

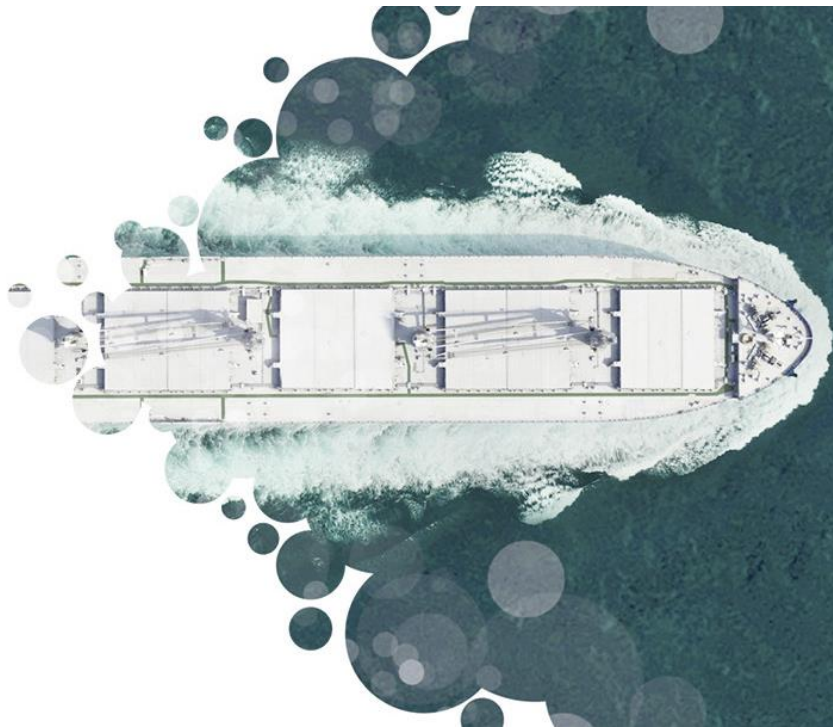


WHEN TRUST MATTERS

# EU ETS & FuelEU Maritime

DMET-MERI Alumni (Singapore)

