



REDUCING INTERNATIONAL SHIPPING'S CARBON INTENSITY THROUGH THE IMO'S EEXI AND CII: CHARTERPARTY IMPLICATIONS AND CHALLENGES

The International Maritime Organization (IMO) has approved draft regulations aimed at reducing greenhouse gas (GHG) emissions from international shipping and improving the energy efficiency of vessels.

The proposed measures seek to regulate both the design and operational efficiency of relevant vessels and present numerous commercial and legal challenges for all the main stakeholders in the physical transport chain. This article focuses on the important issues that are likely to arise under charterparties, and the steps that parties should consider taking now.



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At a glance

- The IMO’s Regulations are expected to come into force on 1 January 2023, but careful planning, understanding and action is required now by the main stakeholders in the physical transport chain.
- The EEXI targets for energy-efficient ship design will apply to all existing ships above 400GT.
- The proposed CII Rating scale from A-E will apply to all vessels above 5,000GT.
- In many cases, technical modifications to a vessel may be seen as the only realistic way to achieve compliance with the EEXI.
- The CII regime has the potential to cut through traditional rights and obligations of parties to commercial contracts – most notably time charterparties – and this is likely to lead to disputes.
- Ensuring compliance and allocating risk and cost is likely to require bespoke solutions and substantive amendments to contracts, especially time charterparties.

In line with the IMO’s Initial GHG Strategy, the Marine Environment Protection Committee (**MEPC**) has approved draft regulations aimed at reducing GHG emissions from the global shipping industry by at least 40% by 2030 (compared to 2008 levels) (the **Regulations**).

The Regulations represent amendments to Chapter 4 of MARPOL Annex VI, and apply on an individual vessel basis (as opposed to applying across fleets of vessels). It is expected that they will be formally adopted at MEPC 76 in June 2021, and will come into force on **1 January 2023**.

The Regulations come at a time when a number of regional measures to reduce GHG emissions from maritime transport are also being discussed. For example, the EU has confirmed its intention to include shipping within its Emissions Trading System (see our previous article on this [here](#)), and China has likewise indicated that shipping may soon be covered under its national carbon trading scheme. The US has also indicated that it may be leaning towards a carbon tariff system of some nature.

The IMO’s approach, however, more directly monitors and incentivises the improvement of a vessel’s energy efficiency and reduction of carbon intensity by focusing on both its technical design and operations. In this regard, the Regulations go beyond simply imposing a tax on

GHG emissions, although recent proposals from the Marshall Islands and the Solomon Islands to the IMO have again raised the possibility of a separate global levy.

Whilst the entry into force of the Regulations are just shy of two years away, careful planning, understanding and action is required now by the main stakeholders in the physical transport chain. In this article, we explain why.

The Regulations – EEXI and CII

There are two key elements to the Regulations:

1. Energy Efficiency Existing Ship Index (EEXI)

What is it?

EEXI is a technical framework to improve the energy efficiency of an applicable vessel’s *design*. Essentially, EEXI extends the Phase 2 targets under the Energy Efficiency Design Index (**EEDI**), which only applies to newbuild vessels, to all existing ships above 400 GT.

A vessel falling under the EEXI regime will be ascribed an **Attained EEXI** (calculated by reference to technical guidelines which are yet to be finalised by the IMO), which indicates the vessel’s estimated energy efficiency compared to a baseline. The information and specific formulas

required to calculate the Attained EEXI will be contained in the vessel's **EEXI Technical File**.

The vessel's Attained EEXI will then be compared to a **Required EEXI**, based on an applicable reduction factor expressed as a percentage relative to the EEDI baseline depending on the vessel's type and size. To the extent that the Attained EEXI is less efficient than the Required EEXI, the vessel will be required to take measures to meet the Required EEXI.

How to comply?

Given that the EEXI is concerned with energy efficiency arising from ship design, improvements to an individual vessel's Attained EEXI can be achieved via technical modifications, such as engine/shaft power limitation, bow or propeller improvements, use of alternative fuels, and/or installation of energy efficiency technology (for example rotor sails).

