INTERNATIONAL MARITIME ORGANIZATION

E

INTERSESSIONAL MEETING OF THE
WORKING GROUP ON REDUCTION OF
GHG EMISSIONS FROM SHIPS
7th session
Agenda item 2

ISWG-GHG 7/2/6
7 February 2020
ENGLISH ONLY

FURTHER CONSIDERATION OF CONCRETE PROPOSALS TO IMPROVE THE OPERATIONAL ENERGY EFFICIENCY OF EXISTING SHIPS, WITH A VIEW TO DEVELOPING DRAFT AMENDMENTS TO CHAPTER 4 OF MARPOL ANNEX VI AND ASSOCIATED GUIDELINES, AS APPROPRIATE

Draft amendments to MARPOL Annex VI to incorporate the goal-based energy efficiency improvement measure utilizing Energy Efficiency Existing Ship Index (EEXI)

Submitted by Greece, Japan, Norway, Panama, United Arab Emirates, ICS, BIMCO and INTERTANKO

SUMMARY

Executive summary:	This document proposes draft amendments to MARPOL Annex VI to incorporate the goal-based energy efficiency improvement measure utilizing Energy Efficiency Existing Ship Index (EEXI), with a view to approval at MEPC 75 and entry into force in 2022. The draft text, as set out in annex 1 of this document, was developed by an informal group established by interested Member States and non-governmental organizations.
Strategic direction, if applicable:	3
Output:	3.2
Action to be taken:	Paragraph 23
Related documents:	MEPC 74/7/2, MEPC 74/INF.23; MEPC 75/7/2; ISWG-GHG 6/2, ISWG-GHG 6/2/3, ISWG-GHG 6/2/4, ISWG-GHG 6/2/12 and ISWG-GHG 7/2/7

Introduction

1 The sixth meeting of the Intersessional Working Group on Reduction of GHG Emissions from Ships (ISWG-GHG 6) considered concrete proposals to improve the operational energy efficiency of existing ships, including a proposal for a goal-based energy efficiency measure utilizing Energy Efficiency Existing Ship Index (EEXI) submitted by Japan and Norway (ISWG-GHG 6/2/3).

2 Following the discussion, ISWG-GHG 6 agreed that goal-based measures should be pursued and that two approaches, i.e. technical approach and operational approach, should be further developed in parallel. In this connection, ISWG-GHG 6 noted that Japan offered to informally coordinate future work on the technical approach.

3 In this context, interested Member States and non-governmental organizations formed an informal group, under informal coordination by Japan, to further develop a concrete proposal on a goal-based measure through technical approach. The informal group had participants consisting of the following Member States:

AUSTRALIA
CANADA
FINLAND
GERMANY
GREECE
JAPAN
NORWAY
SINGAPORE
UNITED ARAB EMIRATES
UNITED KINGDOM
UNITED STATES

and the following non-governmental organizations in consultative status:

BIMCO
EUROMOT
IACS
ICS
INTERTANKO
RINA
WSC

4 The informal group worked together to develop a concrete proposal for a goal-based measure through technical approach, in accordance with the working arrangement prepared by the coordinator (Japan), as set out in annex 2 of this document. Noting that ISWG-GHG 6 agreed to pursue the development of a goal-based measure, the informal group used the goal-based energy efficiency measure utilizing Energy Efficiency Existing Ship Index (EEXI) submitted by Japan and Norway (ISWG-GHG 6/2/3) as the base document for further consideration.

5 Following three rounds of discussions, the informal group developed draft legal instruments to incorporate the EEXI measure into MARPOL Annex VI as the goal-based measure through technical approach. These instruments are namely:

.1 draft amendments to MARPOL Annex VI;

.2 draft guidelines on method of calculation of the attained energy efficiency existing ship index (EEXI) (the "EEXI Calculation Guidelines" hereafter);

.3 draft guidelines on survey and certification of the energy efficiency existing ship index (EEXI) (the "EEXI Survey and Certification Guidelines" hereafter); and

.4 draft guidelines on the shaft / engine power limitation system to comply with the EEXI requirements and use of a power reserve (the "SHaPoLi / EPL Guidelines for the EEXI" hereafter).

