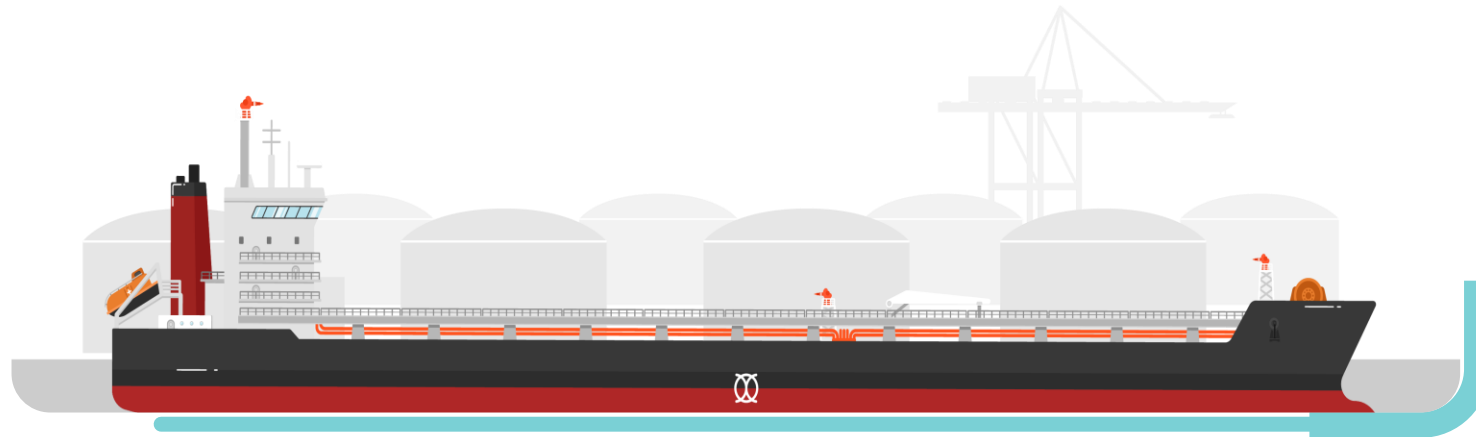


# Zero Emission Shipping Fund

Accelerating transition to net zero



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Powering vessels with Green Fuels

ICS Online Briefing, Tuesday 5 March 2024

# Zero Emission Shipping Fund

Accelerating transition to net zero



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## About ICS

- Principal global trade association for shipowners and operators
- Membership comprises world's **national shipowners' associations** in Asia, Africa, Europe and the Americas covering more than 80% of global fleet
- ICS represents consensus position of all ship types, sectors and trades (bulk carriers, chemical tankers, containerships, general cargo ships, gas carriers, oil tankers, passenger ships, OSVs and specialist ships)
- Founded in 1921, IMO consultative status since 1961

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## Agenda

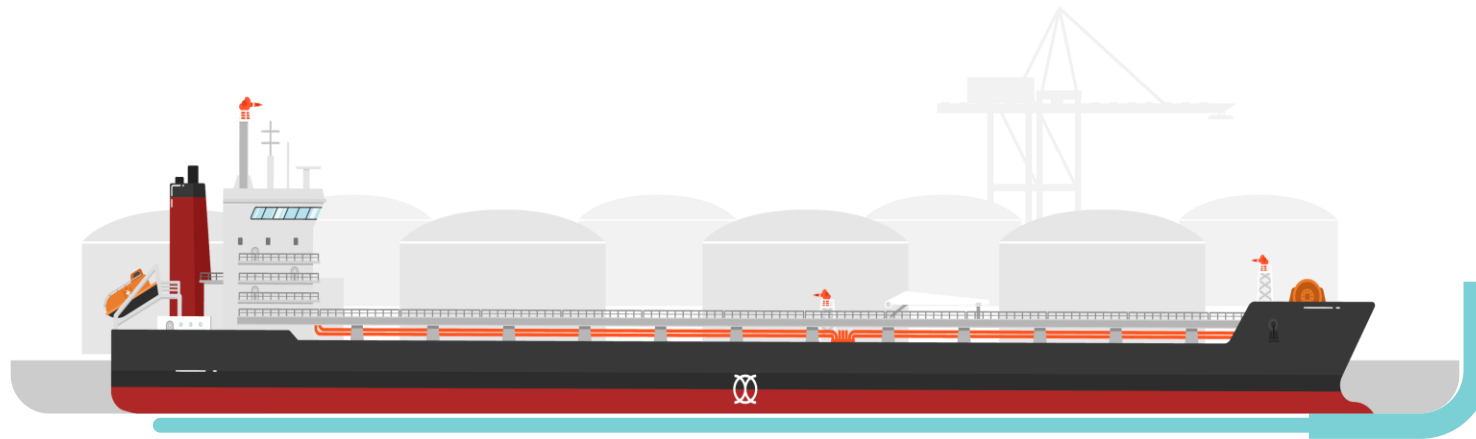
- Overview of Fund and Reward (Feebate) mechanism
- Why feebate mechanism is urgently needed to successfully implement the 2023 IMO GHG Strategy
- Key advantages of feebate mechanism
- Contribution and reward rates, and economic impacts
- Governance of ZESF and IMSF
- Conclusions and action requested of IMO Member States
- *Demonstration of ZESF contribution system prototype*