Tore Longva  
Decarbonization Director, Regulatory Affairs



# EU has introduced two key legislations addressing shipping GHG emissions



**EU Emission Trading System (2024):  
Allowances equal to annual GHG emissions to  
be bought and surrendered**

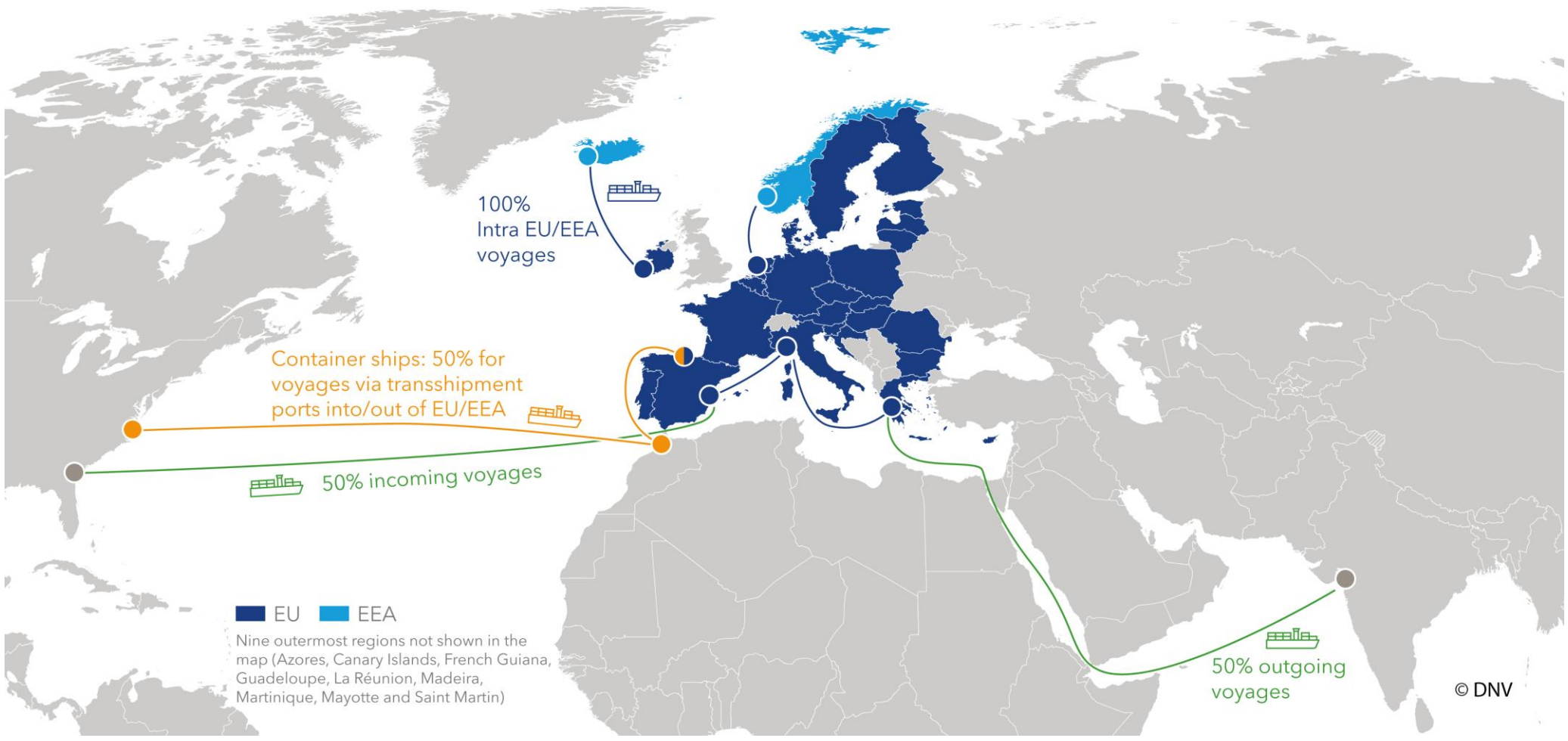
Currently EUA's trade between 80-100 €/tonne CO<sub>2</sub>



**FuelEU Maritime (2025): Reduced lifecycle  
GHG intensity of energy and mandatory shore  
power for passenger and container ships**