6 This document thereby proposes draft amendments to MARPOL Annex VI to incorporate the EEXI developed by the informal group, as set out in annex 1 of this document. The co-sponsors believe that the draft amendments are concrete and well developed, which will satisfy many delegations indicating their preference at ISWG-GHG 6 to approve draft amendments to MARPOL Annex VI at MEPC 75.

7 Guidelines associated with the proposed draft amendments to MARPOL Annex VI are proposed in document ISWG-GHG 7/2/7 (Greece et al.).

Main items being discussed

8 The informal group developed the draft amendments to MARPOL Annex VI following thorough consideration of the EEXI, including effectiveness, implementation, enforcement and legal consistencies. Specifically, the following items were deeply considered and discussed:

.1 general approach;
.2 reduction rates (the required EEXI) and review clause;
.3 date of implementation;
.4 the EEXI technical file; and
.5 form of the International Energy Efficiency Certificate (IEEC).

General approach

9 Some members noted that the goal-based measure might put more burden on pre-EEDI ships compared to EEDI ships, as these ships were not designed and built to fulfil the EEDI regulation. In order to take into account this consideration within the EEXI regulation, a member suggested imposing mandatory engine power limit on all ships at a flat rate (i.e. even ships with EEXI equal or lower than the required EEXI would have to comply with the limit), as all ships should contribute to this effort.

10 Other members put emphasis on the goal-based measure, not limiting the means of compliance to a specific one such as the engine power limit. It was also recalled that ISWG-GHG 6 agreed unanimously that goal-based measures should be pursued (MEPC 75/7/2, paragraph 32).

11 Having noted these views and agreement at ISWG-GHG 6, the informal group used the goal-based EEXI proposal as the basis for further consideration in technical approach, without incorporating the prescriptive measure.

Reduction rates (the required EEXI) and review clause

12 While several members supported the reduction rates (the required EEXI) set out in the base document (ISWG-GHG 6/2/3), some members commented that those reduction rates would be too stringent and might not be achievable by existing ships, in particular old ships. However, no alternative reduction rates had been proposed. It was also noted that technical issues (such as ice-class ships to comply with the required EEXI) could be addressed in the context of correction factors under the EEXI Calculation Guidelines.

13 On the other hand, another member commented that the reduction rates set out in the base document might not be sufficient to achieve the 2030 levels of ambition set out in the Initial GHG Strategy (resolution MEPC.304(72)) and proposed the inclusion of a review clause so that the reduction rates could be revised if necessary.

14 Following the discussion and consideration, the informal group retained the reduction rates as set out in the base documents, subject to future review if necessary, and developed a review clause under the proposed regulation 21A of MARPOL Annex VI with the year of completion of the review in square brackets, as follows:

Regulation 21A
Required EEXI

3 By the end of [2026][2027], the Organization shall review the status of implementation and effect of this regulation and, if proven necessary, amend the relevant regulations as appropriate.

Date of implementation

15 In order to ensure sufficient time for the aforementioned review, a member proposed to set the implementation date of the EEXI to the first periodical survey of the IAPP Certificate (i.e. annual, intermediate or renewal survey) after the date of entry into force of the EEXI. With this proposal, all ships would comply with the EEXI within a year after the date of entry into force, so that there would be sufficient time for the review before 2030.

16 On the other hand, noting that a number of ships would choose engine power limit (EPL) to comply with the EEXI requirements as a cost-effective option, some members questioned whether the engine manufacturers and recognized organizations were capable of conducting EPL and verifying the attained EEXI within a year, respectively. It was also noted that the review could be sufficiently conducted even if the implementation date was set to be the first intermediate or renewal survey. In this context, a member further suggested a "staggered approach" as a possible alternative, meaning that implementation should start from ships contributing to more GHG emissions. Another member commented that there would be additional 16 months of preparation periods between adoption and entry into force of the EEXI.

17 Having noted these views and the importance of early implementation to have sufficient time for the review, the informal group left both options for the date of implementation in square brackets for further consideration by the Working Group, as follows:

Regulation 5
Surveys

4.6 the verification of the ship's EEXI according to regulations 20A and 21A of this Annex shall take place at the first [annual,] intermediate or renewal survey identified in paragraph 1 of this regulation or the initial survey identified in paragraphs 4.1 and 4.3 of this regulation, whichever is the first, on or after [the date of entry into force]; and

The EEXI technical file

18 In order to ensure transparency in the verification process of the attained EEXI, the informal group developed a draft regulation to mandate the development and use of the EEXI technical file. The EEXI technical file is a set of documents in a similar manner as the EEDI technical file, containing the necessary information for the verification and other relevant background documents which should be submitted to the verifier. The EEXI technical file is subject to survey by the port States.

