



# REGULATORY OVERVIEW OF FUEL EU MARITIME

GUIDANCE FROM BRITANNIA P&I CLUB / JUNE 2025

This guidance is part of our comprehensive [Maritime Emissions Regulations](#) section written in consultation with the [law firm HFW](#). This publication was written in consultation with [Alessio Sbraga, Partner](#) and [Alex Andreou, Senior Associate](#), from leading global law firm HFW. Whilst care has been taken to ensure the accuracy of this information at the time of publication, the information is intended as guidance only. It should not be considered as legal advice.

The definitions for technical terms used can be found in the glossary on page 9.

## REGULATORY OVERVIEW OF FUEL EU MARITIME

- 1. [Regulation \(EU\) 2023/1805](#)** (FuelEU) is part of the EU's Fit for 55 legislative package and regulates the greenhouse gas (GHG) intensity of fuel and other energy used on board ships. For an overview of FuelEU, please refer to Britannia's previous article: [FuelEU Maritime Regulations | Reduce greenhouse gas emissions](#). In this guidance, we focus on the regulatory GHG intensity target which came into effect from 1 January 2025 only and other, prospective future regulatory targets are not considered<sup>1</sup>.

### KEY FEATURES OF THE GHG INTENSITY LIMIT

#### GHG INTENSITY LIMIT

- 1.1** Fuel EU establishes an annual limit for the GHG intensity on board ships, which is calculated on a grams of CO<sub>2</sub> equivalent per megajoule basis (gCO<sub>2</sub>eq/MJ) (GHG intensity limit).
- 1.2** Each ship must measure its own GHG intensity on a gCO<sub>2</sub>eq/MJ basis for a calendar year (reporting period) to provide its yearly average GHG intensity
- 1.3** GHG intensity of fuel is a full life-cycle assessment on a well-to-wake (WtW) basis, accounting for GHG intensity during the fuel production phase (well-to-tank), and GHG intensity of the fuel when consumed on board (tank-to-wake).
- 1.4** During the verification period for a reporting period from 1 January to 30 June (verification period), the ship's reported GHG intensity is compared to the GHG intensity limit to generate a compliance balance (compliance balance). If the reported GHG intensity is below the GHG intensity limit, the compliance balance is positive (surplus). If the GHG intensity is above the GHG intensity limit, the compliance balance is negative (deficit). A ship with a surplus is compliant with Fuel EU and, in principle, no further regulatory actions are required (although as we discuss below a ship with a surplus may take further regulatory actions). In contrast, a ship with a deficit must take certain steps to comply with Fuel EU.
- 1.5** In order to comply, a ship with a deficit must either: (a) pay a FuelEU penalty (FuelEU penalty) calculated according to a formulae provided in Annex IV; or (b) adopt one of the flexibility mechanisms provided in Article 20 or 21 of FuelEU to meet the deficit (where the equivalent cost should be lower than the FuelEU penalty dependent on market forces). A ship that has paid a FuelEU penalty, adopted a flexibility mechanism, or with a surplus after 1 May in the verification period will be issued a document of compliance (FuelEU DOC) by 30 June in the verification period.



1 In addition to the mandatory GHG Intensity Limit, FuelEU introduces a requirement for zero emissions at EU berths from 2030 and a potential renewable fuels of non-biological origin (RFNBO) sub-target from 2034.  
2 Article 20.1 of FuelEU Maritime  
3 Article 20.2 of FuelEU Maritime