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## 1. Overview of Fund and Reward (Feebate) mechanism

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## Overview

- 2023 IMO GHG Strategy requires **maritime GHG emissions pricing mechanism** to be adopted in **2025**. Imperative that MEPC starts work now on developing regulatory text to amend MARPOL Annex VI
- Building on concept proposed by Japan, ICS (with Bahamas and Liberia support) has set out comprehensive proposal for **Fund and Reward (Feebate)** mechanism with complete package of suggested draft regulations and supporting Guidelines for implementation and enforcement

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## The proposal: IMO to establish Zero Emission Shipping Fund (ZESF)

- Ships to make **annual** mandatory contributions per tonne of CO<sub>2</sub>e emitted to ZESF with enforcement using verified data already used for IMO Fuel Oil Data Collection System
- Ships using eligible **zero/near-zero GHG fuels** will receive **rewards for CO<sub>2</sub>e emissions prevented** compared to combusting conventional fuel oil – based on agreed CO<sub>2</sub>e conversion factors and energy density of these fuels, as determined by IMO Life-Cycle Assessment (LCA) Guidelines

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To make transition global, ZESF has two main purposes:

- Provide rewards (**feebates**) to ships using zero/near-zero GHG fuels (and technologies) to reduce the **cost gap** and incentivise the accelerated uptake of new fuels to achieve a **“take-off” point by 2030** on a pathway to net zero, and **de-risk** investment decisions which are urgently required
- Provide **billions of US dollars** to support maritime GHG reduction programmes in **developing countries** via a separate **IMO (GHG) Maritime Sustainability Fund (IMSF)**, including production of new fuels and bunkering infrastructure in ports

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## Why is ICS proposing the ZESF?

- Primary objective is to ensure shipping will fully decarbonise by 2050, and that ambitious reduction goals set by IMO can be achieved
- Unless a measure such the ZESF is adopted in 2025, the IMO GHG Strategy is unlikely to succeed, leading to increasing demands for rationing of maritime transport
- This would be disastrous for global shipping industry, but also for economic development and global prosperity



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ICS represents the interests of all sectors and trades of global shipping industry (shipping companies big and small)

- A flat rate contribution system is one that all sectors of the industry have agreed they can live with and accept
- *Some sectors or large companies may prefer more complex alternatives if they are better placed to have access to alternative fuels, or to manage uncertainty (or exploit opportunities) of volatile/variable GHG prices determined by markets*
- ICS advocates a mechanism which provides the greatest certainty to help *entire global shipping sector* achieve net zero

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## What will happen if IMO fails to adopt a flat rate contribution system as a separate economic measure?