Starts at 2% reduction of well-to-wake emissions

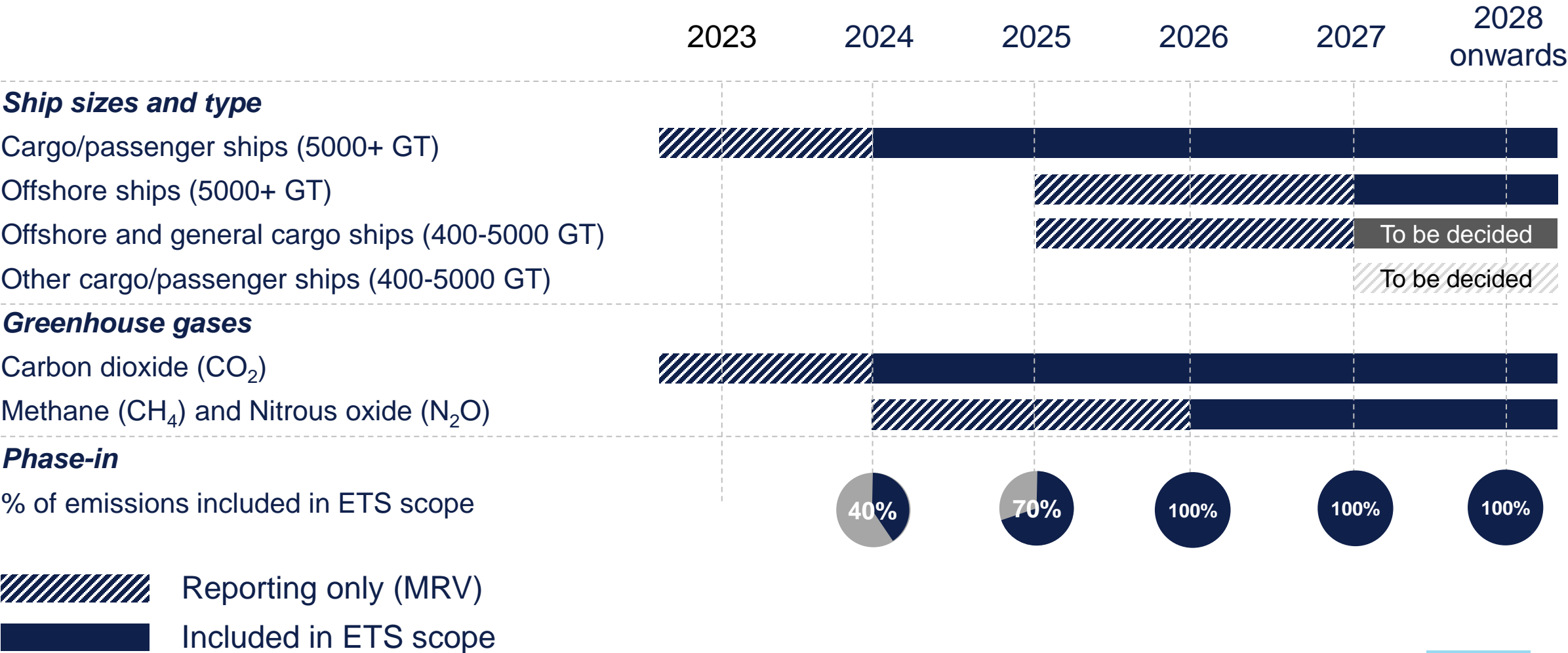
# ETS and FuelEU apply to voyages and port calls in EU/EEA and voyages to and from EU/EEA





# EU ETS

# Shipping to be included in the EU Emissions Trading System from 2024



# Implementation challenges

- Registered owner is the default company, but is in many cases a SPV – results in a large amount of MOHAs
- Multiple owners can have multiple ISM companies and vice versa
  - What happens in case of defaults?
  - Practical arrangement of emission reporting and surrendering of allowances
- Responsiveness of Administering Authorities when applying for MOHA (Maritime Operator Holding Account)
- Revision of commercial agreements to ensure coverage of financial liability.
- STS operations outside ports – infinite voyages



