

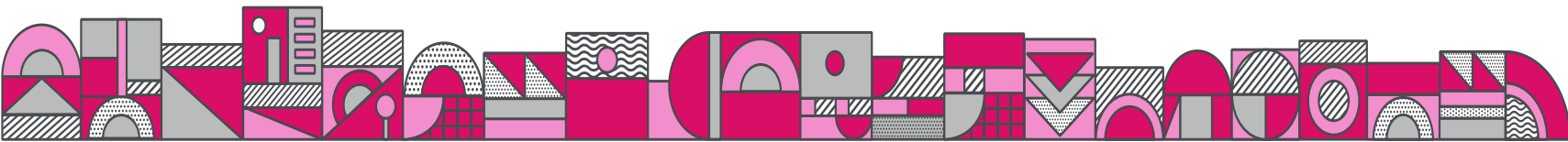
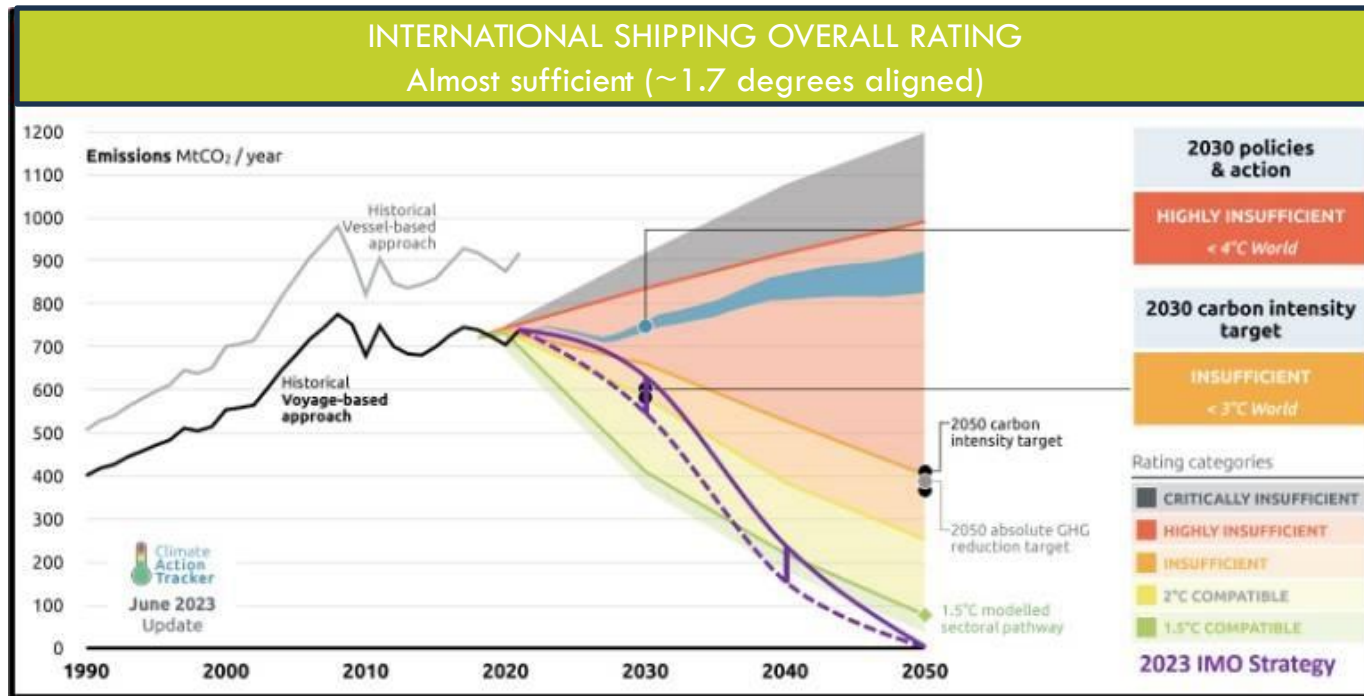
IEA Bioenergy TCP...

