



Sustainable future: decarbonisation of the shipping sector

Climate change is one of the biggest challenges the modern world is facing. For this reason, the EU and the IMO have committed to setting and achieving emission goals in 2030 and 2050, respectively. The IMO and the EU legislator are currently working on a legislative framework in order to reach these goals. This means that new legislation on the emission of the shipping industry is coming our way and might arrive sooner than expected. This circular gives an overview of the new legislation and its impact on the shipping industry.

Frequently used abbreviations:

EEDI:	Energy Efficiency Design Index
EEXI:	Energy Efficiency Existing Ship Index
CII:	Carbon Intensity Indicator
SOx:	Sulphur oxides
NOx:	Nitrogen oxides

Understanding and scoping the problem

The climate on our planet is changing, and one of the major causes is greenhouse gas emissions. Greenhouse gasses forms a natural 'blanket' around the planet, keeping it at an average temperature of 15 °C. During the last 150 years, the emission of greenhouse gasses has increased considerably, reinforcing this blanket and allowing less heat to escape into space. This is causing our planet to heat up.

In 1997, the Kyoto Protocol was adopted, which extended the United Nations Framework Convention on Climate Change that commits industrialised countries and developing economies to reduce greenhouse gas emissions in accordance with agreed individual targets. The Kyoto protocol is based on the scientific consensus that global warming is occurring and that human-made CO₂ emissions are driving it. It therefore stimulates state parties to adopt policies and mitigation measures, and to report periodically.

Almost 10 years after the Kyoto Protocol the Paris Agreement was adopted in 2015. The Paris Agreement legally bound its signatories to the following long-term goals:

- 1) To keep the rise in global temperature well below 2 °C, and preferably up to 1.5 °C.
- 2) To limit global warming to 1.5 °C, emissions have to be cut by roughly 50% by 2030.
- 3) Emissions should be net-zero by 2050.

Net Zero means a balance between the greenhouse gasses emitted and the greenhouse gasses removed from atmosphere.

Reducing emissions of the international shipping industry

In 1973, the International Convention for Prevention of Pollution from Ships (MARPOL) entered into force, and the convention was amended in 1978. MARPOL has six annexes, each addressing a possible source of pollution from ships. Annex VI specifically deals with air pollution.

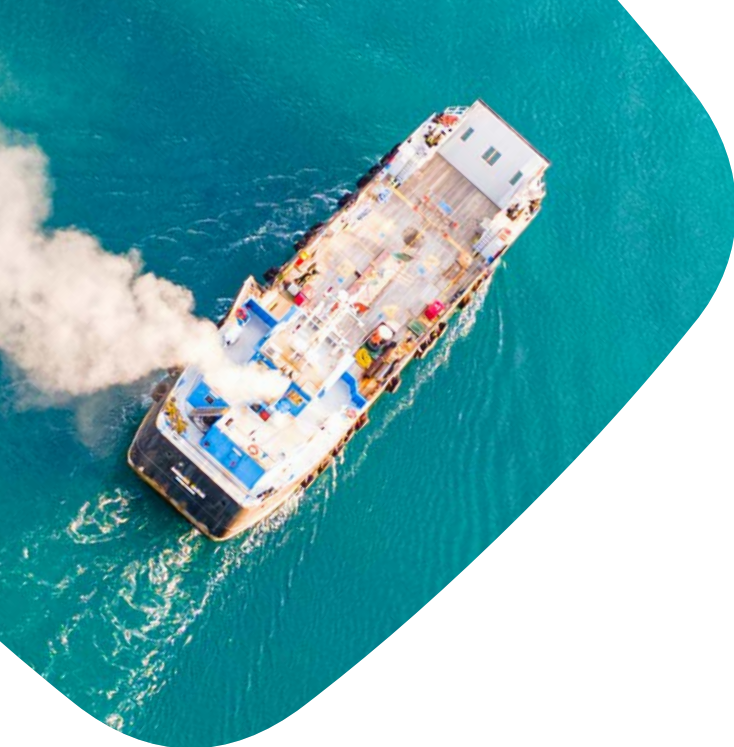
The Marine Environment Protection Committee (MEPC) agreed to revise Annex VI in 2005. The aim of the revision was to significantly strengthen the emission limits in light of technological improvements and implementation experience. The main amendments to MARPOL Annex VI were designed to stimulate a progressive global reduction in emissions of SO_x and NO_x, and to introduce emission control areas to reduce emissions of these air pollutants.

In 2020, the IMO Global Sulphur Cap came into effect, with the goal of reducing SO_x emissions. All vessels operating outside the emission control areas are required to use fuel oil with a maximum sulphur content of 0.5% (down from 3.5%), while vessels operating within the emission control areas are required to use fuel oil with a maximum sulphur content of 0.10%.

The emission control areas (ECAs) designated in MARPOL Annex VI can be consulted [here](#).

Over the last few years, further shipping greenhouse gas emission reduction measures were adopted by the IMO. These measures combine technical and operational approaches to improve the energy efficiency of ships, resulting into fewer emissions of greenhouse gasses.