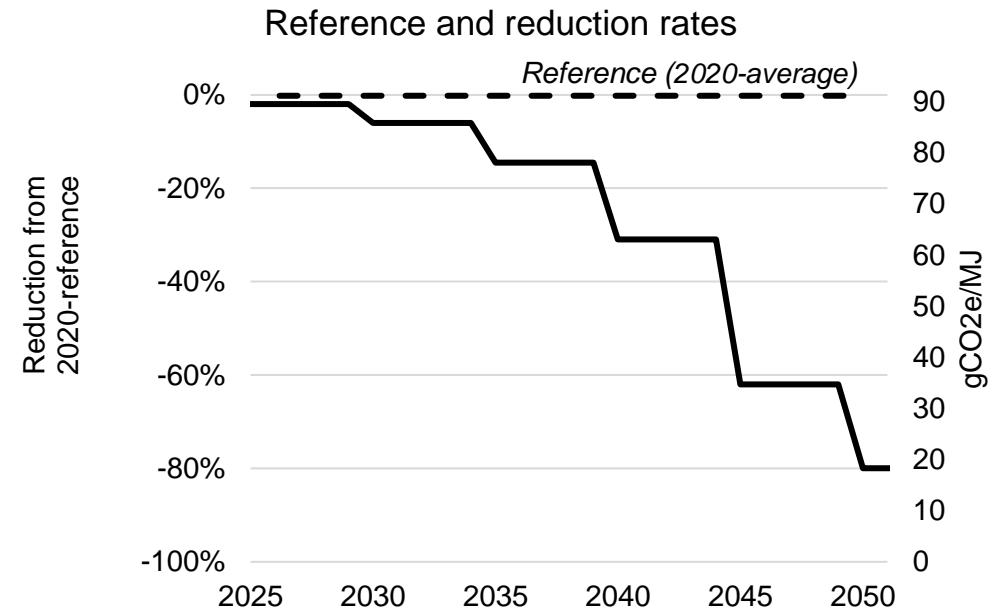


# FuelEU Maritime

# FuelEU Maritime – requirements to lifecycle GHG intensity of energy

- Requirement to the yearly **average well-to-wake GHG intensity of energy** used on-board:
  - All ships above 5000 GT transporting passengers or cargo
  - 50% of energy used on voyages between EU and non-EU ports, 100% of energy used on intra-EU voyages and when at berth
  - The **company responsible on 31 December is responsible for the whole year**, even if there was a change of company during the year.
  - Compliance can be **pooled** across a fleet of ships.
- Requirement to the **use of shore power**:
  - From 1 January 2030 for container and passenger ships not using zero-emission technologies: connect to shore power while at berth in TEN-T ports for more than 2 hours

$$\text{Well to Wake GHG intensity} = \frac{gCO_{2eq}}{MJ}$$

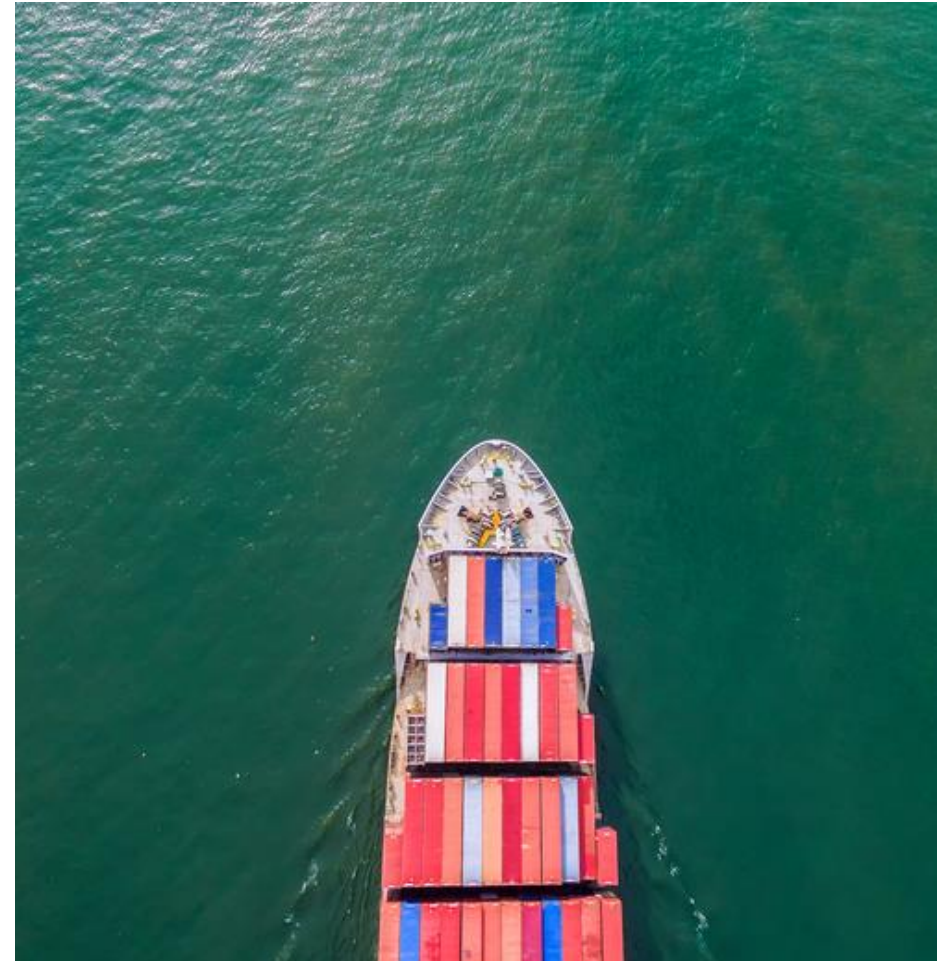


Reduction	2025	2030	2035	2040	2045	2050
Reduction (%)	2%	6%	14.5%	31%	62%	80%
Required GHG intensity (gCO <sub>2</sub> e/MJ)	89.3	85.7	77.9	62.9	34.6	18.2