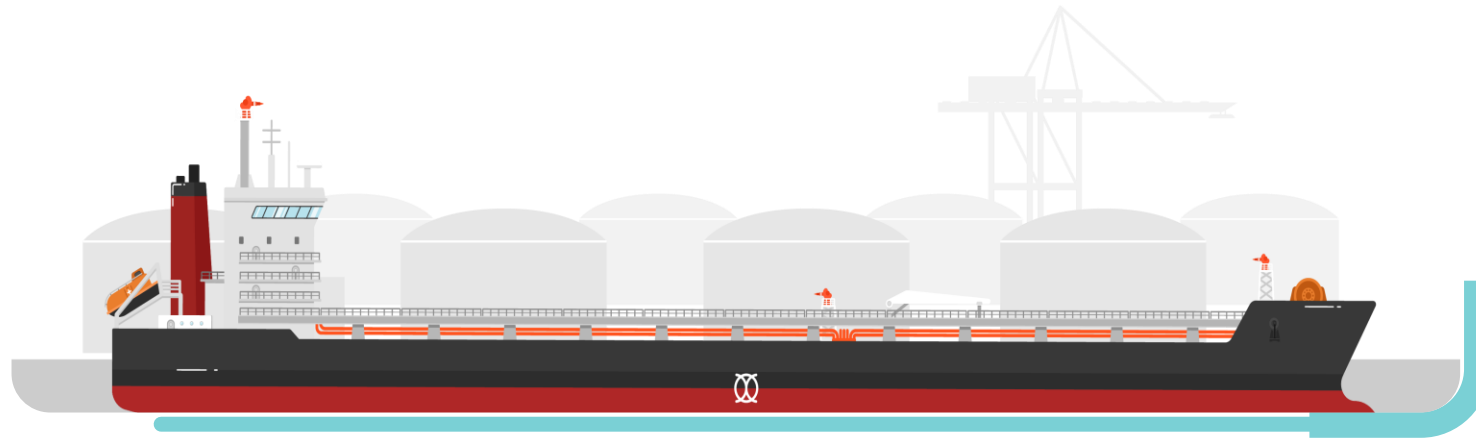
- Proliferation of unilateral emissions trading systems worldwide
- Piecemeal approach will create chaos, and greatly damage authority of IMO and principle of global rules for a global industry
- Working outside of IMO framework, national governments will then **extract billions of US dollars from shipping** to use out of sector, reducing typical shipping companies' ability to invest in new GHG solutions and achieve the IMO GHG reduction goals

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2. Why feebate mechanism is urgently needed to successfully implement 2023 IMO GHG Strategy

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## Implications of 2023 IMO GHG Strategy

- Net zero goal for 2050 is very ambitious, as is the goal to cut GHG emissions by 70-80% by 2040, regardless of trade growth
- To make this possible, **production and uptake** of new fuels must be **rapidly accelerated** to achieve new IMO target for **5-10%** of energy used by shipping to come from zero/near-zero energy sources by 2030 – which is less than 6 years away
- Current production and uptake of zero/near-zero GHG fuels is virtually zero

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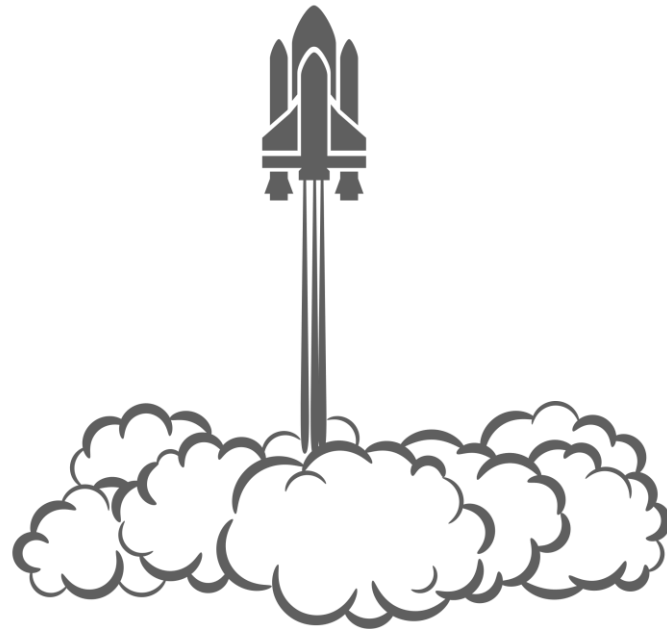
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## Reaching a “take-off” point

If the 2023 IMO GHG Strategy is to succeed, shipping must reach a “take-off” point for production and uptake of zero/near-zero GHG fuels by 2030



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**Global Fuel Standard alone will not achieve net zero, without a separate economic measure to incentivise uptake of zero/near-zero GHG fuels**

- 5 to 10% cut in GHG intensity of marine fuels in 2030 *might* possibly be achieved with biofuel blends (and more ships using LNG)
- But this will not achieve a “**take-off point**” in use of new fuels, such as **ammonia, hydrogen and synthetic methanol/LNG**, which will be vital to achieve the IMO 2040 goal of a 70-80% cut in absolute emissions

NB: ICS fully supports a Global Fuel Standard as a technical measure which complements an economic measure – see ISWG-GHG 16/2 (ICS and IBIA)

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Global Fuel Standard alone (even if it includes some kind of economic element) will not generate **billions of US dollars of guaranteed** funding to support GHG reduction efforts of **developing countries**, including 'green' fuel production and port infrastructure required to meet **2040** and **2050** IMO GHG goals



