

EU Shipping's €24billion/year fossil tax holidays

Maritime ETS is urgent to cut on shipping's fuel subsidies

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This paper estimates that the EU gives more than **€ 24 billion/year in subsidies** to maritime sector in the form of fossil fuel tax exemptions under the European Energy Tax Directive (ETD) and national tax legislation. This is estimated based on national tax rates applicable to road diesel – used by trucks – in EU member states. Each tonne of CO₂ emitted by fossil ships causes the same level of climate change as the CO₂ emitted by fossil trucks. Hence, there are no ethical or environmental grounds to treat the maritime industry more leniently in European environmental regulation. In the context of the continent's climate objectives, this is not only an anachronism but also a perverse incentive for climate pollution.

EU should as a matter of urgency close this environmental gap by **including shipping in the EU Emissions Trading Scheme**. Unlike the ETD, the revision of the ETS Directive can be achieved by qualified majority in the Council under the ordinary legislative procedure (OLP). This would generate over **€ 3.6 billion/year in revenues** (or **€ 7.2 billion/year with a CO₂ multiplier**), that can be reinvested into greening the EU economy, including the maritime sector: e.g. investments in green port infrastructure and operational subsidies for first-movers. The price impact of the ETS on consumer goods will be insignificant, measured in a few euro cents.

Shipping is currently the only sector that is not yet contributing to the EU's climate efforts. With 140 million tonnes of CO₂/year, EU shipping contributes to climate change more than the bottom 20 EU member states' individual economies. The sectoral emissions are forecast to further grow by an additional 33 million tonnes of CO₂/year. A lack of European climate laws for maritime and massive tax subsidies fuel this trend.

Shipping's fossil tax subsidies vs. potential maritime ETS bill



24 billion/year



3.6 billion/year



7.2 billion/year

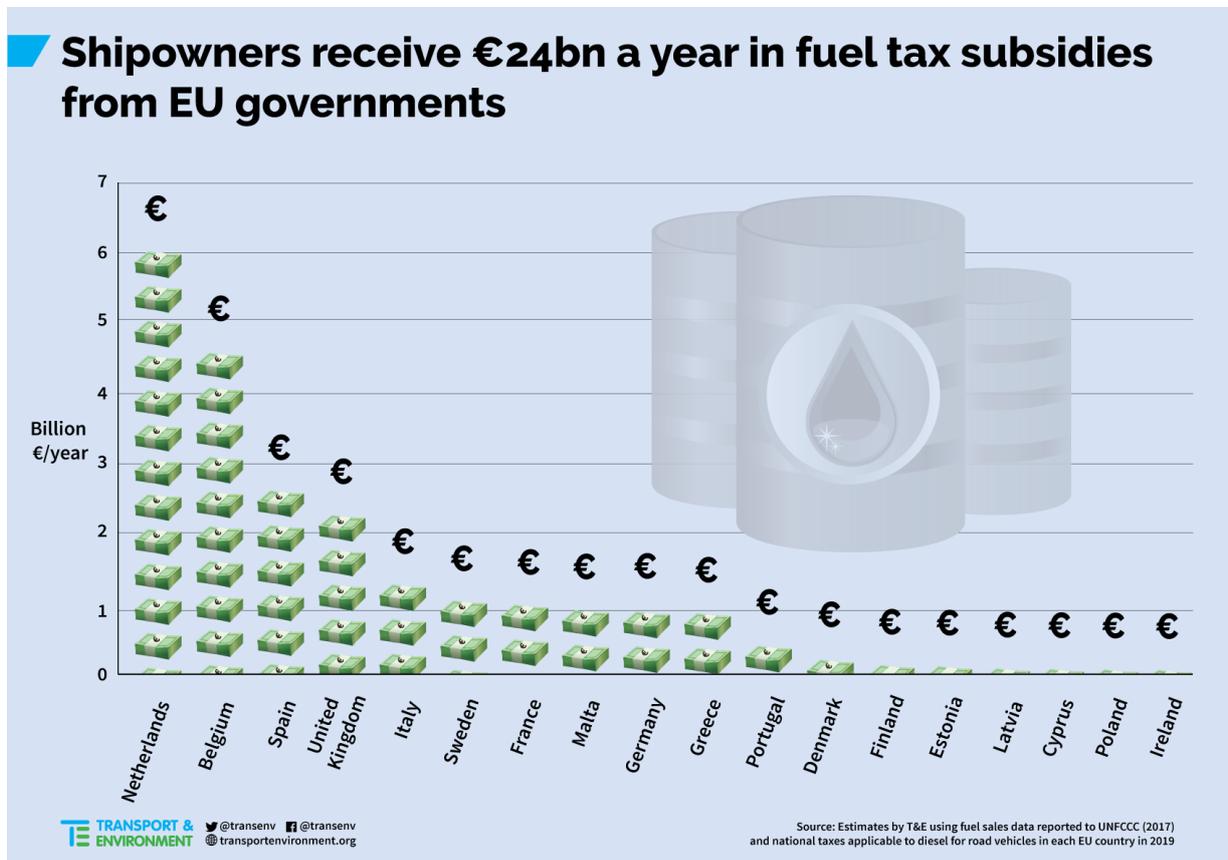
- Shipping fossil fuel tax subsidies
- Potential maritime ETS revenue
- Potential maritime ETS revenue (with 2x CO₂ multiplier)

