



MARITIME DECARBONISATION INTERNATIONAL WORKING GROUP

Tokyo, 14 May 2025



INTERNATIONAL WORKING GROUP ON MARITIME DECARBONISATION

AGENDA



+ IWG STEERING COMMITTEE

- Haris Zografakis, Chair
- Charles Debattista
- Jolien Kruit
- Neil Henderson
- Marianthi Koutri, secretary to the SteerCo

+ INTRODUCTION

- From Gothenburg to Tokyo
Haris Zografakis, IWG Chair

+ WORKSTRAM UPDATES

- **Green Ships**
Haris Zografakis
- **Green Contracts**
Helen Barden
Alexandra Couvadelli
- **Green Fuels**
Jolien Kruit
Neil Henderson

+ PANEL DISCUSSION

Moderator: Haris Zografakis

- Toru Hikima, MOL
- Masahiko Azegami, Development Bank of Japan
- Masahiro Max Takahashi, Japan Marine Science
- Lynn Loo, Global Center for Maritime Decarbonisation



GREEN SHIPS WORKSTREAM

GREEN SHIPS WORKSTREAM

Zero readiness levels

Zero readiness level (ZRL)		
Level	Name	Required criteria
1	Alternative fuel capable vessel	Commissioning trials successfully completed.
2	Ready for trial	All required equipment installed onboard.
3	Installation in progress	Power sources designed and tested, space provided for fuel containment and systems.
4	Fuel system prepared	Fuel containment and supply system approved and prototype tested.
5	Design approval	Approval in principle provided for overall design concept.
-	Fossil fuel only	No viable possibility of retrofit.

- + Notes on national law in relation to zero-ready framework
 - Definitions and description
 - Warranties
 - Fitness for purpose
 - Tort
- + Comments under the laws of England & Wales, Germany Hong Kong, Japan, Korea, Netherlands, PRC
- + Collaboration with BIMCO



