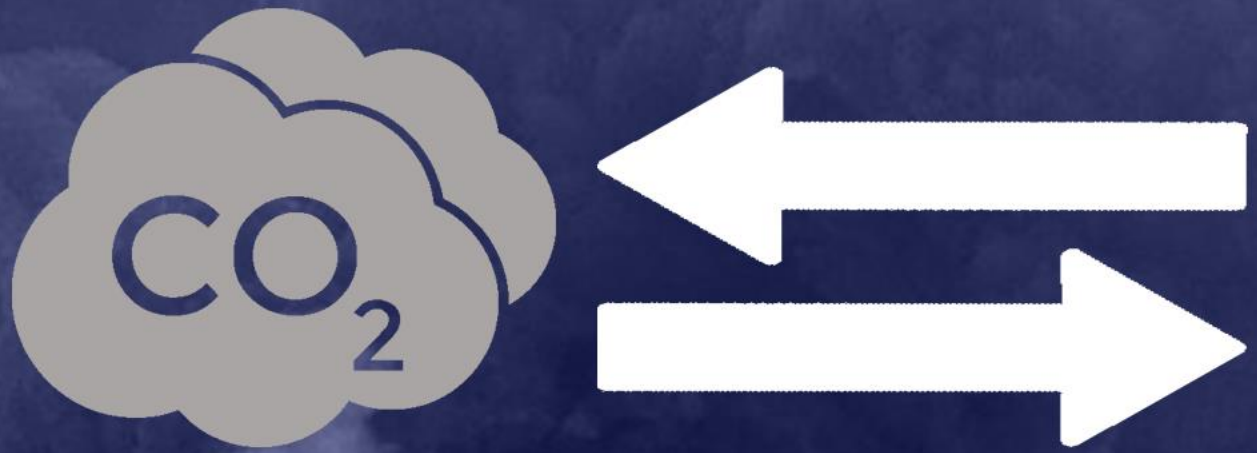
ECG
Business Intelligence

Emission Trading System

Making Sense of it All for FVL



Contents

Part 1 – EU Emission Trading System (ETS)—Overview Page 3

Part 2 –
- EU ETS for MARITIME Page 8
- EU ETS for ROAD TRANSPORT Page 14

Part 3 – Estimating Costs Page 17

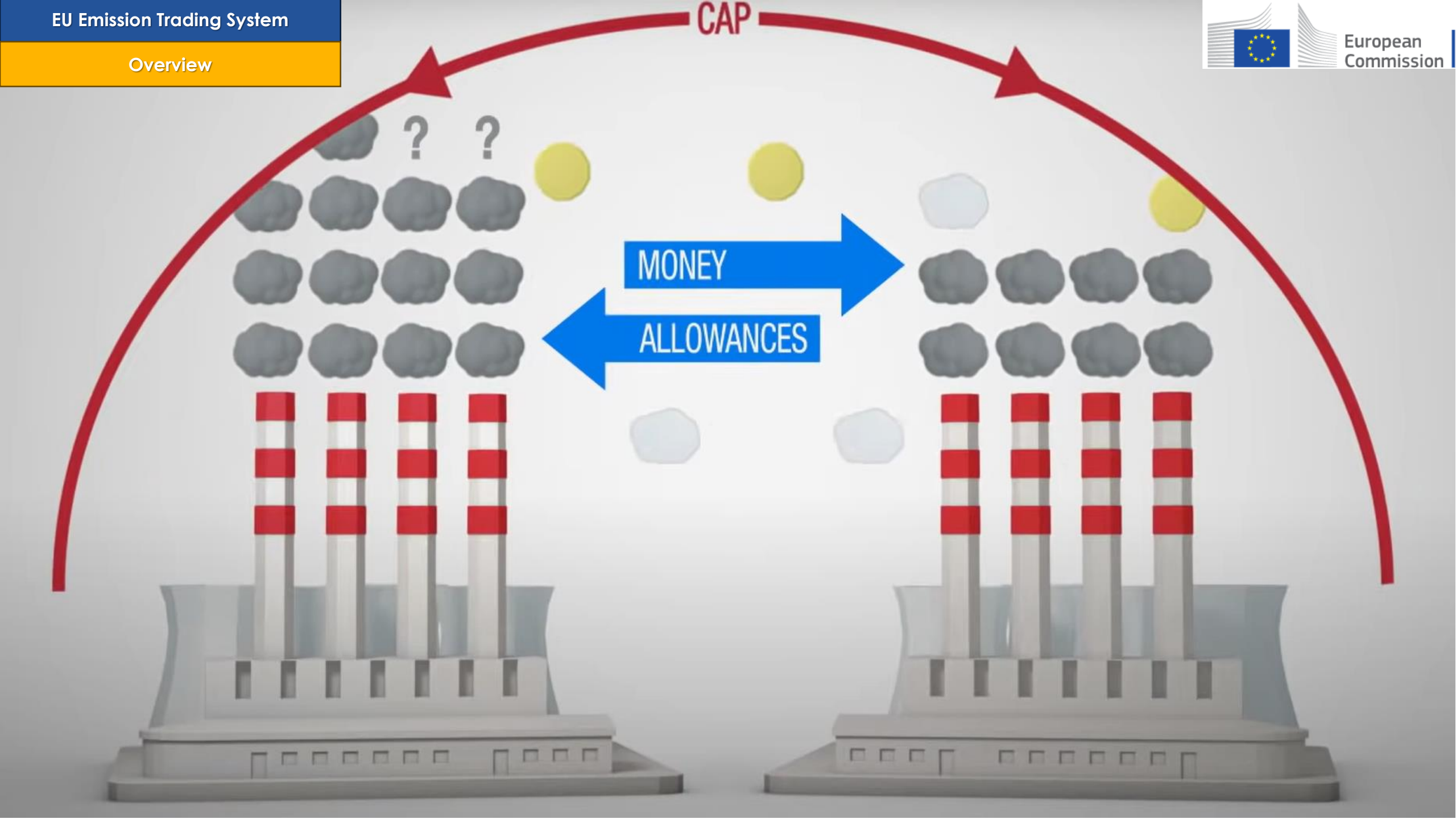
Part 4 –Talking to the Industry Page 23
- In Conversation with Stefan Elstrom, Stena Line Page 24
- In Conversation with Prof. Psaraftis, Technical University of Denmark Page 28
- In Conversation with Daniel Gent, UECC Page 38
- In Conversation with Rasmus Hald Philipsen, MAERSK Page 43

Part 5: In Conclusion & Appendix Page 47

Appendix: Directive (EU) 2023/959- relevant bits for FVL Page 49

EU Emission Trading System

Overview



European Commission

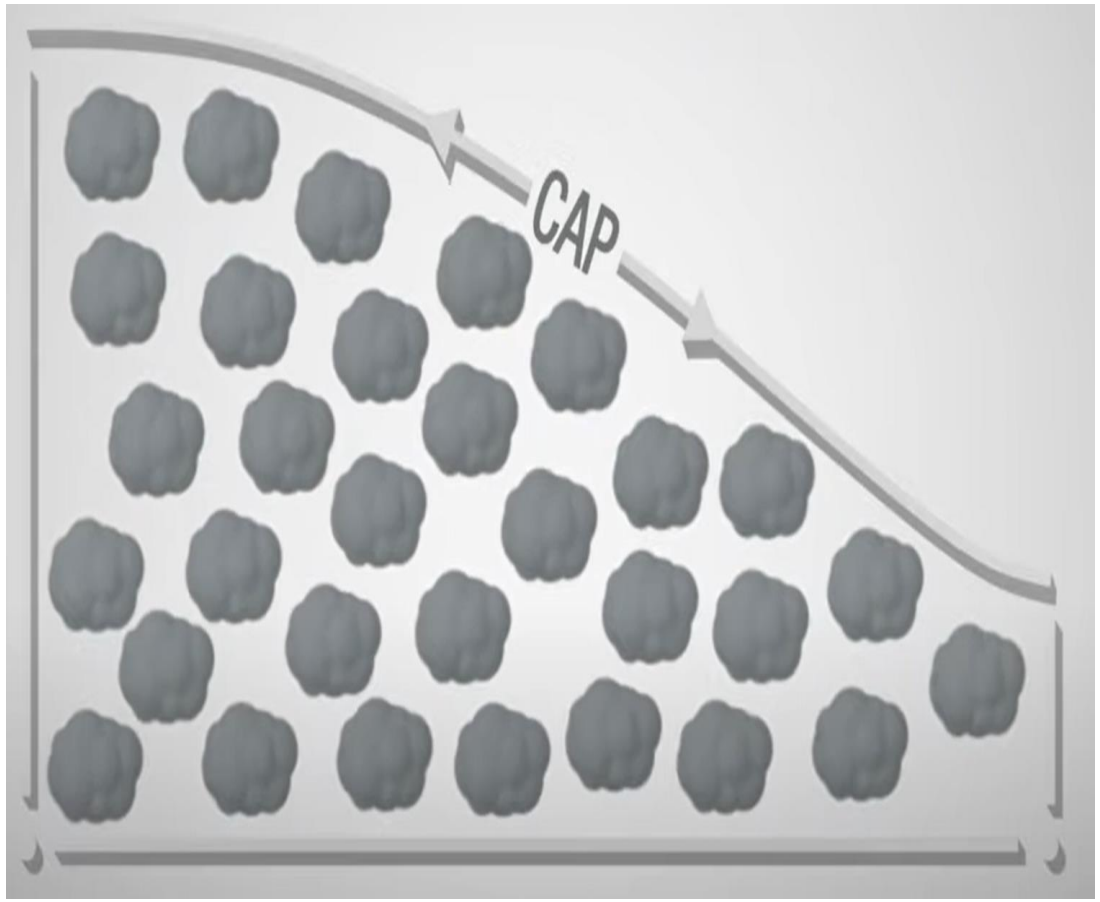
Cap & Trade System

Cap – total amount of certain GHG emissions that can be emitted (Cap reduces over time)