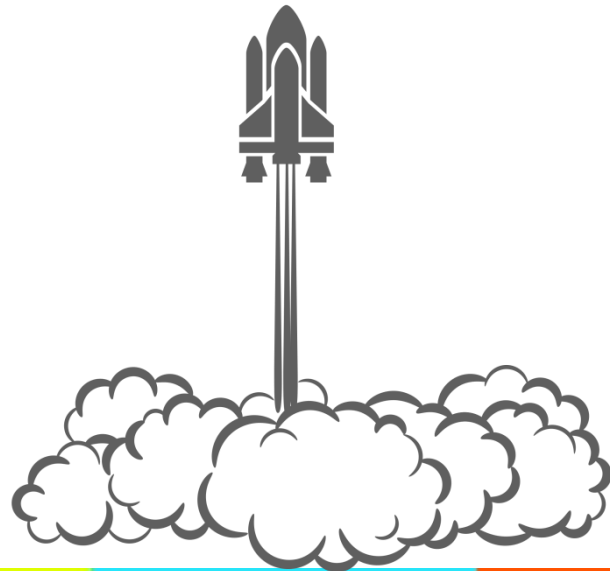
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To ensure net zero for 2050 remains plausible, IMO urgently needs to implement the **ZESF Fund and Reward (Feebate)** mechanism to reach a “**take-off**” point, incentivising and de-risking a **rapid acceleration** in the production and uptake of zero/near-zero GHG marine fuels by **2030** to keep a pathway to net zero open



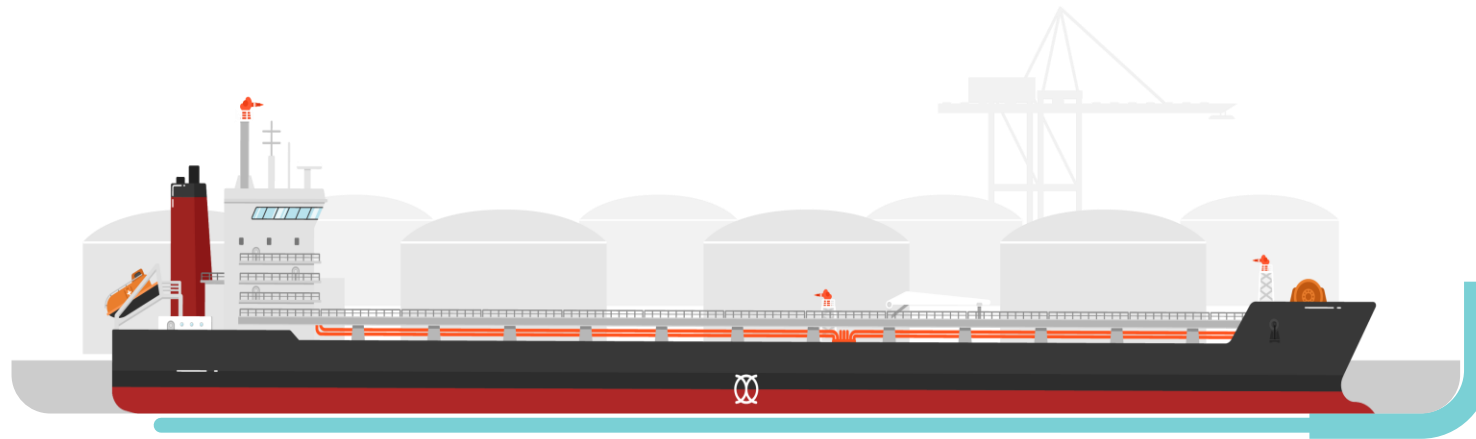


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## 3. Key Advantages of Feebate mechanism

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## Key Advantages of Fund and Reward (Feebate) Mechanism

- **Reward element** will **multiply** the effect of the contribution rate on reducing the **cost gap**, so the contribution rate per tonne of CO<sub>2</sub>e can be set at a level which **avoids** disproportionately negative economic impacts on IMO Member States
- If the cost gap, for example, is determined to be US\$600 per tonne of fuel oil, the contribution rate does **not** need to be set at a rate equivalent to US\$600 per tonne of fuel oil to close the cost gap – a much lower contribution rate should be sufficient

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## Minimal administrative burden for Member States (or for IMO)