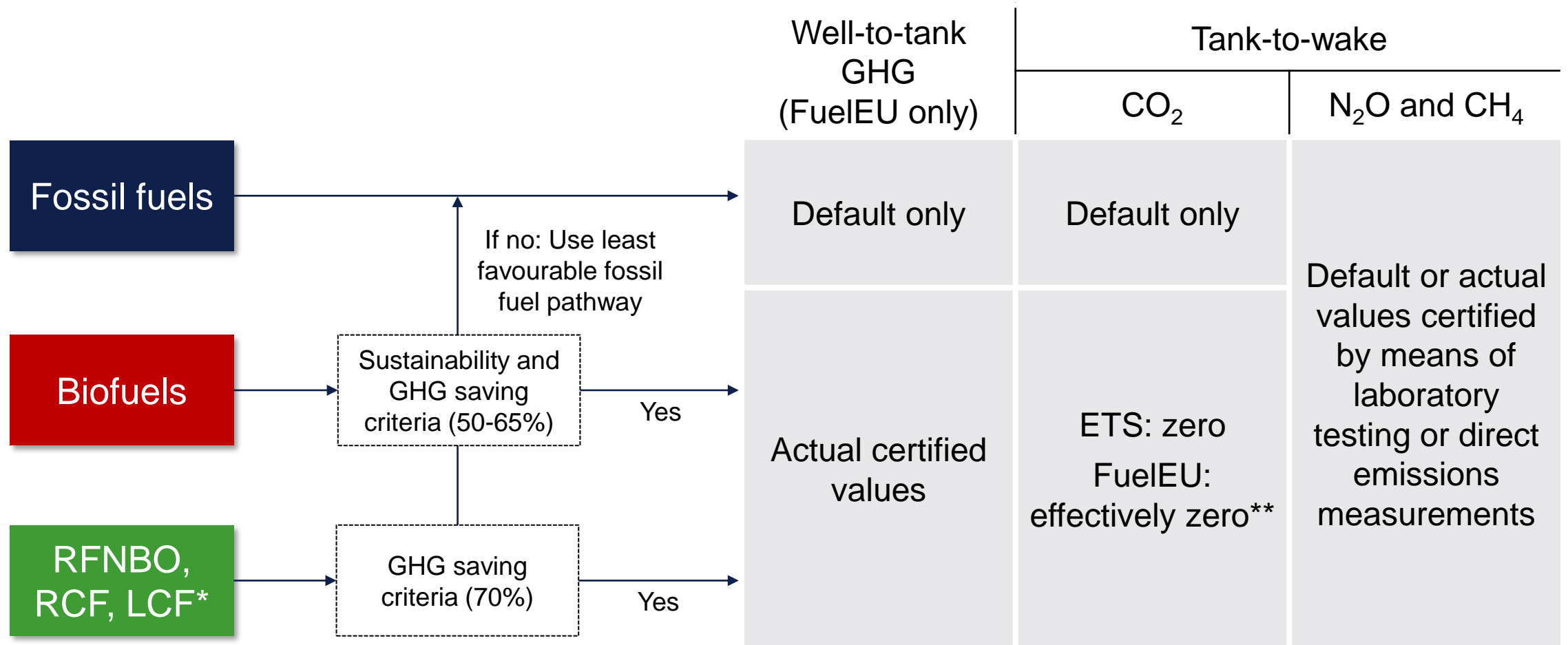


# EU ETS and FuelEU Maritime compliance options

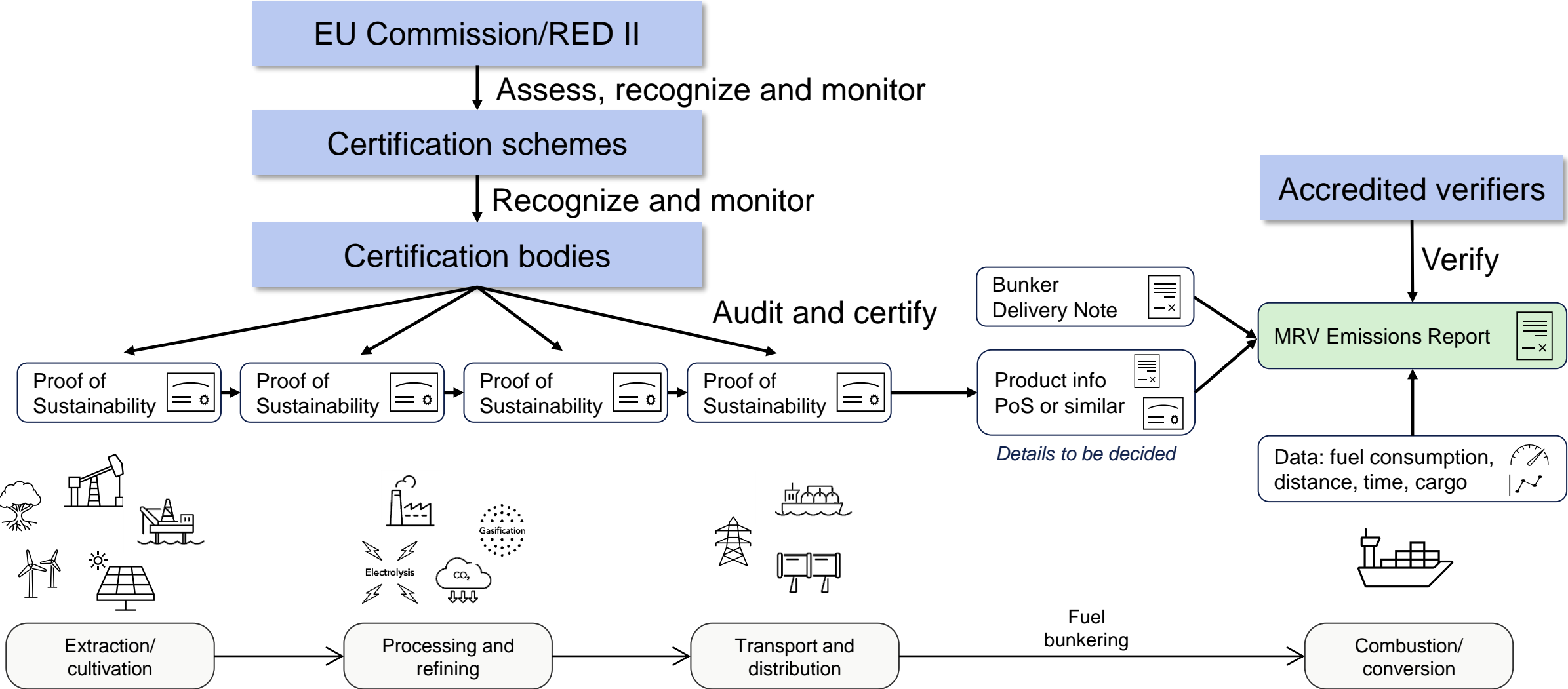
Option	EU ETS	FuelEU Maritime
Fossil LNG/LPG	+	+
Sustainable biofuels	++	++
Renewable fuels of non-biological origin (RFNBO), recycled carbon fuels (RCF) (e.g. e-methanol)	++	++
Shore power	++	++
Wind assisted propulsion	++	+
Energy efficiency	++	(++)
Onboard carbon capture and storage	++	?
Compliance balance (borrow, bank, pool)	N/A	+
Pay penalty	N/A	O



# Fuels and emission factors under FuelEU and ETS



# Certification of fuels and emissions reports



# Implementation advice

- The ISM company is always responsible, not the owner
- The ISM company responsible on 31 December is responsible for the whole year – make sure to know the GHG intensity performance when taking over a ship
- Plan for compliance by securing low emission fuel or through pooling of compliance
- Ensure that low emission fuels are always accompanied by a Proof of Sustainability
- Prepare for submission of Monitoring Plan by 31 August 2024