- **Buy** – operators can 'buy' emission allowances (limited number)
- **Receive**– operators can 'receive' emission allowances

Each year operators must surrender enough allowances to cover emissions, or face heavy fines

'Cap' reduces over time



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Which sectors does ETS apply to?
CO_2 emissions from:

- Electricity & heat generation
- Oil refineries, steel works, production of iron, aluminium, metals, glass, organic chemicals etc
- Aviation within EU—incl. flights departing to UK & Switzerland
- **Maritime Transport (from 2024)**
- **Road Transport & Buildings (from 2027)**

How does it work?
Compliance Cycle

- Operators to meet compliance obligations on an annual basis
- Operators to purchase limited European Union Emission Allowances (EUAs) at the current CO_2 price
- Operators to surrender allowances by date set by Member States authoritative body, for emissions in previous year
- One EUA allows for one tonne CO_2 emission

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EMBER

Cost per tonne of carbon dioxide produced (in £ or €)

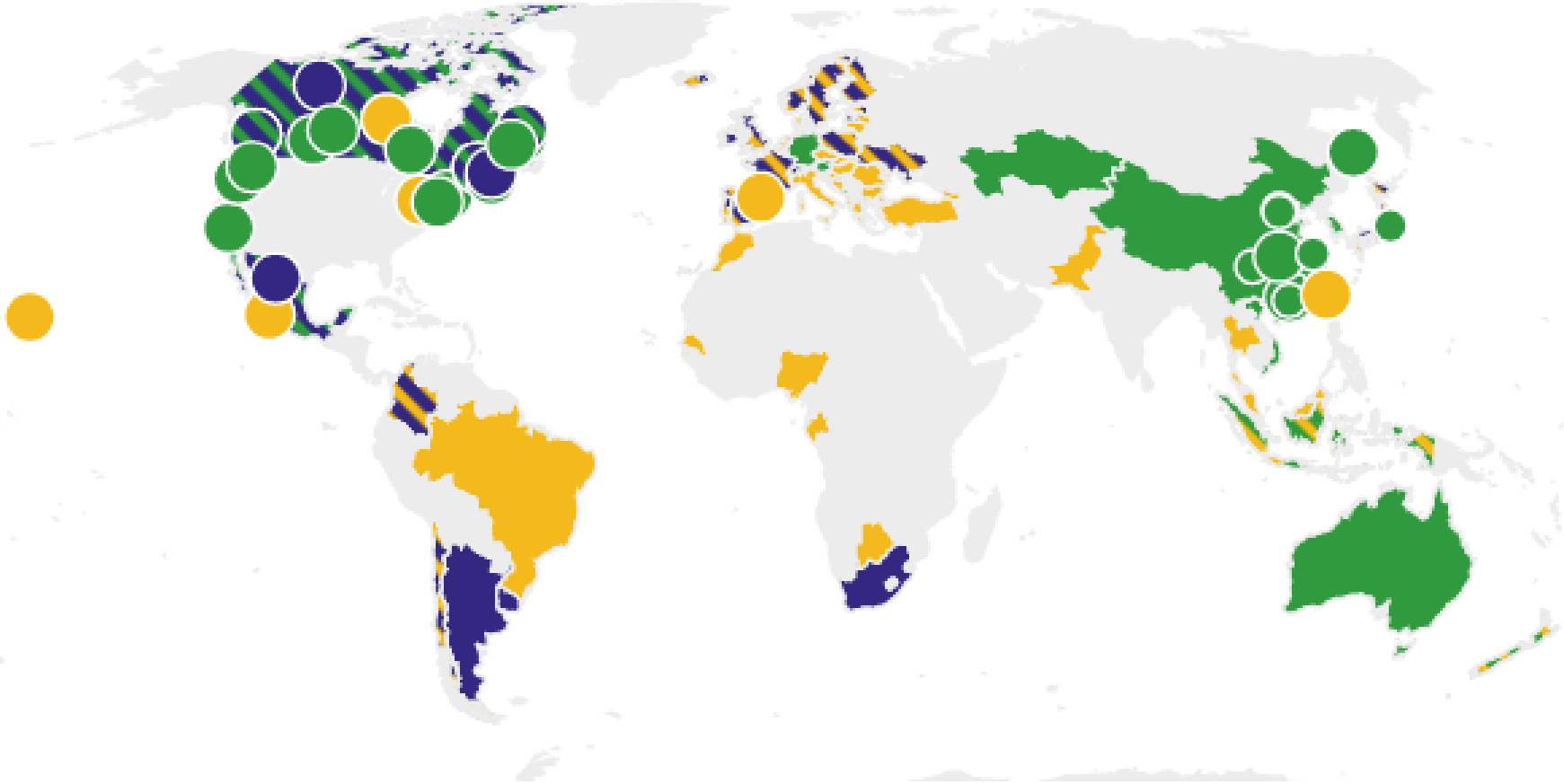
Source: Data provided by ICE (via Montel); due to licensing this data is not available for download
EU & UK Emissions Trading Scheme prices (December contract)

EMBER

World Bank: Carbon Pricing Dashboard

THE WORLD BANK
IBRD • IDA

Summary map of regional, national and subnational carbon pricing initiatives



- ETS implemented or scheduled for implementation
- ETS or carbon tax under consideration
- ETS implemented or scheduled, ETS or carbon tax under c...
- Carbon tax implemented or scheduled for implementation
- ETS and carbon tax implemented or scheduled
- Carbon tax implemented or scheduled, ETS under consider...

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Global trend for carbon pricing initiatives

ETS for Maritime

Effective 1.1.2024

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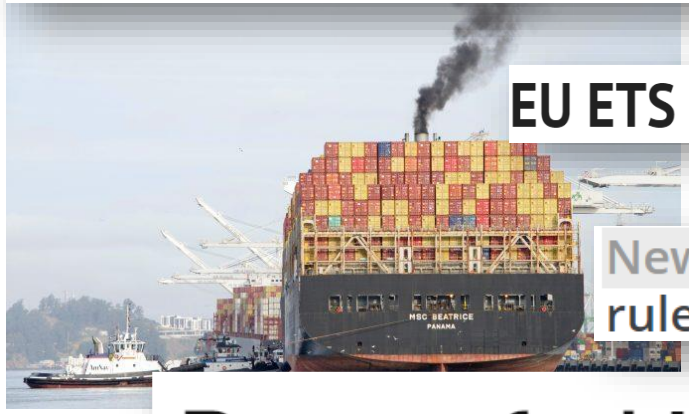
16.5.2023 EN Official Journal of the European Union 30/134

EUR-Lex
Access to European Union law

DIRECTIVE (EU) 2023/959 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

of 10 May 2023

amending Directive 2003/87/EC establishing a system for greenhouse gas emission allowance trading within the Union and Decision (EU) 2015/1814 concerning the establishment and operation of a market stability reserve for the Union greenhouse gas emission trading system



EU ETS rollout to bring cost hike

HEAVY LIFT & PROJECT FORWARDING INTERNATIONAL

What will ETS inclusion mean for shipping?

ABN·AMRO

18 April 2023

News / Major shipping lines will pass on cost of compliance with EU's new emission rules

THELOADSTAR

Prepare for higher shipping costs but the EU ETS should be a manageable change

SAFETY4SEA

Carbon pricing: Will maritime emissions increase as ships avoid ports within a carbon trading scheme?

International Transport Forum

PUBLISHED JUL 7, 2023

EU ETS Could Create $20B Liability for Shipping Between 2024 and 2026

The Maritime Executive
INTELLECTUAL CAPITAL FOR LEADERS

SeatradeMaritime NEWS Mar 02, 2023

Up to €1.5m per year: understanding financial implications of the EU ETS

What is EU ETS for MARITIME

- Shipping companies have to 'purchase' and 'surrender' ETS emission allowances (EUAs) for each tonne of CO_2 emitted
- Shipping companies will 'pay' for emissions they have reported on the *previous* year
  - **Phase-In Approach (for EU-to-EU voyages)**
    - 2025 –Shipping companies will pay 40% of the emissions reported in 2024
    - 2026 –Shipping companies will pay 70% of their 2025 emissions
    - 2027 onwards– Shipping companies will pay 100% of their reported emissions for 2026
  - **Phase-In Approach (for into or out of EU voyages)**
    - 2025 –Shipping companies will pay 20% of emissions reported in 2024
    - 2026—Shipping companies will pay 40% of emissions reported in 2025
    - 2027—Shipping companies will pay 50% of emissions reported in 2026

'Polluter Pays' Principle provides incentive for decarbonising shipping

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Who is affected? & How are they affected?