Tristan Smith

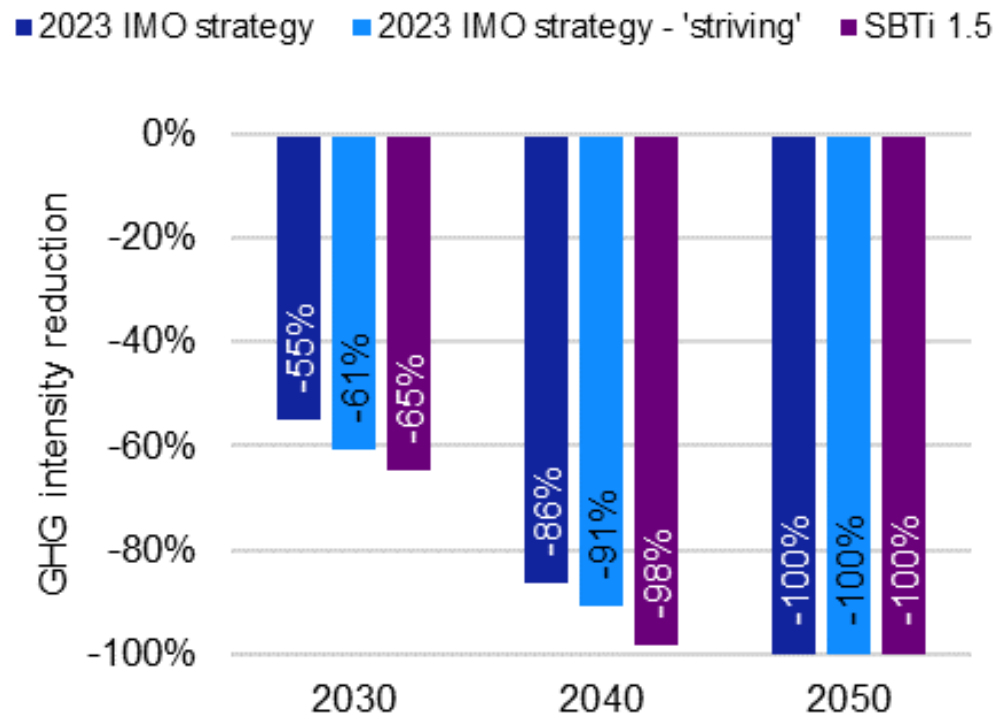
Tristan.smith@ucl.ac.uk

<https://www.shippingandoceans.com/news>

Quantum leap at the IMO (2023)



2023 - Public and private stated ambitions align close to 1.5



Threats, division, delay (Q3/4 2025)



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Trump threatens vulnerable countries before key shipping emissions vote

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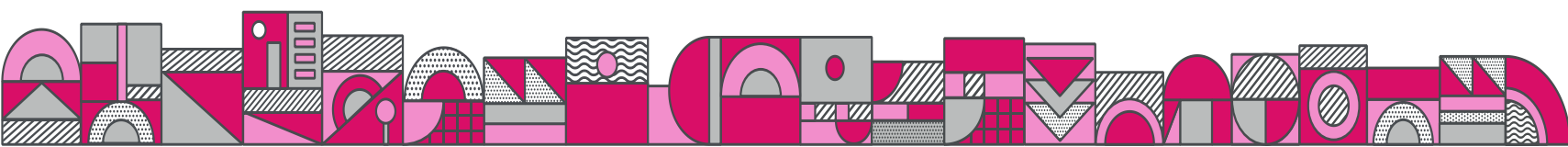
US accused of 'bully-boy' tactics to sink climate deal

Officials say 'threats' used to derail net zero deal for shipping industry ripped up rules of global diplomacy

The New York Times

Trump Officials Accused of Bullying Tactics to Kill a Climate Measure

Nations were poised to approve the first fee on pollution from ships. That's when the Trump administration began the threats.