GREEN CONTRACTS WORKSTREAM



Green Contracts Workstream

Helen Barden, NorthStandard
Alexandra Couvadelli, Gard

CMI Tokyo
13-17 May 2025





Green Contracts Working Group



**Charles
Debattista**

Chair of the
working group



**Helen
Barden**

Time
Charterparties



**Alexandra
Couvadelli**

Bunker
Contracts



**Grant
Hunter**

Sales
Contracts



**Daniel-Luc
Farrugia**

Bills of
Lading



IMO

2023 GHG Strategy

**CII, EEXI, EEDI, MBM
approved at MEPC83**



Developing national and regional regulation

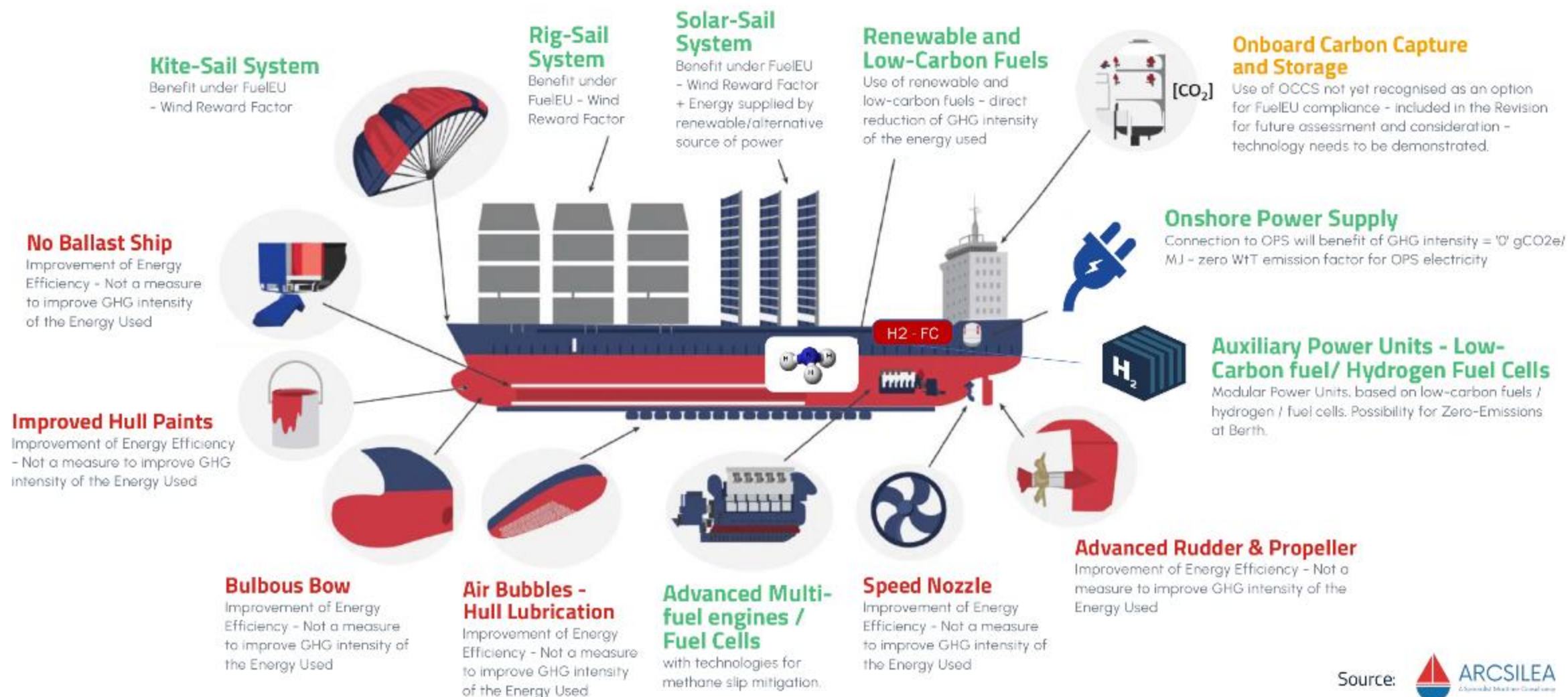


Relevant for FuelEU

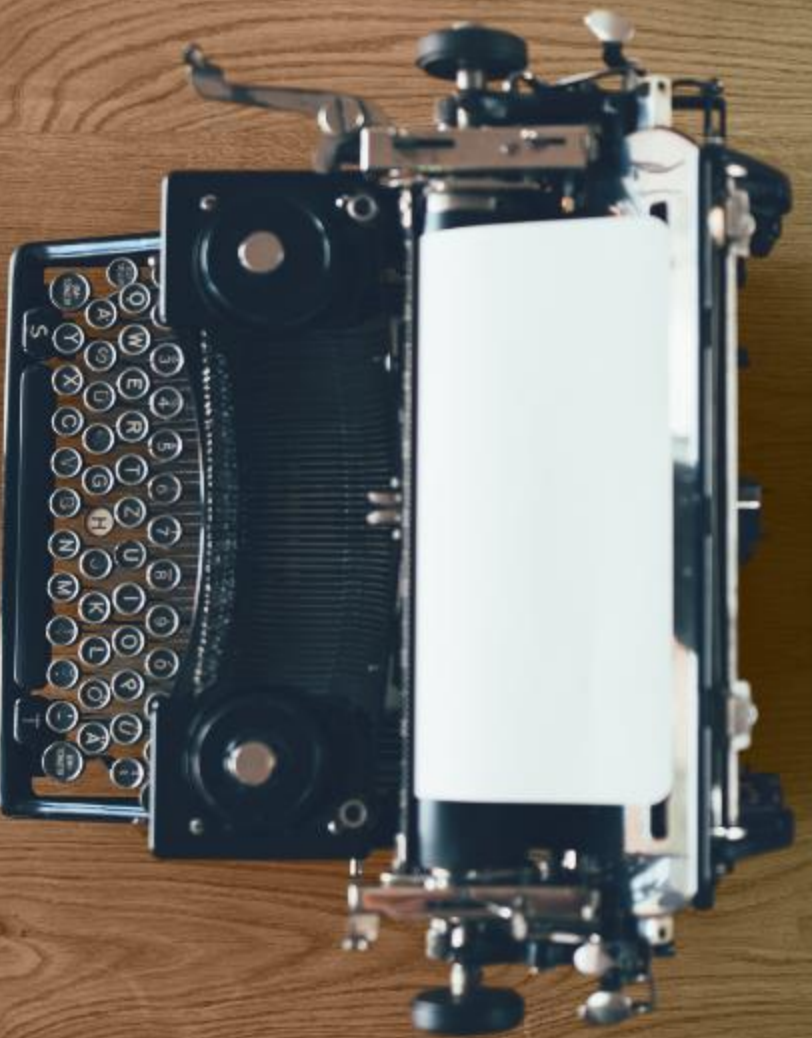
Possible in future revision for FuelEU

Energy Efficiency - Not relevant for FuelEU

(even though, total energy consumption does affect compliance balance calculation - important for calculation of compliance "deficit" or "surplus")



Source:





Time Charterparties



- ? Can an owner refuse a charterer's order that may cause an owner to be in breach of global emission regulation?
- ? Can a charterer oblige owners to implement technical modifications and operational efficiencies for regulatory compliance?
- ? Could maintenance obligations on owners equate an owner being obliged to bring the vessel up to more efficient market standards, whether explicitly regulated for or not?
- ? Noting the term "efficient" condition on delivery may equate to seaworthiness and noting an owner's obligation as to the vessel's seaworthiness, could a charterer argue that the ship has not been delivered in a seaworthy condition if it is not "greenworthy".
- ? What tools are available to owners and charterers in the relevant jurisdiction to obtain disclosure of vessel efficiency data, including outputs from such data?

Sales Contracts



- ❓ How might greener shipping practices affect these obligations and the associated risks of delay under a sales contract?
- ❓ How might greener charterparties, which prioritise carbon intensity and energy efficiency impact demurrage as between the seller/charterer and buyer?
- ❓ In a greener shipping world, what criteria might define a "reasonable" contract of carriage?

Bills of Lading



- ❓ Does your law permit or encourage the inclusion of environmental clauses within Bills of Lading placing environmental responsibilities on carriers or shippers?
- ❓ Is there any reason in your domestic law of carriage why green-friendly clauses would not be recognized and enforced in Bills of Lading?
- ❓ How does your jurisdiction's law address the impact of green practices and environmental risks on the insurance and liability aspects of Bills of Lading?



Bunker Contracts

- ? What is the standard of due diligence required under your jurisdiction that a Buyer needs to demonstrate when considering, for example, certification of the fuel, vetting/KYC purposes.
- ? Will an implied term exist where the fuel specification is not compliant with MARPOL regulation or other relevant regulation that the fuel is "not fit for purpose"?
- ? How will the local Courts interpret the effect of limitation of liability clauses when they provide for a very low threshold for such limitation of liability, or short time limit for notifying claims?
- ? Will the buyer be able to call on a breach of an implied term and claim damages for their losses in excess of the actual value of bunkers, for example for the penalties under FuelEU Maritime?

Next steps

We ask for a green light for the working group to draft a questionnaire for the consideration of the ExComm of the CMI for circulation to MLAs.



Questionnaire

1. Whether the existing law in the respective jurisdictions is already in a position to answer, and if so provide the answer;
 2. If an MLA's jurisdiction is not in a position to answer any of the specific questions set, then what vehicle would be most appropriate for the resolution of that question?
 3. Are there any other questions the MLA would like to see included?
-