19 The informal group noted that the EEDI-certified ships could use the attained EEDI as an alternative to the attained EEXI, if the attained EEDI satisfied the required EEXI. In order to avoid an administrative burden for such cases, the group developed the texts to allow the use of the EEDI technical file without developing a new EEXI technical file if the attained EEDI was used as an alternative to the attained EEXI, as follows:

Regulation 20A
Attained Energy Efficiency Existing Ship Index (EEXI)

1 The attained EEXI shall be calculated for:

.1 each ship; and
.2 each ship which has undergone a major conversion,

which falls into one or more of the categories in regulations 2.25 to 2.35, 2.38 and 2.39 of this Annex. The attained EEXI shall be specific to each ship and shall indicate the estimated performance of the ship in terms of energy efficiency, and be accompanied by the EEXI technical file that contains the information necessary for the calculation of the attained EEXI and that shows the process of the calculation. The attained EEXI shall be verified, based on the EEXI technical file, either by the Administration or by any organization duly authorized by it*.

2 The attained EEXI shall be calculated taking into account guidelines** developed by the Organization.

3 For each ship to which regulation 20 of this Annex applies, the attained EEDI may be used as an alternative to the attained EEXI. In such cases, the attained EEDI shall be verified based on the EEDI technical file, in accordance with regulation 20.1 of this Annex.

Form of the International Energy Efficiency Certificate (IEEC)

20 The informal group noted that the International Energy Efficiency Certificate (IEEC) should be re-issued after the ship's attained EEXI complying with the required EEXI is certified by the Administration. Accordingly, the informal group developed draft revised form of IEEC as set out in Appendix VIII of draft amendments to MARPOL Annex VI, in annex 1 to this document.

Remaining issues to be further considered

21 Despite three rounds of discussions by the informal group, the year of completion of the review and the date of implementation were left in square brackets for further consideration by the Working Group, as described in paragraphs 14 and 15 to 17.

Proposal

22 The co-sponsors propose the Working Group to:

.1 consider the remaining issues specified in paragraph 21 of this document; and

.2 finalize the draft amendments to MARPOL Annex VI to incorporate the EEXI as set out in annex 1 of this document for consideration by MEPC 75.

Action requested of the Working Group

23 The Group is invited to consider the proposals set out in this document and take action as appropriate.

***

ANNEX 1

DRAFT AMENDMENTS TO MARPOL ANNEX VI
(Energy efficiency improvement measure on existing ships)
(shown as additions/~~deletions~~)

Regulation 2
Definitions

24 Major Conversion means in relation to chapter 4 of this Annex a conversion of a ship:

.5 which substantially alters the energy efficiency of the ship and includes any modifications that could cause the ship to exceed the applicable required EEDI as set out in regulation 21 or required EEXI as set out in regulation 21A of this Annex.

36 Attained EEDI is the EEDI value achieved by an individual ship in accordance with regulation 20 of this Annex.

36A Attained EEXI is the EEXI value achieved by an individual ship in accordance with regulation 20A of this Annex.

37 Required EEDI is the maximum value of attained EEDI that is allowed by regulation 21 of this Annex for the specific ship type and size.

37A Required EEXI is the maximum value of attained EEXI that is allowed by regulation 21A of this Annex for the specific ship type and size.

Regulation 5
Surveys

4 Ships to which chapter 4 of this Annex applies shall also be subject to the surveys specified below, taking into account guidelines adopted by the Organization[**]:

.6 the verification of the ship's EEXI according to regulations 20A and 21A of this Annex shall take place at the first [annual,] intermediate or renewal survey identified in paragraphs 1 of this regulation or the initial survey identified in paragraph 4.1 and 4.3 of this regulation, whichever is the first, on or after [date of entry into force]; and

.7 notwithstanding paragraph 4.6 of this regulation, a general or partial survey, according to the circumstances, after a major conversion of a ship to which regulation 20A applies. The survey shall ensure that the ship's EEXI is recalculated as necessary and meets the requirement of regulation 21A of this Annex.

