

MARINE ENVIRONMENT PROTECTION  
COMMITTEE  
64th session  
Agenda item 5

MEPC 64/5/..  
## July 2012  
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## REDUCTION OF GHG EMISSIONS FROM SHIPS

### Operational Energy Efficiency of New and Existing Ships

Submitted by ICS

#### SUMMARY

*Executive summary:* This paper advocates the need for development of practical measures addressing the operational emission of greenhouse gases from ships that reflect the technical and commercial realities of operating a ship in service.

*Strategic direction:* 7.3

*High-level action:* 7.3.2

*Planned output:* 7.3.2.1

*Action to be taken:* Paragraph 13

*Related documents:* MEPC 63/5/12

#### Introduction

1 During recent sessions of the Committee significant effort has been made to develop and propose measures to reduce and/or mitigate future GHG emissions from ships. In particular MEPC 62 adopted technical measures to improve the energy efficiency of new ships by stipulating standards to be achieved during design and construction together with the requirement for all ships to develop and implement bespoke measures to improve the operational energy efficiency of each individual ship.

2 ICS welcomed the measures adopted at MEPC 62 through the amendment of MARPOL Annex VI and continues to advocate their timely implementation. It is recognised that the EEDI is a valuable tool to improve the efficiency of new ships by requiring an increasingly demanding and verified level of energy efficiency performance. The mandatory development and carriage of bespoke ship energy efficiency management plans (SEEMP) will further concentrate attention on the management of fuel consumption and energy efficiency, which have traditionally been and remain the main business considerations for operating a ship. It is relevant to note that the EEDI has already been taken up by many shipowners for their newbuildings, recognising that a favourable result will assist future chartering opportunities.

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3 ICS considers it essential that any further measures to be developed regarding operational efficiency in service reflect the practical, physical and technical realities of providing sufficient available power to safely propel and service the ship's auxiliary power demands in all relevant environmental and operational conditions.

## **Background and Discussion**

4 Some Market Based Measure (MBM) proposals submitted to the Committee involve the calculation of a specific operational index for both new and existing ships, either based on the current EEDI formulation or on some other specific formulation yet to be developed. It has already been recognised in the MEPC discussion that as verified metrics are used in the EEDI formulation to produce a figure that is comparable between ships of the same type, the EEDI formulation is not suitable for application to existing ships.

5 ICS considers such an approach to be unrealistic because actual GHG emissions from ships in service are strongly influenced by how the ship is operated rather than the base energy efficiency level provided by the ship design. Unlike the standard conditions that can reasonably be applied or corrected during a new building sea trial, ships operate in a very wide range of physical environments which are all essentially random in terms of the loads applied to the ship. For operational ships the routes, cargo loading patterns and required delivery times have a very high degree of variation that all affect energy efficiency. Any MBM based upon the EEDI could not consider the practicalities of operation and has the potential to adversely affect the stability of the already unstable market.

6 It must be recognised that fuel consumption has become, and will continue to be, the most significant cost centre in the operation of ships. Owners/operators are already very strongly focused on minimising a ship's fuel consumption. The expected significant increases in fuel costs will only further incentivise ship operators to increase both environmental and operational efficiency by reducing fuel consumption as far as is possible.

7 It has been alleged in some quarters that shipowners have little incentive to reduce fuel consumption when operating under certain chartering agreements where the charterer is responsible for fuel costs. The reality is that whilst shippers are increasingly considering environmental performance, including carbon footprint, it is still, and will remain the case that the overall cost of a voyage is the deciding factor. In a competitive market where fuel costs dominate the cost for individual voyages, it is the more fuel efficient ships that will first be offered any contract. It can be realistically argued, that due to the prevalent fuel costs, a more fuel efficient ship will always have a significant advantage in the market place, and that this fact will have a greater effect on driving a continuous improvement in fleet efficiency overall than any regulatory measure that may be imposed.

8 After long and detailed debate, the Committee has approved guidelines for the management of operational energy efficiency. The Guideline recognises the importance of facilitating flexibility in methods of managing fuel consumption and a ship's energy efficiency by allowing for bespoke plans, taking account of the need to optimise the plans for the specific needs of individual ships engaged in specific trades.

## **Conclusions**

9 Taking into account the practical realities of operating a ship, the only consistent and straightforward measure of an individual ship's energy efficiency, and consequently GHG emissions, is one which is related directly to the actual fuel consumption of that ship, either on individual voyages or over longer periods of time.

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10 Due to the high levels of physical, technical and commercial complexity referred to above, a standard numerical index cannot be relied on to incentivise real reductions in operational fuel consumption (and hence GHG emissions) for existing ships, as for most ships it will not accurately reflect the wide variations encountered in actual operation.

11 ICS does not believe that the state of the global economy and the impact on shipping markets indicate that an MBM for shipping is appropriate at present. However if IMO Member States ultimately decide to adopt an MBM, ICS retains a clear preference for a Market Based Mechanism that is levy/compensation fund based. Any MBM selected should be one which directly relates to the actual fuel consumption of individual ships in service, and should not be inappropriately influenced by the arbitrary application of a standard numerical index to existing ships. ICS believes that a levy/compensation fund based system would ensure that:

- A level playing field is maintained
- Serious market distortion is avoided
- Management of the system will be easier, and,
- The desired transparency will be provided.

12 However, ICS remains fully supportive of the Secretary General's proposal to further review and assess all MBMs tabled to the IMO discussions. It is only by full and impartial review and assessment, including cost benefit analysis, of all the shipping MBM options that it can be ensured that the most suitable financial instrument will be selected to address both environmental and commercial impacts in the most beneficial way.

#### **Action to be taken**

13 The Committee is invited to note the comment provided above and to take it into consideration when developing future measures to address the operational emissions of greenhouse gases from ships.

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