## FLEXIBILITY MECHANISMS FOR COMPLIANCE WITH FuelEU

- 1.6** The flexibility mechanisms under Article 20 or 21 of FuelEU are available to ships with a surplus or a deficit. These are banking, borrowing and pooling.
- 1.6.1** **Banking**<sup>2</sup> – A ship with a surplus can bank a surplus, if banked before the FuelEU DOC is issued. The ship can use a banked surplus in any future reporting periods, including for pooling.
- 1.6.2** **Borrowing**<sup>3</sup> – A ship with a deficit can borrow an advance compliance balance (advance compliance surplus) from the next reporting period (n+1). A ship may only borrow for one reporting period in a row. Borrowing is limited to two percent more than the GHG intensity limit. In reporting period n+1, the borrowed advance compliance surplus and interest of ten percent will be added to the compliance balance, making compliance more difficult and potentially increasing the total cost of the FuelEU penalty across the two reporting periods.
- 1.6.3** **Pooling**<sup>4</sup> – Ships with either a surplus or a deficit can pool their compliance balance with other ships' compliance balances. Solutions are left to the market and there are limited regulatory conditions for pooling:
- (a) A ship's compliance balance may only be included in one pool per reporting period;
  - (b) After pooling, (i) the total net pooled compliance of all the ship's compliance balances must be positive; (ii) any ship with a deficit must not increase their (initial) deficit through pooling; and (iii) any ship with a surplus cannot be in deficit after pooling;
  - (c) The pool must use one verifier;
  - (d) Each compliance entity must register their intention to pool on the FuelEU database;
  - (e) After 30 June 2026, each ship must hold a valid FuelEU DOC;
  - (f) No ship in the pool may borrow in that reporting period.
- 1.6.4** It appears that, after pooling, a ship which retains a surplus may bank that surplus, provided it is banked in time, and a ship which retains a deficit (equal to or less than that with which it started) may pay a FuelEU penalty.

## STRATEGIES FOR COMPLIANCE WITH FuelEU FOR OWNERS AND CHARTERERS

- 2.** In this section, we discuss the initial strategic questions owners and charterers need to answer in order to guide the solutions required for FuelEU in their physical transport contracts.
- 2.1** The effect of FuelEU is that the existing fleet, adopting a business-as-usual approach, will not meet the GHG intensity limit as this requires a change to the ship's fuel mix.
- 2.2** FuelEU is a unique regulation and poses novel issues for owners and charterers. Compliance may be achieved by paying the FuelEU penalty, or adopting flexibility mechanisms that impose commercial, rather than regulatory cost; such as costs to join a pool or buy sustainable maritime fuel (SMF) or apply net-zero emission technology (e.g. wind sails). Parties will have a choice whether to treat FuelEU as a compliance cost, a risk management exercise to minimise fleet exposure, or even a commercial opportunity to monetise surplus through pooling. Consequently, contractual solutions and arrangements around FuelEU are more complex and strategic than EU ETS given the different methods for compliance and the fact that it is not simply a question of paying a Fuel EU penalty.
- 2.3** The starting point for any physical transport contract solution will be to determine the compliance strategy. This is likely to impact the risk allocation under contracts.

#### Strategies for Ships Generating a Deficit

- 2.4** A party may accept operating its ship with a deficit (and not deploying SMF). If so, there will still be a strategic decision whether to:
- (a) pay a Fuel EU penalty;
  - (b) borrow an advance compliance surplus to meet FuelEU liability (in the short term), or
  - (c) seek to pool.
- 2.5** Owners with ships generating a deficit may be agnostic where their charterers have agreed to pay the costs. If the FuelEU liability is to be passed down, charterers are more likely to prioritise pooling.
- 2.6** Depending on market forces, pooling may offer an opportunity for the compliance entity to pay less than the FuelEU penalty. The price of netting off a deficit will be determined by the availability of a pooling market and market pricing of a deficit.
- 2.7** Borrowing may also be a good short-term solution. For example, where a ship will start to stem biofuels, in a future reporting period, it may make sense to take the risk of borrowing and possibly increasing a future deficit, because it is likely the ship will operate with a surplus and net-off the borrowing "costs".
- 2.8** Long term charterers would be advised to: (a) secure the ability to direct and control the compliance entity and the compliance balance in the charterparty; and (b) seek pooling partners well before the verification period deadline of 30 April (even though the de facto period for achieving pooling is a short window of a matter of months during the verification period).

#### Strategies for Ships Generating a Surplus

- 2.9** Alternatively, ships - which generate a surplus due to consumption of SMF, such as certain types of LNG, LPG, biofuel, or renewable fuel of non-biological origin (RFNBO) - may be "anchor" ships within their owned or operated fleet. Owners or charterers may decide to build a compliance strategy around their anchor ships, using the surplus generated to net-off deficits across the fleet in reporting periods.
- 2.10** Where a compliance strategy is built on an "anchor" ship, two issues bear consideration: (i) ship technology - whether the engines and auxiliaries are capable of consuming SMF - and (ii) SMF supply - whether owners or charterers can stem SMF and are willing to bear the additional costs.
- 2.11** Subsidiary questions for parties with "anchor" ships will be whether they have access to and the control of the compliance balance, as well as entitlement. An owner with a dual fuel ship or a charterer with a supply of SMF may both want the commercial benefit of a compliance balance as consideration for their respective investments. Third parties who are involved in the supply of SMF may also enter the market. Whichever camp a party is in, developing a house strategy for compliance will guide the contractual solutions, although commercial bargaining power will still play its part. For example:
- 2.11.1** charterers with a biofuel supply may wish to control the ship's compliance balance directly and enter into pooling arrangements in their own name, i.e. not rely on owners, given a prospective surplus, or
  - 2.11.2** owners of LPG or LNG ships or other dual fuel assets using SMFs may simply consider the compliance balance theirs to control given their investment and retain all cost and risk for FuelEU (irrespective of ownership of the fuel itself); or
  - 2.11.3** fuel suppliers may have agreed to stem bunkers at a discount in consideration for controlling a ship's compliance balance.