As from January 2023, ships will be rated according to their energy efficiency on a scale from A to E. The rating will be calculated on the basis of the EEDI (for newbuilds from 2013 and over 400 GT) and the EEXI (for ships that were built before 2013 and over 400 GT). A ship's rating will be calculated according to the installed power of the main engine, the specific fuel oil consumption of the main engine and the auxiliary engines, and a conversion factor between the fuel and the corresponding CO₂ emissions. The size and the type of a ship will therefore have an impact on the rating.

According to the IMO, administrations, port authorities and other stakeholders will be encouraged to provide incentives to ships with an A or B rating. If a ship has a D rating for three consecutive years or an E rating, shipowners will be required to submit a corrective action plan which shows how they plan to achieve a C rating. It is likely that a low rating such as D or E will lead to issues with port authorities and classification societies in the future, and that these ships will be less desirable for charterers.

If the rating attained is lower than the required rating, operators will have no other option than to modify the design or to change the operation of the ship to improve its rating and reach the required level of energy efficiency. Examples of corrective measures are reducing engine power, correcting capacity, or retrofitting the vessel.

It is important to note that the energy efficiency rating will not be limited to the vessel itself only. The energy efficiency of the operation of the vessel will also be allocated an annual rating on a scale from A to E; that is the Carbon Intensity Indicator

(CII). The CII applies to all cargo, cruise and ROPAX vessels over 5,000 GT that trade internationally. The CII measures how efficiently a ship transports goods or passengers, so it is comparable to an energy label. The rating thresholds will become increasingly stringent towards 2030. This means that if a ship receives a C label in 2023, it might receive a D label in 2024 if nothing in the operation of the ship is changed to make it more energy efficient.

The European Emission Trading System (EU ETS)

The goals set by the European Union are more stringent than the goals set by the IMO. In 2021, the European Commission adopted a series of legislative proposals setting out how it intends to achieve climate neutrality in the EU by 2050. The intermediate target is a reduction of at least 55% in greenhouse gas emissions by 2030 (Fit for 55). In order to achieve its goal, the European Commission proposes to revise several pieces of EU climate legislation, including the existing EU emissions trading system.

The EU emissions trading system (EU ETS) is based on a 'cap and trade' principle. This means that a cap is set on the total amount of certain greenhouse gasses emitted by the installations covered by the system. The cap is reduced over time, so the total emissions are reduced. Installations can buy emissions allowances, which they can trade with one another if needed.

Alongside the amendments to the Fit for 55 package, draft EU legislation which determines that the EU Emissions Trading System should be extended to maritime transport was proposed. When adopted, the overall cap of emissions will also apply to maritime emissions of ships above 5,000 GT, regardless of the flag they fly. At the moment of writing this circular, the application of the Emissions Trading System to the shipping industry is still under discussion, and stakeholders are negotiating the content of the new EU legislation in this respect. In the future, shipping companies

might have to purchase and surrender ETS emission allowances for each tonne of reported CO2 emissions in the scope of the system. If the legislation is adopted, a transition period will apply to ensure a smooth transition.

Potential effects on the shipping industry

Those currently negotiating long-term charter parties are recommended to take into account that new legislation is coming our way, and to agree provisions that cover the potential consequences of the new legislation in order to prevent any conflicts later on.

The following should be considered when negotiating long-term charter parties:

- If owners are allowed to carry out EEXI modifications to their vessels, and who is responsible for time lost due to EEXI modifications or CII modifications.
- If the performance clause in the charter party might be amended after 1 January 2023, and if charterers will be compensated due to changes in the operation or reduction of speed of a vessel after 1 January 2023.
- Who will pay for emission rights, if needed to trade within the EU.

In the negotiation stage, it would also be a good idea for the parties involved to discuss if shipowners already have concrete plans to retrofit their vessels or amend their operations in anticipation of what is coming.

BIMCO recommends that their EEXI Transition Clause for Time Charter Parties is included in both existing and future time charter parties. This clause focuses in detail on two types of modification: the Engine Power Limitation and the Shaft Power Limitation. The clause may also be used to address other energy saving technical measures that shipowners might implement to comply with the new legislation. Contracting parties may of course change the standard clause to suit their operations and agreements.

At the moment of writing this circular, BIMCO is drafting a standard CII Compliance Clause for Time Charter Parties, which will address the agreements between owners and charterers in respect of changes in a vessel's operations and the consequences thereof.

Conclusion

It goes without saying that the shipping industry will have to comply with several new regulations and standards in order to fulfil its role in reducing greenhouse gas emissions. Ships might have to change the way they operate, reduce their engine power, or retrofit in order to obtain the required CII or EEXI rating. It is recommended that shipowners contact their classification society before making any decisions on retrofitting vessels or changing the way they operate to comply with the new regulations.

On the contractual side, it is important that the parties involved agree provisions that cover the potential consequences of the new legislation to prevent any conflicts later on when negotiating new long-term charter parties.

If needed, our Loss Prevention Services team can assist with any questions shipowners or charterers may have. Please do not hesitate to contact LPS@msgspecialtymarine.com in case of any questions or comments.

On 21 June 2022 we hosted a webinar on this topic. If you would like to know more about the contents of this webinar, please contact LPS@msgspecialtymarine.com.



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