1. Policy context

A recent analysis by the International Transport Forum (ITF) concluded that “at least EUR 3 billion is spent per year on just three maritime subsidies in OECD countries: tonnage taxes, tax exemptions for fuels for domestic shipping, and fiscal measures to reduce wage costs of seafarers”.¹ The purpose of this report is to analyse subsidies provided to international shipping in the EU in the form of fossil fuel tax exemptions and how maritime ETS could help fill this gap.

ETD (2003/96/EC) bans under the Article 14(1)(c) taxation of marine fuel sold to ships on the EU territory. The European Commission has recently recognised that mandatory tax exemption of, inter alia, maritime fuels under the ETD is “in stark contrast with the environmental objectives” of the Union.²

T&E estimated that, shipping fuel, the dirtiest of all transport fuels, receives preferential treatment worthy of €24 billion/year (Table 2), which indirectly exacerbates shipping’s impact on climate change. To discontinue this practice, ETD needs to be revised which can only be accomplished by unanimity procedure in the EU Council. This increases the risk of “no-action”, as it would take only one country to veto the change.



Therefore, including international shipping in the EU Emissions Trading Scheme, as committed by the Commission President-elect³, is the most straightforward way to ensure that the shipping industry pay for their environmental externalities associated with GHG emissions. Unlike ETD revision that requires

¹ ITF, Maritime Subsidies Do They Provide Value for Money? 2019, Accessible at: <https://www.itf-oecd.org/sites/default/files/docs/maritime-subsidies-value-for-money.pdf>

² Commission SWD (2019) 329 final, Brussels, 11.9.2019, page 60. Accessible at: https://ec.europa.eu/taxation_customs/sites/taxation/files/energy-tax-report-2019.pdf

³ https://ec.europa.eu/commission/sites/beta-political/files/political-guidelines-next-commission_en.pdf

unanimity voting, the revision of the ETS Directive can be achieved by a qualitative majority in the Council under the ordinary legislative procedure (OLP). Hence, no single country could block the legislation.

Including shipping in the ETS under the MRV scope would generate some € 3.6 billion/year with the current ETS CO₂ price of €26 per allowance. Given the low pass-through freight costs of shipping (see below), a multiplier (e.g. 2x) could be applied to maritime CO₂ under the ETS to double the revenues to € 7.2 billion. CO₂ multipliers can help fill the “fuel subsidy gap” for the maritime sector by increasing the level of carbon pricing while maintaining the scope of emissions covered. Raised revenues could then be re-invested in the maritime sector, including in zero-carbon energy/fuels infrastructure in ports, as well as operational subsidies for the first-movers to zero-carbon propulsion. To enable this, a Maritime Climate Fund (MCF) can be established under the ETS Directive to channel and manage the funding.

The cost impact of shipping ETS on the price of consumer goods in Europe would be insignificant. This is because maritime transport contributes only a small percentage to the final consumer prices and changes of these prices in either direction will not have huge impacts on trade. This is explained by the huge size of ships creating economies of scale that lowers the unit cost of transportation.

T&E has estimated, based on the shipping CO₂ data from the maritime industry, the likely impact of maritime ETS on the prices of some of the consumer goods that are internationally transported by ships. As Table 1 demonstrates, if ships calling at EU ports were required to pay even a €50 per tonne of CO₂ price under the EU ETS and if these costs were passed on to final consumers proportionate to each products’ share of CO₂ in shipping, the price increase on these consumer goods would be insignificant. For example, a kg of banana from Ecuador or an iPad from China would respectively cost Belgium consumers for about 0.55% and 0.0005% more (all else being equal). The difference is measured in Euro cents.