#### Strategies and Considerations for SMF

- 2.12** Mid-term compliance strategies are likely to be built on anchor ships consuming LNG, LPG and biofuels.

- 2.13** For LNG and LPG:
- 2.13.1** dual fuel engine technology is established in LNG and LPG carriers and is being expanded to new ship types; and
  - 2.13.2** there is an existing fuel supply chain and infrastructure in place.
- 2.14** **Biofuel:** subject to class and engine manufacturer approvals, and the type and source of biofuel, this may be used as a drop-in fuel without retrofits or modifications and stemmed at major bunkering ports – Amsterdam Rotterdam-Antwerp, Singapore and Zhoushan among others. However, to obtain a sustainability benefit (e.g. as an SMF under FuelEU), the biofuel must meet the sustainability and GHG emissions saving criteria prescribed by Renewable Energy Directive (RED) II and Article 10 of FuelEU, including any required documentation and certification.
- 2.15** **RFNBO:** this is an obvious way to generate surplus and manage the risk across vessels, alternatively to monetise FuelEU opportunities through pooling. However, at present, the availability of RFNBO and ships capable of deploying the same are not yet available at scale, so the CAPEX represents a significant hurdle, although this is more of a consideration for the future.
- 2.16** Decisions on all these strategic issues will vary from stakeholder to stakeholder and will guide the contractual solutions required in physical transport contracts and maritime services agreements.

## NEGOTIATING CONTRACTUAL SOLUTIONS

- 3.** In this section, we consider the key contractual risks and considerations for parties negotiating FuelEU clauses for physical transport contracts (time and voyage charterparties), maritime services agreements (ship management agreements) and agreements to buy and sell compliance balances (pooling agreements).

### 4. Time Charterparty

- 4.1** Unlike the EU ETS, there are no statutory rights for reimbursement of FuelEU penalties in EU Member States from a third party responsible for purchasing the fuel or commercially operating a ship pursuant to a physical transport contract under FuelEU. For charterers, this may be an owners' issue and there may be resistance from charterers to accept liability for costs arising out of FuelEU. It would then be a matter of interpretation of the charterparty to determine how the parties have agreed to allocate such costs, whether they follow the fuel/charterers or the ship/owners. It is always preferable to avoid these kinds of disputes on interpretation and to agree clear allocation of risk and responsibility for costs in advance.
- 4.2** **Data Sharing / Monitoring and Verification** – as with all these clauses, consistent sharing of data during the reporting period and promptly during the verification period will enable the parties to mitigate Fuel EU penalties, for example, notifying a charterer that they should explore pooling options early.
- 4.3** **Stemming SMF** – the charterparty will have to address the operational and safety implications of using SMF. This is a wider issue than just FuelEU. It requires agreement on quality specifications, quantity measurement, sustainability criteria, documents and certification, and sampling/testing methods and standards. The recommendation would be to make separate provisions for this to allocate risk and responsibility appropriately.
- 4.4** **Payment of FuelEU Penalties** – under the BIMCO FuelEU Maritime Clause for Time Charter Parties 2024 (BIMCO FuelEU clause), owners are responsible for compliance with FuelEU, but charterers are allocated responsibility for payment of FuelEU penalties. The "forecasted" FuelEU penalty costs are paid monthly throughout the reporting period based on the ship's notional in-year GHG Intensity and the corresponding compliance balance (surcharge). There is then reconciliation of the parties' positions and the surcharge as the GHG intensity/compliance balance changes during the reporting period (sub-clause (g)). This may increase administrative burden for the parties.
- 4.5** Actual FuelEU liabilities will only be known (i) when the provisional compliance balance for the previous reporting period is confirmed by the ship's verifier by 31 March in a verification period and (ii) after any further adjustment

is made due to use of flexibility mechanisms prior to 1 May in the verification period. This is addressed in the BIMCO FuelEU clause by further reconciliation of the surcharge should the compliance balance change after pooling or borrowing (sub-clause (k)).