[**] Refer to the 2014 Guidelines on survey and certification of the Energy Efficiency Design Index (resolution MEPC.254(67), as amended by resolutions MEPC.261(68) and MEPC.309(73); consolidated text:MEPC.1/Circ.855/Rev.2), as may be further amended.

Regulation 9
Duration and Validity of Certificates and Statements of Compliance related to fuel oil consumption reporting

International Energy Efficiency Certificate

11 An International Energy Efficiency Certificate issued under this Annex shall cease to be valid in any of the following cases:

.3 if the ship's equipment, systems, fittings, arrangements, or material covered by the survey was changed without the express approval of the Administration in accordance with regulation 5.5 of this Annex, unless regulation 3 of this Annex applies.

Regulation 19
Application

3 Regulations 20, 20A, ~~and~~ 21 and 21A of this Annex shall not apply to ships which have non-conventional propulsion, except that regulations 20 and 21 shall apply to cruise passenger ships having non-conventional propulsion and LNG carriers having conventional or non-conventional propulsion, delivered on or after 1 September 2019, as defined in paragraph 43 of regulation 2 and regulations 20A and 21A shall apply to cruise passenger ships having non-conventional propulsion and LNG carriers having conventional or non-conventional propulsion. Regulations 20, 20A, ~~and~~ 21 and 21A shall not apply to category A ships as defined in the Polar Code.

Regulation 20A
Attained Energy Efficiency Existing Ship Index (EEXI)

1 The attained EEXI shall be calculated for:

.1 each ship; and

.2 each ship which has undergone a major conversion,

which falls into one or more of the categories in regulations 2.25 to 2.35, 2.38 and 2.39 of this Annex. The attained EEXI shall be specific to each ship and shall indicate the estimated performance of the ship in terms of energy efficiency, and be accompanied by the EEXI technical file that contains the information necessary for the calculation of the attained EEXI and that shows the process of the calculation. The attained EEXI shall be verified, based on the EEXI technical file, either by the Administration or by any organization duly authorized by it*.

2 The attained EEXI shall be calculated taking into account guidelines** developed by the Organization.

3 For each ship to which regulation 20 of this Annex applies, the attained EEDI may be used as an alternative to the attained EEXI. In such cases, the attained EEDI shall be verified based on the EEDI technical file, in accordance with regulation 20.1 of this Annex.

---

* Refer to Code for Recognized Organizations (RO Code), adopted by the MEPC by resolution MEPC.237(65), as may be amended.

** Guidelines on the method of calculation of the Energy Efficiency Existing Ship Index to be developed by the Organization.

Regulation 21A
Required EEXI

1 For :

.1 each ship; and

.2 each ship which has undergone a major conversion

which falls into one of the categories in regulations 2.25 to 2.31, 2.33 to 2.35, 2.38 and 2.39 and to which this chapter is applicable, the attained EEXI shall be as follows:

Attained EEXI ≤ Required EEXI = (1-Y/100) × EEDI Reference line value

where Y is the reduction factor specified in Table 3 for the required EEXI compared to the EEDI reference line.

Table 3. Reduction factors (in percentage) for the EEXI relative to the EEDI reference line

Ship type	Size	Reduction factor
Bulk carrier	20,000 DWT and Above	20
	10,000 and above but less than 20,000 DWT	0-20*
Gas carrier	15,000 DWT and above	30
	10,000 and above but less than 15,000 DWT	20
	2,000 and above but less than 10,000 DWT	0-20*
Tanker	20,000 DWT and above	20
	4,000 and above but less than 20,000 DWT	0-20*
Containership	200,000 DWT and above	50
	120,000 and above but less than 200,000 DWT	45
	80,000 and above but less than 120,000 DWT	40
	40,000 and above but less than 80,000 DWT	35
	15,000 and above but less than 40,000 DWT	30
	10,000 and above but less than 15,000 DWT	15-30*
General cargo ship	15,000 DWT and above	30
	3,000 and above but less than 15,000 DWT	0-30*
Refrigerated cargo carrier	5,000 DWT and above	15