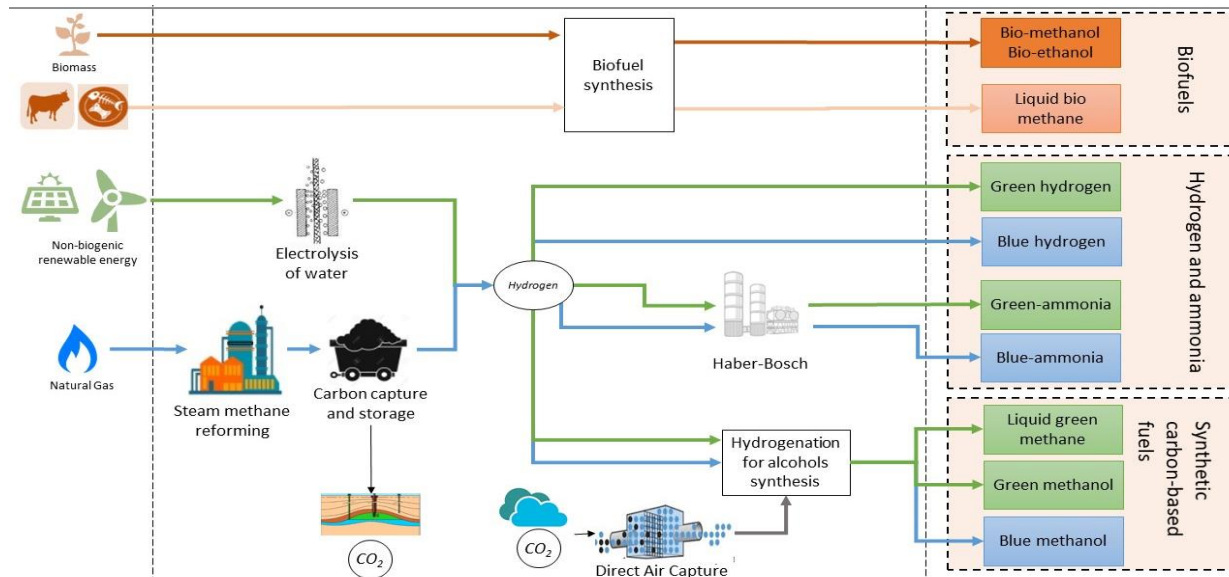


Fuel production pathways

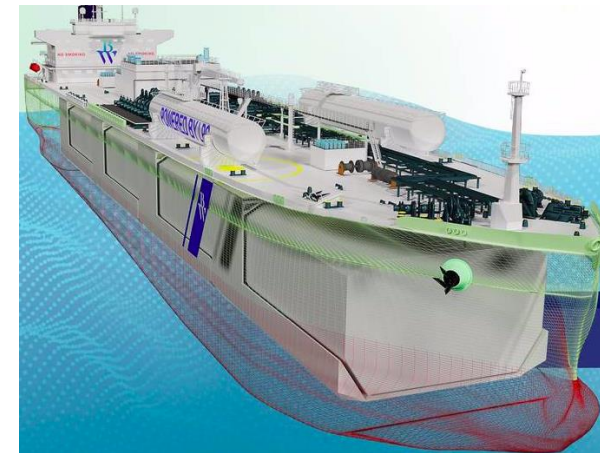
Feedstock prices