Who*

- **From 2024:**
  - On-Shore (cargo + passenger) vessels over 5,000 GT between ports within the EU
  - On-Shore (cargo + passenger) vessels over 5,000 GT while in EU Ports
  - On-Shore (cargo + passenger) vessels over 5,000 GT on voyages into or out of the EU (so whilst on EU waters)
- **From 2027**
  - On-Shore vessels under 5000 GT but not below 400 GT
  - Off-Shore* vessels over 5000 GT

How

- **From 2024**
  - Shipping companies will have to purchase and surrender emissions allowances covering 40% of their intra-EU voyage and EU Port CO_2 emissions in the current year + 20% of emissions on voyages in to or out of the EU
- **From 2025**
  - Shipping companies will have to purchase and surrender emissions allowances covering 70% of their intra-EU voyage and EU Port CO_2 emissions + 40% of emissions on voyages in to or out of the EU
- **From 2026**
  - Shipping companies will have to purchase and surrender emissions allowances covering 100% of their intra-EU voyage and EU Port CO_2, CH_4, N_20 emissions + 50% of emissions on voyages in to or out of the EU

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*** Exemptions exist vessels such as 'ice' classed and those dealing with low population islands.**
**** Offshore Vessels are ships that specifically serve operational purposes such as oil rigs & exploration vessels.**

Compliance Process in a Nutshell

Each Shipping Company will be registered under a Member State's administrating authority.

- EU registered Shipping Company will be under Member State where it is registered
- Non-EU registered Shipping Company will be under Member State with highest number of port calls on voyages in preceding 24-month time frame.
- EU will prepare a list of Shipping Companies and the Member State administering body they are under by 31 December 2024
- EU list will be updated every 2 years

Shipping Companies to continue to use EU MRV monitoring process

- By 30 April each year following 2024, Shipping Lines need to report volume of CO_2 emissions
- By 30 September of each year following 2024, Shipping lines need to 'pay' via emission allowances (EUAs) or face 'fines' – payment under the 'phase-in' system
- From 2026 all GHGs such as CO_2, CH_4, N_2O to be included in emissions reporting

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ETS Table of General Information for Maritime

Vessels over 5,000 GT (On-shore)	EU to EU ports	Port Stay at EU Port	Voyage into or out of EU	ETS Emission: Volume of Total Emissions	ETS Payment Due: Payment based on Market Price per tonne of CO_2	Fines for inadequate EUAs: Fine based on €100 per tonne of CO_2	Failure to Pay Fine: Failure to pay fine for 2 consecutive years-expulsion order for ALL ships under shipping company
1.1.2024	Purchase & Surrender Emission Allowances for 40% of total CO_2 emissions	Purchase & Surrender Emission Allowances on 40%	Purchase & Surrender Emission Allowances on 20%	Calculated CO_2 emissions to be made by 30 April 2025 based on 2024 emissions	Payment to be paid in by 30 September* 2025 on 2024 CO_2 Emissions	Fine rises to €100 per tonne of CO_2 emitted in 2024	Flag state can detain ship, and other member states deny entry of ship and all other ships under the shipping company
1.1.2025	Purchase & Surrender Emission Allowances for 70% of total CO_2 emissions	Purchase & Surrender Emission Allowances on 70%	Purchase & Surrender Emission Allowances on 35%	Calculated CO_2 emissions to be made by 30 April 2026 based on 2025 emissions	Payment to be paid in by 30 September * 2026 on 2025 CO_2 Emissions	Fine rises to €100 per tonne of CO_2 emitted in 2025	Flag state can detain ship, and other member states deny entry of ship and all other ships under the shipping company
1.1.2026 ETS to include ALL greenhouse gases: CO_2, Methane CH_4, Nitrous Oxide N_2O	Purchase & Surrender Emission Allowances for 100% of total emissions	Purchase & Surrender Emission Allowances on 100%	Purchase & Surrender Emission Allowances on 50%	Calculated CO_2, CH_4, N_2O emissions to be made by 30 April 2027 based on 2026 emissions	Payment to be paid in by 30 September* 2027 on 2026 GHG Emissions (using CO_2 per tonne price equivalent)	Fine rises to €100 per tonne of CO_2 emitted in 2026	Flag state can detain ship, and other member states deny entry of ship and all other ships under the shipping company
1.1.2027 Vessels under 5,000 GT but not below 400 GT: to be reviewed 31.12.2024 for inclusion in ETS from 1.1.2027	Purchase & Surrender Emission Allowances for 100% of total emissions	Purchase & Surrender Emission Allowances on 100%	Purchase & Surrender Emission Allowances on 50%	Calculated CO_2, CH_4, N_2O emissions to be made by 30 April 2028 based on 2027 emissions	Payment to be paid in by 30 September* 2028 on 2027 GHG Emissions (using CO_2 per tonne price equivalent)	Fine rises to €100 per tonne of CO_2 emitted in 2027	Flag state can detain ship, and other member states deny entry of ship and all other ships under the shipping company

No 'free' allocation of EUAs for shipping companies, but 'phased in' approach instead

https://eur-lex.europa.eu/eli/dir/2023/959/oj

* Date for submission of allowances/ 'payment' set by Member States' authoritative body but expected to remain as 30 September (this was amended from 30 April).

ETS for Road Transport

Effective 1.1.2027

New EU emissions trading system: will it help decarbonise road transport?

21 APR 2023

The European Parliament has adopted a new emissions trading system for buildings and road transport (ETS II) that will go live in 2027.

EU ETS for road transport: essential to decarbonise sector

3 May 2022

Revision of the EU emission trading system (ETS)
In "A European Green Deal"
20/06/2023

All-inclusive Emissions Trading System for road: more realistic start date

20 DEC 2022

European Commission

Questions and Answers - Emissions Trading

This new upstream system will regulate fuel suppliers rather than households and car drivers. It will become operational as of ~~2025~~ 2027.

Understanding the new EU ETS (Part 2): Buildings, Road Transport, Fuels. And how the revenues will be spent

February 6, 2023 energypost.eu

ECG Business Intelligence

What is ETS for Road Transport?

- 'Upstream' system regulates **fuel suppliers** rather than households and car & truck drivers
- Effective from 2027, while reporting and monitoring starts 2025
- Cap set to achieve 42% emission reductions in 2030 compared to 2005 levels
- Measures Include:
  - Market Stability Reserve: price stability mechanism to avoid excessive price increases.
  - Safeguard: If prices of oil or gas are exceptionally high prior to new system, deployment delayed to 2028.

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Estimating Costs

EU ETS

With special thanks to QueSeas

Case Study

EU ETS - What will be the cost of decarbonizing shipping?

Case study based on 2021 MRV public data

Considering that the EU MRV data is public we analysed the reporting data for 2021 (exported on v25_05/08/2022) in order to see what Companies will need to pay to transport goods.

The study is based on raw data and ships are categorized based on the ship type. Based on the verified emission reports of 2021, the average annual total CO_2 emissions per ship type for one vessel per ship type is summarized in Table 1.

Table 1 Average annual total CO_2 emissions per ship type [m tonnes]

Ship type	Average annual total CO_2 emissions per ship type [m tonnes]
Ro-pax ship	34,305.8
Ro-ro ship	24,407.3
Bulk carrier	4,356.6
Passenger ship	23,388.4
General cargo ship	5,006.1
Chemical tanker	6,402.5
Container ship	22,307.9
Refrigerated cargo carrier	9,919.2
Vehicle carrier	8,613.3
Gas carrier	7,377.6
Container/ro-ro cargo ship	20,338.8
Oil tanker	8,878.0
Combination carrier	8,497.4
LNG carrier	22,212.5

Issued Date: August 7, 2023

Business Intelligence

Download the full case study here:
QueSeas - EU ETS - What will be the cost of decarbonizing shipping - Ver.2 07082023.pdf

Case Study

EU ETS - What will be the cost of decarbonizing shipping? ..cont'd

Taking into account the pattern of voyages for the EU ETS, (i.e. 50% of the emissions from ships performing voyages departing from an EU port and arriving at a non-EU port, 50% of the emissions from ships performing voyages arriving at an EU port from a non-EU port, 100% emissions from ships performing voyages between EU ports, and 100% of emissions from ships at berth in an EU port) based on the verified emission reports of 2021, the average amount of CO_2 emissions to be encountered for the EU ETS for one vessel per ship type is summarized in Table 2.

Table 2: ETS Average CO_2 emissions [m tonnes] considering pattern of voyage per ship type.