Thank You

Helen Barden, NorthStandard
Alexandra Couvadelli, Gard

CMI Tokyo
13-17 May 2025



GREEN FUELS WORKSTREAM

International Liability and Compensation System for alternative fuels

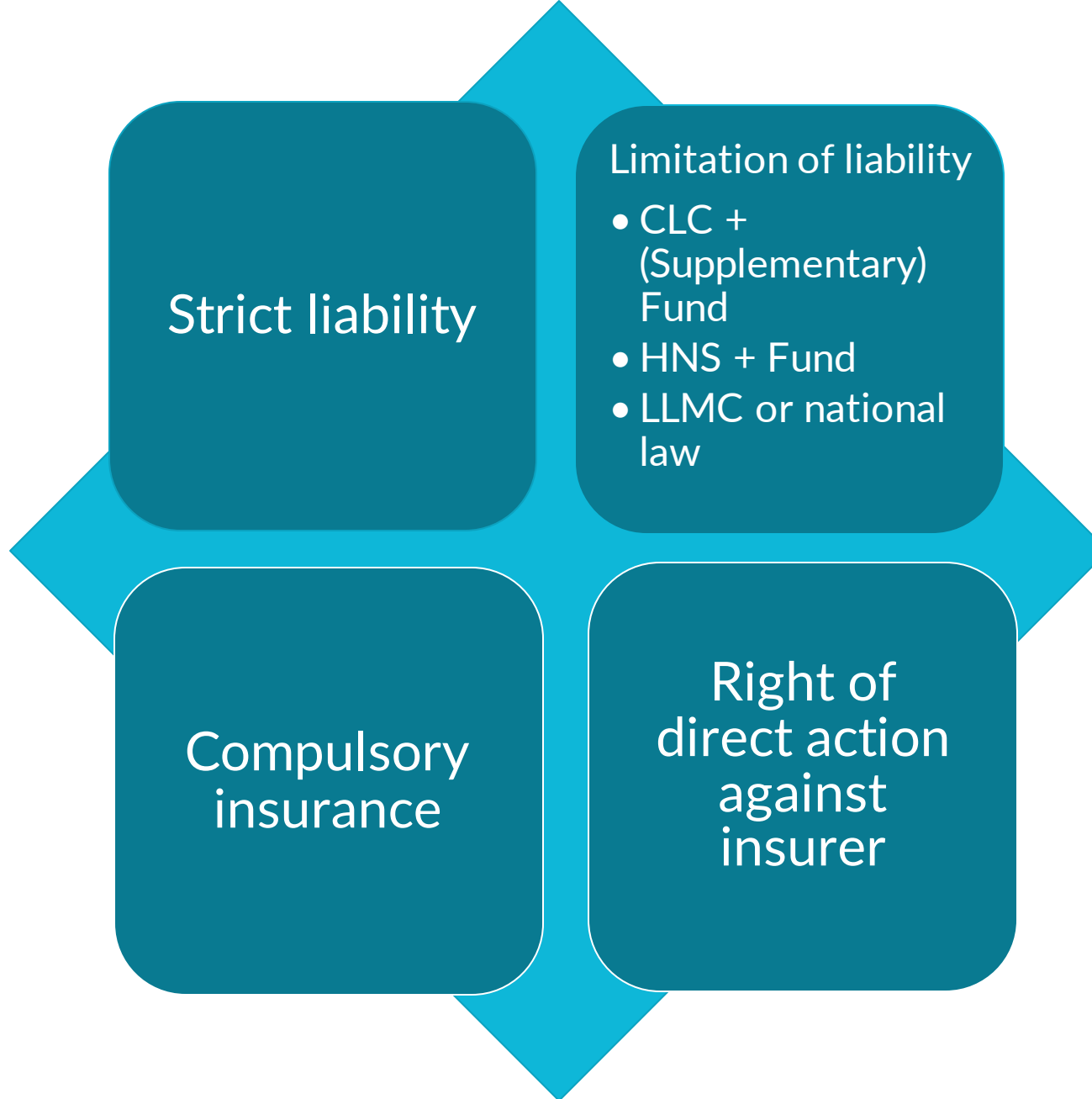
CMI IWG on Maritime Decarbonisation – Green Fuels

Dr. Jolien Kruit

Tokyo, 14 May 2025

CMI Gothenburg 2024

- ➔ No International civil liability and compensation regime for incidents involving alternative fuels
 - ➔ Alternative fuels are no hydrocarbons in the meaning
 - ➔ CLC + Fund: 122 ratifications
 - ➔ Bunker Pollution Convention: 100 ratifications
- ➔ HNS would only cover alternative fuels carried as cargo
 - ➔ Not yet in force
 - ➔ 12 ratifications only required



Strong drivers for Alternative Fuels



IMO

- * 2050 net zero
- * checkpoints for 2030 (30% reduction compared to 2008) and 2040 (70-80%)
- * MBM (if adopted in Oct '25)

IMO and Fuel EU Maritime:

Uptake of (near) zero GHG emission technologies, fuels and/or energy sources of at least 5-10%, of the energy used by international shipping by 2030

