



Legal and Contractual Considerations for EEXI and CII

Although January 2023 may appear to be some time away, shipowners and operators are having to consider the likely consequences of the Energy Efficiency Existing Ship Index and the Carbon Intensity Index now. CJC London Director [Ian Short](#) and London Trainee Solicitor [Evgenia Kanellopoulou](#) explore some of the legal and contractual issues arising from changes to MARPOL.

Background

Ships and vessels have been used for the transportation of cargo for centuries, starting with self-propelled craft through to sailing ships where vessels would harness the power of the wind to propel the vessel. Such forms of transport had, of course, a low carbon footprint. Steam-powered ships took the place of the sailing vessels, before in turn giving way to the commercial fleets that we see today, with ships powered by fuel oil, diesel oil and, sometimes, LNG. As the important issues of climate change and ensuring a low carbon footprint rightly come ever more to the fore, the shipping industry is looking to go full circle at least in terms of limiting carbon emissions, whilst looking for innovative ways to maintain efficiency.



Whilst it is easy to talk about climate change and ways to decarbonise shipping, in truth, the shipping business is a commercial world and directors owe duties to shareholders to maximise profits. Where owners and operators may have good intentions to become cleaner and greener, a “sea-change” in attitudes is only likely when a failure to adhere to standards would lead to an adverse commercial impact.

Regulations restricting the use of high sulphur content in marine fuels to those vessels equipped with exhaust gas scrubbers were introduced in January 2020. Whilst the fuel switch brought some inevitable commercial disputes, ultimately the change to lower sulphur fuels was one that the maritime industry adapted to well.

The Energy Efficiency Existing Ship Index (EEXI)

With greenhouse gases rather than sulphur in mind, the International Maritime Organization’s (IMO’s) Energy Efficiency Existing Ship Index (EEXI) is the latest tool to decarbonise shipping. Based on design parameters, the IMO proposes that a minimum efficiency standard for existing ships should be established and that only those designed for efficient, low carbon-emitting vessels should be allowed to continue trading. The EEXI is a variant of the Energy Efficiency Design Index (EEDI), which applies to new ships built after 2013. The EEXI is determined by CO₂ emissions per tonne mile and the main factors in

its calculation are the vessel's installed power and cargo-carrying capacity. The EEXI is a one-off 'pass or fail' paper test which will be done at the first annual or special survey and will affect more than half of the world fleet when it enters into force in January 2023.

The main method of compliance for ships that do not meet the required EEXI will be to adopt engine power limitation. This is a relatively simple and cost-effective solution and should cause minimal disruption to the vessel's operation. Another option is to adopt technologies which have been calibrated for their effect on energy efficiency. These technologies have been rated A to C and include those that will immediately reduce a vessel's power requirement, such as antifouling coatings; those that passively capture energy, such as solar panels; and equipment that improves efficiency but requires power, including Flettner rotors or air lubrication.

The Carbon Intensity Index (CII)

Where the EEXI is a one-time certification targeting design parameters, the Carbon Intensity Index (CII) is an annual review of a ship's actual carbon emission performance over the past year with such monitoring starting from January 2023. It addresses emissions in operation and has been devised to measure how efficiently a ship transports goods or passengers, in grams of CO₂ emitted per cargo-carrying capacity and nautical mile terms.

Ships will be rated between A and E based on their emissions performance. Ships rated D and E will be forced to take corrective actions which may involve significant cost to the shipowner. Rating thresholds will also become increasingly stringent towards 2030.

CII compliance will involve considerable planning in coming up with technical and operational solutions to improve the emissions performance of vessels. There are unlikely to be significant impacts for non-compliance and/or low ratings until 2026 but it will be interesting to see longer term whether, in addition to remedial action, the market will generate its own practical penalties, for example D or E rated ships not being considered favourably by charterers when fixing the vessels or, indeed, attracting lower rates.

Impact

The above proposed changes will affect all ships built before 2010 which consume large volumes of fuel compared to modern designs. They will also affect 60-70% of bulk carriers, mainly above Panamax, and a significant percentage of tankers, mainly larger than Aframax, as well as LNG carriers and 250 steam turbine ships worldwide. The various ways owners could reduce CO₂ emissions include slow-steaming, weather routing, optimised port rotation, reduction of cargo intake and use of alternative fuels, such as biofuels and LNG.

Legal and Contractual Considerations

With the date of the EEXI and CII implementation approaching, owners and operators ought to have in mind the possible legal challenges that might arise. Any initial modifications to meet EEXI requirements are likely to fall on the shipowner as the owner is obliged to comply with MARPOL and will likely have contractual obligations to ensure compliance with the convention and its regulations under charterparties too.

