September 2024

To guarantee the uptake of sustainable e-fuels

Advantages of the sustainable e-fuels multiplier/reward factor

A sustainable e-fuels multiplier/reward factor would allow the energy from each tonne of a sustainable fuel to count multiple times towards the attainment of the GFI target. For example, a reward factor of two would allow one tonne of green e-methanol to count twice towards the GFI requirements. This mechanism would:

1

Reduce **compliance costs** when using green e-fuels

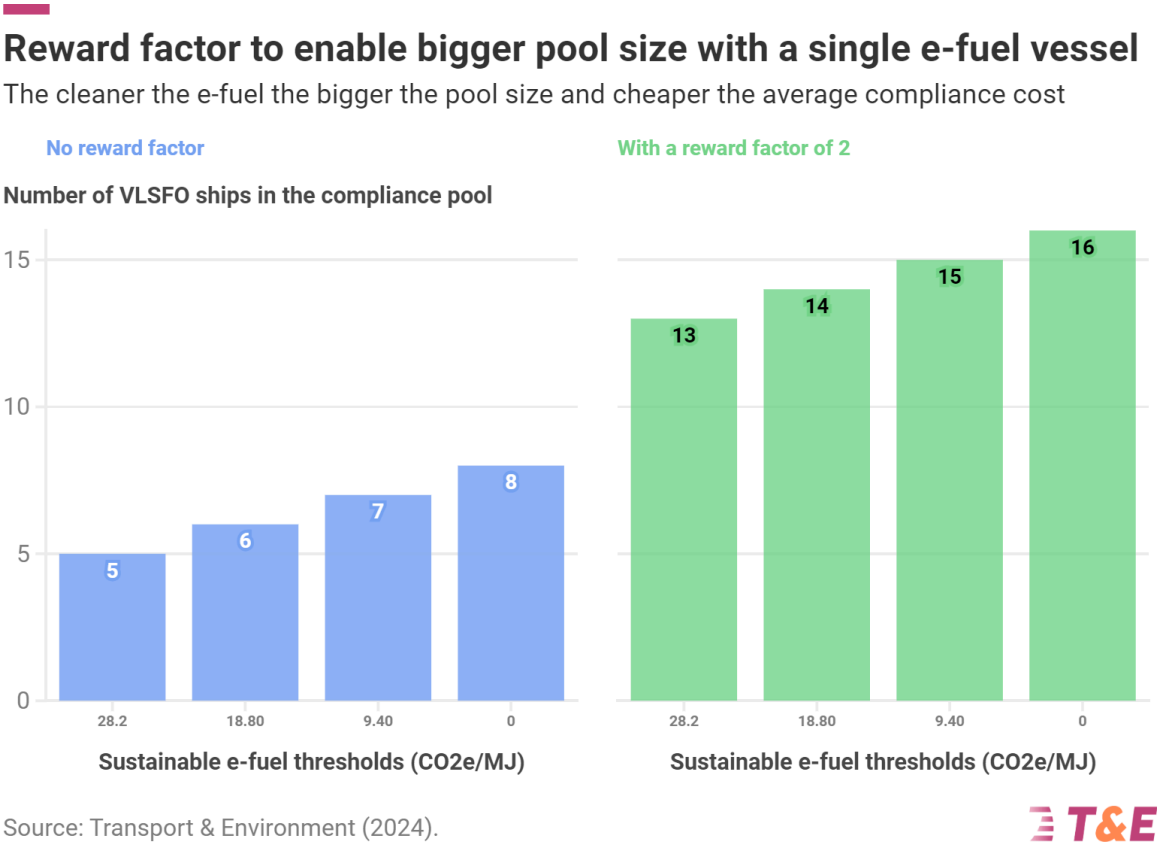
2

Encourage the use of the **most sustainable e-fuels**

3

Secure **market demand** of sustainable e-fuels

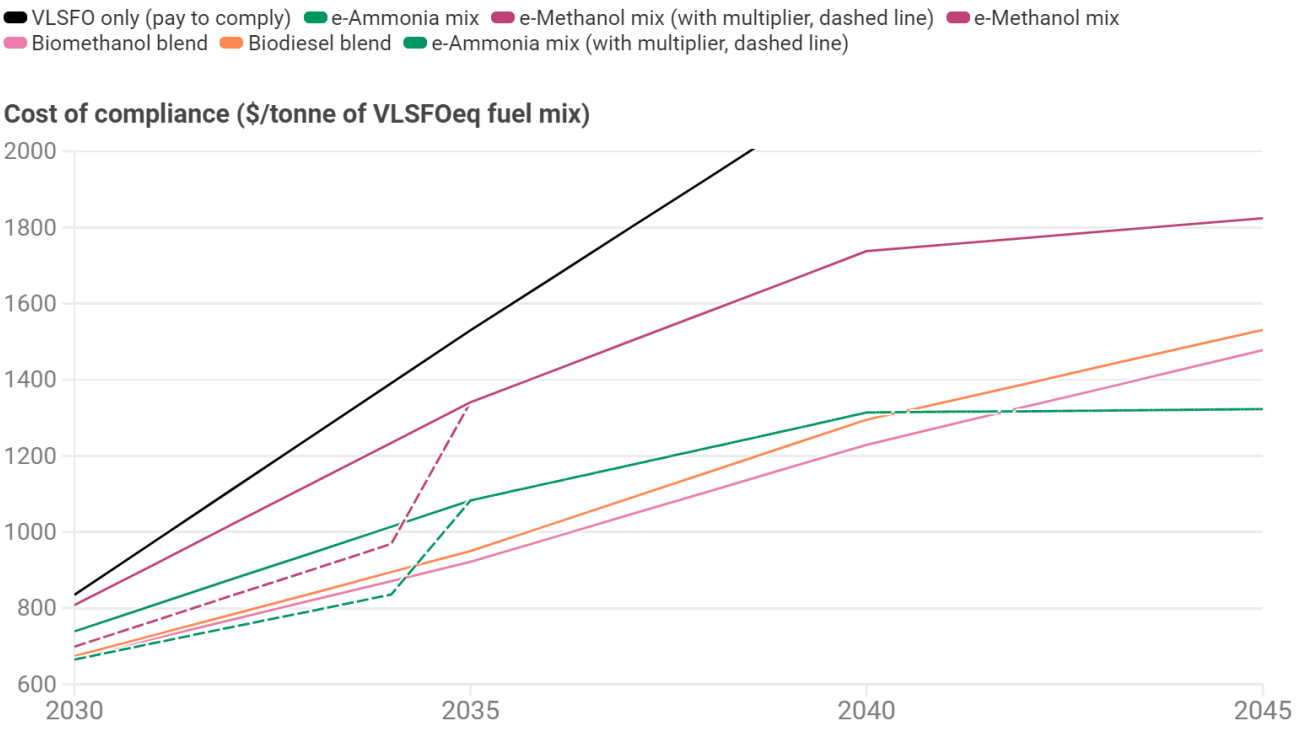
With a multiplier of 2, a ship running on e-ammonia (with a GHG intensity of 9.4 gCO_{2e}/MJ) could be pooled with up to 15 VLSFO-powered ships to comply with the required 2030 GFI.



