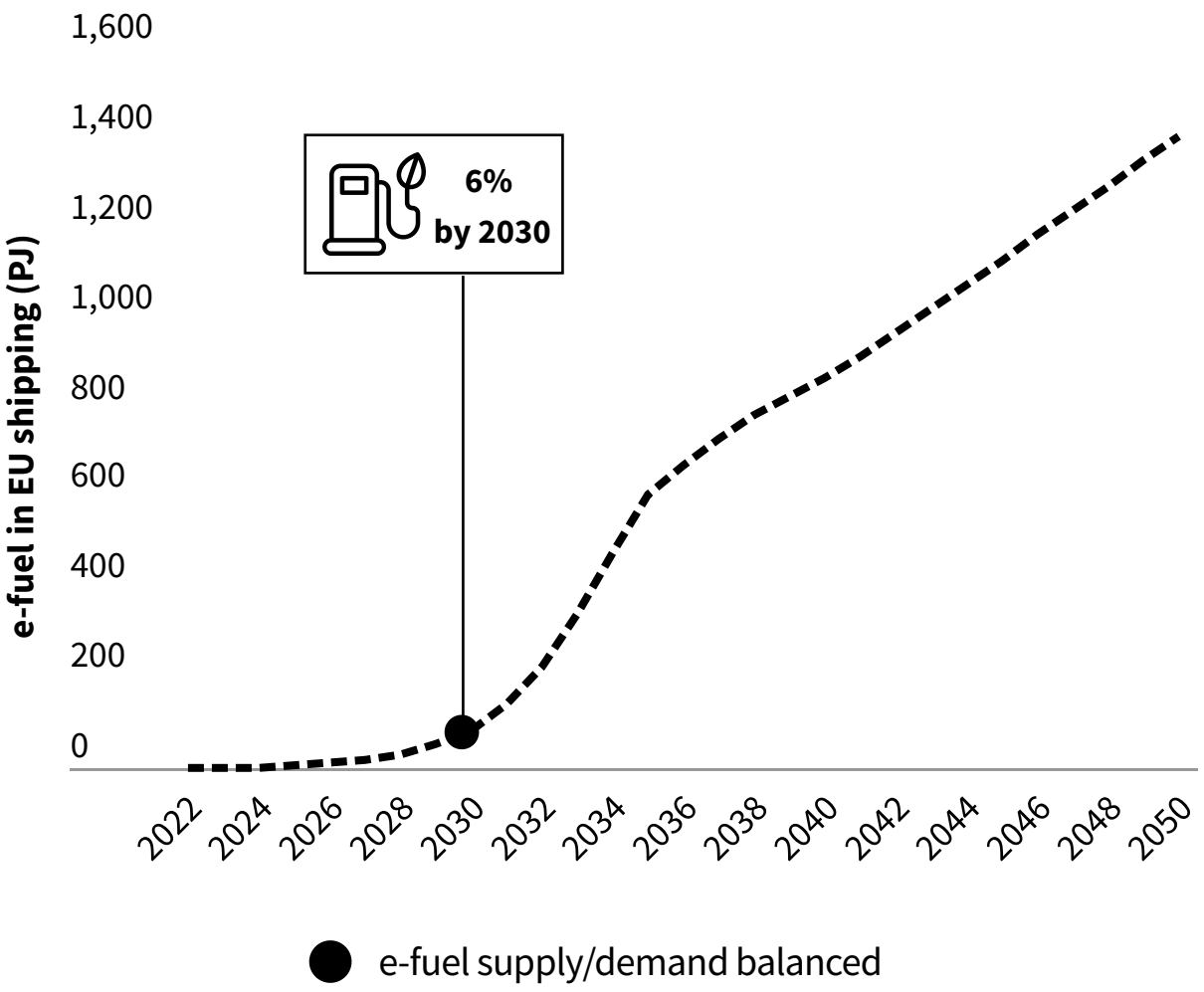
How to guarantee green H2 uptake in EU shipping



Recommendation 1:

Mandate a **6%** green **Hydrogen** (-based fuel) use in EU shipping by 2030 under the draft FuelEU Maritime Regulation. The goal of FuelEU Maritime regulation is to create demand for alternative marine fuels for shipping. The draft legislation is currently under negotiations in the EU Council and EU Parliament.