Production process capex/opex/efficiency

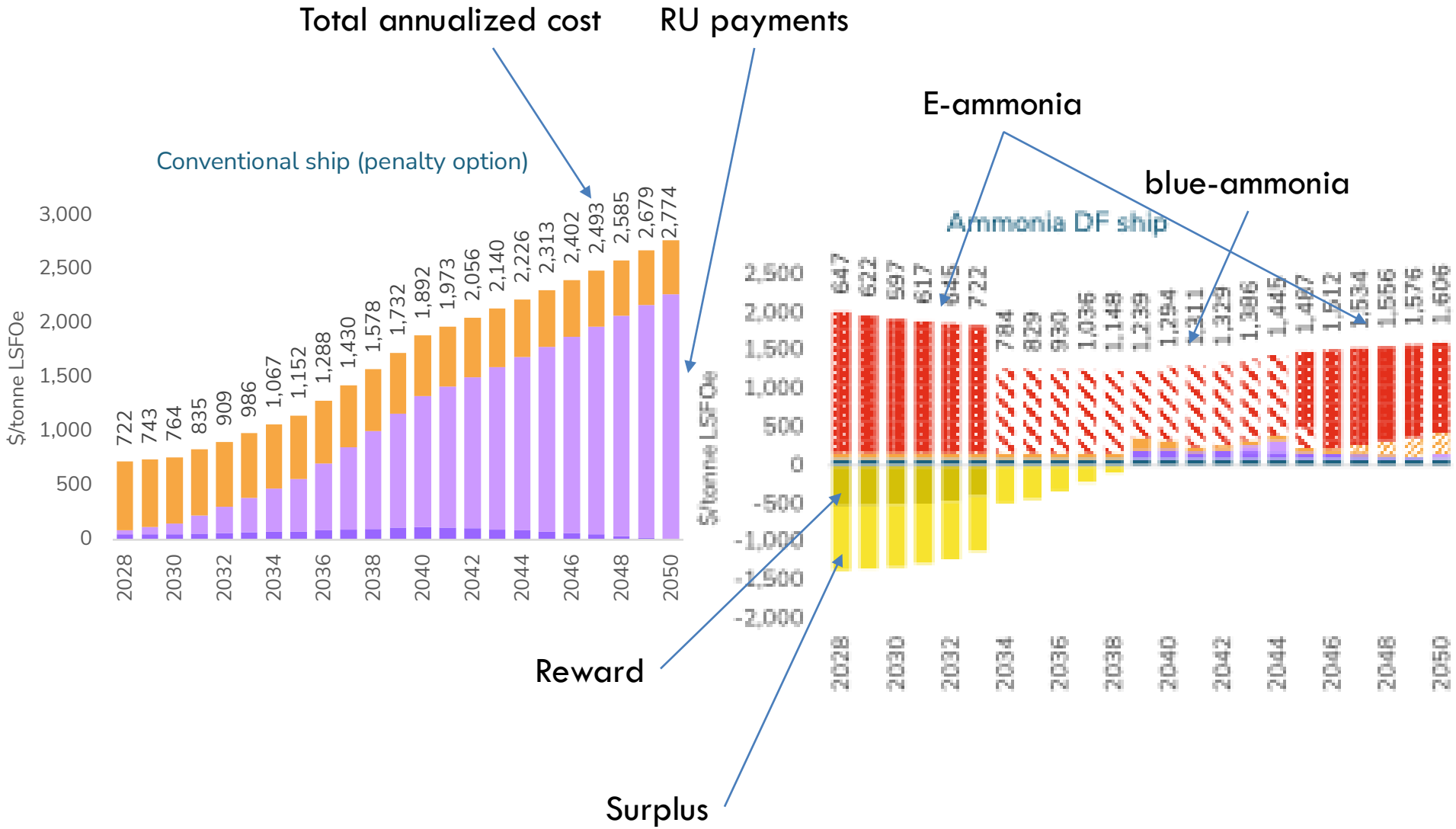
Machinery and storage, capex, efficiency, size