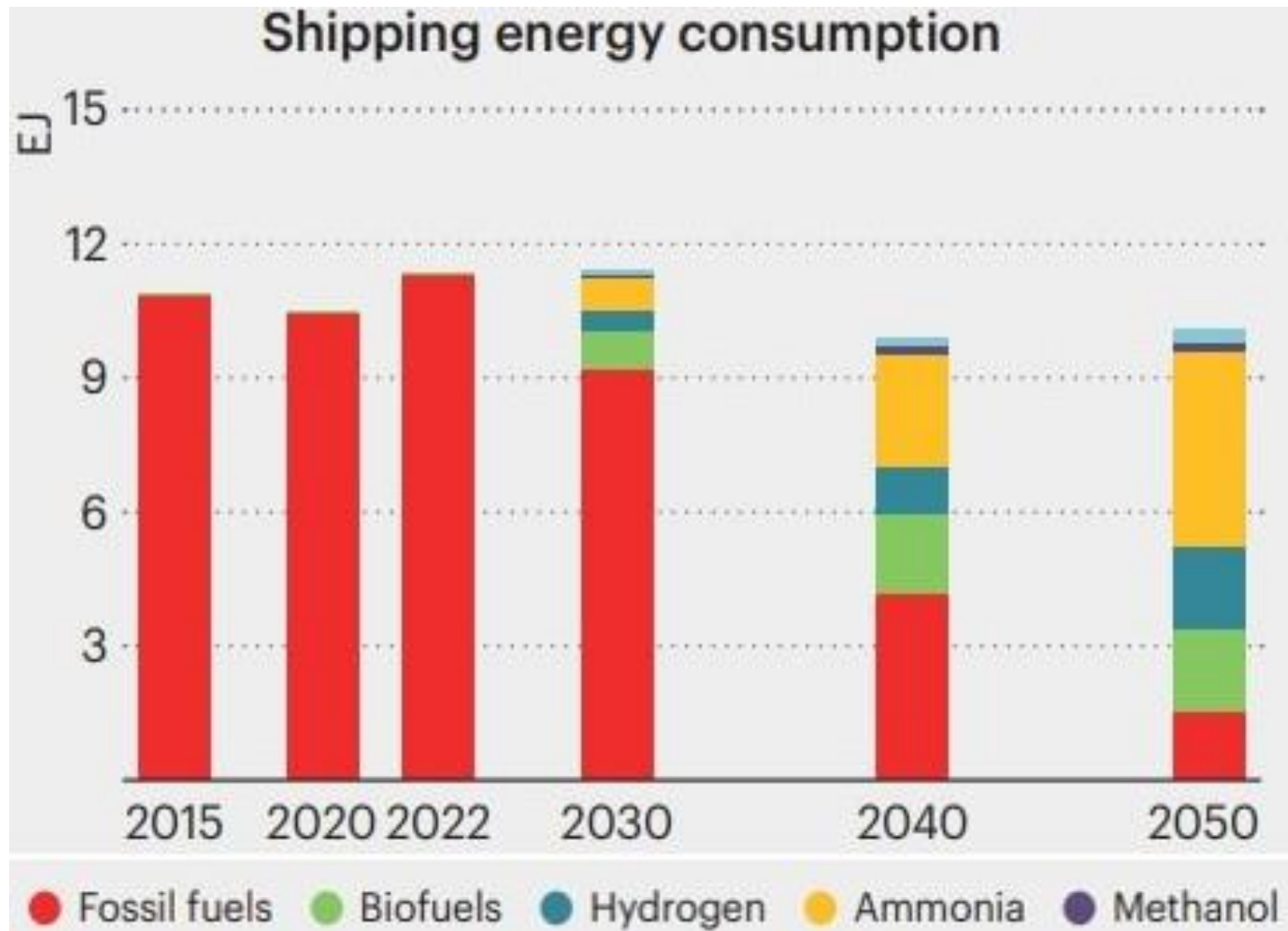


FUEL EU Maritime

Reduction of GHG intensity of energy



Customer driven uptake



Recommendation CMI IWG

- [Göteborg-discussion-paper-Green-Fuels-1.pdf](#):
- “There is a need for an **international discussion** on the necessity for a legal regime to deal with civil liability and compensation in case of an incident involving alternative fuels, either carried on board vessels as cargo or to be used as fuel.”

IWG's two main focus points

- i. Raising awareness of the identified liability and compensation gap, and the need for action at international level to close this gap; and
- ii. Providing output on specific aspects that may be helpful for the creation of an international regime



Nick Gaskell



Jan-Erik Pötschke



Neil Henderson



Jaime Albors



Hannah Mosmans



Fred Kenney



Jolien Kruit



Haris Zografakis



INTERNATIONAL
MARITIME
ORGANIZATION

E

LEGAL COMMITTEE
112th session
Agenda item 13

LEG 112/13/2
20 December 2024
Original: ENGLISH

Pre-session public release: ☒

WORK PROGRAMME

**Proposal to add a new output on the work programme on the suitability of
IMO liability and compensation regimes with respect to alternative fuels**

**Submitted by Antigua and Barbuda, Australia, Belgium, Canada, Denmark, Fiji, France,
Germany, Netherlands (Kingdom of the), New Zealand, Norway, Solomon Islands,
Spain, Tuvalu, Comité Maritime International (CMI) and International Group of
Protection and Indemnity Associations (P & I Clubs)**

Proposal that the IMO Legal Committee

- i. undertakes an analysis of the CLC, HNS and Bunker Pollution Convention to assess their current suitability for responding to claims for injury, pollution or damage (including positive and negative aspects) following an incident arising from, or related to, use of alternative fuels;
- ii. if none of the Conventions are currently suitable, (...) to **recommend the characteristics of a liability and compensation regime** (...); and
- iii. to identify and recommend the most suitable mechanism to provide the required characteristics, including by amending a current instrument or developing a new one.

IMO pathway

- ➔ Proposal accepted on 25 March 2025
- ➔ If adopted it will be placed on the work programme of the IMO Legal Committee in the next biennium (2026-2027)
- ➔ An informal correspondence group on the subject is to be formed, so work is started soonest
- ➔ CMI has offered its assistance in a separate paper (LEG 112/13/2)

IMO pathway

- IMO MEPC 83: **IMO Net-zero Framework** agreed, i.e. the first in the world to combine mandatory emissions limits and GHG pricing across an entire industry
 - MARPOL Annex VI
 - currently 108 Parties, covering 97% of the world's merchant shipping fleet by tonnage
 - Part of the revenues are intended to be circulated back to the industry as support for using zero and near-zero, fuels and/or energy sources

MEPC placeholder?

- ➔ Might the IMO fund from the mid-term measures be an appropriate source of financing for a second-tier fund for any future liability and compensation regime for alternative fuels?

Thank **you**



Dr. Jolien Kruit

Advocaat Partner | Van Traa Advocaten N.V.
kruit@vantraa.nl | M +31 6 46 00 40 43 | D +31 10 22 45 511
P.O. Box 21390, 3001 AJ Rotterdam, the Netherlands
Minervahuis II, Meent 94, 3011 JP Rotterdam, the Netherlands
www.vantraa.nl | [LinkedIn](#) | [Twitter](#) | [Nieuwsbrief](#)



Greener Fuels: update on work programme

CMI Colloquium, Tokyo, May 2025

Neil Henderson*



*any views expressed are my own and do not necessarily reflect those of Gard or the International Group of P&I Clubs

Request for feedback from National MLAs

1. *Does your country have any existing specific law or legislation that might deal with liability for alternative fuels (apart from general tort/delictual law, or global limitation provisions for maritime claims)?*
2. *If so, please provide the reference to and a copy of the specific legislation or a link thereto.*
3. *If not, does your country have any plans to introduce legislation dealing with liability and compensation in respect of alternative fuels?*

- Green Fuels Gothenburg Discussion Paper, 4 June 2024
- 21 October: RFF circulated to National MLAs with the Gothenburg Discussion Paper
- Feedback received from 9 National MLAs*:
 - No legislation in place or plans to introduce legislation
 - Recognised need for an international regime

*Belgium, China, Germany, Greece, Italy, Malta, Netherlands, Turkey, Venezuela

Work in progress

Supporting the IMO in its work on an international liability and compensation convention for alternative fuels, and

continuing to collaborate with key stakeholders on the issues

- Gap analysis of the Nairobi Wreck Removal Convention
- Second questionnaire to MLAs on revised paper (including NWRC)
- Paper on whether biofuel blends and biofuels are covered by the Bunkers Convention
- 'Elements' list for a convention covering alternative fuels: strict liability, mandatory insurance, limitation of liability etc.

Thank you

INTERNATIONAL WORKING GROUP ON MARITIME DECARBONISATION

AGENDA



+ IWG STEERING COMMITTEE

- Haris Zografakis, Chair
- Charles Debattista
- Jolien Kruit
- Neil Henderson
- Marianthi Koutri, secretary to the SteerCo

+ INTRODUCTION

- From Gothenburg to Tokyo
Haris Zografakis, IWG Chair

+ WORKSTRAM UPDATES

- **Green Ships**
Haris Zografakis
- **Green Contracts**
Helen Barden
Alexandra Couvadelli
- **Green Fuels**
Jolien Kruit
Neil Henderson

+ PANEL DISCUSSION

Moderator: Haris Zografakis

- Toru Hikima, MOL
- Masahiko Azegami, Development Bank of Japan
- Masahiro Max Takahashi, Japan Marine Science
- Lynn Loo, Global Center for Maritime Decarbonisation