~800 000 tonnes

guaranteed H2 demand from EU shipping by 2030

~8.6 GW Electrolyser

capacity will be required for EU shipping alone

~2 million TOE/2030

dependence reduction on Russian oil & gas

Recommendation 2:

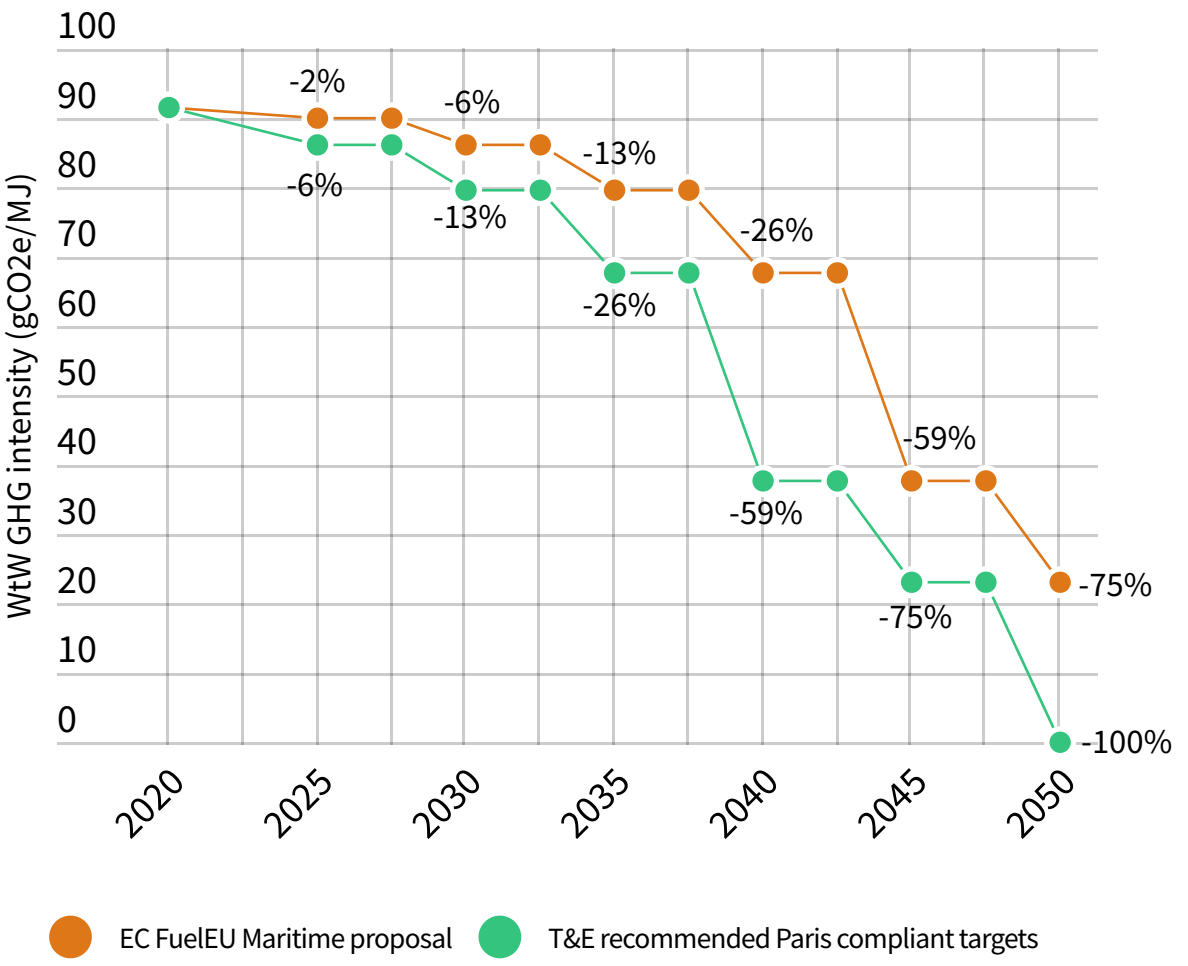
Advance EC proposed regulatory targets by 5 years and set 2050 as the sunset date for the last use of GHG emitting fuels