Insignificant impact of shipping ETS on consumer goods

Product	Origin	Destination	Distance	Ship CO ₂ emitted per item	Additional costs with shipping in the ETS with €50/tonne CO ₂	Old Price in Belgium* without ETS	New price in Belgium* with ETS	Price increase due to ETS
 Banana (single)	Ecuador	Netherlands	10464 km	22 g	0.11000 € Cents	1.200	1.207 € /kg of banana	0.5500%
 iPad (single)	China	Denmark	19327 km	55 g	0.27500 € Cents	550	550.003 € /iPad	0.0005%
 Grain (1 kg)	Brazil	Holland	10416 km	21 g	0.10500 € Cents	0.16	0.161 € /kg of grain	0.6562%
 Diesel (1 litre)	USA	Italy	8575 km	24 g	0.12000 € Cents	1.4	1.401 € /litre of diesel	0.0857%

Source: Estimates by T&E based on the product emissions data from Danish Shipping, <http://www.navigatingresponsibly.dk/>

* Product prices in Belgium were found based on desk research.


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Table 1: Possible impact of ETS on consumer goods (T&E calculations based on data from Danish Shipowners Association⁴).

⁴ <http://www.navigatingresponsibly.dk/>

2. Methodology of calculations

Estimations for fuel tax subsidies are based on the EU emissions reports to the UNFCCC in 2017, which includes information on international maritime as a memo item.⁵ UNFCCC data on maritime emissions are based on the fuel sales data from each EU country. The latter is the relevant basis for estimating foregone fuel tax revenues because excise duties are usually levied at point of sale. To convert CO₂ emissions into fuel sales, we assumed that all marine fuel sold in the EU was heavy fuel oil (HFO), which has a CO₂ to fuel ratio of 3.114 (by mass). In reality, some of the sold fuel was likely marine gas oil (MGO), which has a CO₂ to fuel ratio of 3.206.⁶ However, this uncertainty has less than 1% impact on the final estimations even if up to 30% of all fuel sold was MGO.

The fuel mass is converted to litres.⁷ We then used nominal excise tax rates⁸ in each EU member states applicable to diesel for road vehicles (trucks) in 2019 to calculate the total amount fossil fuel subsidy given to shipping industry every year (Table 2).

The potential maritime ETS revenues were calculated following a slightly different method. For this purpose, we used EU shipping MRV emissions as the basis, because maritime ETS would be based on MRV scope as opposed to UNFCCC reports (based on fuel sales). In reality, the MRV and UNFCCC reported emissions highly correlate. The only difference is that the fuel sale/purchase point is irrelevant for MRV because it is maritime activity-based information, as opposed to fuel sales. For this reason, potential maritime ETS revenues were calculated by simply multiplying total EU-related maritime CO₂ emissions per year (138 million tonnes)⁹ by the current CO₂ price under the ETS – i.e. €26/tonne CO₂. For the CO₂ multiplier, we have simply assumed 1 tonne of CO₂ = 2 CO₂ allowances under the ETS.

Further information

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⁵ Item 1.D.1.b Navigation, including all international maritime movements including inland waterways.

⁶ 3rd IMO GHG study, Table 32, 2014

⁷ HFO has a density of 970 kg/m³, or 1030 litre/tonne, from JRC Well-to-Tank Report version 4.0 Appendix Table 2.2. Available: https://ec.europa.eu/jrc/sites/jrcsh/files/wtt_appendix_1_v4_july_2013_final.pdf

⁸ Data on road taxes was compiled by T&E using EU Weekly Oil Bulletin. Accessible at: <https://ec.europa.eu/energy/en/data-analysis/weekly-oil-bulletin>

⁹ EU THETIS MRV, <https://mrv.emsa.europa.eu/#public/emission-report>

3. Annex I: Detailed results

Shipping's fossil fuel tax subsidies in the EU

		Marine fuel deliveries (Ktonnes)	Foregone tax revenues (€/year)
	Netherlands	11,757	6,060,774,193
	Belgium	7,398	4,576,273,567
	Spain	6,762	2,649,393,339
	United Kingdom	3,338	2,271,604,476
	Italy	2,241	1,432,233,353
	Sweden	2,446	1,134,718,400
	France	1,758	1,105,646,454
	Malta	2,172	1,052,430,174
	Germany	2,044	990,298,597
	Greece	2,230	965,837,734
	Portugal	785	396,517,345
	Denmark	497	220,421,506
	Finland	345	163,786,085
	Estonia	301	151,842,565
	Latvia	276	108,013,165
	Cyprus	254	107,451,454
	Poland	263	92,306,341
	Ireland	151	77,925,912
	Slovakia	157	76,276,113
	Lithuania	175	64,813,995
	Bulgaria	79	26,828,102
	Romania	28	11,633,459
	Austria	20	8,550,511
	Croatia	6	2,679,161
	Slovakia	6	2,401,003
	Luxembourg	0.1	18,808

Source: Estimates by T&E based on fuel sales data from UNFCCC (2017) and EU national road diesel taxes (2019).