The Regulations do not, however, prescribe which improvement method should be deployed.

A vessel's EEXI Technical File will need to be approved by the vessel's Flag State or Class at the first annual/intermediate/renewal IAPP survey taking place after 1 January 2023. Compliance with the EEXI regime will be reflected in the vessel's IEEC certificate (the format of which is also to be amended).

2. Carbon Intensity Indicator (CII)

What is it?

The CII framework regulates the *operational* carbon intensity of a vessel (i.e. the carbon emissions per unit of 'transport work' or the operating mileage in a given year). The regime will apply to all vessels above 5,000 GT¹.

Each individual vessel covered by the CII regime will be given an annual carbon intensity rating (**CII Rating**) indicating their performance over the previous year. There are five CII Rating categories representing different performance levels – namely: A (major superior); B (minor superior); C (moderate); D (minor inferior); and E (inferior). The thresholds between

the CII Rating categories will become increasingly stringent towards 2030.

A vessel's CII Rating for a given year will be generated by monitoring/documenting the actual operational carbon intensity achieved by the vessel (**Attained Annual Operational CII**), and then comparing this against the required operational carbon intensity that the vessel must achieve under the framework (**Required Annual Operational CII**). The Attained Annual Operational CII of any given vessel should improve annually.

Vessels under the CII framework are also required to have an enhanced Ship Energy Efficiency Management Plan (**SEEMP**). The SEEMP, which the Regulations suggest is likely to form part of a vessel's SMS, should include:

- the methodology used to monitor and calculate the relevant vessel's Attained Annual Operational CII;
- an annual Required Annual Operational CII for the next three years;
- an implementation plan describing how the Required Annual Operational CII target will be achieved over the next three years (to achieve a continuous improvement); and
- a procedure for self-evaluation and improvement.

The minimum CII Rating required for compliance is C (moderate), and Flag States, port authorities and other stakeholders have received encouragement from the IMO to provide incentives to those vessels achieving a CII Rating of A or B.

A vessel rated D for three consecutive years, or rated E at any point, must develop a plan of corrective actions to achieve the Required Annual Operational CII for its age, type and size. The plan must be set out in the SEEMP within one month after reporting the vessel's Attained Annual Operational CII, and will be verified by the Flag State.

How to comply?

The formal metric to calculate a vessel's Attained Annual Operational CII is yet to be confirmed, with

technical guidelines awaited from the IMO. The two options are:

- the Energy Efficiency Operational Indicator (**EEOI**), a metric previously developed by the IMO², which works by dividing a vessel's annual carbon emissions by its annual *cargo tonne miles*; or
- the Annual Efficiency Ratio (**AER**), which works by dividing a vessel's annual carbon emissions by its annual *DWT miles*.

At present, AER data is being collected and is readily available by virtue of the IMO's Data Collection System (DCS). Whilst EEOI data would require further monitoring and reporting, it should be noted that such data is being used by signatories to the Sea Cargo Charter, which is a framework available to all bulk charterers in order to attempt to set standards for reporting emissions.

Irrespective of which CII metric (AER or EEOI) applies, broadly speaking, the vessel's Attained Annual Operational CII can be improved by:

- operating at a reduced speed and/or slow steaming;
- diverting from the shortest or quickest route on a voyage/increasing distance sailed (including ballast voyages for AER);
- reducing cargo volume intake (for AER); and/or
- installing energy efficient technology.

Commercial and legal challenges under charterparties

Several issues arise when considering how the EEXI and CII regimes might be successfully implemented into contractual frameworks within the shipping industry.

Key considerations will be who bears the responsibility/risk/cost of compliance, the risk and exposure to third party claims and any impact on insurance coverage.

For the CII regime, uncertainty presides over which method(s) should be applied to achieve a continual CII

¹ I.e. those vessels subject to the requirement for the data collection system for fuel oil consumption – MEPC.278(70)

² See MEPC.1/Circ.684

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improvement, and the nature and severity of the impact of a vessel’s CII Rating either being consistently rated C (moderate) or below, or being downgraded (for example, financial or other sanctions, impact on Class, reputation and trading).