~480 million tonnes

extra GHG saved by 2050

Paris Agreement

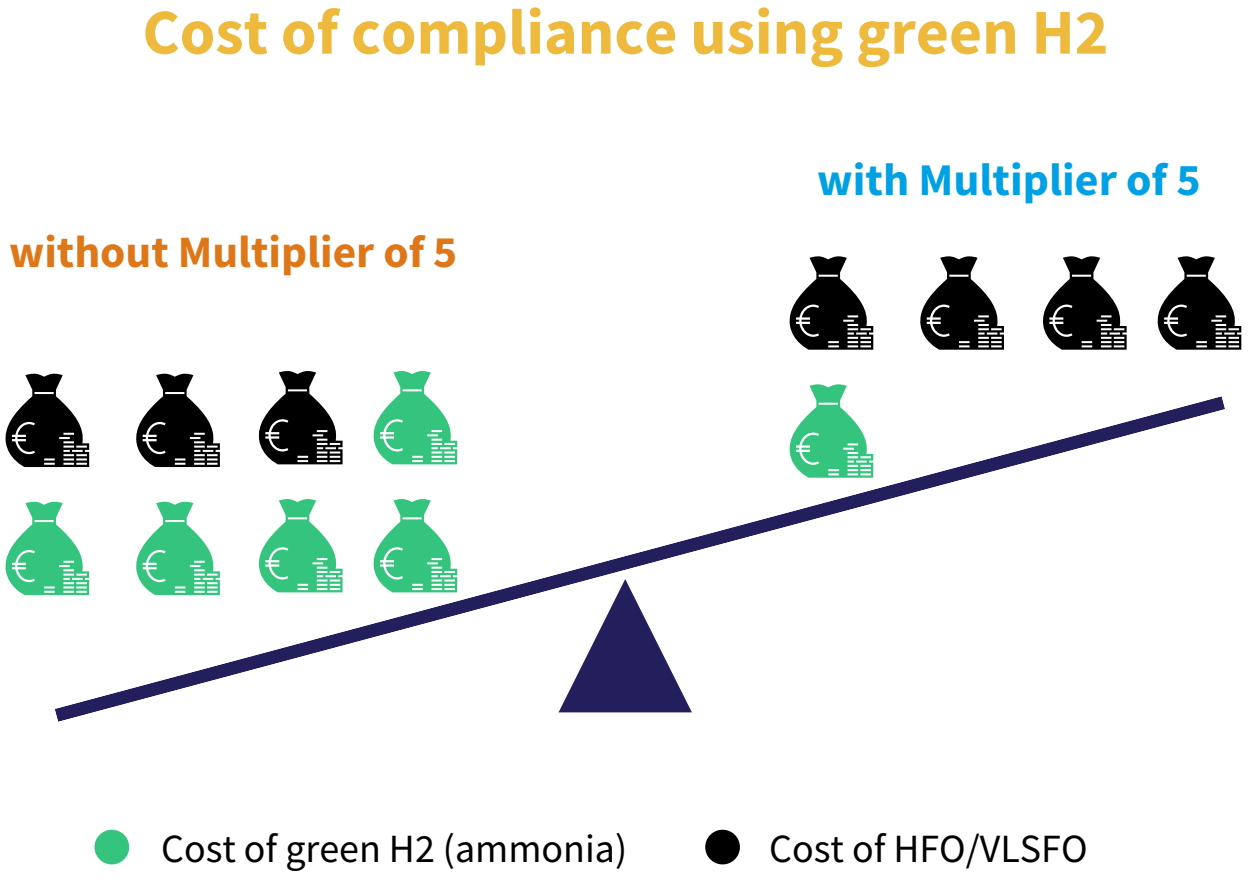
Full decarbonisation by 2050



Recommendation 3:

Apply a **multiplier** of **5** to the use of green H2(-based fuels) in shipping under the FuelEU Maritime Regulation. Multiplier functions like a "discount" system allowing the use of each tonne of green H2(based fuels) count 5 times towards achieving the regulatory targets. In practice, this helps to **fully bridge the cost-gap** between green H2(based fuels) and fossil fuels. Multiplier should only apply to volumes used above the sub-quota in order to provide additional incentives to shipowners/operators to switch to green H2-based fuels.

Cost of compliance using green H2



Potential green H2 demand for shipping in 2030

Europe has a sizeable ship bunkering market. Currently 99+% are of fossil origin. If the EU mandates a **6% green e-fuel** mandate under FuelEU Maritime, this would represent a total of about **800 000 tonnes** of green H2 market for shipping alone by 2030. This is compared to 20 MT currently aimed for all applications.

Million tonnes of green Hydrogen (using e-ammonia as the final product)

0 60,000 120,000 180,000