Ship type	Average annual ETS CO_2 emissions per ship type [m tonnes]
Ro-pax ship	31,429
Passenger ship	22,051
Ro-ro ship	19,167
Container ship	14,104
Container/ro-ro cargo ship	14,037
LNG carrier	11,623
Refrigerated cargo carrier	5,625
Oil tanker	5,478
Vehicle carrier	5,473
Gas carrier	4,659
Combination carrier	4,333
Chemical tanker	4,328
General cargo ship	3,276
Other ship types	3,271
Bulk carrier	2,465

Issued Date: August 7, 2023

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QueSeas - EU ETS - What will be the cost of decarbonizing shipping - Ver.2 07082023.pdf

Case Study

EU ETS - What will be the cost of decarbonizing shipping? ...cont'd

QueSeas

For the phase-in period, the average CO_2 allowances to surrender for one vessel per ship type and year are presented in Table 3.

Table 3: Phase-in period for shipping – Number of the average CO2 allowances to be surrendered.

	Number of the average CO2 allowances to be surrendered		
Phase-in period for shipping	**40%**	**70%**	**100%**
Ship type	**2024**	**2025**	**2026**
Ro-pax ship	12,572	22,001	31,429
Ro-ro ship	7,667	13,417	19,167
Bulk carrier	986	1,725	2,465
Passenger ship	8,820	15,435	22,051
General cargo ship	1,311	2,293	3,276
Chemical tanker	1,731	3,030	4,328
Container ship	5,642	9,873	14,104
Refrigerated cargo carrier	2,250	3,937	5,625
Vehicle carrier	2,189	3,831	5,473
Gas carrier	1,864	3,261	4,659
Container/ro-ro cargo ship	5,615	9,826	14,037
Oil tanker	2,191	3,835	5,478
Combination carrier	1,733	3,033	4,333
LNG carrier	4,649	8,136	11,623

Issued Date: August 7, 2023

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Case Study

EU ETS - What will be the cost of decarbonizing shipping?...cont'd

Assuming that the cost of EU carbon permits will be 87.1 €, following the latest EU carbon permit spot price as per August 7, 2023, the average allowances for one vessel per ship type and year are presented in Table 4.

Table 4: Average Allowances to Be Surrendered Per Reporting Year in € Per Ship Type

Ship type	Average allowances to be surrendered per reporting year in € per ship type		
	2024	2025	2026
Ro-pax ship	€ 1,095,002	€ 1,916,254	€ 2,737,505
Passenger ship	€ 768,240	€ 1,344,421	€ 1,920,601
Ro-ro ship	€ 667,762	€ 1,168,584	€ 1,669,405
Container ship	€ 491,381	€ 859,917	€ 1,228,453
Container/ro-ro cargo ship	€ 489,034	€ 855,809	€ 1,222,585
LNG carrier	€ 404,960	€ 708,679	€ 1,012,399
Refrigerated cargo carrier	€ 195,967	€ 342,942	€ 489,917
Oil tanker	€ 190,851	€ 333,989	€ 477,126
Vehicle carrier	€ 190,668	€ 333,669	€ 476,670
Gas carrier	€ 162,320	€ 284,060	€ 405,799
Combination carrier	€ 150,963	€ 264,185	€ 377,406
Chemical tanker	€ 150,786	€ 263,876	€ 376,965
General cargo ship	€ 114,151	€ 199,764	€ 285,377
Other ship types	€ 113,955	€ 199,421	€ 284,888
Bulk carrier	€ 85,867	€ 150,266	€ 214,666

Issued Date: August 7, 2023

Download the full case study here:
QueSeas - EU ETS - What will be the cost of decarbonizing shipping - Ver.2 07082023.pdf

Case Study

EU ETS - What will be the cost of decarbonizing shipping?...cont'd

QueSeas

Assuming that a company has a fleet of 5 vessels of the same ship type, the average cost of the allowances to be surrendered per company in € are presented in Table 5.

Table 5: Average Allowances to Be Surrendered Per Reporting Year in € Per a Fleet of 5 Vessels

Ship type	Average allowances to be surrendered per reporting year in € per a fleet of 5 vessels		
	2024	2025	2026
Ro-pax ship	€ 5,475,010	€ 9,581,268	€ 13,687,525
Passenger ship	€ 3,841,202	€ 6,722,103	€ 9,603,005
Ro-ro ship	€ 3,338,810	€ 5,842,918	€ 8,347,025
Container ship	€ 2,456,906	€ 4,299,585	€ 6,142,264
Container/ro-ro cargo ship	€ 2,445,170	€ 4,279,047	€ 6,112,924
LNG carrier	€ 2,024,798	€ 3,543,396	€ 5,061,995
Refrigerated cargo carrier	€ 979,834	€ 1,714,710	€ 2,449,585
Oil tanker	€ 954,253	€ 1,669,943	€ 2,385,632
Vehicle carrier	€ 953,340	€ 1,668,345	€ 2,383,350
Gas carrier	€ 811,599	€ 1,420,298	€ 2,028,997
Combination carrier	€ 754,813	€ 1,320,923	€ 1,887,032
Chemical tanker	€ 753,931	€ 1,319,379	€ 1,884,827
General cargo ship	€ 570,753	€ 998,818	€ 1,426,883
Other ship types	€ 569,775	€ 997,106	€ 1,424,438
Bulk carrier	€ 429,333	€ 751,332	€ 1,073,331

Issued Date: August 7, 2023

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Download the full case study here:
[QueSeas - EU ETS - What will be the cost of decarbonizing shipping - Ver.2 07082023.pdf]

Speaking to the industry

Maritime

In conversation with Stena Line

Stena Line

www. stenaline.com

In conversation with Stena Line

Stefan Elfstrom,
PR Manager
Stena Line

- The EU Emission Trading System (ETS) will include maritime from January 2024— what is the impact of this for your customers?

Stena Line: "As from 1 January 2024, ferry operators will start paying for carbon emissions and at Stena Line we are fully committed to support the EU's ambitions with carbon neutral energy sources and sustainable solutions across all operations.
With shipping in ETS from next year, we will introduce a surcharge towards all customers in January 2024. This surcharge will be specified towards customers for best transparency. As the launch of ETS approaches, more details will become available from the EU and we will gradually inform customers regarding the anticipated effects."

- Going forward, how does Stena Line aim to reduce emissions?

Stena Line: "Stena Line is committed to a shift towards new fuels for the fleet, as well as taking action to reduce the environmental impact in ports and other parts of our business. The first step in decarbonizing our vessel fleet will rely on improved energy efficiency measures and biodiesel. This will continue together with the uptake of sustainable methanol for converted vessels. The long-term perspective will be governed by battery electrification with a share of cost-competitive sustainable liquid fuel at routes more challenging to electrify."

In conversation with Stena Line….cont'd

- What do you feel is the most viable option in the short term?

Stena Line: "Introducing a degree of bio-based fuel from sustainable sources is the most viable action to achieve a positive impact on emissions in the short term. At Stena Line we are working closely with Stena Teknik and Stena Oil to secure that these fuels are compatible with the fleet of vessels, aligned with regulatory requirements as well ensuring a future supply of viable sustainable fuel."

- With regard to the upcoming ETS—do you envisage the cost being significant? And this cost will increase annually in the short term as the cap is lowered per year.

Stena Line: "ETS is a 'cap and trade' scheme where a limit (the cap) is placed on the amount to emit specified pollutants and obliges us as a company to hold an allowance for each tonne of CO_2 or other carbon equivalent gases we emit. The ETS will, in the start phase, cover CO_2 and eventually incorporate also nitrous oxides, soot and methane emissions – these will be included in the ETS scope using a certain calculation method. There will be no set price list for these emission allowances – instead, the price will be defined by supply and demand on the market. As for the scope of ETS, the new legislation will include 100% of emissions for voyages within the EU, 50% of the emissions from voyages starting or ending outside of the EU, and all emissions that occur when ships are at berth in EU ports.
To allow for a smooth transition to ETS, shipping companies will, during an initial phase-in period, purchase allowances for a portion of their total emissions; 40% in 2024, 70% in 2025 and eventually reaching 100% in 2026.

In conversation with Stena Line …cont'd

- Do you anticipate the costs being significant and therefore how will this be absorbed?

Stena Line: "The cost impact of ETS will be significant, and we will need to introduce a surcharge for it, using the same principle as for existing similar externally added costs."

- What do you expect the ETS will cost Stena Line per annum?

Stena Line: "The cost will be significant, meaning above 1bn SEK annually (approx. €100m) for our total operations. However, we are awaiting more detailed information on ETS from the EU and it also depends on our CO_2 emissions which we continuously are working to reduce."

- What about countries such as the UK?

Stena Line: "**The UK has notified that they will eventually introduce a similar system which would have an impact both on UK domestic routes and UK-EU routes."**

Will EU ETS cause transhipment hub relocation?