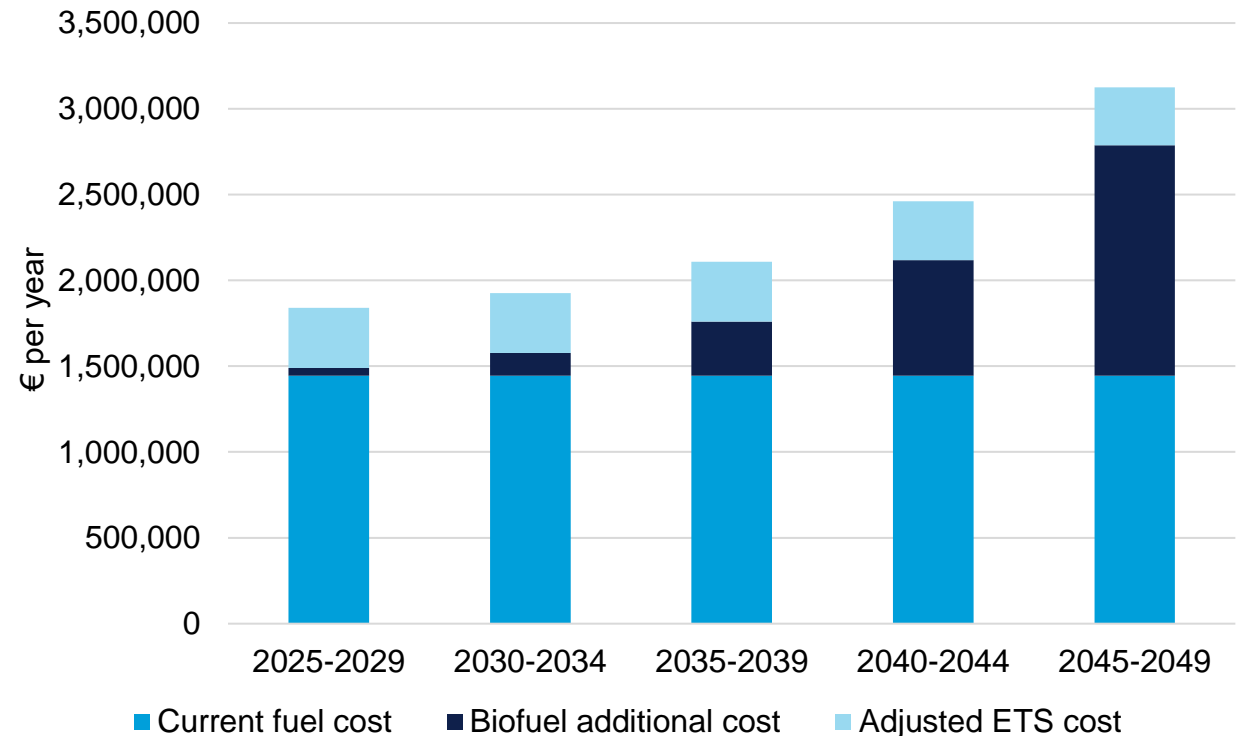




# Implications

# Potential impact of EU ETS and FuelEU using biofuel for one ship

- About 2500 t MGO @ 580 €/tonne fuel on voyages in or out of EU
- Switching to FuelEU required amount of sustainable biofuel @1060 €/tonne fuel
- ETS cost @90 €/tonne CO<sub>2</sub>e is reduced correspondingly
- FuelEU impact expected to be more significant over time



# Implications of EU ETS and FuelEU Maritime



- **Qualified and documented low well-to-wake GHG emission fuels** are essential
- Requires **updated commercial agreements**
- **Pooling compliance** with other ships possible also outside the company – ensures flexibility on which ship to apply measures
- Knowing and understanding your own **emissions data** will be business critical
- **Energy efficiency** improvements remain important although not directly required
- Impact of **FuelEU Maritime more significant than ETS** from mid-2030
- **IMO considering a similar measures** – EU will review ETS and FuelEU



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Tore.Longva@dnv.com

+47 957 00 428



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