Impact of the sustainable fuels reward factor on the size of the compliance pool

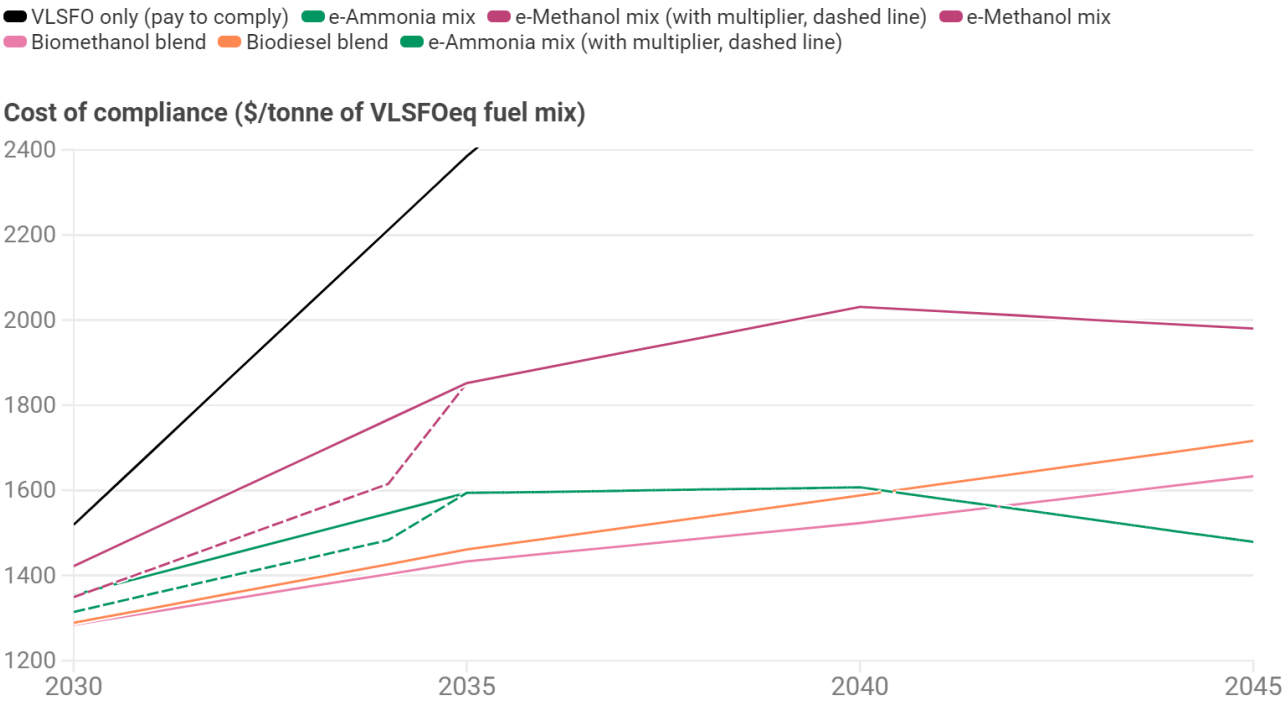
The graphs below show that in the absence of a high levy, a multiplier of 2 could **make low emissive e-ammonia cost competitive against biodiesel** and bring the price of green e-methanol significantly closer to biodiesel. If it was combined with a high levy ($150-$300), the multiplier effect would still remain, reducing the cost compliance gap between biodiesel and green e-ammonia or green e-methanol. Consequently, the multiplier could **reduce the amount of feebate funds needed to bridge the price gap** between e-fuels and alternatives, making more funds available for other purposes.

Competitiveness of fuels under GFS: multiplier comparison



Source: Transport & Environment (2024); DNV (2024)
Notes: Analysis assumes that ships co-combust/blend only the minimum level of alternative fuels needed to meet the GFS targets and that this is technically possible with DF engines. The analysis includes fuel costs and penalty costs, where relevant, and does not include a levy. For 2045/50, if a given fuel mix is unable to meet the required reduction in emissions intensity, we calculate costs from 100% use of the low-emission fuel.

Competitiveness of fuels under GFS: multiplier comparison (with levy)



Source: Transport & Environment (2024); DNV (2024)
Notes: Analysis assumes that ships co-combust/blend only the minimum level of alternative fuels needed to meet the GFS targets and that this is technically possible with DF engines. Costs include fuel costs, penalty costs where relevant, and a levy on WtW emissions, using values from the IMO CIA (DNV). For 2045/50, if a given fuel mix is unable to meet the required reduction in emissions intensity, we calculate costs from 100% use of the low-emission fuel.

Further information

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