	3,000 and above but less than 5,000 DWT	0-15*
Combination carrier	20,000 DWT and above	20
	4,000 and above but less than 20,000 DWT	0-20*
LNG carrier	10,000 DWT and above	30
Ro-ro cargo ship (vehicle carrier)	10,000 DWT and above	15
Ro-ro cargo ship	2,000 DWT and above	20
	1,000 and above but less than 2,000 DWT	0-20*
Ro-ro passenger ship	1,000 DWT and above	20
	250 and above but less than 1,000 DWT	0-20*
Cruise passenger ship having non-conventional propulsion	85,000 GT and above	30
	25,000 and above but less than 85,000 GT	0-30*

* Reduction factor to be linearly interpolated between the two values dependent upon ship size. The lower value of the reduction factor is to be applied to the smaller ship size.

2 The EEDI reference line values shall be calculated in accordance with regulations 21.3 and 21.4 of this Annex. For ro-ro cargo ships and ro-ro passenger ships, the reference line value to be used from phase 2 and thereafter under regulation 21.3 of this Annex shall be referred.

3 By the end of [2026][2027], the Organization shall review the status of implementation and effect of this regulation and, if proven necessary, amend the relevant regulations as appropriate.

APPENDIX VIII

Form of International Energy Efficiency (IEE) Certificate

INTERNATIONAL ENERGY EFFICIENCY CERTIFICATE

Issued under the provisions of the Protocol of 1997, as amended, to amend the International Convention for the Prevention of Pollution by Ships, 1973, as modified by the Protocol of 1978 related thereto (hereinafter referred to as "the Convention") under the authority of the Government of:

.....
(Full designation of the Party)

by .....
(Full designation of the competent person or organization authorized under the provisions of the Convention)

Particulars of ship[1]

Name of ship .....

Distinctive number or letters .....

Port of registry .....

Gross tonnage .....

IMO Number[2] .....

THIS IS TO CERTIFY:

1 That the ship has been surveyed in accordance with regulation 5.4 of Annex VI of the Convention; and

2 That the survey shows that the ship complies with the applicable requirements in regulation 20, regulation 20A, regulation 21, regulation 21A and regulation 22.

Completion date of survey on which this Certificate is based: ..... (dd/mm/yyyy)

Issued at .....
(Place of issue of certificate)

(dd/mm/yyyy): ....
(Date of issue) (Signature of duly authorized official issuing the certificate)

(Seal or stamp of the authority, as appropriate)

[1] Alternatively, the particulars of the ship may be placed horizontally in boxes.

[2] In accordance with IMO ship identification number scheme, adopted by the Organization by resolution A.600(15).

Supplement to the International Energy Efficiency Certificate (IEE Certificate)

RECORD OF CONSTRUCTION RELATING TO ENERGY EFFICIENCY

Notes:

1 This Record shall be permanently attached to the IEE Certificate. The IEE Certificate shall be available on board the ship at all times.

2 The Record shall be at least in English, French or Spanish. If an official language of the issuing Party is also used, this shall prevail in case of a dispute or discrepancy.

3 Entries in boxes shall be made by inserting either: a cross (x) for the answers "yes" and "applicable"; or a dash (-) for the answers "no" and "not applicable", as appropriate.

4 Unless otherwise stated, regulations mentioned in this Record refer to regulations in Annex VI of the Convention, and resolutions or circulars refer to those adopted by the International Maritime Organization.

1 Particulars of ship

1.1 Name of ship .....

1.2 IMO number .....

1.3 Date of building contract .....

1.4 Gross tonnage .....

1.5 Deadweight .....

1.6 Type of ship* .....

2 Propulsion system

2.1 Diesel propulsion ..... □

2.2 Diesel-electric propulsion ..... □

2.3 Turbine propulsion ..... □

2.4 Hybrid propulsion ..... □

2.5 Propulsion system other than any of the above ..... □

3 Attained Energy Efficiency Design Index (EEDI)

* Insert ship type in accordance with definitions specified in regulation 2. Ships falling into more than one of the ship types defined in regulation 2 should be considered as being the ship type with the most stringent (the lowest) required EEDI. If ship does not fall into the ship types defined in regulation 2, insert "Ship other than any of the ship type defined in regulation 2".