ScienceDirect

Implications of the EU Emissions Trading System (ETS) on European container routes: A carbon leakage case study

Sotiria Lagouvardou Harilaos N. Psaraftis

The Piraeus versus Izmir case study

DTU

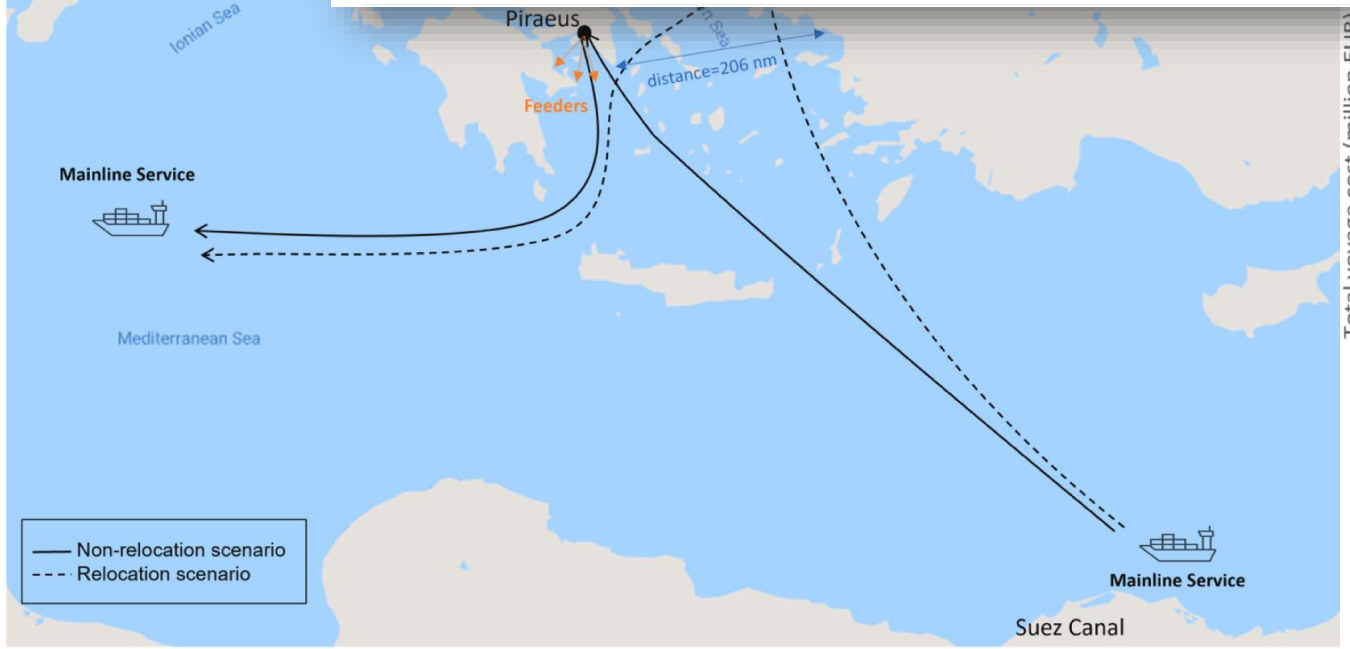
MARITIME TRANSPORT RESEARCH

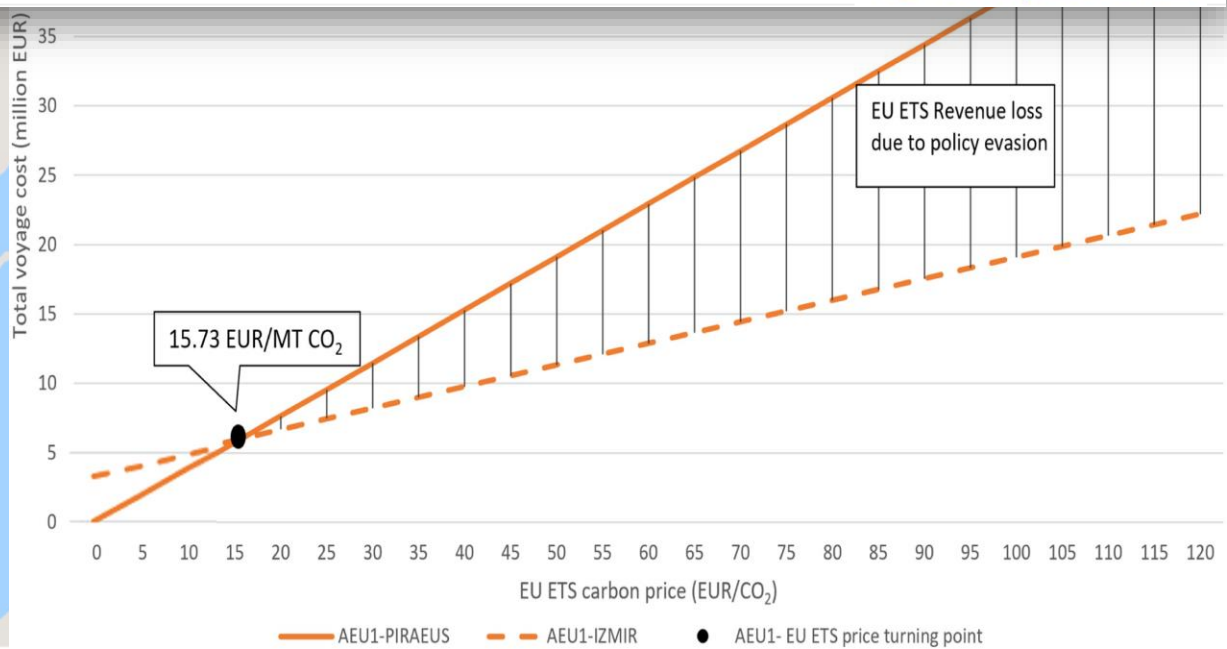
Maritime Transport Research

Volume 3, 2022, 100059

Carbon pricing: Will maritime emissions increase as ships avoid ports within a carbon trading scheme?

International Transport Forum





In conversation Prof. Psaraftis, Technical University of Denmark

Harilaos N. Psaraftis
Professor, Technical University of Denmark

- Please could you explain the findings of your cost-benefit analysis—do you see vessels switching to non-EU transshipment hubs?

Prof. Psaraftis: "That was a paper that we published in March 2022. We found that the enforcement of a regional Market-Based Measure (MBM) such as the EU ETS may provide financial incentives to container shipping operators to reconfigure their networks and reduce payments into the EU ETS. They could do this by switching their transshipment hubs from a port within the EEA (European Economic Area) to a port very close to the EEA but outside the EEA."

The paper can be accessed for free at this link: https://www.sciencedirect.com/science/article/pii/S2666822X22000107

- Which areas did you study?

Prof. Psaraftis: "We performed a cost–benefit analysis that calculated the cost of EU Allowances (EUAs) for several international services and compared it with a relocation scenario."

In conversation Prof. Psaraftis, Technical University of Denmark …cont'd

- Could you provide the gist of your results?

Prof. Psaraftis: "Our case studies focused on the Piraeus–Izmir and the Algeciras–Tanger Med scenarios and identified the EU carbon price turning point that would render the switch of the transshipment hubs a cost-effective choice for the operator. The results showed that the preference for a non-EEA hub would become attractive for carbon prices well below 25 EUR per metric ton of CO_2. Further, in all cases, the hub switch would result in a rise in the overall carbon emissions attributed to the service which would amplify the risk of carbon leakage. Our results showed that the relocation would lead to revenue loss for the EU ETS and penalization of the EEA transshipment hubs in close proximity with hubs outside the EEA, thus posing a threat to their economic activity and development.

I also want to mention that since that paper was published, the revised version of the Directive (formulated by the European Parliament and the Council in the summer of 2022 and agreed upon after the trilogue in early 2023) explicitly included language to mitigate the risk of transshipment hub relocation for container lines. That language was absent from the Commission's initial version of the Directive."

In conversation Prof. Psaraftis, Technical University of Denmark …cont'd

- So, what has been introduced to mitigate transhipment in the latest version of the Directive?

Prof. Psaraftis: "The Directive stipulates that it will cover 100% of the CO_2 emissions occurring while sailing between ports of the EEA, 100% of the CO_2 emissions at berth in EEA ports and 50% of the CO_2 emissions from international voyages between an EEA and a non-EEA port.

The final version of the Directive introduces a 300 nm zone from the EEA, and if a non-EEA port is within that zone and performs transshipment, the corresponding port call is not considered a port call for ETS purposes. So, if a cargo comes from Singapore, is transshipped in Tangier and then goes to Rotterdam, the entire trip from Singapore to Rotterdam counts for ETS purposes. 50% of its emissions will be charged the ETS carbon price.

So, after our paper was published, they tried to close the loophole. How successful that will be remains to be seen."

In conversation Prof. Psaraftis, Technical University of Denmark …cont'd

- How will companies report their emissions and purchase their EU ETS Allowances (EUA)?