- The ZESF contribution system will be a **fully automated web-based system**: calculating, collecting/dispersing contributions and rewards. No money passes via governments
- ZESF will provide evidence to ships that the required annual contributions have been made, which ships can present to their flag State (or designated Recognized Organizations)
- Only role of flag State is to issue annual **Statement of Compliance** which ship can present to Port State Control for enforcement purposes

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## Simple but robust enforcement mechanism

- Contributions and rewards calculated by ZESF using fuel data which has already been verified by flag State or delegated **Recognised Organization**, with flag State making final check that annual fuel consumption data matches the verified data used for the IMO DCS before issuing SOC
- No real difference to EU MRV (being used for EU ETS) or system used for alternative IMO proposals, **except ZESF less complex with less scope of administrative errors**

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## Little possibility of fraud

- Use of verified DCS data, and simplicity of transparent system, makes fraud very difficult to hide
- Any scope for fraud, e.g. consumption of new fuels eligible for rewards, prevented by same checks and balances used for ensuring compliance with other more complex IMO regulations
- Fuel data verifiers will meet IMO (and IACS) standards for ROs
- Operation of ZESF will be subject to audits to identify any discrepancies which can be pursued with flag States

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## Certainty: Contribution rate will be fixed for 5 years – not variable/volatile

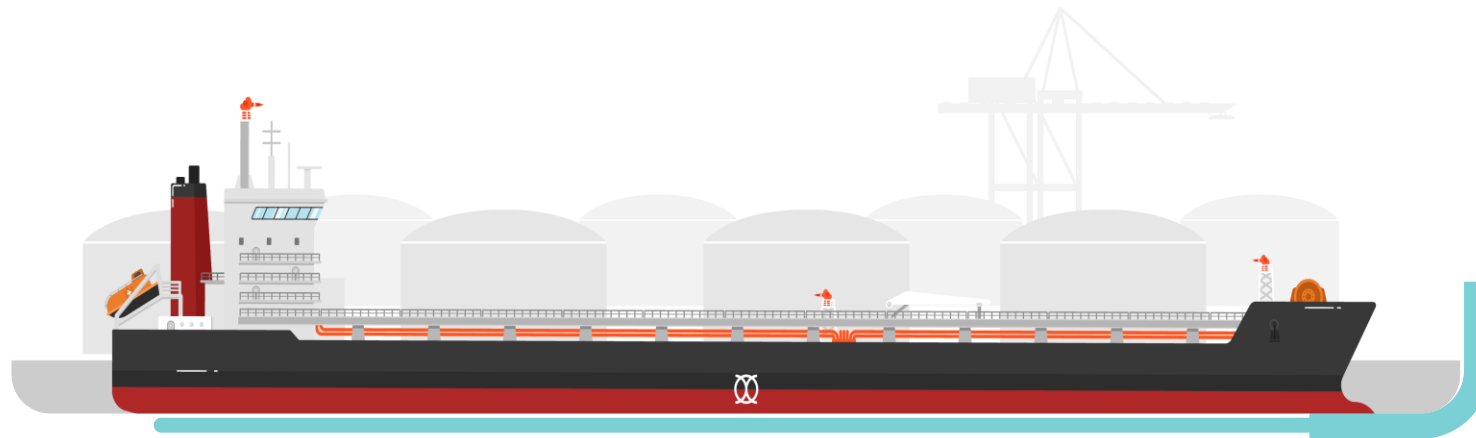
- Reward rate for uptake of zero/near-zero GHG fuels is **guaranteed** for 5 years, so energy producers and shipowners can **de-risk** investment decisions in new fuels and technologies
- Fixed contribution rate means IMO can calculate ZESF funds that will be generated with **confidence**, while separate IMO GHG Maritime Sustainability Fund will have **guaranteed revenue stream** (billions of US dollars) for GHG reduction programmes in developing countries
- Impact on bunker costs on different routes and national economies easy to assess (see Clarksons Research analysis – ISWG-GHG 16/2/2)

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4. Contribution and Rewards for CO<sub>2</sub>e emitted/prevented, and economic impacts

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## Agreeing on the contribution rate to be made by ships to ZESF

- ICS takes **no view** on what the contribution rate **per tonne of CO<sub>2</sub>e** should be, which will take account of the IMO Comprehensive Impact Assessment (CIA) of proposed measures (as initiated by MEPC 80)
- But the contribution rate should be sufficient to meet the objectives of the measure, avoid disproportionately negative economic impacts on States, and be politically acceptable



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## Contribution rate per tonne of CO<sub>2</sub>e emitted