- 4.6 There are likely to be other approaches to the allocation of risk and responsibility and payment of FuelEU penalties in the market – for the latter, it may be based on the verified compliance balance which would not require ongoing reconciliation. The mode, frequency and timing of payment may well also be adjusted to later in time and closer to the regulatory timeline for meeting the FuelEU penalty (e.g. 30 June).
- 4.7 **Exclusions from FuelEU Penalty Liability** – the parties may also want to further scope their respective liability for the compliance balance and the Fuel EU penalties. Charterers will want to exclude off-hire periods and charterparty breaches resulting in emissions generation. The BIMCO clause does this although it is limited to undisputed off-hire, which is slightly narrower than the equivalent BIMCO EU ETS clause exception. A further complexity with FuelEU is that actions in one reporting period can affect the compliance balance in subsequent reporting periods. The parties may want to agree that (i) the benefit of any banked surplus, or (ii) aggravated Fuel EU penalties due to borrowing or operating a deficit in a pre-charterparty reporting period, is/are for owners' account.
- 4.8 **Control of the Compliance Balance** – where charterers agree to pay the Fuel EU penalties, they will also want to direct and control the compliance balance. Liability should be linked to the deficit after 1 May in the verification period. This enables charterers to use flexibility mechanisms to reduce the deficit as they see fit. For example, using banked surplus from a previous reporting period, borrowing an advance compliance surplus (which may have benefits if charterers start to stem biofuels in future reporting periods), or pooling the ship's deficit with other ships' surplus. The flexibility mechanisms are likely to reduce overall exposure. Charterers will want to satisfy themselves that no other party may control the compliance balance and the compliance entity will follow their instructions, logging relevant information on the FuelEU database, seeking warranties for this.
- 4.9 **Surplus/Banked Surplus** – where charterers have stemmed SMF, likely at a premium to fossil fuel, charterers will want to monetise the potential regulatory benefits. Charterers will want to be paid for any surplus generated during the charterparty, as provided in the BIMCO FuelEU clause, if charterers cannot use or have access to and control of the compliance balance for pooling.
- 4.10 Charterers will also want to be paid out for any banked surplus or notional in-year (not yet verified) surplus on redelivery. The parties would need to agree a value for the surplus which could be the FuelEU penalty or a lower figure like any premium on fossil fuel.
- 4.11 **Liquidated Damages** – If due to an owners' breach, the ship cannot consume the SMF and there are no regulatory benefits, charterers may want to recover the notional in-year surplus that would have been generated as damages.
- 4.12 **Protections/Indemnities** – Owners may want rights to suspend performance in case of non-performance by charterers, and both parties may want indemnity protection against losses arising due to one party's breach. Termination rights (or notice / anti-technicality provisions) may also be considered appropriate.
- 4.13 **Delivery/Redelivery** – It is likely that a tiered system will be created for periods when charterers operate the ship for a full reporting period or partial reporting periods. Owners will want to retain control of the compliance balance in the latter case, although the market may well present alternative options.
- 4.14 For trip time charters, there is likely to be less common interest between the parties. Charterers may resist liability altogether on the basis that GHG intensity is an annual average, which a trip time charterer cannot control. Equally, charterers may be reluctant to stem more expensive SMF. Ultimately, charterers are likely to pay Fuel EU penalties or be paid for surplus on the basis of a notional charterparty attained GHG intensity, even if this will not in fact reflect actual end of year GHG intensity in a reporting period.

## 5. Voyage Charterparty

- 5.1 How the market addresses FuelEU in voyage charterparties remains to be seen. Voyage charterers have no control over fuel used on board a ship and will probably argue that they are not the polluter in any event.

- 5.2** Given the nature and short duration of voyage charterparties, it may also be challenging to assess accurately in real time the contribution of the voyage to the ship's annual GHG intensity. For example, the ship could start consuming biofuels after conclusion of the voyage charter, so overall GHG intensity is under the GHG intensity limit. Equally, defining the length of the duration of a voyage to be counted may also be a source of contention. As there will be uncertainty, owners may simply seek to price FuelEU costs for the voyage based on a notional GHG intensity advance or simply add a fixed EU port call surcharge or roll additional amounts into freight (similar to the approach we have seen with the EU ETS).