Prof. Psaraftis: "EUAs will be distributed among the Member States (MS), but I admit that I am not fully familiar with the details, which look rather complex. Each company shall report their allowances through their registered MS and purchase their EUAs through auctioning based on their previous year's carbon emissions and in compliance with the reduction targets of the EU ETS. Since the EU Monitoring, Reporting and Verification system (EU MRV) is effectively the foundation of accounting the EU emissions from ships, the extension of the EU ETS utilizes the key principles of the EU MRV establishing the shipping companies and the countries that they are registered to, as the regulated entities. The overall level of issued EUAs will be tightened progressively. Achieving the EU's emission reduction target for 2030 will require a reduction in the emissions of the sectors covered by the EU ETS of 62 % compared to 2005."

In conversation Prof. Psaraftis, Technical University of Denmark …cont'd

- If we concentrate on time charter contracts—how do you see the EU ETS affecting costs?

Prof. Psaraftis: "As I read it, those paying for the fuel will be ultimately responsible for paying the EU ETS costs. Since for time charter contracts it is the charterer who bears the cost of bunkering and thus the decision on the vessel's service speed and the respective CO_2 emissions, new clauses shall be introduced to protect the shipowner from excessive carbon charges due to the charterer's non-conformity with the scheme. According to the Directive, the obligation of surrendering emissions allowances will be phased. At the end of each year, shipping companies should demonstrate a balance between allowances and verified emissions and in case of exceeding their purchased allowances, they will need to buy the excess amount from the carbon market. EUAs can be purchased through either the primary market i.e., auctions by the MS through the European Energy Exchange (EEX), or the secondary market by trading of the EUAs through the EEX."

Case Study 1:


Greece
Turkey
Feeders
Izmir
Aegean Sea
Piraeus
Ionian Sea
distance=206 nm
Feeders
Mainline Service
Mediterranean Sea
Non-relocation scenario
Relocation scenario
Mainline Service
Suez Canal

In conversation Prof. Psaraftis, Technical University of Denmark …cont'd

- In your research, your case studies highlight the possible carbon leakage by vessels choosing certain transshipment hubs—but would this mean longer voyages?

Prof. Psaraftis : "Since the respective new voyage will be entirely or partially excluded from the EU scheme, there are not enough incentives for reducing the GHG emissions while sailing towards the competitor non-EEA port. To absorb the time lost due to the extra sailing distance the vessel can increase the service speed, which leads to an increase in total carbon emissions for the service and further amplifies the risk of carbon leakage. The estimation of the EU carbon turning point that renders the relocation of the hub cost-effective allows us to quantify the risk of evasion of the scheme.

Our first case study compared the hub of Piraeus with the nearby ports in Turkey (Izmir area) and concluded that the risk of evasion of the system is real at a price of less than 25 EUR/MT of carbon. Furthermore, the plans to expand the Izmir terminals further encourage the operators to shift their transshipments to the nearby non-EEA port.

Case Study 2:


Spain
Algeciras
Feeders
Mainline Service
Mainline Service
Strait of Gibraltar
distance=30 nm
Feeders
Tanger Med
Morocco
Non-relocation scenario
Relocation scenario

In conversation Prof. Psaraftis, Technical University of Denmark …cont'd

Prof. Psaraftis: "The second case study of this paper focused on the comparison between the Algeciras port in Spain and the Tanger Med port in Morocco. The ports that have been major competitors on transshipment volumes have also been included in the impact assessment (IA) of the EC proposal published in October 2021. The IA alerted that a preference to Tanger Med will become viable in the medium term; however, our paper showed that the switch might become in the nearest future especially with the prominent expansion of the Tanger Med 2 terminal. Our model indicated that the relocation of the hub is possible at prices as low as 6 EUR/MT of CO_2.

Again, the study was done before the final version of the Directive which introduced language to mitigate the risk of transshipment hub relocation. In my opinion, the new language may go some way into plugging the loophole, but does not go all the way. I think it will still be cheaper to use a non-EEA port to do the transshipment. Plus, one could still find a port 310 nm from the EEA."

I finally want to say that this paper resulted in a big prize for my co-author Sotiria Lagouvardou. She received the Young Researcher Award for 2023 by ITF/OECD." See here: https://www.itf-oecd.org/carbon-pricing-will-maritime-emissions-increase-ships-avoid-ports-within-carbon-trading-scheme

In conversation with UECC

UECC

www.uecc.com

In conversation with Daniel Gent, UECC

Daniel Gent
Energy & Sustainability Manager
UECC

- With the Carbon Intensity Indicator (CII) being introduced from 2023, and EU ETS from 2024 for the maritime sector—please could you share the combined impact of these two new legislations?

Daniel Gent, UECC: "The combined impact is hard to quantify, such is the nature of the regulations themselves. Broadly speaking, EU ETS can be seen as a levy or tax on fossil fuels, so the carbon impact per fuel type is known, the volatility comes from the liquidity in the carbon market. CII is a much more complex picture, since there are a multitude of ways to achieve compliance, and these are unique for every vessel."

- With the Carbon Intensity Indicator (CII) for a vessel to be rated higher than 'E' or 'D' what needs to be in place? For example, using higher quality, cleaner fuel costs more? And should a vessels speed be slowed to reduce emissions, what implications would this have overall? Would you need to introduce additional vessels?

Daniel Gent, UECC: "In general, CII requires shipping companies to do one of two things; slow down or use lower carbon fuels. For some vessels, slowing down will simply not provide the required improvement to move to the target grade, in which case lower carbon fuels need to be utilised. Of course, if speed is reduced then capacity is taken out of the market, so either more tonnage is added, or cargo is left behind. If lower carbon fuels are introduced then it will be possible to maintain the same level of service and still achieve a satisfactory CII rating, but this will come at a cost as cleaner fuels are generally more expensive than conventional. UECC have already made significant investments in our fleet by adding 5 LNG dual fuel vessels which are well positioned to take on the challenges CII brings."

In conversation with Daniel Gent, UECC …cont'd

- With the CII, what are the 'fines'? So, for example if a ship owner needs to make sure the vessel is a 'C' classed vessel, but falls short—what are the consequences? And if your vessel is classed above –so for example an 'A' or 'B' would the ship owner/line gain credits?

Daniel Gent, UECC: "This is something that the IMO needs to address imminently. At present, an E-rated vessel (or a 3x consecutive D-rated vessel) is at risk of 'sanction', but what does that actually mean? I would liken it to the introduction of the sulphur ECA's, where enforcement was sporadic and locally administered and it was known that some shipping companies continued to burn high sulphur fuel without penalty. The Trident Alliance was established at the time to lobby for better regulation and an even playing field. CII needs to be robustly enforced or the targeted GHG reductions will not be met on schedule. On the opposite side, there are no advantages to achieving a 'Good A'. What I mean by that, is that once you make an A rating it is not incentivised to further improve your CII. The same is true of B or C ratings."

- With the EU ETS how do you envisage costs to increase for the vessel owner?

Daniel Gent, UECC: "As I mentioned earlier, the cost increases are fairly predictable even if the carbon price is a little volatile. In simple terms, one tonne of MGO is about to increase in cost by $128 in 2024, $224 in 2025 and $320 in 2026 based on current EUA prices. This cost is of course too great to be absorbed by the vessel owners, and so a transparent and equitable system should be established to ensure that the 'polluter pays'."

In conversation with Daniel Gent, UECC …cont'd

- Transhipment has become a big topic; do you see RO-RO carriers introducing new transhipment hubs? Or does the current 300nm not apply to Ro-Ro vessels?

Daniel Gent, UECC: "The wording is quite clear on this point. Containerships calling at transhipment container ports will have restrictions on 'port calls' that are within 300NM of the Union. There are several key elements to unpack here, first is that the vessel type that this regulation is targeting is specifically named. Secondly, transhipment port is clearly defined as a port through which more than 65% of container traffic is transhipped. If we put this into practice, let's imagine a bulk carrier is calling Tanger Med prior to entering the EU. Tanger Med may well qualify as a 'container transhipment port' but it is illogical that a bulk carrier would be penalised on this basis.

When it comes to automotive ports, we see that in locations such as Turkey, the port is established to serve a nearby automotive plant. Even if vehicle carriers were added to the legislation, it would require a huge uptick in transhipping of vehicles to counteract the existing throughput on these ports."

- With the ETS regulations to include other GHGs from 2027, will this raise problems for reporting? Or will newer carriers have less overall GHGs so these emissions will reduce as well?

Daniel Gent, UECC: "The reporting will not change in as much as holistic GHG emissions are already defined per fuel type. So from a vessel owner perspective the reporting continues in the same way as previous. What it does mean is that the cost will further increase. Methane and Nitrous Oxide will be added and this has an impact as both of these gases have relatively high GWP."

In conversation with Daniel Gent, UECC …cont'd

- How effective is the MRV system and will this continue to be the method used to report emissions per vessel?

Daniel Gent, UECC: "It will, and it will continue to evolve and develop over time. What I specifically applaud about this system is the transparency. Data is available publicly for industry stakeholders to understand where emissions are being generated. In the case of the IMO DCS system this is much more opaque and I would like to see greater clarity in time there."

