

MARINE ENVIRONMENT PROTECTION
COMMITTEE
73rd session
Agenda item 7

MEPC 73/7/3
17 August 2018
Original: ENGLISH

REDUCTION OF GHG EMISSIONS FROM SHIPS

Energy saving potentials for existing ships and candidate measures

Submitted by CESA

SUMMARY

Executive summary: This submission contains proposals to further promote the timely uptake of technology with a focus on energy saving potentials for existing ships

*Strategic direction,
if applicable:* 3

Output: 3.2

Action to be taken: Paragraph 11

Related documents: MEPC 72/7/4, MEPC 72/INF.12; ISWG-GHG 3/INF.2; resolution MEPC.304(72) and MEPC 73/7/2

Introduction

1 MEPC 72 adopted resolution MEPC.304(72) on *Initial IMO Strategy on reduction of GHG emissions from ships* (hereinafter the Strategy) and decided to consider follow-up actions and how to progress the matter of reduction of GHG emissions from ships on the basis e.g. of a report from ISWG GHG 4 which will take place from 15 to 19 October 2018.

2 The Strategy includes candidate short-term measures that could be finalized and agreed between 2018 and 2023, with possible entry into force to be defined for each measure individually. These may include technical and operational energy efficiency measures for both new and existing ships. Possible mid-term measures could be finalized and agreed by the Committee between 2023 and 2030. It is thus clear that work on short-term and certain mid- and long-term measures will require work to commence prior to 2023.

3 This document focuses on existing ships as these ships have the highest impact on GHG emissions for the short-term and the mid-term, and therefore a reduction of GHG emissions by these ships will have the highest impact on the level of ambition stated under paragraph 3.1.2 in the Strategy.

Energy efficiency of existing ships

4 New build ships need to comply with the Energy Efficiency Design Index (EEDI). According to statistical information from several databases about 85% of the existing ships come from the pre-EEDI era (i.e. before 1 January 2013) and therefore did not have new build requirements regarding their energy efficiency. At this moment, the average age of a ship being recycled is 29 years. About 45% of the end-of-life ships are older than 29 years and even reaching up to 55 years of age. In 2030, when ships on average need to have a reduction of CO₂ emissions of at least 40%, ships from the pre-EEDI era are "only" 17 years and older. In the current market these ships will remain in operation way beyond 2040, and still a significant number of these ships will be in service in 2050.

5 Bearing in mind the levels of ambition in the Strategy and the amount of pre-EEDI ships and their corresponding GHG emissions, it should be envisaged to develop an EEDI-like measure for existing ships with a view to establishing an Existing Fleet Improvement Programme.

6 The available technologies as demonstrated in documents ISWG-GHG 3/INF.2 and MEPC 72/7/4, as well as those mentioned in annex 13 of document MEPC 72/INF.12, allow significant reductions in GHG emissions from ships. These technology overviews are not exhaustive but present a wide range of the possibilities for improving the energy efficiency of existing ships.

Candidate measures

7 The early deployment of the available technologies is crucial if international shipping is to reach the levels of ambition of the Strategy. It is a significant challenge to ensure that the available technology is implemented onto existing ships, at the earliest, in a legally enforceable way. To facilitate this implementation, CESA has identified the following candidate measures which should all be utilized as appropriate. It is important to realize that, as stated in the Strategy under paragraph 4.3, certain mid- and long-term measures will require work to commence prior to 2023.

8 As proposed in the Strategy under paragraphs 4.7.3 and 4.7.9 an Existing Fleet Improvement Programme should be established, and research and development activities funded and promoted in IMO for research into alternative fuels and technological development. An International Maritime Research Board could coordinate and oversee these efforts with respect to intellectual property rights.

9 CESA considers that a mandatory index for pre-EEDI ships should be introduced to improve the energy efficiency through technical measures. Such an index could take the form of an EEDI for existing ships built before 1 January 2013. It is possible to calculate an attained EEDI-proxy for existing ships and to develop lower reduction rates that can be achieved by suitable and already available technologies. Improvement ratios with gradual phasing-in periods need to be set.

10 In addition, CESA would like to underline the need for energy efficiency auditing. Such a mechanism could be based on the SEEMP which includes objectives, monitoring, measurements, goals and evaluation accomplishing the purpose of the energy efficiency operational requirements to identify energy saving opportunities on ships. In order to achieve highest energy efficiency and GHG reduction capabilities, the SEEMP has to be strengthened by introducing mandatory goal-setting and verification.

Action requested of the Committee

11 The Committee is invited to consider the information provided and take action as appropriate.