PANEL DISCUSSION

Decarbonization Pathway to zero by or around 2050

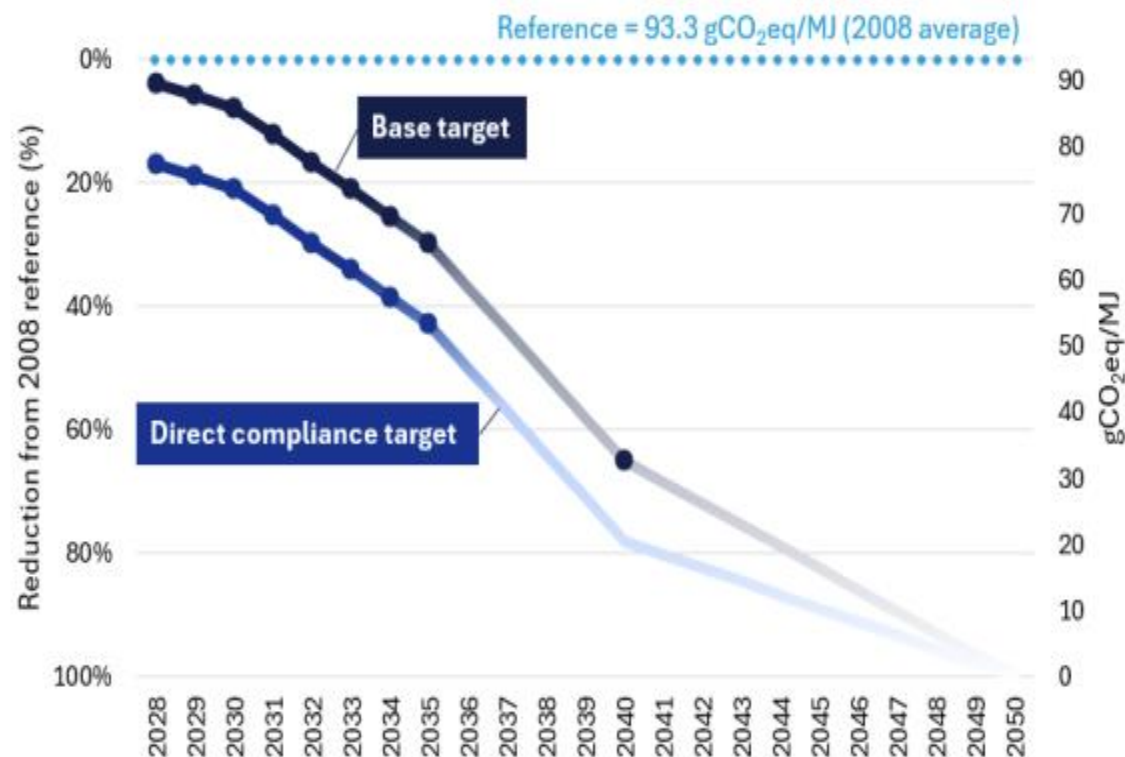
May 14, 2025
Masahiro (Max) Takahashi
Director / Managing Executive Officer
Japan Marine Science Inc.



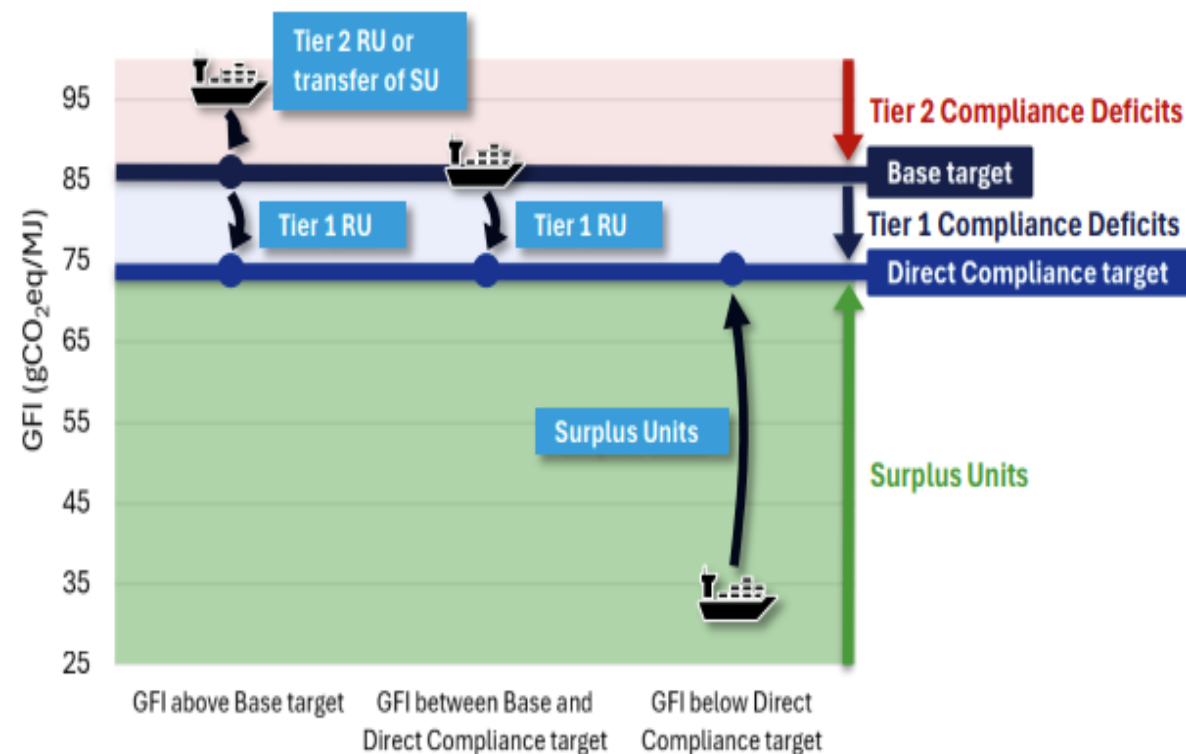
株式会社 日本海洋科学
Japan Marine Science Inc.