## 6. Ship Management Agreements

- 6.1** Unlike EU ETS, the registered owner is not the default compliance entity, it is the ISM DOC holder, generally the ship manager. The manager is therefore the entity that must comply with FuelEU and will be subject to sanctions for non-compliance. A manager that has not received payment of a FuelEU penalty from their owners must still pay the FuelEU penalty to the administering authority. This creates significant additional exposure for managers who traditionally act as agents for and on behalf of their principals.
- 6.2** Generally, managers will not have any direct contractual relationship with the commercial operator of the ship, where this is a time charterer. Managers can agree clauses in their ship services agreements for owners to pay Fuel EU penalties. However, they will have no control over terms agreed in physical transport contracts and passing through costs to the time charterer. Further, managers will have no control over the fuel supplied to a ship which will have the most direct operational impact on the GHG intensity.
- 6.3** Given the nature of this additional responsibility, managers will require significant protection. This is likely to be in the form of security - either a parent company guarantee or upfront cash payments, or payments into escrow accounts. Like BIMCO FuelEU, managers may require cash payments during a reporting period to reflect the forecast annual compliance balance. They may also require contractual indemnities from owners in respect of losses that may arise due to non-compliance with FuelEU. The challenge with such indemnities is that they will only be as good as the contractual counterparty.
- 6.4** The owners will also want to build flexibility to control the compliance balance and direct the compliance entity to take any steps required to implement a flexibility mechanism. This may come from owners or their nominee (e.g. time charterer) where this has been delegated by way of contractual arrangement (e.g. amendment to a time charterparty). Owners will need to ensure that managers follow instructions promptly even where provided by an owners' nominee.
- 6.5** Termination provisions should also be considered. Under FuelEU, where there is a change of compliance entity, the new compliance entity as of 31 December will be responsible for the entire reporting period.
- 6.6** BIMCO have recently introduced a FuelEU maritime clause for Shipman 2024 which covers most of the issues set out above. However, more work will still be required by the parties when it comes to agreeing security and relevant timeframes for receipt of any FuelEU penalty and pooling arrangements which will be at the heart of a manager's new role in the FuelEU era.

## 7. Pooling Agreements

- 7.1** Pooling agreements are likely to be a central feature of FuelEU compliance. Already, there are various pooling options appearing on the market.
- 7.2** Discussed above are the complexities of compliance strategies. One of the first questions will be whether pooling is an in-house mechanism for managing FuelEU costs within an owned or operated fleet (or both) or whether it involves third party involvement.
- 7.3** With this decision, the parties can determine an appropriate structure, the type or number of ships to be included, and the entity administering the pool. Initial pool proposals are varied: they can take the form of multiparty systems, bilateral agreements between ships, marketplaces created by third-party brokers or consultants, or customer groups administered by parties in the ship services or physical transport chain, including fuel suppliers.

- 7.4** The answers to these issues will guide the type of contractual solution required, whether it is a multiparty agreement, a master services agreement or bilateral agreement, and these are likely to be complex. Such agreements will need to address eligibility criteria for the pool (such as minimum GHG intensity thresholds), but also strict (and time-sensitive) pooling obligations. For entities entering into a pooling arrangement, for each ship, there should be clarity on the economic operator of the ship and whether they may also control the compliance balance. This will ensure the party with custody over the compliance balance and operational control of GHG intensity is bound by the pooling arrangement. Interested parties must also ensure that compliance entities (managers) agree to follow instructions with respect to registering pooling on the FuelEU database. This could take the form of a manager's undertaking to follow such instructions. The agreement would also need to deal with payment terms and pricing the compliance balance. Changes in entities' relationship to the ship should also be addressed, with termination provisions, among other terms.