UMAS and World Bank

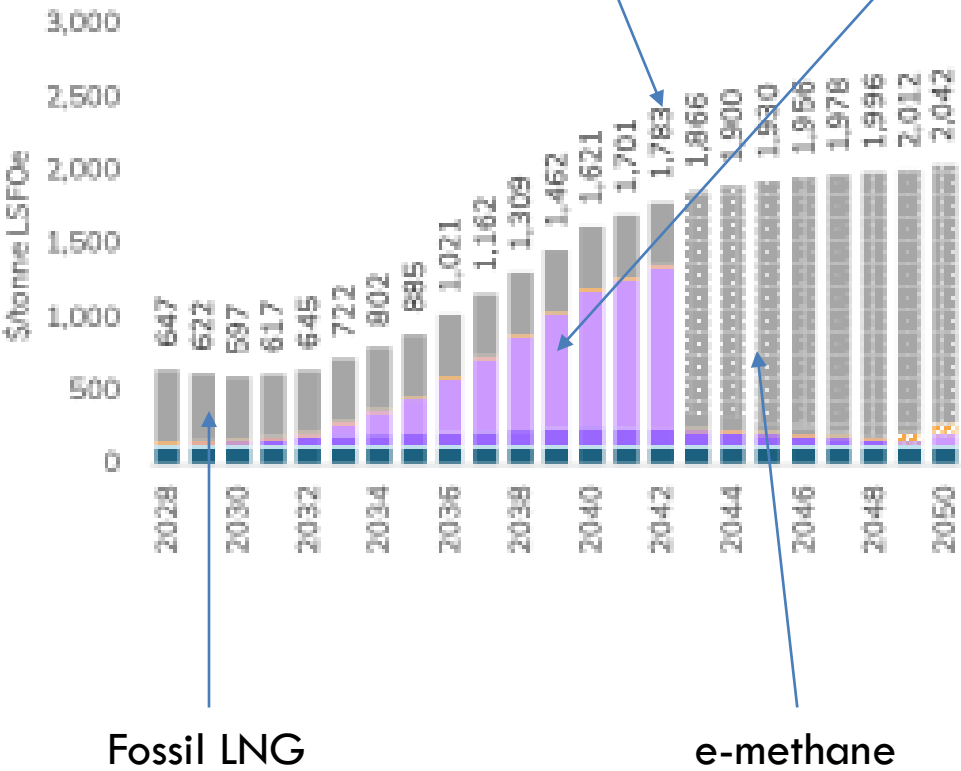


BW



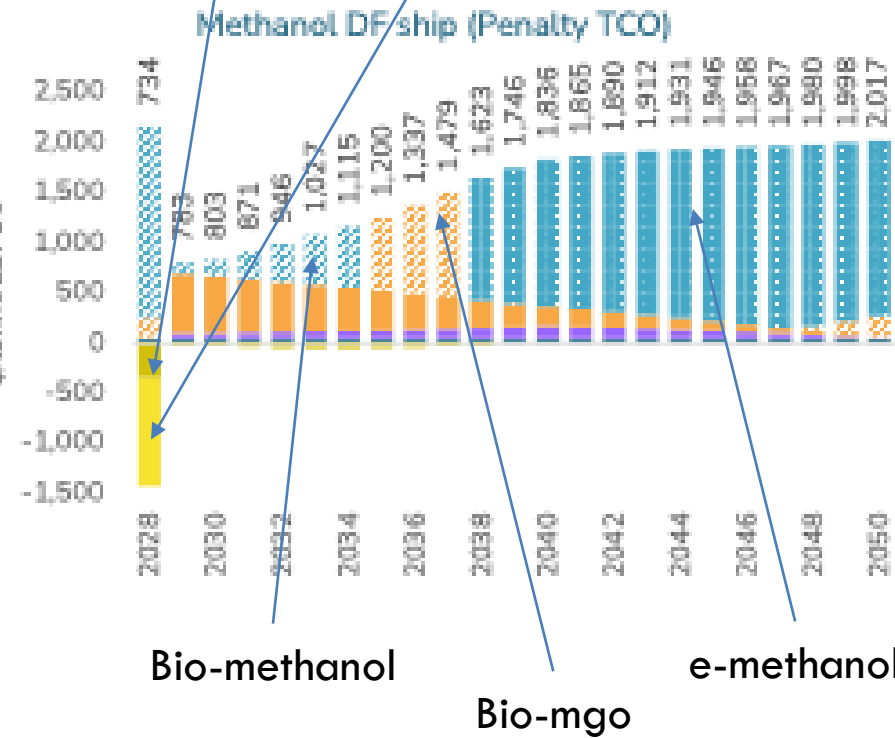