GHG emissions per unit of energy used on board a ship

$$GFI_{attained} = \frac{\sum_{j=1}^J EI_j \times Energy_j}{Energy_{total}}$$



Year	2028	2029	2030	2031	2032	2033	2034	2035	...	2040
Base	4%	6%	8%	12.4%	16.8%	21.2%	25.6%	30%		65%
Direct	17%	19%	21%	25.4%	29.8%	34.2%	38.6%	43%		-



Initial prices on Remedial Units, 2028 to 2030:

- Tier 1 RU: US\$ 100 per tonne of CO₂eq
- Tier 2 RU: US\$ 380 per tonne of CO₂eq

To be reviewed and adjusted from 2031

Use of IMO Net-Zero Fund

- The amount of annual revenue is expected to 10 to 15 Billion USD/year
- Part of the revenues are to be used as reward for use of ZNZs but not defined how much be given (to be determined by March 1, 2027)
- ZNZs which can receive reward is below 19 gCO₂/MJ (until end of 2034), then (from 2035) below 14 gCO₂/MJ (reviewed every 5 years)

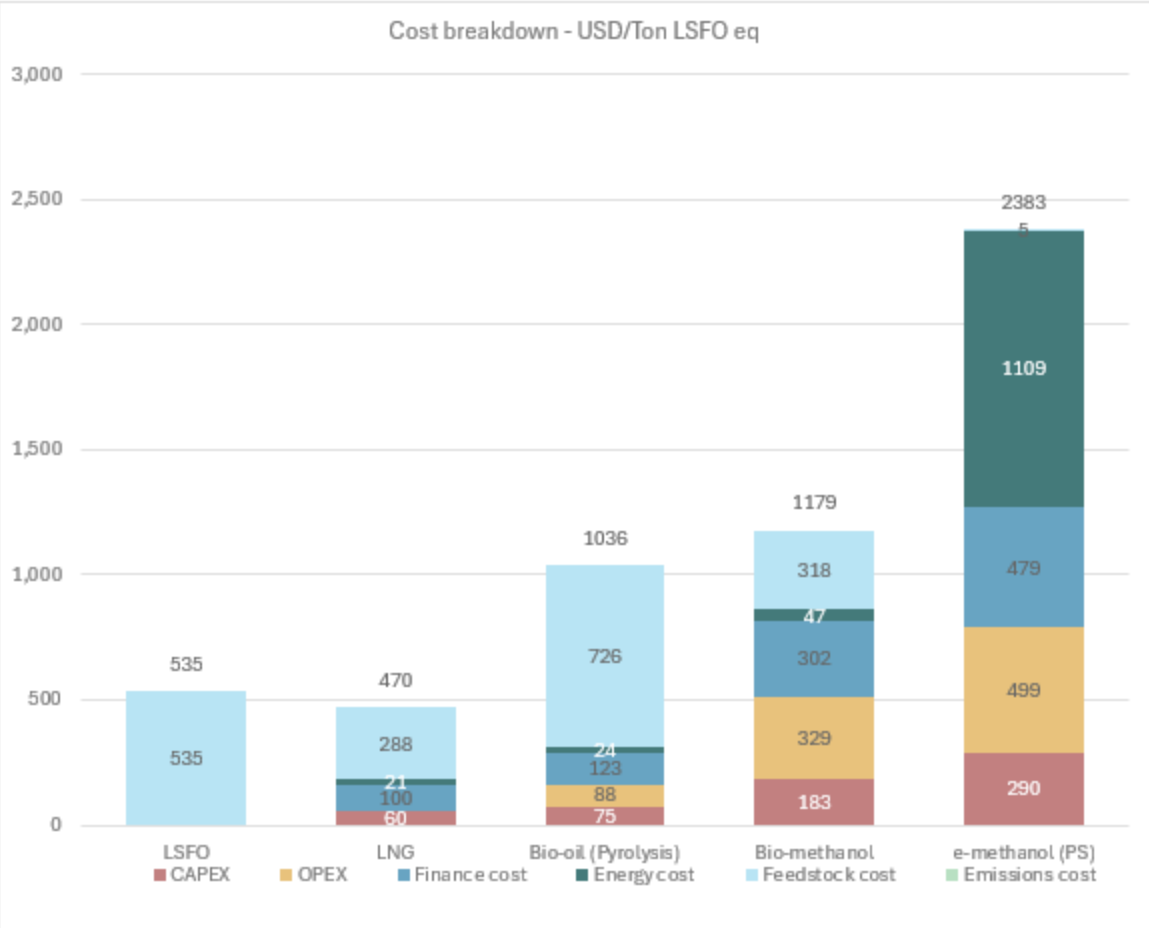
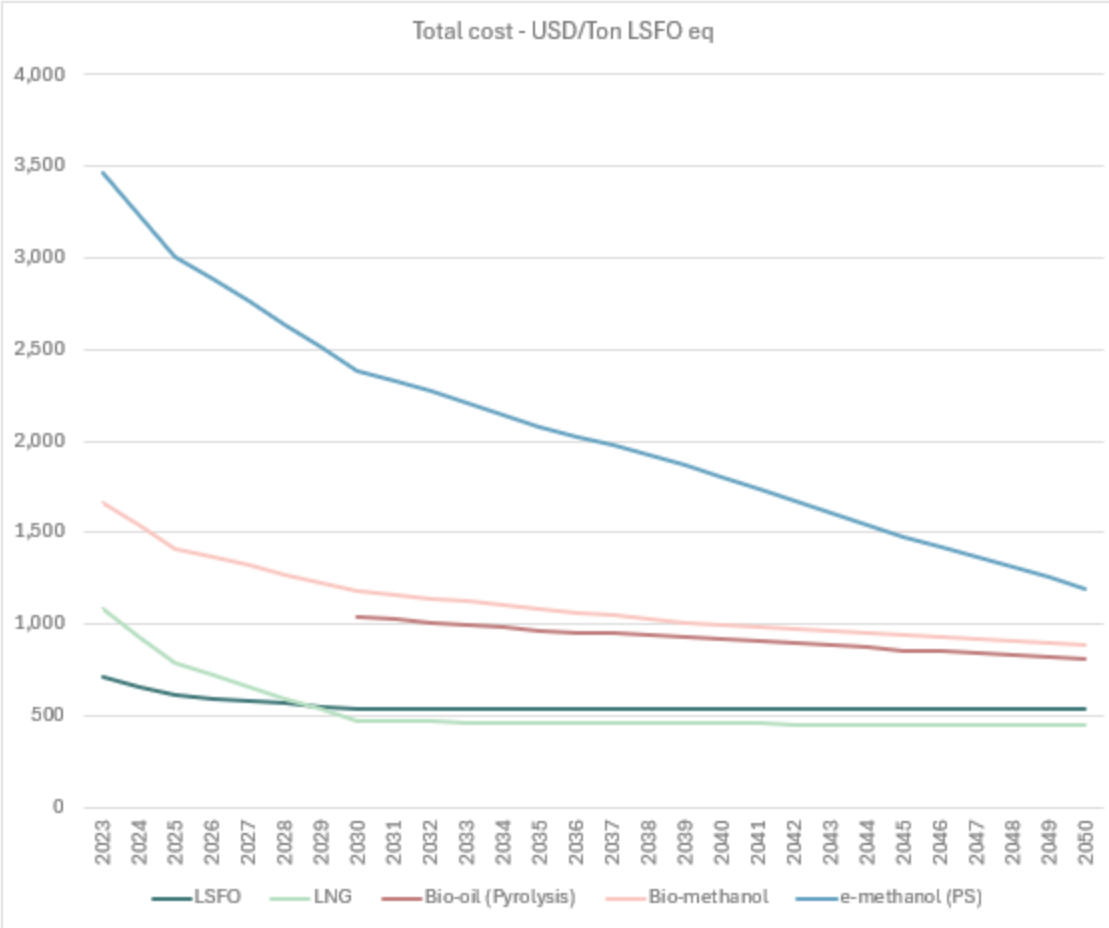
LSFO	94.2 gCO ₂ /MJ
Bio Diesel	33 gCO ₂ /MJ (IMO defined maximum value)
Bio Diesel(UCO)	15 gCO ₂ /MJ (Used Cooking Oil)
Blue Ammonia	83 gCO ₂ /MJ
Green Ammonia	17 gCO ₂ /MJ
Blue Methanol	69.1 gCO ₂ /MJ
Bio Methanol	9 gCO ₂ /MJ
Green Methanol	3 gCO ₂ /MJ