## DISPUTES

- 8.** We consider here contractual disputes that may arise. FuelEU does not provide the same certainty of costs recovery for compliance entities against a commercial operator (unlike under the EU ETS). In consequence, there may be disputes as to liability for FuelEU costs or steps taken to comply with FuelEU (such as stemming SMF) in charterparties, which are unamended for FuelEU.
- 8.1** Assuming there is a FuelEU clause, charterers may default on their payment obligation. Under the BIMCO FuelEU clause, this is a rolling monthly payment obligation, so a breach could happen at any point in the reporting period. However, for long term time charterparties, we expect parties will negotiate payment obligations to apply after 31 January or 1 May of the verification period, i.e. once the compliance balance is verified and liabilities have crystallised. In which case, defaults may coalesce around these deadlines.
- 8.2** There is also the prospect of owners' default. Owners may permit charterers to control the compliance balance for the ship. They may fail to provide this. We doubt that charterers would have any superior rights to a compliance balance, or that the compliance balance is property that can have tiered property rights, therefore, charterers would be left with a contractual claim only. Also, where charterers have stemmed SMF and the ship cannot consume this, losing regulatory benefits, such as the opportunity to generate surplus, charterers may seek to recover these losses from owners.
- 8.3** Likewise, where compliance is reliant on a supply of SMF, there may be a charterers' default. If the SMF consumed does not meet the sustainability and GHG emissions saving criteria under Red II and FuelEU, or cannot be consumed due to its properties, this may expose the ship to an unexpected FuelEU penalty.

## FUTURE CHANGES TO FuelEU AND CONSIDERATIONS

9. The scope of and targets imposed by FuelEU are clear for the coming years. However, the mid-term measures approved at MEPC 83 – the global fuel standard and lifecycle emissions guidelines (as part of the IMO Net-Zero Emission Framework) – seek to regulate shipping in a broadly similar manner to FuelEU, albeit in accordance with a different global economic measure. It is possible that this may cause the EU to adjust FuelEU in line with the review process in the years to come; for instance, amendments to the qualifying percentage of GHG intensity onboard for voyages to and from non-EEA countries, but again this remains to be seen in light of the EU's wider Fit for 55 goals and there is still some way to go to make the IMO Net-Zero Emission Framework work in practice.

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## GLOSSARY

**Administering Authority:** This is the administering authority in each EU Member State, which is responsible for administering EU ETS, and FuelEU. Each compliance entity will be allocated an administering authority.

**Advance Compliance Surplus:** Under FuelEU, where a ship borrows from its Compliance Balance from the future Reporting Period (n+1), this borrowed Compliance Balance is the Advance Compliance Surplus and shall be added to the ship's Compliance Balance in Verification Period (n+1).

**AER Metric:** Annual Efficiency Ratio is the metric under CII for assessing the GHG intensity of a ship and is based on GHG emissions per dead weight tonne mile. A different metric is used under FuelEU.

**Attained CII:** Under the CII Regulations, this is a ship's actual annual recorded operational energy efficiency calculated according to the AER Metric and expressed on a gCO<sub>2</sub>/dwt.nm basis.

**Attained EEXI:** This is the ship's energy efficiency and is compared to the Required EEXI to determine whether improvements are required.

**BIMCO CII TC Clause:** The CII Operations Clause for Time Charterparties 2022.

**BIMCO CII VC Clause:** The BIMCO CII clause for voyage charterparties 2023.

**BIMCO EEXI Clause:** The BIMCO EEXI clause for time charterparties 2021.

**BIMCO ETS Clause:** The Emission Trading Scheme Allowances Clause for Time Charter Parties 2022 published in respect of EU ETS.

**BIMCO FuelEU Clause:** The FuelEU Maritime Clause for Time Charter Parties 2024 published in respect of FuelEU.

**BIMCO Shipman EU ETS Clause:** The ETS Shipman Emission Trading Scheme Allowances Clause for Shipman 2023 published in respect of EU ETS.

**BIMCO Shipman FuelEU Clause:** The FuelEU Maritime Clause for Shipman 2024 published in respect of FuelEU.

**BIMCO Surcharge:** The Emission Scheme Surcharge Clause for Voyage Charter Parties Clause 2023 is one of the three BIMCO-published clauses for use in voyage charterparties in respect of EU ETS. This clause provides for payment of a cash equivalent sum to the EUAs as a surcharge on top of freight.

**Cap and trade system:** A form of emissions regulation which requires participants to pay for their emissions. The number of permits for participants to emit GHG are capped and are traded between participants. This increases costs of emissions and incentives low emission solutions. The EU ETS is a cap-and-trade system.

**CII Rating:** For the CII Regulations, this is an annual carbon intensity rating from 'A' (superior) to 'E' (inferior), which is produced by assessing Attained CII against the Required CII.

**CII Regulations:** These are the IMO's Carbon Intensity Indicator (CII) and Energy Efficiency Existing Ship Index (EEXI), which were introduced through amendments to Revised MARPOL Annex VI.

