 ICS reiterates that the delivery of the long-term levels of ambition of the Strategy, as may be revised by MEPC 80, will be very much dependent on the production and availability to international shipping of low- and zero-GHG fuels in ports throughout the world, including developing countries, as well as technologies such as carbon capture and storage, which will require the adoption of an economic measure in addition to a technical standard.

15 The GFS measure, as set out in the annex to this document, would be relatively simple to implement, which is important both from compliance/enforcement and administrative burden perspectives.

² Subject to amendment of appendix V of MARPOL Annex VI.

Potential impacts on States

16 Pursuant to MEPC.1/Circ.885/Rev.1, an initial impact assessment on States of the proposed GFS was set out in annex to document ISWG-GHG 12/3/4 (Austria et al). ICS recognizes that a comprehensive impact assessment is required to be undertaken on the final basket of measures, subject to further consideration and agreement of those measures by Member States.

17 The advantage of the simpler approach suggested in this document by ICS is that it should be far easier to conduct a comprehensive impact assessment of the measure for the year 2030, in combination with an assessment of the impact of the economic measure. Moreover, unlike the economic measure, the cost impacts of the technical measure suggested by ICS would not occur until 2030.

Possible draft amendments to MARPOL Annex VI

18 ICS has taken into account the discussion at ISWG-GHG 13, MEPC 79, and ISWG-GHG 14, in particular with regard to the issues raised relating to the operational, administrative, legal, and governance aspects of the proposal and, in response to the Committee's invitation for further details, ICS has prepared possible draft amendments to MARPOL Annex VI as set out in the annex to this document to add, inter alia, a new chapter 7 on "Global GHG Fuel Standard".

19 The possible draft amendments set out in the annex of this document include provisions for the new chapter 7 to MARPOL Annex VI as follows:

- .1 regulation 39 – Application;
- .2 regulation 40 – GHG Fuel Intensity; and
- .3 regulation 41 – Review of this chapter.

20 In addition to the possible draft amendments set out in this document, consequential draft amendments to the regulations of MARPOL Annex VI are envisaged to address, inter alia, port State control of these new operational requirements.

Action requested of the Working Group

21 The Group is requested to note the simpler version of the GFS suggested by ICS, and invited to recommend to MEPC 80, as part of a basket of measures to reduce GHG emissions from international shipping:

- .1 that, in addition to the revised IMSF&R (Fund and Reward) economic measure set out in document ISWG-GHG 14/3, a technical measure for a GHG Fuel Standard in terms of maximum GHG fuel intensity of fuel to be used on board the ship should be developed and finalized, with a view to approval at MEPC 81 and adoption at MEPC 82; and
- .2 with a view to being in a position to commence, as soon as possible, a comprehensive assessment of the technical measure's feasibility, effectiveness and impact on States, consider the possible draft amendments to MARPOL Annex VI to implement the GFS as set out in the annex to this document.

ANNEX

POSSIBLE DRAFT AMENDMENTS TO MARPOL ANNEX VI

(Global GHG Fuel Standard)

(N.B. Draft regulation numbers follow those in draft chapter 6 – International Maritime Sustainability Funding and Reward Mechanism, as set out in document ISWG-GHG 14/3 (ICS))

A new chapter 7 is added as follows:

Chapter 7 – Global GHG Fuel Standard

Regulation 39

Application

1 This chapter shall apply to ships of [5,000] gross tonnage and above which fall into one or more of the categories in regulations 2.2.5, 2.2.7, 2.2.9, 2.2.11, 2.2.14 to 2.2.16, 2.2.22, and 2.2.26 to 2.2.29 of this Annex.

2 The provisions of this chapter shall not apply to:

- .1 ships solely engaged in voyages within waters subject to the sovereignty or jurisdiction of the State the flag of which the ship is entitled to fly; and
- .2 ships not propelled by mechanical means, and platforms including FPSOs and FSUs and drilling rigs, regardless of their propulsion.

Regulation 40

GHG Fuel Intensity

1 From 1 January 2030 the GHG Fuel Intensity (Required GFI) of energy used on board the ship shall not exceed [[95%] of the GFI reference value¹] (gCO_{2e}/MJ)^{2,3,4}.

2 From 1 January 2040 the GHG Fuel Intensity (Required GFI) of energy used on board the ship shall not exceed [[70%] of the GFI reference value] (gCO_{2e}/MJ).

¹ GFI reference value to be calculated on approval of the draft amendments and corresponds to the fleet average greenhouse gas (gCO_{2e}/MJ) intensity of the energy used on-board by ships in [2019] determined on the basis of fuel oil consumption data collected and reported pursuant to regulation 27 of MARPOL Annex VI and using guidelines to be developed by the Organization.

² GFI given in terms of the mass of GHG emissions per unit of energy used on board the ship based on the LCA guidelines under development by the Organization [with CO₂ or CO_{2e} for the GFS subject to consideration].

³ As per the requirements of regulation 14.1 of MARPOL Annex VI, the GHG Fuel Intensity (GFI) of fuel supplied to the ship to be recorded on a Bunker Delivery Note, with consequential amendments required to the provisions of regulations 18.4 and 18.5 of MARPOL Annex VI.

⁴ Pursuant to regulation 4 of MARPOL Annex VI, compliance with the GHG Fuel Intensity (GFI) could be achieved through an equivalent means such as carbon capture and storage.

3 The standard set forth in paragraph 1 shall be subject to a review to be completed by 1 January 2028 to determine the cost and availability of marine fuels to comply with the standard set forth in that paragraph and confirmation by the Parties that it is possible for ships to comply.

4 The standard set forth in paragraph 2 shall be subject to a review to be completed by 1 January [203X].

5 Pursuant to regulation 18.2.1 of this Annex, a ship not able to purchase compliant fuel oil to meet the requirement set out in paragraph 1 of this regulation, shall notify its Administration taking into account guidelines developed by the Organization⁵.

Regulation 41

Review of this chapter

By [2033], and at five-year periods thereafter, the Organization shall review the status of this chapter, including the cost and availability of fuel oil to meet the standard set out in regulation 40 of this Annex, and amend the relevant provisions if necessary.

⁵ Guidelines to be developed based on resolution MEPC.320(74) 2019 *Guidelines for consistent implementation of the 0.50% sulphur limit under MARPOL Annex VI* including pro-forma FONAR.