- Part of the revenues are to be used to support just and equitable transition of for SIDs and LDCs (related to maritime industry only?)

Region	Electricity cost	Emissions cost	Emissions scope	Cost unit	Year (for stacked bar chart)
Asia	Low	0	WTW	USD/Ton LSFO eq	2030

Comments:
Red cells can be changed

Fuel selector	Fuel 1	Fuel 2	Fuel 3	Fuel 4	Fuel 5
Fuel	LSFO	LNG	Bio-oil (Pyrolysis)	Bio-methanol	e-methanol (PS)

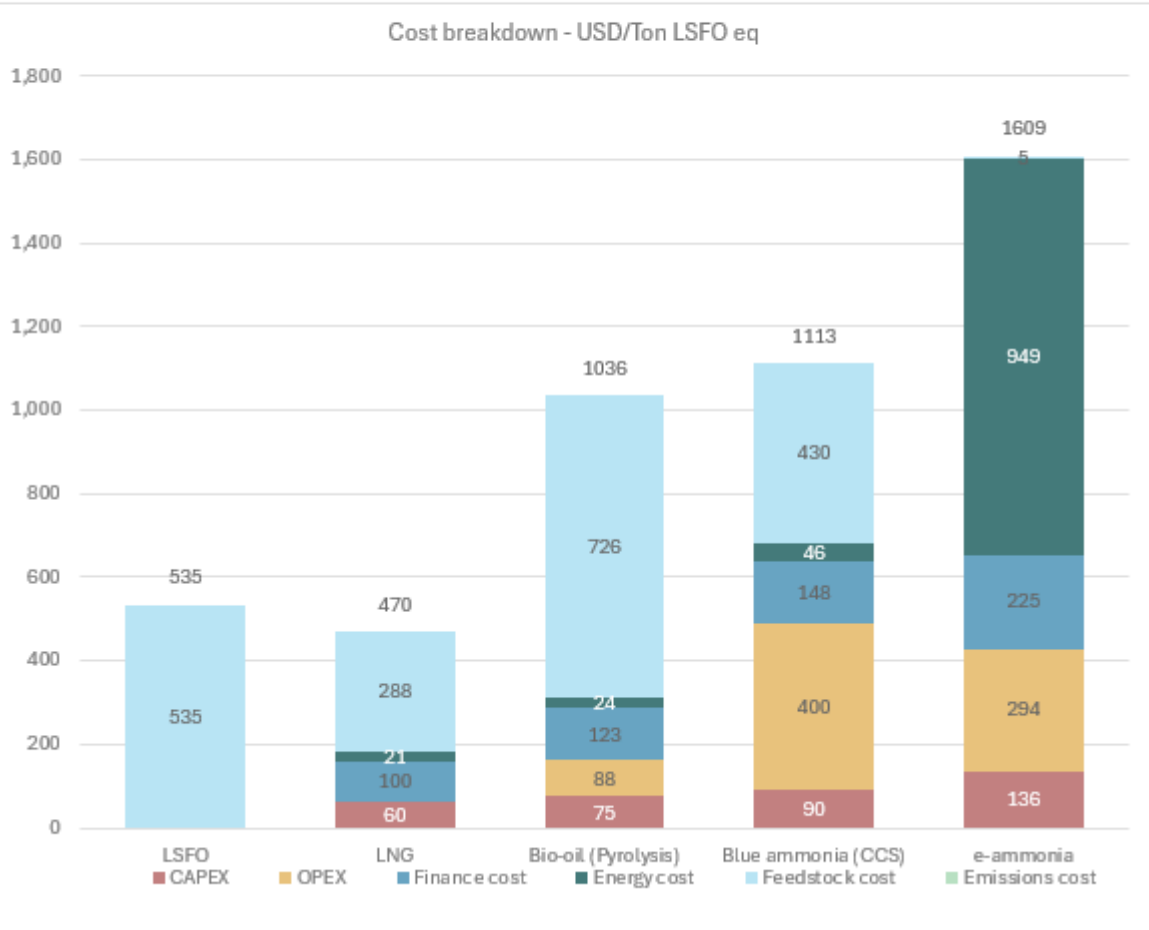
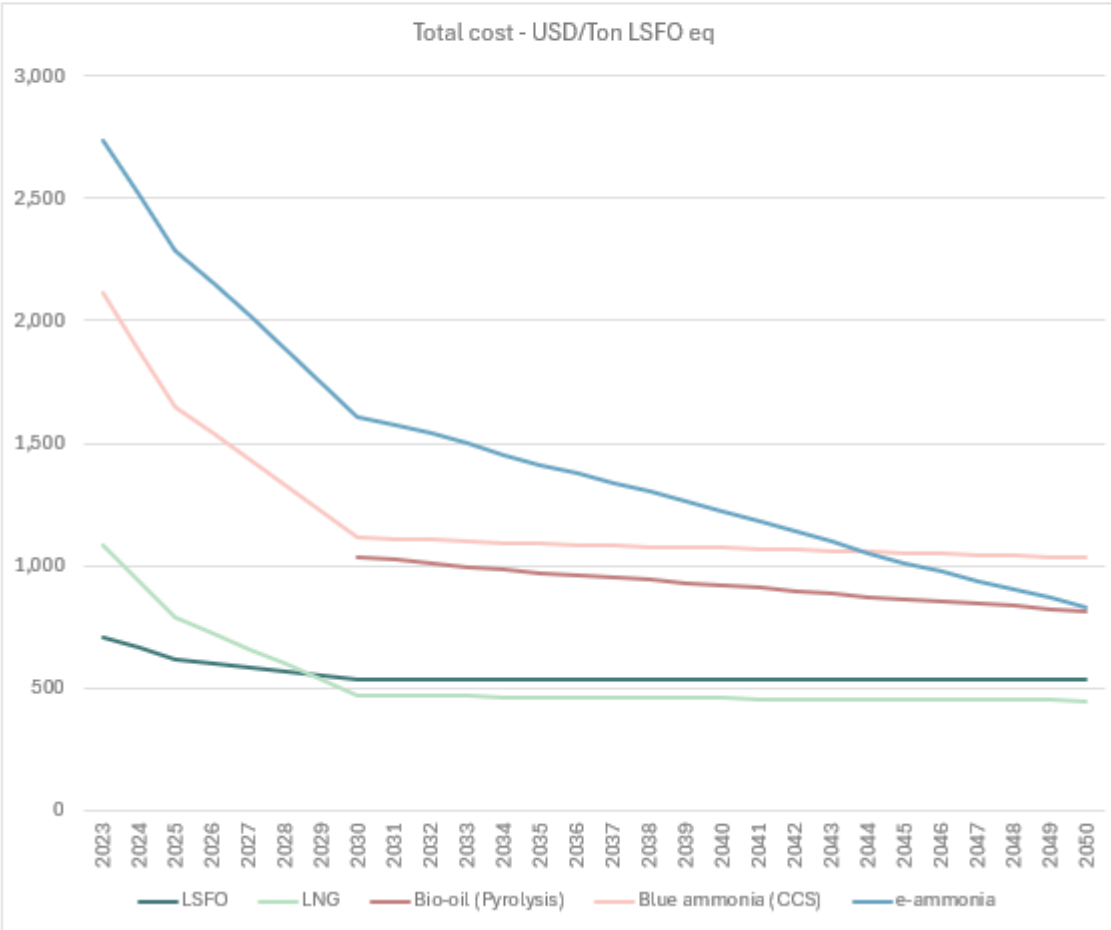