- To be fixed by MARPOL for a 5 year period, with review of contribution rate to begin two years after entry into force of measure
- Contribution rates **per tonne of fuel** consumed to be set out in separate Guidelines, with some fuels types having lower or zero contribution rates per tonne consumed than “liquid fuel oil”, based on CO<sub>2</sub>e conversion factors and energy densities of fuels, as determined by IMO Life-Cycle Assessment (LCA Guidelines)

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## Taking account of life-cycle emissions

- Ships would not pay for life-cycle emissions for which other sectors, such as energy producers, are responsible
- But life-cycle emissions of zero/near-zero GHG fuels (as determined by LCA Guidelines) to be taken into account by lower or zero contribution rates per tonne of fuel consumed
- Measure to be consistent with 2023 GHG Strategy by not increasing emissions of other sectors

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## Setting the contribution rate per tonne GHG emitted

- This will take account of Comprehensive Impact Assessment and what is politically acceptable to Member States
- But updated analysis by Clarksons Research (ISWG-GHG 16/2/2) suggests contribution rate equivalent to range between US\$20 and US\$300 per tonne of fuel oil would have no disproportionately negative impacts on States

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## Reward rate for zero/near zero fuels per tonne of CO<sub>2</sub>e prevented

- Determined following Comprehensive Impact Assessment, but sufficient to **narrow cost gap** between zero/near-zero fuels and conventional fuel oil (without closing cost gap completely, to avoid unfair competition)
- Reward rates **per tonne** of zero/near zero GHG fuels consumed to be set out in separate Guidelines, taking account of life-cycle emissions prevented and energy density of these fuels
- **Use of technologies, such as carbon capture**, would also be eligible for rewards for CO<sub>2</sub>e emissions prevented

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**To achieve objectives, contribution rate per tonne of CO<sub>2</sub>e must:**

- Be sufficient to fund rewards for uptake of zero/near-zero fuels to achieve of IMO goal for **5 -10% energy** used by shipping to come from zero/near-zero sources in **2030**
- Provide levels of funding required for separate IMO (GHG) Maritime Sustainability Fund (IMSF) to support GHG reduction programmes in developing countries

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## Funding rewards

- If 5-10% of energy used by shipping in 2030 comes from zero/near-zero GHG sources, with a reward rate set at (e.g.) US\$100 per tonne of CO<sub>2</sub>e prevented, the cost of rewarding this accelerated uptake of new fuels would be between **US\$5 to US\$10 billion per year:**

*5-10% of 300 million tonnes of fuel oil consumption per year =  
15-30 million tonnes x 3.2 (CO<sub>2</sub>e cf) x US\$100 reward per tonne of  
CO<sub>2</sub>e prevented = US\$5 to US\$10 billion per year for rewards*

- To fund rewards, this might require a contribution by ships to ZESF equivalent to between about US\$20 and US\$40 per tonne of fuel oil consumed (**US\$6.25 to US\$12.5 per tonne of CO<sub>2</sub>e emitted**)

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## Total contribution rate by ships will be higher...

- To achieve objectives, contribution rate would need to be **higher** than US\$20-US\$40 per tonne of fuel oil
- The reward rate may need to be higher than US\$100 per tonne of CO<sub>2</sub>e prevented to be sufficient to meaningfully narrow the cost gap between zero/near-zero GHG fuels and conventional fuel oil
- **Most importantly, the actual contribution rate will depend on the amount of funds (billions of US dollars) which IMO decides to collect (via the ZESF) to support maritime GHG reduction programmes in developing countries**

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## Possible landing zone?

- ICS takes no view on contribution rate, provided it achieves its objectives, avoids DNI on States, and is politically acceptable
- But “for illustrative” purposes, Japan has suggested **US\$2 billion per year** might initially be allocated to developing countries, which with **US\$5 to US\$10 billion to fund rewards** (to meet 5 -10% alternative energy target) suggests ZESF would need to generate about **US\$7 to US\$12 billion per year**
- This is equivalent about **US\$28 to US\$56 per tonne of conventional fuel oil** (about **US\$8.75 to US\$17.5 per tonne of CO<sub>2</sub>e**)



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## Possible landing zone – additional thoughts