3.1 The ~~A~~attained EEDI in accordance with regulation 20.1 is calculated based on the information contained in the EEDI technical file which also shows the process of calculating the ~~A~~attained EEDI..... □

The ~~A~~attained EEDI is: ..... grams-CO_2/tonne-mile

3.2 The ~~A~~attained EEDI is not calculated as:

3.2.1 the ship is exempt under regulation 20.1 as it is not a new ship as defined in regulation 2.23 ..... □

3.2.2 the type of propulsion system is exempt in accordance with regulation 19.3 ..... □

3.2.3 the requirement of regulation 20 is waived by the ship's Administration in accordance with regulation 19.4 ..... □

3.2.4 the type of ship is exempt in accordance with regulation 20.1 ..... □

4 Required EEDI

4.1 Required EEDI is: ..... grams-CO_2/tonne-mile

4.2 The required EEDI is not applicable as:

4.2.1 the ship is exempt under regulation 21.1 as it is not a new ship as defined in regulation 2.23 ..... □

4.2.2 the type of propulsion system is exempt in accordance with regulation 19.3..... □

4.2.3 the requirement of regulation 21 is waived by the ship's Administration in accordance with regulation 19.4 ..... □

4.2.4 the type of ship is exempt in accordance with regulation 21.1 ..... □

4.2.5 the ship's capacity is below the minimum capacity threshold in Table 1 of regulation 21.2 ..... □

5 Attained Energy Efficiency Existing Ship Index (EEXI)

5.1 The attained EEXI in accordance with regulation 20A.1 is calculated taking into account guidelines** developed by the Organization……□

The attained EEXI is:……..grams-CO_2/tonne-mile

5.2 The attained EEXI is not calculated as:

5.2.1 the type of propulsion system is exempt in accordance with regulation 19.3……..□

5.2.2 the type of ship is exempt in accordance with regulation 20A.1……..□

6 Required EEXI

** Guidelines on the method of calculation of the Energy Efficiency Existing Ship Index to be developed by the Organization.

6.1 Required EEXI is:…….grams-CO_2/tonne-mile

6.2 The required EEXI is not applicable as:

6.2.1 the type of propulsion system is exempt in accordance with regulation 19.3……□

6.2.2 the type of ship is exempt in accordance with regulation 21A.1…….□

6.2.3 the ship's capacity is below the minimum capacity threshold in Table 3 of regulation 21A.1……□

~~5~~7 Ship Energy Efficiency Management Plan

~~5~~7.1 The ship is provided with a Ship Energy Efficiency Management Plan (SEEMP) in compliance with regulation 22……..……..……..□

~~6~~8 EEDI technical file

~~6~~8.1 The IEE Certificate is accompanied by the EEDI technical file in compliance with regulation 20.1……..……..□

~~6.2~~8.1.1 The EEDI technical file identification/verification number……..……

~~6.3~~8.1.2 The EEDI technical file verification date……..……....

9 EEXI technical file

9.1 The IEE Certificate is accompanied by the EEXI technical file in compliance with regulation 20A.1……□

9.1.1 The EEXI technical file identification/verification number..……

9.1.2 The EEXI technical file verification date..…….....

9.2 The IEE Certificate is not accompanied by the EEXI technical file as the attained EEDI is used as an alternative to the attained EEXI……..……..……□

THIS IS TO CERTIFY that this Record is correct in all respects.

Issued at .....
(Place of issue of the Record)

(dd/mm/yyyy): ....
(Date of issue) (Signature of duly authorized official issuing the certificate)

(Seal or stamp of the authority, as appropriate)

***

ANNEX 2

WORKING ARRANGEMENT OF THE INFORMAL GROUP ON "TECHNICAL APPROACH (EEXI)" FOR GHG SHORT-TERM MEASURE

1 Working items

Following items are to be considered in parallel under coordination of Japan, with other interested members, using document ISWG-GHG 6/2/3 (Japan and Norway) as the base document. The members are invited to make comments and proposals.

.1 Draft amendments to MARPOL Annex VI

Japan provides draft texts (**Attachment 1**), based on the text proposed in annex 1 of document ISWG-GHG 6/2/3 (Japan and Norway), for review and consideration by the members.

The members are invited to review and propose alternative texts if necessary. Such proposals should be supported with description and data, as appropriate, for consideration by the other members, except for editorial changes.