Source: fuel cost calculator v1.1 by MMMCZ

Region	Electricity cost	Emissions cost	Emissions scope	Cost unit	Year (for stacked bar chart)
Asia	Low	0	WTW	USD/Ton LSFO eq	2030

Comments:
Red cells can be changed

Fuel selector	Fuel 1	Fuel 2	Fuel 3	Fuel 4	Fuel 5
Fuel	LSFO	LNG	Bio-oil (Pyrolysis)	Blue ammonia (CCS)	e-ammonia



Source: fuel cost calculator v1.1 by MMCZ

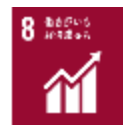
- Availability and cost of ZNZs for international shipping
- Could shipping demand encourage investment for fuel production? International shipping is just 3% of global GHG emission
- Limited capacity of ship building – dominant production capacity in China
- When break even point of using fossil fuel + penalty and zero emission ship + green fuel comes?
- Who will ultimately pay cost of decarbonization? Should IMO work as money collection and distribution mechanism for SIDs and LDCs? What is the role of UNFCCC?
- Ship owner and operator relationship. IMO regulation is for “a ship” but fuel is supplied by operator.
- Decision based on life cycle total cost of ships life (25years) including ships cost and fuel may encourage to build zero emission ships earlier, but usually time charter arrangement is not that long.

海に学び、人を紡ぎ、未来を織りなす



株式会社 日本海洋科学
Japan Marine Science Inc.

SUSTAINABLE
DEVELOPMENT
GOALS



私たちは持続可能な開発目標（SDG s）を支援しています。

免責事項

本資料は、電子的または機械的な方法を問わず、当社の書面による承諾を得ることなく複製又は頒布等を行わないようお願いします。

Legal Disclaimer

No part of this document shall be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior written permission of Japan Marine Science Inc.

Mitsui O.S.K. Lines, Ltd. (MOL)

Corporate profile

Dry Bulk Business



Energy Business



MOL Fleet Scale

873vessels

(as of as of March 2024)



Product Transport Business



Wellbeing & lifestyle Business, Associated Businesses, Others



MOL Group Environmental Vision 2.2

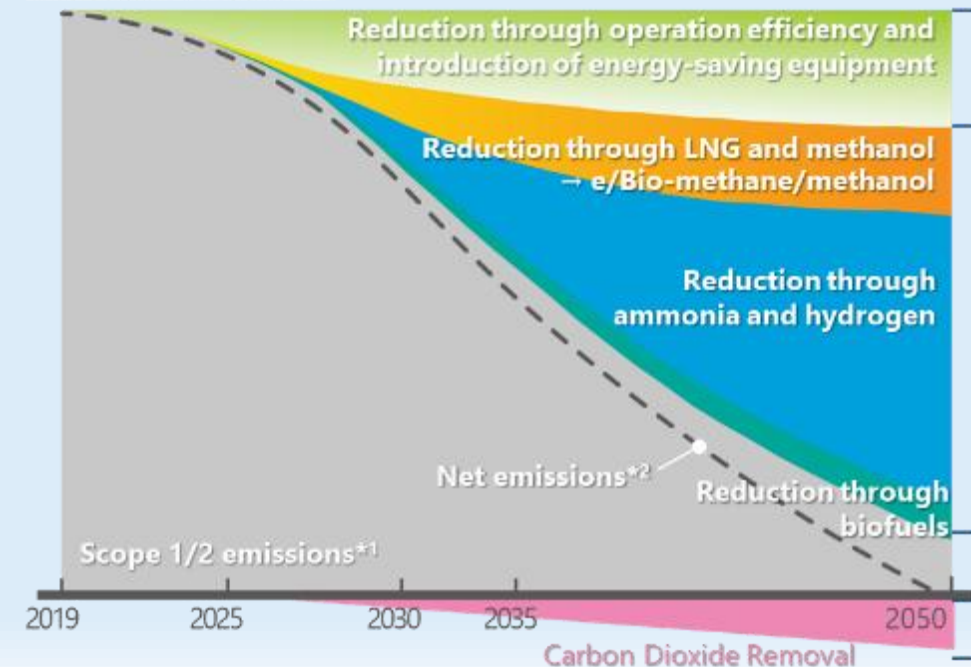
By 2035
Reduce GHG emissions
intensity by 45%

In addition to Scope 1, part of Scope 3 covered
(international marine transport operated by MOL)

By 2050
With the concerted effort throughout
the Group, achieve net zero GHG
emissions

All of Scope 1, 2, and 3 covered (MOL + consolidated subsidiaries)

Vertical axis: GHG emissions





MARITIME DECARBONISATION INTERNATIONAL WORKING GROUP

Tokyo, 14 May 2025