With regards to time charters that run after 2023 and beyond, owners and charterers will have to consider their options carefully. For example, shipowners may need to ensure that they have included in their draft contracts clauses that will allow them to address all technical matters arising as a result of the new IMO decarbonisation obligations imposed by EEXI and CII. Owners may want to ensure that they have the liberty to effect works on the vessel to be retrofitted to incorporate new technologies so that the vessel complies with the new regulations before they come into effect beginning of 2023 or enable them to take remedial actions post-January 2023. For example, owners may want the ability to arrange dry-docking the vessel during the charter for modifications, or an additional dry-dock, thus taking the vessel temporarily out of charterers' service but without being in breach of the charter.

Owners will also need to ensure that they can both comply with the EEXI regulations and ensure a sufficient CII rating thereafter whilst at the same time complying with their obligations to contractual counterparts, such as charterers and bill of lading holders. Otherwise, the owners may end up with a conflicting set of obligations. The clearest example of this might be a reduced speed as a result of the new regulations, such as by virtue of engine power limitation, versus inconsistent speed and performance warranties in the charterparty. It is not unforeseeable that a situation may arise whereby the vessel has to proceed at a certain speed in order to comply with the new MARPOL regulations yet nevertheless faces potential underperformance claims from charterers, with the owners therefore facing potential deductions from hire.

On a similar note, shipowners ordinarily have obligations for the vessel to proceed with all due despatch or utmost despatch, whether under a time charter, voyage charter or to bill of lading holders. It will not always follow that the most efficient operation for decarbonisation is the same as the fastest route to the loading or discharging port. Owners will therefore need to ensure that, going forward, they are not found in breach of contractual utmost despatch obligations when merely attempting to comply with the new MARPOL requirements. Since the commercial shipping world has evolved over the years with multiple contracts in play at any one time, this is not necessarily as straightforward as incorporating a single clause dealing with performance and speed issues in the charterparty unless the terms of that charterparty are also incorporated into bills of lading – otherwise a shipowner may be permitted under a charterparty to operate at reduced speeds whether by virtue of engine power limitation or otherwise to ensure EEXI compliance and achieve a desired CII efficiency rating yet still face claims under, say, the bill of lading from cargo interests for failing to carry the cargo with all due despatch. From the owners' point of view, the charterparty clauses ought to therefore go further such that charterers warrant the inclusion of similar provisions in the bill of lading terms or otherwise be held accountable to indemnify the owners for any losses arising out of alleged utmost despatch breaches to cargo interests.

From a charterers' perspective, they will want to try to ensure that they are giving lawful and legitimate orders to the vessel when ordering the vessel to proceed at certain speeds. Otherwise, a charterer under a long-term charter runs the risk of having to pay the agreed rate of hire for a vessel which, post-January 2023, may become less commercially efficient in terms of its earnings (for example, freight is earned less frequently under sub-charters) whilst the owner concentrates on the vessel's carbon efficiency.

There are also further knock-on effects of slower speeds and engine power limitation under voyage charters. For example, a charterer in its role as disponent owner may want to start the laytime/demurrage clock ticking as soon as possible by steaming as fast as possible into the port and then earn demurrage whilst the vessel waits at anchorage as opposed to the vessel slow steaming into the port just in time for berthing thus depriving the charterer/disponent owner of potential further charter income but which would produce CO₂ savings. A rethink of the traditional demurrage model under voyage charters may be necessary to truly encourage all contractual parties in the chain of shipping contracts to have decarbonisation in mind.

Reducing cargo intake is another possible way that owners could seek to reduce their vessel's CO₂ emissions. Therefore, it could be the case that some owners may decide to reduce cargo intake in order to consume less fuel and, therefore, reduce the risk of a poorer CII rating. However, again, this option could put owners at risk of being found in breach of their obligations under the charterparty; for example if owners are in breach of any cargo capacity warranty or if owners do not allow charterers the whole reach of the vessel's holds and cargo spaces. Owners may also want to ensure that final cargo quantity ranges are contractually at owners', as opposed to charterers', option but that may not always be commercially viable in circumstances where the vessel has been chartered in to load a specific cargo and a specific quantity of that cargo. Whilst it is considered unlikely, care will have to be taken to ensure that engine power limitation and possible cargo limitation does not have the net effect of requiring the use of more vessels to perform shipments to ensure greater carbon efficiency on a vessel-by-vessel basis in circumstances where the overall carbon output of using more vessels could be greater than the use of less, albeit less carbon efficient, shipments.

Conclusion

The shipping industry will adapt to the important new regulations aimed at lowering carbon emissions as it always does and it is hoped that vessels can be run efficiently from both an environmental and commercial perspective going forward. However, as ever with the introduction of new regulations, owners and charterers will need to carefully consider the commercial, legal and contractual position between themselves in advance if they are to avoid potential disputes as the new regulations come into force.

If you have any queries arising out of any of the above or would like us to consider more specific points arising out of the possible legal and contractual implications of the MARPOL regulations going forward whether for owners, operators or charterers, please do not hesitate to contact the authors.

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