In particular, following issues will be specifically considered:

.1 Reduction rates (required EEXI)

The base document proposes the reduction rates equivalent to EEDI as of 2022.

The members are invited to review and propose alternative rates if necessary. Such proposals should be supported with the data showing: i) contribution to the 2030 target as an average over the fleet; and ii) estimated performance of ships complying with the proposed reduction rate (e.g. main engine power, design speed, relevance with the minimum power requirement).

Note: Alternative reduction rates for specific ship type and ship size or for ships engaging in specific occasion could also be dealt with in the context of correction factors under working item 2 (Guidelines on the method of calculation of the attained EEXI).

.2 Date of implementation

The base document proposes the date of implementation to be the first intermediate or renewal survey on or after the day of entry into force.

The members are invited to review and propose alternative date of implementation if necessary. Such proposals should be supported with data showing estimated number of ships subject to implementation of EEXI verification in each month after the entry into force and review from ROs.

.3 Reviewing and/or monitoring of EEXI

The base document does not propose reviewing or monitoring clause. However, additional clause similar to regulation 21.6 (EEDI review) of MARPOL Annex VI and/or draft amendment to regulation 20 of MARPOL Annex VI approved at MEPC 74 (mandatory reporting of attained EEDI) could be incorporated in EEXI if necessary.

The members are invited to consider and propose texts for such clause related to reviewing and/or monitoring of EEXI if necessary.

.2 Draft guidelines on the method of calculation of the attained EEXI

Japan provides draft texts (**Attachment 2**) for review and consideration by the members. The structure of the draft guidelines is similar to that of the *2018 Guidelines on the method of calculation of the attained EEDI* (resolution MEPC.308(73)) with the following modifications:

.1 simplified calculation method of design speed V_{ref} for ships not having speed-power curve obtained from sea trial or tank test;

.2 fixed engine specific fuel consumption SFC for engines not having a test report included in a NOx technical file and not having the SFC specified by the manufacturer; and

.3 inclusion of engine power limit.

The members are invited to review and propose alternative texts if necessary. Such proposals should be supported with description and data, as appropriate, for consideration by the other members, except for editorial changes.

.3 Draft guidelines on survey and certification of the attained EEXI

Japan provides draft texts (**Attachment 3**) for review and consideration by the members. The structure of the draft guidelines is similar to that of the *2014 Guidelines on survey and certification of the attained EEDI* (resolution MEPC.254(67)) with simplifications for existing ships and inclusion of engine power limit and EEXI Technical File.

The members are invited to review and propose alternative texts if necessary. Such proposals should be supported with description and data, as appropriate, for consideration by the other members, except for editorial changes.

.4 Draft guidelines for Engine Power Limit (EPL) to comply with the EEXI requirements and use of a power reserve

Japan provides draft texts (**Attachment 4**) for review and consideration by the members, using document MEPC 74/5/5 (France et al.) as the base document with some track changes for adjustment for existing ships.

The members are invited to review and propose alternative texts if necessary. Such proposals should be supported with description and data, as appropriate, for consideration by the other members, except for editorial changes.

.5 Additional information related to impact assessment

Japan will provide additional information related to impact assessment of EEXI, in accordance with paragraph 12 of MEPC.1/Circ.885, covering the following items:

.1 Case study on ships engaging in different routes connecting major pacific states including SIDS; and

.2 Summary of potential impact of EEXI on international trade.

Upon finalization of the additional impact assessment, Japan will provide draft report for review and consideration by the members.

The members are invited to review and add additional studies if necessary.

.6 Draft submission(s) to ISWG-GHG 7

Upon consideration on the above items, Japan will provide draft submission documents, consolidating all items, for review and consideration by the members.

The members are invited to review and propose alternative texts if necessary.

2 Timeline toward submission deadline (7 February 2020)

2019

13 December	First draft circulated by Japan (Round 1)
27 December	Round 1 deadline: Inputs from the group members

2020

10 January	Second draft circulated by Japan (Round 2)
17 January	Round 2 deadline: Inputs from the group members
24 January	Draft submission circulated by Japan (Round 3)
31 January	Round 3 deadline: Inputs from the group members
4 February	Confirmation of co-sponsorship
7 February	Submission deadline to ISWG-GHG 7