**Compliance Balance:** Under FuelEU, this is the ship's performance against the GHG Intensity Limit. The ship's GHG Intensity during a calendar year is compared to the GHG Intensity Limit established by FuelEU to generate the Compliance Balance.

**EU ETS Compliance Deadline:** Under the EU ETS, this is the 30 September in the year following the Reporting Period and is the annual deadline for compliance entities to surrender EUAs to their Administering Authority.

**Compliance Entity:** The entity responsible for compliance with a given regulation. See also "shipping company" for the compliance entity for EU emissions regulations.

**Deficit:** Under FuelEU, where a ship's GHG Intensity is above the GHG Intensity Limit, the ship's Compliance Balance is negative, which is a compliance deficit.

**EEA:** The European Economic Area, covering the EU and Iceland, Liechtenstein and Norway.

**Emissions:** These are GHG emissions as regulated by an emissions regulation and may include CO<sub>2</sub>, CH<sub>4</sub> or N<sub>2</sub>O emissions depending on the emissions regulation.

**EPL:** Engine power limitation. A method of complying with EEXI.

**EUAs:** Emissions allowances under the EU ETS, which permit the holder of the EUA to emit one tonne of CO<sub>2</sub> equivalent.

**EU ETS:** The EU Emissions Trading System Directive (Directive 2003/87/EC), which is a cap-and-trade system, requiring participants to surrender EUAs meeting their verified emissions.

**EU's Fit for 55 Legislative Package:** The set of regulations, directives, and legislative proposals covering different sectors and industries introduced by the EU to align EU policies with EU climate goals.

**Flexibility Mechanism:** Under FuelEU, this is a regulatory action that can be taken by a compliance entity (one of Banking, Borrowing or Pooling) and offers flexibility so that compliance with FuelEU is not restricted to generating a Surplus in a Reporting Period.

**FuelEU:** Regulation (EU) 2023/1805, this Regulation imposes two targets: one applicable from 1 January 2025 is for ships to meet an annual GHG Intensity Limit and a second, applicable from 1 January 2030, is for certain types of ship to connect to onshore power supply.

**FuelEU Database:** The electronic system on which FuelEU data and compliance information is inputting and recorded.

**FuelEU DOC:** FuelEU document of compliance which is issued to the shipping company by 30 June in the Verification Period, where their ship has generated a Surplus or a Deficit and a FuelEU Penalty has been paid for the Deficit.

**FuelEU Penalty:** This is a penalty imposed under FuelEU on ships which have a Deficit after 1 May in the Verification Period, which may be calculated according to a formulae provided in Annex IV.

**gCO<sub>2</sub>eq/MJ:** CO<sub>2</sub> equivalent per megajoule, this is the metric for assessing GHG Intensity under FuelEU only.

**GHG:** Greenhouse gas.

**GHG Intensity:** The measurement of a ship's GHG intensity on a grams of CO<sub>2</sub> equivalent per megajoule (gCO<sub>2</sub>eq/MJ) basis for a calendar year under FuelEU.

**GHG Intensity Limit:** The limit on GHG Intensity of a vessel's emissions, as set pursuant to FuelEU.

**IIEEC:** International Energy Efficiency Certificate required under the CII Regulations.

**IMO Net-Zero Framework:** Means the latest measures approved at MEPC 83 and subject to agreement at extraordinary session in October 2025, which approved requirements for a global fuel standard where ships must monitor and reduce their GHG fuel intensity against two thresholds and a global economic measure where ships which operate with GHG fuel intensity above the threshold must acquire remedial units and ships which operate with GHG fuel intensity below the threshold may be eligible for financial rewards.

**ISM DOC Holder:** The entity which, on behalf of a ship, holds the document of compliance certifying that that company complies with the requirements of the International Safety Management Code, which can be delegated to a ship manager or bareboat charterer. This entity can be mandated as the compliance entity under EU ETS (and MRV Regulation) and is the compliance entity under FuelEU.

**Life Cycle Assessment:** A method for assessing the GHG intensity of a fuel, which accounts for GHG across the full life cycle of the fuel, i.e. from production, delivery to consumption.

**MiFID II:** Markets in Financial Instruments Directive (MiFID) II, which is a legal framework for securities markets, investment intermediaries, in addition to trading venues. Entities holding EUAs, which are a financial instrument, may be regulated by MiFID II.

**MOHA:** Maritime operator holding account, which is a type of account for holding EUAs, and can only be opened by a compliance entity. It permits that entity to surrender EUAs to their Administering Authority.