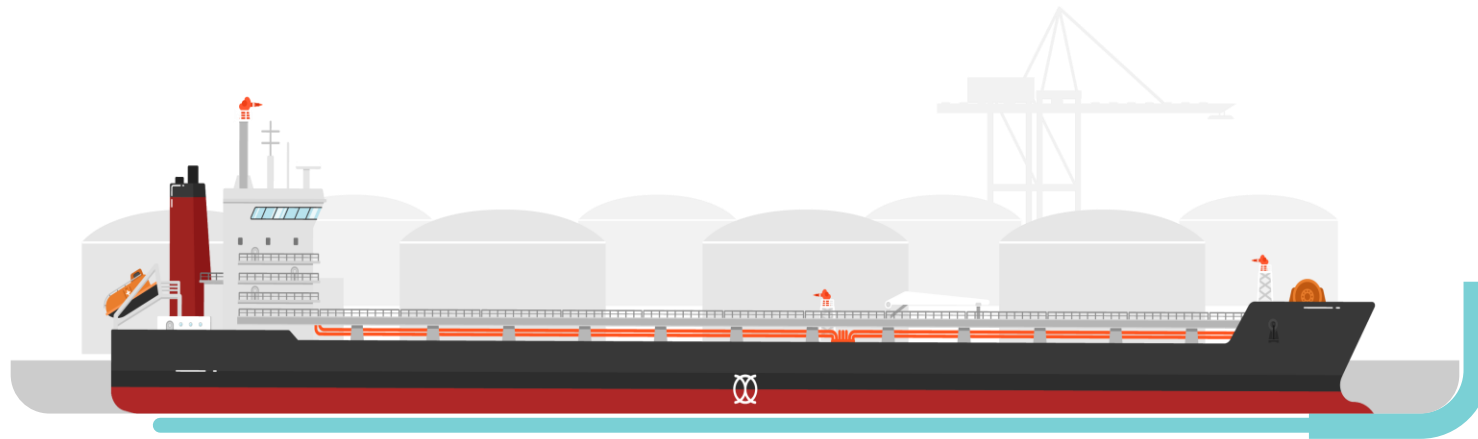
- Under EU ETS – during first year (2025), ships only need to pay for **20%** of their total emissions (40% of 50%).
- If cost of EU allowances is 75 Euros a tonne of CO<sub>2</sub> (it's currently much less) that's equivalent to about 15 Euros per tonne of CO<sub>2</sub>
- Similar to possible upper end of potential landing zone of **about US\$17.5** per tonne of CO<sub>2</sub>e?

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## 6. Governance of ZESF and IMSF

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## Governance of Zero Emission Shipping Fund (ZESF)

- To be overseen by MEPC
- Details, including management of funds, set out in suggested amendments to MARPOL Annex VI and supporting Guidelines
- But the fully automated contribution and reward system can be administered by IMO secretariat because no ‘policy’ decisions are required about the use of ZESF funds which will be set out in the regulations

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## Governance of IMO (GHG) Maritime Sustainability Fund (IMSF)

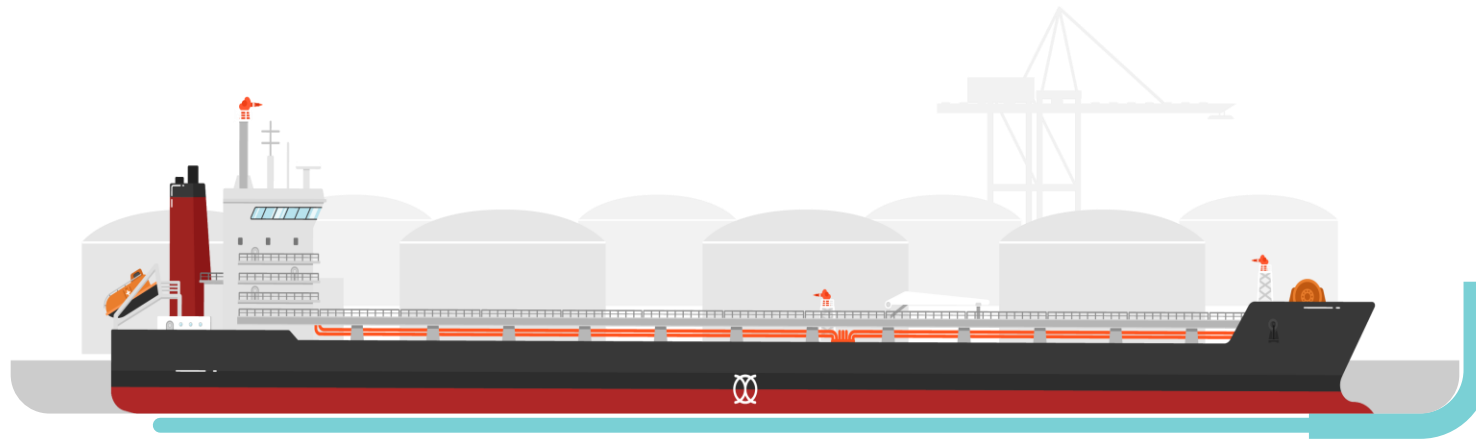
- **Supervisory Committee of State Parties**, will determine **priorities** as to how billions of US\$ of IMSF funds (transferred from ZESF) will best be used to support GHG reduction efforts of developing countries to achieve goals of 2023 IMO GHG Strategy
- Decisions on specific programmes and projects IMSF will fund, plus robust conduct/oversight, can be delegated to other UN agencies
- **Terms of Reference** for IMSF to be finalised after measure is adopted – **immediate priority is to establish regulatory architecture of ZESF contribution system to ensure funding to support developing countries**

