

Breakthrough at IMO

Adoption of the first ever global and legally binding CO₂ standard for an industry sector

Although shipping is the most environmentally sound mode of cargo transport and a modest contributor to overall CO₂ emissions, a global approach is needed to further improve its energy efficiency – and thereby reduce its emissions of air pollutants and GHGs – because sea transport is predicted to continue growing apace with world trade.

Mandatory measures to reduce some ship emissions were adopted by IMO in October 1997, before the Kyoto Protocol was adopted. However, as acknowledged by that Protocol, CO₂ emissions from international shipping cannot be attributed to any nation due to the industry's global activities and complex operation. Accordingly, the International Maritime Organization (IMO) has been pursuing the control of GHG emissions from international shipping

through a global approach, in recognition of the magnitude of the climate change challenge. As a result, mandatory treaty provisions to reduce GHG emissions from international shipping were adopted at IMO, in July 2011, by the Parties to Annex VI of the MARPOL Convention.

"This is a landmark for the Organization, which has now made a positive contribution to worldwide efforts to stem climate change and, indeed, a landmark for the international community since, for the first time in history, it has been possible to legislate GHG emission reductions for an entire industry sector."

E.E. Mitropoulos
IMO Secretary-General

"...this underscores the fact that IMO is best positioned to play a leadership role in addressing greenhouse gas emissions from international shipping."

Ban Ki-moon
UN Secretary-General

"... I would like to congratulate IMO on this outstanding result ...The adoption of mandatory efficiency standards for international shipping is a major step and a substantial contribution..."

Christiana Figueres
UNFCCC Executive Secretary



Objectives of IMO's strategies on GHG emissions

To further improve energy efficiency and reduce GHG emissions from international shipping through the development of effective reduction measures and, at the same time, to open up the possibility of contributing financially towards combating climate change in developing countries through the use of proceeds from appropriate market-based measures (MBMs).

IMO's work and achievements

According to the Second IMO GHG Study 2009, international shipping emitted 870 million tonnes, or about 2.7% of the global man-made emissions of CO₂ in 2007. Exhaust gases are the primary source of GHG emissions from ships and CO₂ is the most important GHG, both in quantity and warming potential. The Study estimates that technical and operational measures could increase efficiency and reduce the emissions rate by 25% to 75%.

IMO's Marine Environment Protection Committee (MEPC) has given extensive consideration to the control of GHG emissions from ships and, in July 2011, adopted a package of specific technical measures for new ships and operational reduction measures for all ships over 400 gross tonnage.

The adopted measures added to MARPOL Annex VI ("Regulations on the prevention of air pollution from ships") a new Chapter 4 entitled "Regulations on energy efficiency for ships", making mandatory the Energy Efficiency Design Index (EEDI) and the Ship Energy Efficiency Management Plan (SEEMP), which are, consequently, the first ever mandatory GHG reduction regime for an entire economic sector.

The EEDI requires a minimum energy efficiency level (CO₂ emissions) per capacity mile (e.g. tonne mile) for different ship type and size segments. With the level being tightened every five years, the EEDI will stimulate continued technical development of all the components influencing the fuel efficiency of a ship. Reduction rates are set until 2025-2030 when a 30% reduction is mandated over the average efficiency for ships built between 2000 and 2010. The EEDI is a non-prescriptive, performance based tool that

leaves the choice of technologies to use in a specific ship design to the industry. The EEDI has been developed for the largest and most energy intensive segments of the world merchant fleet and will embrace about 70% of emissions from new oil and gas tankers, bulk carriers, general cargo, refrigerated cargo and container ships as well as combination carriers (wet/dry bulk). For ship types not covered by the current EEDI formula, suitable formulas will be developed in the future addressing the largest emitters first.

The SEEMP will assist the shipping industry in achieving cost-effective efficiency improvements in its operations, using the Energy Efficiency Operational Indicator (EEOI) as a monitoring tool and benchmark.

The new IMO measures are expected to enter into force on 1 January 2013 and could help ship operators save \$34 to 60 billion in fuel costs in 2020, as well as reduce CO₂ emissions from international maritime transport by up to 180 million tonnes annually by 2020, a figure that, by 2030, will increase to 390 million tonnes.

However, the technical and operational measures will not be sufficient to satisfactorily reduce the amount of GHG emissions from international shipping in view of the growth projections of human population and world trade. Therefore, MBMs have also been considered and would serve two main purposes: providing a fiscal incentive for the maritime industry to reduce emissions even further, and off-setting of growing ship emissions. The overwhelming part of any proceeds generated by an MBM would be used for climate change purposes in developing countries.

Moving forward

The adoption by IMO of amendments to MARPOL Annex VI on inclusion of mandatory energy efficiency regulations for ships represents the first ever global and legally binding CO₂ reduction regime for an international industry sector or transport mode. With a view to seeking additional beneficial outcomes, MEPC 62 (July 2011) agreed a work plan to continue the work on energy efficiency measures for ship types, sizes and propulsion systems not covered by the current EEDI framework. It is expected that further substantial progress will continue to be made at MEPC 63 in February 2012, when the options for an appropriate MBM for international shipping will be subject to further detailed consideration.



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