**MRV Regulation:** Regulation (EU) 2015/757, the Regulation which complements EU ETS and requires shipping companies to monitor, report and verify emissions from their ships.

**Physical Transport Contract:** This is a contract for carriage services such as a time charter or voyage charter.

**Polluter Pays Principle:** A policy principle commonly adopted in emissions regulations, which seeks to impose the costs of emissions of the ultimate polluter. For EU ETS, this is identified as the commercial operator as defined therein.

**Port of Call:** Under EU ETS and FuelEU, this is defined as a port where the ship undertakes cargo operations or disembarks passengers. The definition excludes certain stops – such as for refuelling/obtaining supplies, distress calls, and ship-to-ship transfers outside ports.

**RED II:** Directive (EU) 2018/2001, the EU Directive which promotes the use of energy from renewable sources.

**Registry Regulation:** Regulation (EU) No 389/201, this Regulation complements the EU ETS and contains the obligations and requirements in respect of opening MOHA's and trading accounts. It sets out the legal nature of EUAs and the rules in respect of transfer, surrender and ownership of EUAs.

**Reporting Period:** For CII Regulations, EU ETS and FuelEU, this is one full calendar year from 1 January to 31 December, within which compliance entities must monitor the ship's emissions and GHG intensity, as prescribed in each regulation.

**Required CII:** The specific annual operational energy efficiency that vessels must achieve under CII, which is expressed in accordance with the AER metric on a gCO<sub>2</sub>/dwt.nm basis.

**Required EEXI:** This is a benchmark value for EEXI for each ship, which is derived from the ship's type and capacity.

**Revised MARPOL Annex VI:** The amendments to Annex VI of the IMO's MARPOL Chapter 4, via MEPC Resolution 328(76), which incorporate the CII Regulations.

**RFNBO:** Renewable fuel of non-biological origin. These are sustainable, synthetic (e-)fuels, where the fuel's feedstock is derived from sustainable, renewable sources and the energy powering the production process to transform the feedstock into fuel is also derived from renewable sources. Examples include green methanol, green ammonia or green hydrogen.

**SEEMP:** Ship Energy Efficiency Management Plan, a document which is kept onboard a ship and records the steps that the ship shall take in order to comply with the CII Regulations.

**Shipping Company:** A "shipping company" or "company" is the entity responsible for compliance with EU ETS and the MRV Regulation, which may be the ISM Doc Holder (if mandated by the registered owner) or the registered owner. A "company" is also the entity responsible for compliance with FuelEU and, by default, shall be the ISM Doc Holder.

**SMF:** Sustainable maritime fuel, which is fuel that shows a GHG saving compared to liquid fossil fuel, such as types of LNG, LPG, biofuel or RFNBO.

**SoC:** The IMO Data Collection System Statement of Compliance, where the Attained CII and CII Rating are recorded in accordance with the CII Regulations.

**SPL:** Shaft power limitation. A method of complying with EEXI.

**Surplus:** Under FuelEU, where a ship's GHG Intensity is below the GHG Intensity Limit, the ship's Compliance Balance is positive, which is a compliance surplus.

**Sustainability and GHG Saving Criteria:** Criteria established by international standards, laws and regulations or even commercial agreement for the sustainability and GHG saving of a certain fuel type.

**TtW (Tank-To-Wake):** An assessment of GHG intensity of a fuel, covering the period from consumption onboard a ship, when it is in the fuel tank, to the ship's wake.

**Trading Account:** An account where EUAs can be held and from which EUAs can be transferred to other accounts. These accounts can be opened by any qualifying entity, i.e. they do not have to be compliance entities. However, functionality is reduced compared to a MOHA and EUAs cannot be surrendered to Administering Authorities from these accounts.

**Verification Period:** Under the CII Regulations, FuelEU and EU ETS, the year immediately after the Reporting Period is the verification period, during which emissions data and GHG intensity data that has been monitored and recorded by a ship for the previous Reporting Period is reported and verified by an accredited verifier under the applicable regulations and other compliance steps are taken.

**Voyage:** Voyages are movements of a ship between ports of call

**WtW (Well-to-Wake):** An assessment of GHG intensity of fuel on a full Life Cycle Assessment basis.

**WtT (Well-To-Tank):** An assessment of GHG intensity of a fuel, covering the period from production, transport to port, and delivery onboard the ship.