Most notably, the CII regime has the potential to directly impact, and, in some cases, cut through the fundamental rights and obligations of Owners, Charterers and commercial operators in traditional commercial contracts – most notably time charterparties – and this is likely to lead to disputes. While uncertainty remains regarding exactly how the EEXI and CII regimes will be implemented, we identify some of the commercial and legal challenges that could arise.

EEXI

In relation to EEXI, it has to be understood that Owners bear primary responsibility for compliance with MARPOL, by virtue of the vessel’s Flag State (assuming it is a MARPOL contracting State). The vessel will also be subject to MARPOL when trading to a MARPOL State.

The terms of most standard time and voyage charterparties suggest that technical modifications to the vessel required in order to comply with international regulations such as EEXI may rest with Owners, due to either their seaworthiness/due diligence obligations (as modified by the

Hague or Hague Visby Rules) or their legal fitness obligations. While the EEXI requirements do not mandate that technical modifications have to be made, nor do they prescribe which modifications should be made, it may be that this is the only realistic way to achieve compliance.

CII

Time charterparties

In a time charterparty context, following Charterers’ orders in relation to the employment of the vessel could negatively impact the vessel’s Attained Annual Operational CII and, in turn, its CII Rating. External factors outside of the parties’ control (e.g. bad weather affecting the carbon intensity of the vessel over a passage) could also play their part. On one hand, expecting Owners to bear full responsibility for this would appear unfair, especially as the CII regime is outside of Owners’ control. On the other hand, Charterers are entitled to insist that their orders are followed in return for payment of hire, as their use of the vessel would be otherwise prejudiced and they may face third party claims for failure to meet their obligations under sub-contracts.

Setting aside the installation of energy efficiency technology (responsibility for which, similarly to the position in relation to EEXI, may rest with Owners), the potential operational measures to improve a

vessel’s Attained Annual Operational CII listed above may place Owners in breach of existing contractual obligations. For example:

- Slow steaming or diverting from the shortest or quickest route on a voyage could, in the absence of agreement between the parties, place Owners in breach of their obligations to proceed on voyages with utmost/due despatch and/or comply with Charterers’ orders and instructions, and also any speed and consumption warranties in the charterparty.
- Slowing steaming and/or prolonging voyages may also constitute a wrongful deviation, which could invalidate P&I coverage. Depending on the wording of applicable clauses and factual circumstances, this could also give rise to off-hire claims or alternatively claims for equitable set-off against hire.
- Reducing the vessel’s cargo intake (which would arise only under the AER metric) could place Owners in breach of express cargo capacity warranties (often found in the vessel description), the obligation to make sure the whole reach is available, and Charterers’ employment orders. Due diligence warranties may also be called into question.

Depending on the facts involved, there are likely to be limited

defences to these breaches/non-performance. Whilst Owners can reject orders which are unlawful/illegitimate, it could be very difficult to identify a causative link between Charterers' orders and a negative impact on a vessel's CII Rating in a time charterparty context (especially in short to medium term). For example, pinpointing that a particular individual order (or series of consecutive orders) has in fact caused the vessel to surpass its Attained Annual Operational CII or detrimentally impacted the vessel's CII Rating in real time may be a tall order.

Likewise, it is also difficult to see what exceptions might apply to relieve Owners of their obligations. Implied terms, the doctrine of frustration and any implied indemnity arguments are all likely to be difficult to succeed on, and even then the enquiry would be very fact specific.

The position is likely to be further complicated by a number of practical considerations:

- It will probably be very challenging for Owners to predict – with any real certainty – their Attained Annual Operational CII in advance for a period of three years in the SEEMP. As such, it will be difficult for Owners to monitor, assess and verify the vessel's Attained Annual Operational CII in real time in circumstances where the vessel's trading pattern may be unknown (unless she is on a fixed liner service) and where Charterers direct employment under a time charterparty.
- Secondly, given that the Regulations are not clear on the timeframe within which the Flag State must assess and verify a vessel's Attained Annual Operational CII for the previous year, this would make it even more difficult to trace back and identify any Charterers' orders which could have caused a negative impact to a vessel's CII Rating.