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## 5. Conclusions and action requested of IMO Member States

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## Conclusions

- The ZESF and Feebate mechanism is the only comprehensive proposal which will guarantee the billions of US dollars required for a truly global transition, including billions of dollars to support developing countries
- Document ISWG-GHG 16/2/3 sets out complete package for the regulatory architecture which can realistically be finalised for approval as a maritime GHG emissions pricing measure at MEPC 83 (Spring 2025) as required by 2023 IMO GHG Strategy
- **For MEPC 83 to be able to approve a measure, work needs to start on new MARPOL Annex VI regulations immediately**

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**Conclusions: Feebate mechanism will accelerate “take-off” point for production and uptake of zero/near-zero GHG marine fuels, so that 2040 and 2050 goals remain achievable**

- The mechanism achieves this by **reducing cost gap** and **de-risking** urgent investment decisions, funding rewards for CO<sub>2</sub>e emissions prevented by the use of zero/near-zero GHG fuels and technologies
- **Billions of US dollars will also be provided to support developing countries’ production of ‘green’ fuels and bunkering infrastructure in ports, which contributions by ships to ZESF will provide via the separate IMO (GHG) Maritime Sustainability Fund (IMSF)**
-

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## Conclusions: The feebate mechanism will:

- Due to the **reward** element, **multiply** the effect of the contribution rate to significantly reduce the cost gap, with **minimal economic impacts** on IMO Member States
- Involve minimal administrative burden for Administrations
- Help deliver IMO goal for **5-10%** of the energy used by shipping to come from zero/near-zero GHG sources by **2030** – but also leaving open a pathway to a 70-80% cut in absolute emissions for 2040, so that reaching net zero, by or around 2050, remains **achievable and plausible**



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Key advantage of Fund and Reward (Feebate) mechanism is:



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**Certainty** as to amount of funds to be raised

**Certainty** as to rewards to incentivize, de-risk and accelerate transition

**Certainty** as to guaranteed billions of US dollars of funding for developing countries

**Certainty** as to how the ship complies

**Certainty** as to potential economic impacts on fuel costs and States

**Certainty** for Administrations and Port States as to minimal administrative burden and how the requirements will be robustly enforced

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## Action required by Member States

- A Fund and Reward (Feebate) mechanism should be taken forward as a maritime GHG emissions pricing mechanism, as required by the 2023 IMO GHG Strategy
- This should be prioritised by MEPC 81 for development and adoption as **a separate economic measure** by 2025, as part of a **basket** of mid-term measures that also includes a Global (GHG) Fuel Standard as a separate technical measure
- In view of the urgency, ISWG-GHG 17 should be instructed to develop necessary MARPOL amendments for submission to MEPC 82

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## The Elevator Pitch

- The ZESF will **de-risk** investment decisions which are urgently required to ensure a “take off” point for production/uptake of green marine fuels is achieved by 2030 to keep pathway open to net zero by 2050
- Reward mechanism significantly reduces cost gap by **multiplying** the effect of the contribution rate
- This avoids need for a higher contribution rate or negative economic impacts on trade or States
- Yet still generates billions of US\$ to support developing countries to ensure a transition which is just and equitable, global and successful

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# And finally....



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Key advantage of Fund and Reward (Feebate) mechanism is:

**“Beautiful simplicity”**



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## Demonstration of ZESF web-site based contribution system prototype, developed by ICS

Please click link below (please allow a few moments to load)

[▶ Combined sets - ZESF Prototype 2024 \(figma.com\)](#)