- Anything else?

Daniel Gent, UECC: "This coming period of 5-10 years will mark an extraordinary shift in international shipping, more so than anything seen before in most of our lifetimes. What is clear is that market-based measures are an extremely effective way to drive decarbonisation. The problem lies in the development of a robust system that ensures capital is raised and distributed to reduce the industry's carbon footprint without punishing those in society who can least afford it. The IMO now has to make a decision about what market based measures they will deploy to drive their most recent targets. Both Cap & Trade and Carbon levies seem to be ruled out, so perhaps a system of commoditising CII ratings is next on the agenda. It will certainly be fascinating to follow!"

In conversation with Maersk

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In conversation with Rasmus Hald Philipsen, Senior Advisor Public & Regulatory Affairs, Maersk

Rasmus Hald Philipsen,
Senior Advisor Europe,
Public & Regulatory Affairs,
Maersk

- Please confirm if the statement released here-EU Emissions Trading System 2022 updates | Maersk- is the latest regarding Maersk's expectation of the cost implications of the EU ETS?

Rasmus Hald Philipsen, Maersk: "The press release in the link you have shared is the latest we have published on EU ETS. As we get closer to the start of ETS for shipping, we continuously refine our methodology for calculating the cost of compliance in tandem with the European Commission issuing more guidance. Once the implementing measures are adopted, we will have a clearer picture of the implications. We expect to publish more in the near future as we have more detailed information to share with our customers.

While I understand the appeal of the figures of the figures in the table, they should be used very carefully. The figures are estimates to answer questions from customers around the potential implications of ETS. As such, they are estimates of cost increases in EUR per FFE for selected trades under a specific set of conditions that reflect the state of the legislative process as well as the composition of our network at that particular point in time: July 2022. They should not be understood as announced surcharge rates."

In conversation with Rasmus Hald Philipsen, Maersk …cont'd

- With the EU ETS to include maritime from 1.1.2024 with EUAs and fines due to be paid in from 30.09.2025 on previous years' emissions, how does Maersk expect costs to rise?
  - Will Maersk increase the prices to its clients per route?

Rasmus Hald Philipsen, Maersk: "We have announced that we intend to apply the costs of EU ETS as a standalone surcharge."

  - With long and deep sea voyages how significant is this introduction of the EU ETS?

Rasmus Hald Philipsen, Maersk: "For long and deep sea voyages, the impact of EU ETS depends on the vessel, the ports of call and a range of other factors such as fuel choice and speed."

  - For Maersk, do you operate any short sea voyages in Europe—ie Europe to Europe ports ? Or are these follow on stops after coming from further afield? If so how would the EU ETS work?

Rasmus Hald Philipsen, Maersk: "We have voyages between two EU ports although these are not traditionally understood as being short sea voyages. These feature as part of our overall network and serve to transport cargo across a wider area."

  - Anything else?

Rasmus Hald Philipsen, Maersk: "In addition to the below, I would note that our Eco Delivery customers will not be charged with a potential new surcharge related to the ETS as these are customers whose cargo is transported using green fuels. This is important as it helps close the price gap between fossil fuel transport and transport using green fuels."

Based on July 2022 press release:

EU Emissions Trading System 2022 updates | Maersk

https://www.maersk.com/news/articles/2022/07/12/eu-ets-latest-developments

- With the imminent inclusion of the maritime sector in the EU ETS—what does this mean for Maersk customers?

Maersk: "The cost of compliance with the ETS will likely be significant therefore impacting the cost of shipping. It is expected that the volatility of the European Union Allowance (EUA) traded in ETS may increase, as the revised legislation comes into effect. To ensure transparency, we plan to apply these costs as a standalone surcharge effective Q1 2023.
Based on the latest developments, below are estimates of cost increases (in EUR) per FFE for selected trades with the following considerations.

- **Price of the European Union Allowance (EUA) to be around EUR 90**
- **Obligation to purchase allowances is considered 100% since the ETS proposal version of the European Parliament abolishes the phase-in period**
- **Emissions of CO2, Methane and Nitrous oxide proposed in the assembly"**

Trade	Dry (in EUR)	Reefer (in EUR)
WCSA to Europe	213	319
North Europe to Far East	99	149
Far East to North Europe	170	255
Middle East to North Europe	106	159
North Europe to US	184	276

MAERSK

In Conclusion

& Appendix

In Conclusion

- EU ETS- a cap & trade system based on polluters to buy allowances, termed EUAs, per tonne of CO_2 emitted from 2024, other GHGs to be included from 2026
- System to extend to Maritime from 1.1. 2025, based on 2024 emissions with CO_2 levels emitted to be sent for verification by 30 April 2025, with EUAs or/and fines paid by September 30th, 2025
- EUAs based on market price of CO_2 as of date of purchasing EUAs.
- May 2023 update to the legislation includes a 300 nautical mile radius from EU ports, included in ETS at 50% rate –list of transhipment ports to be issued 31 December 2023—but this is only for 'containerized' traffic
- Phase in period for maritime vessels over 5000gt on emissions from 1.1.2024 at 40% rate (to be paid in 2025), 1.1.2025 at 70% (to be paid in 2026), 1.1.2026 at 100% (to be paid in 2027)
- Smaller vessels and offshore to be introduced from 1.12027
- Most lines will introduce a surcharge to cover higher costs
- EU ETS for Road—to be introduced from 1.1.2027—will affect 'fuel suppliers' as total amount of fuel will be limited in supply to market. Those involved in FVL, will need to prepare for higher fuel prices.

Appendix: *Directive (EU) 2023/959* Relevant Sections for FVL only

Directive (EU) 2023/959, amending Directive 2003/87/EC

May 2023 update

Laws published by the EU on 16 May 2023. CBAM regulation entered into force on 17 May 2023, remaining legal acts effective 20 days after release thereby on 5 June 2023.

Official publication of amended Directive can be found here: https://eur-lex.europa.eu/eli/dir/2023/959/oj

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Glossary of Terms

- NDC—Nationally Determined Contributions. NDCs are the goals by each country to reduce national emissions.
- UNFCCC—United Nations Framework Convention on Climate Change
- EU ETS—European Union Emission Trading System
- CBAM—Carbon Border Adjustment Mechanism
- IMO—International Maritime Organisation
- Port of Call—An intermediate port where a ship usually stops for supplies, repairs or transshipment of cargo
- MSR—Market Stability Reserve
- VF—Verified Emissions
- MRV—Monitoring, Reporting and Verification of EU ETS emissions
- MRR—Monitoring and Reporting Regulation
- AVR—Accreditation and Verification Regulation
- MS—Member State
- EUA—EU Emissions Allowances

Updated Directive: Key Points

EUR-Lex
Access to European Union law

- **Directive (EU) 2023/959, amends Directive 2003/87/EC thereby establishing a system for greenhouse gas emission allowance trading within the Union and Decision (EU) 2015/1814 concerning the establishment and operation of a market stability reserve for the Union greenhouse gas emission trading system**

- Union committed to reducing Union's economy-wide net greenhouse gas emissions by at least 55% compared to 1990 levels by 2030 in the updated NDC submitted to the UNFCCC Secretariat on 17 December 2020.
- Regulation (EU) 2021/1119 has enshrined in legislation the objective of economy-wide climate neutrality by 2050
- All sectors of the economy need to contribute to achieving the emission reductions established by Regulation (EU) 2021/1119
- Greenhouse gases that are not directly released into the atmosphere should be considered emissions under the EU ETS and allowances should be surrendered for those emissions unless they are stored in accordance with Directive 2009/31/EC.
- In 2013 the Commission introduced a 'strategy' for integrating the maritime emissions with the first step being the MRV system as per Regulation (EU) 2015/757, to be followed by reduction targets for the maritime sector. Legislators agreed that as of 2023 bodies such as the IMO and the Union should start preparatory work on adoption and implementation of emission reduction targets for the maritime sector.
- Extension of EU ETS to maritime transport, and to ensure smooth inclusion of the sector into EU ETS, surrendering of allowances by shipping companies should be gradually increased, with respect to the 'verified' emissions reported for 2024 and 2025. From 2026 shipping companies should surrender the number of allowances corresponding to all their CO_2 emissions.
- Methane and nitrous oxide emissions to be first included in regulation (EU) 2015/757 from 2024 and included in EU-ETS from 2026.

