

TRIPARTITE 2019 – REDUCING GHG EMISSIONS FROM SHIPS



International Chamber of Shipping

Shaping the Future of Shipping

John Bradshaw
Technical Director

Initial IMO strategy on reduction of GHG emissions from ships

- ICS and other shipowner associations supported development of the initial IMO strategy and welcomed it as an important milestone;
- This presentation is intended to give a very high level introduction to how we can deliver the short term and mid-/long-term objectives of the initial strategy.

We are confident that the industry is on track to deliver the 2030 objectives and that we will deliver the 2050 objectives.



The existing energy efficiency framework

- The existing energy efficiency framework of MARPOL Annex VI could be used to implement short term GHG measures by amending existing regulations;
- Looking further ahead, delivering the 2050 levels of ambition of the initial strategy will require much more fundamental changes in the industry and may require a new regulatory framework; and
- Measures must consider both new ships and the existing fleet, since a ship can typically expect to have a useful life of 20 – 25 years.



SEEMP

- The existing SEEMP guidelines address measures such as speed optimisation and use of operational efficiency indicators, and provide good guidance on operational efficiency;
- However, currently there is no mandated review and improvement process. This could be addressed by making it subject to mandatory through life audit/survey;
- Either objectives and use of carbon intensity indicators will be necessary to demonstrate effectiveness of the SEEMP, or alternatively GHG reductions could be demonstrated using an alternative parallel measure such as the EEXI; and
- Objectives and indicators should not penalise efficient ships because they serve inherently inefficient but essential trades or operate in hostile environments.



EEDI & EEXI

- The EEDI has improved the efficiency of ships and reduced GHG emissions;
- Industry supported early introduction of EEDI phase 3 for some ship types and more ambitious phase 3 requirements for container ships;
- The EEXI proposal of Japan, essentially a simplified EEDI for existing ships, could provide a useful and effective tool to improve the efficiency of existing ships; and
- The EEXI proposal includes provision to limit shaft power, an alternative proposal is to introduce a prescriptive shaft power limitation.



Speed

- Slowing ships down could reduce GHG emissions from ships; but
- A blunt speed limit would penalise efficient ships, present significant implementation and enforcement issues and could retard innovation.

Speed optimisation could be implemented without the difficulties of a speed limit using the enhanced SEEMP, EEXI or by limiting shaft power without a separate speed measure.



Port optimization

- Speed optimization will only be fully effective if ships can achieve just in time arrival and departure;
- This will facilitate much smoother voyage speed profiles and allow ships to operate at an optimum speed for the voyage, as well as minimising unnecessary emissions as a result of running generators for extended periods at anchor; however
- IMO does not regulate ports, therefore delivering port improvements is more challenging than for ships, which are regulated by IMO's international regulatory framework.

Speed optimisation and port optimization are complementary measures, IMO MEPC resolution MEPC.323(74) *Invitation to member states to encourage voluntary cooperation between the port and shipping sectors to contribute to reducing GHG emissions from ships* provides a useful starting point but is only an encouragement for shipping and ports to cooperate.



Making progress - 2023

- It is essential that short term measures enter into force by 2023 (requiring agreement not later than MEPC 76) otherwise we face regional and unilateral measures;
- There are synergies between strengthening the SEEMP and the EEXI (or shaft power limitation), ships could demonstrate compliance using performance monitoring or alternatively by being pre-certificated;
- Improving port optimisation is an important enabling measure which we consider must be progressed; and
- Minimising methane slip from gas engines and developing robust carbon factors for all marine fuels are “low hanging fruit” and will make a useful contribution or facilitate a better understanding.



Long-term measures

- Achieving the 2050 levels of ambition of the initial strategy will require new carbon free fuels and energy carriers;
- This will require research and developed, followed by commercialisation of new technologies on a huge scale;
- Shipowner associations are developing a proposal to accelerate research and development of ultra low/zero emission fuels and technologies, including a funding mechanism;
- As zero carbon pathways are identified, measures will be developed to push/pull the industry through the transition to a zero carbon future; and
- Industry looks forward to the development of measures to move the industry to a zero carbon future but the priority at this stage is to agree effective short term measures and to accelerate the development of zero carbon technologies as an enabling measure.



Summary

- Strengthening the existing IMO energy efficiency framework along with improving port optimization, addressing methane slip and further developing marine fuel carbon factors would deliver the 2030 level of ambition;
- A huge research and development effort is needed to facilitate the industry's transition to a zero carbon future, industry is already developing ideas for how this could be accelerated and funded;
- The industry will face measures to force the transition to ultra-low/zero emission ships, we think it is premature to have this discussion until short term measures have been agreed; and
- GHG reduction measures must be effective whilst also minimising negative impacts and protecting vulnerable countries such as small island states.





International Chamber of Shipping

Shaping the Future of Shipping