Voyage charterparties

In a spot voyage charterparty, Owners may be better placed to identify the operational limits in which the vessel must work to maintain or improve its Attained Annual Operational CII and/or CII Rating, and might therefore be able

to tailor the terms of the charterparty accordingly (for example, more narrowly defining warranties as to speed and performance).

However, if tailored clauses are not negotiated, potential issues could still arise if Owners take operational measures in light of the CII regime (some of which overlap with issues arising under time charterparties):

- Where it could be shown that, as a matter of fact, Owners intentionally opted to slow steam or divert from the shortest or quickest route, Owners may be in breach of their obligations to proceed on voyages with utmost/due despatch, and also any speed and consumption warranties. Alternatively, it could also constitute a wrongful deviation.
- While some standard form voyage charterparties allow a de minimis or negligible departure from the express cargo capacity warranties, Owners may be in breach of express cargo capacity warranties if (under the AER metric) the vessel's cargo intake is reduced beyond this.
- Steps taken to conserve energy/limit power/reduce speed at the load/discharge ports could lead to laytime and demurrage issues.

Again, it is difficult to see what exceptions might be available to Owners in these circumstances. Rights of termination, subject to the particular facts and the terms of the relevant charterparty, may also exist. Failing this, Owners could face claims for damages for breach of contract.

That said, there exist clauses out there (such as the BIMCO Slow Steaming Clause 2012) which go some way to provide Owners with the toolkit to reduce speed in certain circumstances. However, care should also be taken here because, often, this right is given in return for a minimum speed and performance warranty, which itself could still fall foul of the CII regime depending on the particular facts and circumstances.

Contracts of Affreightment (COAs)

Likewise, under pre-existing long term COAs, it is conceivable that slow steaming or otherwise extending voyage lengths might reduce the total number of voyages made in

any given year. This might reduce Owners' earnings under the relevant COA, or potentially place Owners in breach of any term stipulating a minimum number of annual voyages.

In the absence of specific protective clauses, it would have to be argued that an implied term and/or an implied duty on the parties applies (i.e. to cooperate with each other in performance of the contract, which therefore requires them to factor in change of circumstances brought about by the Regulations). Again, such arguments will, inherently, be prone to difficulty.

Conclusions and potential solutions

The contractual rights and obligations that are likely to be impacted by the Regulations are of a fundamental nature to the effective and commercial operation of charterparties. Parties should therefore be giving thought as to how they can mitigate their risk and exposure here. There are unlikely to be any straightforward solutions, and bespoke clauses should be contemplated.

In relation to the EEXI regime, negotiated arrangements may be prudent in existing time charterparties. For example, in order to agree the details of when, where and how the vessel is to be modified in order to meet its Required EEXI. Depending on the circumstances, Charterers may also contribute expertise and possibly finance towards the modification(s), especially in long term time charterparties where this could lead to an improvement in energy efficiency.

In particular, under a time charterparty, close cooperation between the parties will be required to negotiate a commercially viable clause that addresses the CII regime. The parties will need to strike a balance between Owners' requirements (for example, Owners' need to meet their Attained Annual Operational CII and maintain the vessel's CII Rating) and Charterers' requirements (for example, Charterers' right to employ the vessel and meet their obligations under third party contracts). Ultimately, it will depend on Charterers' willingness

to accept this compromise and commercial solutions may need to be explored.

Parties now need to give careful consideration as to how they allocate the risk and responsibility of compliance with the Regulations under their commercial contracts. At the end of the day, this requires deciding who will, ultimately, bear the cost of carbon emissions and at what price.

As with all things, it is better to get started sooner rather than later and HFW has the knowledge, experience and expertise to assist.

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