Extension of EU ETS to Maritime Transport : Main Points

- From 1.1.2024 : Carbon dioxide (CO_2) emissions for ships of, or greater than, 5,000 gross tonnage:
    - Half of the emissions (50%) from ships performing voyages arriving at a port under the jurisdiction of a Member State, from a port outside the jurisdiction of a Member State
    - Half of the emissions (50%) from ships departing from a port under the jurisdiction of a Member State and arriving at a port outside the jurisdiction of a Member State
    - All emissions (100%) from ships performing voyages arriving at a port under the jurisdiction of a Member State from a port under the jurisdiction of a Member State
    - All emissions (100%) within a port under the jurisdiction of a Member State
    - A limit of 300 nautical miles from a port under the jurisdiction of a Member State is excluded from definition of '*port of call*' to avoid evasive activities. The exclusion from definition of 'port of call' only applies to stops by container ships at certain non-Union ports
- From 1.1.2026: Inclusion of methane and nitrous oxide emissions to be included in regulation (EU) 2015/757 from 2024, and included in EU ETS from 2026

EU ETS for MARITIME will be introduced using a 'PHASED-IN APPROACH'

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Official publication of amended Directive can be found here: https://eur-lex.europa.eu/eli/dir/2023/959/oj

Gist of Phase-In approach for EU ETS for Maritime

- **Phase in for Maritime Transport (for EU to EU port voyages):**
  - 40% of 'verified' emissions reported for 2024
  - 70% of 'verified' emissions reported for 2025
  - 100% of 'verified' emissions reported for 2026, and each year thereafter
  - If fewer allowances are surrendered compared to the verified emissions from maritime transport for the years 2024 and 2025, once the difference between verified emissions and allowances surrendered has been established for each year, an amount of allowances corresponding to that difference shall be cancelled (rather than auctioned).

- **Phase in for Maritime Transport (for EU to/from non-EU port voyages):**
  - 40% (of 50% of verified emissions) reported for 2024
  - 70% (of 50% of verified emissions) reported for 2025
  - 100% (of 50% of verified emissions) reported for 2026, and each year thereafter

- **Verified Emissions**
  - 1.1.2024: Verified Emissions to include ONLY CO_2 (carbon dioxide)emissions
  - 1.1.2026: Verified Emissions to include CO_2 (carbon dioxide), CH_4 (methane) and N_2O (nitrous oxide).

  - If fewer allowances are surrendered compared to the verified emissions from maritime transport for the years 2024 and 2025, once the difference between verified emissions and allowances surrendered has been established for each year, an amount of allowances corresponding to that difference shall be cancelled (rather than auctioned).

https://eur-lex.europa.eu/eli/dir/2023/959/oj

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- **Administering Authority**:
  - In case of a shipping company registered in a Member State, the administering authority shall be the Member State in which the company is registered
  - In case of a shipping company not registered in a Member State, the Member State with the greatest number of port calls from voyages performed by that shipping company in the preceding four monitoring years
  - In the case of a shipping company not registered in a Member State and that did not carry out any voyage in the preceding four monitoring years, the administering authority is the Member State where a ship of the shipping company has started or ended its first voyage

- A Member State is responsible for each shipping company. The Commission list, to be updated every two years, will publish a list of shipping companies within the scope of EU ETS. For shipping companies registered in a Member State, the administering authority for the company is the Member State.

- Member States should ensure that the shipping companies that they administer comply with the requirements of Directive 2003/87/EC. If a shipping company fails to comply, the Member State (except for the Member State whose flag the ship is flying) should be able to refuse entry to the ships. The Member State whose flag the ship is flying should be able to detain that ship, should the shipping company fail to comply.

- Compliance with EU ETS is responsibility of the 'shipping company' defined as the shipowner, or any other organisation or person, such as the manager or bareboat charterer, that has assumed responsibility of the ship based on definition of 'company' in Article 3, point d of Regulation (EU) 2015/757

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Official publication of amended Directive can be found here:
https://eur-lex.europa.eu/eli/dir/2023/959/oj

Amendments to MRV for Maritime

- Regulation applies to ships of 5,000 gross tonnage and above
- 1.1.2025 regulation applies to general cargo ships below 5,000 GT but not below 400 GT
- 1.1.2025 regulation applies to offshore ships of 5,000 GT and above

- By 1 April 2024, for each ship falling within scope of regulation submit a 'monitoring plan' to the administering authority, and that includes emissions of CH_4 and N_2O
- Monitoring plans should be submitted no later than 3 months after each ships first call in a port under a MS.
- By 6 June 2025, administering authority will approve the monitoring plan submitted

- 1.1.2025 –from 2025 by 31 March of each year, companies shall report for each ship under their responsibility, emissions for the entire reporting period of the previous year.
  - The administering authority may require companies to submit emissions report earlier than 31st March but not earlier than 28 February.
  - EUAs to be submitted by 30 September

- By 30 June of the year following the end of the reporting period, ships must carry on board a valid document of compliance, valid for 18 months
- Penalties: Failure to comply for 2 or more consecutive years allows the MS of a port to issue an expulsion order, following which every MS shall refuse entry to the ship

Regulation EU 2015/757: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32015R0757&from=EL
Amendments : https://eur-lex.europa.eu/eli/reg/2023/957

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Update to 2003/87/EC: Application to Maritime Transport

- Until 31 December 2030:
  - Share of EUAs shall be attributed to Member States with ratio of shipping companies under their responsibility, based on their population in 2020 and data from 2018 to 2020, above 15 shipping companies per million inhabitants
  - Quantity of allowances to correspond to 3.5% of additional quantity of allowances due to increase in maritime cap
  - 2024 and 2025 the quantity of allowances shall, in addition, be multiplied by percentages applicable to relevant year
  - Revenue generated from auctioning share of allowances should be used for restoration and protection and better management of marine-based ecosystems, in particular marine protected areas. Should there be remaining allowances 50% of the allowances shall be distributed among relevant Members States based on share of shipping companies and remainder distributed in equal shares.

Official publication of amended Directive can be found here:
https://eur-lex.europa.eu/eli/dir/2023/959/oj

Gist on EMSA (or other relevant authority's) role

- The European Maritime Safety Agency (EMSA) or other relevant organisations, should assist the Commission in relation to implementation of Directive 2003/87/EC

- Owing to its experience with implementation of Regulation (EU) 2015/757 and its IT tools, EMSA should assist in the monitoring, reporting and verification of emissions generated by maritime transport under Directive 2003/87/EC

- The Commission, assisted by EMSA, should endeavour to develop appropriate monitoring tools, with such tools made available to Member States for robust enforcement of Directive 2003/87/EC

- To achieve the emission reduction target for 2030, reduction in emissions of sectors covered by EU ETS need to reduce emissions by 62% compared to 2005 levels.
  - Total quantity of allowances to be reduced in 2024 and 2026
  - Linear reduction factor (LRF) should be increased in 2024 and 2028

- Member States' revenues will increase as a result of inclusion of maritime in EU ETS, therefore Member States are encouraged to use these revenues to contribute to protection, restoration and better management of marine based ecosystems, in particular marine protected areas.

ECG Business Intelligence

Official publication of amended Directive can be found here:
https://eur-lex.europa.eu/eli/dir/2023/959/oj

Update to 2003/87/EC: Application to Maritime Transport

- Allocation of allowances and application of surrender requirements:
  - **50%** of emissions from ships performing voyages departing from port of call under jurisdiction of a Member State, and arriving at port of call outside of jurisdiction of member state
  - **50%** of emissions from ships departing from port of call outside jurisdiction of Member State and arriving at port of call under jurisdiction of Member State
  - **100%** of emissions from ships departing from a port of call under the jurisdiction of a Member State and arriving at a port of call under jurisdiction of a Member State
  - **100%** of emissions from ships within a port of call under the jurisdiction of a Member State

- By **31 December 2023**, the Commission will establish a list of neighbouring **container transhipments ports** and update that list by 31 December every two years thereafter.
  - List to include a port as a neighbouring container transhipment port where the share of transhipment of containers, measured in twenty-foot equivalent units, **exceeds 65% of total container traffic** at that port during the most recent 12-month period, where the port is located outside the Union but less than **300 nautical miles** from a port under the jurisdiction of a Member State.
  - Containers shall be considered to be transhipped when they are unloaded from a ship to the port for the sole purpose of being loaded onto another ship.

Container traffic ONLY

Official publication of amended Directive can be found here:
https://eur-lex.europa.eu/eli/dir/2023/959/oj

Extension of EU ETS to include Road Transport

- As CO_2 is expected to be transported by ship and truck, Annex 1 to Directive 2003/87/EC should be extended to all means of transport. Where the emissions from the transport are also covered by another activity under Directive 2003/87/EC, the emissions should be accounted under the other activity to avoid double counting.

- Expansion of emission trading to include emissions from buildings and **road transport** sectors. For these sectors, a separate but parallel emission trading system, accompanied by complementary policies via an amendment to Directive 2003/87/EC.
  - 2025: ETS for buildings, road transport and additional sectors to start
  - 2024-2026: regulated entities required to hold greenhouse gas emission permits to report emissions
  - 2027—issuance of allowances and compliance obligations to commence
  - Due to the very large number of small emitters, the point of regulation is further upstream in the supply chain.
  - Directive lays down robust control system for quantities of fuels released for consumption under Council Directive (EU) 2020/262—**final consumers of fuels therefore in buildings & road transport, will NOT be subject to obligations under Directive 2003/87/EC**

ECG Business Intelligence

Official publication of amended Directive can be found here:
https://eur-lex.europa.eu/eli/dir/2023/959/oj

Thank You