



Making polluters pay

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According to the International Maritime Organization's (IMO) *Fourth Greenhouse Gas Study 2020*, maritime transportation accounts for an estimated 2.9% of global greenhouse gas (GHG) emissions. But today, the sector relies entirely on fossil fuels. As per the same paper, the industry's GHG emission level is projected to increase dramatically in the coming years, even by 130% in 2050 compared to 2008.

As Europe is heading to climate neutrality by the middle of the century, it has become clear that shipping must also deliver its fair share of the EU's decarbonisation effort. As a vessel's lifetime is about 25 years, it means that ships commissioned today are likely to be operating well into the 2040s. The deployment of zero-emission vessels is thus imperative in this decade.

To reach these objectives, the European Commission (COM) released its Fit for 55 Package, in which several legislative proposals were made for the decarbonisation of EU shipping. While the shipping Emissions Trading System (ETS) proposal provides a reasonable basis for the upcoming legislative debate, the FuelEU Maritime proposal drastically lacks the ambition to drive green fuels in the sector.

A ship operator overtaking coal plants?

The ETS is Europe's flagship climate policy. It works under a 'cap and trade' principle where a limit is set on the total amount of pollution that the installations covered by the system can emit and is reduced over time so that total emissions fall. Polluters must buy allowances (EUAs) for each tonne of GHG put in the atmosphere. If the cost of reducing their emissions is lower than the price of an allowance, the company will invest in emissions reductions and sell allowances. Conversely, if the price of reducing emissions is higher than the carbon price, the company will buy allowances, thus incentivising emissions reductions elsewhere in the carbon market. The ETS, therefore, provides flexibility and incentivises the most cost-effective emission reductions.

In July, the COM proposed to include international shipping emissions in the ETS. It is an important move because it means shipping companies will finally pay for their

climate pollution. They will be accountable for all emissions between and within the European ports but only half from voyages with non-European ports. According to our latest research, the Mediterranean Shipping Company would rank 6th among the EU's biggest carbon emitters if shipping was part of the bloc's emissions trading system. "For the third year running, the biggest shipping emitter has climbed the top 10 of Europe's largest polluters. It's emblematic of an industry that doesn't pay a cent for its pollution. That a ship operator is overtaking coal plants shows that business as usual isn't working. We need an EU carbon market that makes shipping pay for all its pollution," Jacob Armstrong, Sustainable Shipping Officer at our organisation, said. He also stressed, "Anything less than a carbon market covering extra-European voyages lets the biggest shipping companies off the hook and leaves smaller operators who sail mainly within Europe to pick up the tab. It would also forfeit ETS revenues that could be reinvested in greening the sector."

Including maritime transport in the ETS presents a significant benefit: it would have a minor effect on overall prices. Firstly, price increases will stay within the normal fluctuation of fuels. Secondly, **it will be the consumer and not the shipping company that will end up paying.** But the impact on the price of consumer goods will remain negligible. For instance, the price of an iPad shipped from China will increase by €0.003, that is to say, almost nothing.

That said, the ETS will generate a significant amount of revenues. Rough calculations show that the shipping ETS could bring in sums of more than €6.0b per year (the impressive economies of scale of the shipping business is laid bare when juxtaposed with the marginal impact on consumers).

One challenge for policymakers will be to ensure the ETS achieves its ultimate goal: decarbonised shipping. In this sense, revenues from the ETS should be forwarded to a dedicated fund (i.e. The Ocean Fund), as per the **European Parliament's proposal.** This tool would incentivise innovative green shipping projects. The fund would be especially useful if combined with Carbon Contracts for Difference, subsidy schemes for clean fuels that are proven, market-friendly tools to kick-start shipping's transition.

In parallel, concerns about carbon leakage – where ships would reroute to non-EU ports to avoid paying the full carbon cost – have been expressed after the plan's release. On that matter, **another T&E study** found that the risk of evasive port calls in three locations (Rotterdam, Algeciras, Piraeus) close to potentially competitive non-European ports is unlikely to happen. Under the proposed scope, only 6% of voyages to these ports would be tempted to evade at a carbon price of €60/t CO₂ prices. The extra costs associated with the need to carry out economic activity in that port (additional port dues, extra fuel expenses, port congestion, opportunity cost) render the actual risk marginal.

Nonetheless, the maritime ETS is unlikely to be sufficient to bridge the price gap between conventional fossil and sustainable marine fuels, hence the importance of a complementary regulation to make a fuel switch happen finally. This is the purpose of the FuelEU Maritime initiative.

Fail to push?

If energy efficiency can deliver up to one-third of emission cuts, **full decarbonisation by 2050 will require the gradual deployment of zero-emission vessels from 2025.** The stated objective of the FuelEU Maritime initiative is to promote green marine fuels.



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The COM proposed to introduce a goal-based fuel GHG intensity target that increases in stringency over time. One outstanding achievement is that the target is expressed in life-cycle GHG emissions (so-called Well-to-Wake) to account not only for CO₂ but also methane (CH₄) and nitrous oxide (N₂O) emissions of the different fuels used on board ships.

Nevertheless, if adopted in its current shape, the regulation will fail to push the maritime sector to invest in genuinely sustainable fuels such as green e-fuels, including e-hydrogen and e-ammonia. On the contrary, implementing the GHG target would likely result in accelerating fossil gas uptake in the shipping sector. It is because fossil liquefied natural gas (LNG) is allowed until 2040 under the current targets and enjoys a competitive advantage compared to more sustainable fuels due to its considerably low price; that's despite the limited or even negative benefits of fossil LNG use to reduce GHG emissions.

A report from the World Bank released in April 2021 strongly advised policymakers not to encourage the use of LNG in shipping. It found that LNG is unlikely to play a significant role in decarbonisation, including as a transitional fuel, because of the risk of stranded assets it creates. The report also described green ammonia and hydrogen as having **the most promising balance of favourable features relative to other options for zero-emission shipping.**

It is also **the opinion** of the biggest shipyards in the world that plan to deliver the first big container ships powered by green ammonia by 2025.

But to make a case for shipping companies to invest in e-fuels ships, FuelEU Maritime needs powerful add-ons. Multipliers have worked well to push electric cars under EU car CO₂ standards. As far as shipping is concerned, they would make it more cost-attractive for ship operators **to invest in an e-fuel-powered ship than blending biodiesel in existing fuel oil ships.** According to T&E estimations, a multiplier of 5 would be a good level to promote e-fuel ships, i.e., counting five times carbon intensity improvements achieved by using green fuels onboard. The incentive would be even stronger if companies could exchange excess compliance points from ships powered by renewable fuels only within the credit exchange system proposed by the COM.

In addition, the proposed “pay to comply” system, exempting ships from

GHG intensity reduction efforts, must be removed. Only dissuasive penalties making non-compliance cost-prohibitive should be used; otherwise, one cannot reasonably expect a fuel switch to happen on the market.

This measure will also be complemented with EU targets on infrastructure through the Alternative Fuel Infrastructure Regulation (AFIR), which must encourage ports to deploy hydrogen refuelling points instead of fossil LNG.

Room for improvement?

While the COM's proposal for ETS provides a sound basis for applying the polluter pays principle in shipping, the FuelEU Maritime will need a change of philosophy, from simply promoting alternative fuels to supporting those truly sustainable ones.

As the texts will enter negotiations in the European Parliament and the European Council starting from September, there is still room for improvements before the proposals enter into force in 2023-2024. □



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