Total annualized cost **RU payments**

LNG DF ship

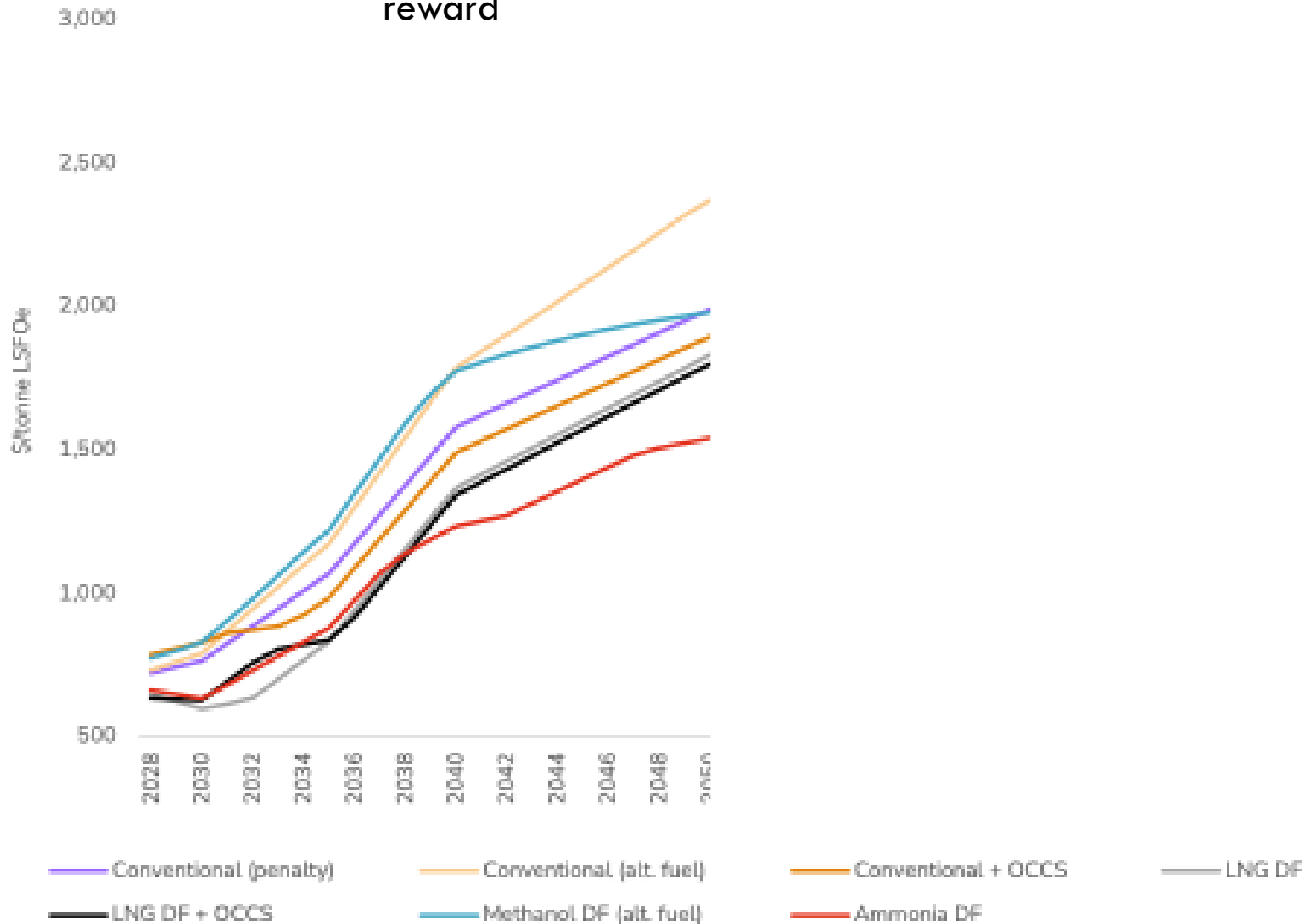


Reward

Surplus

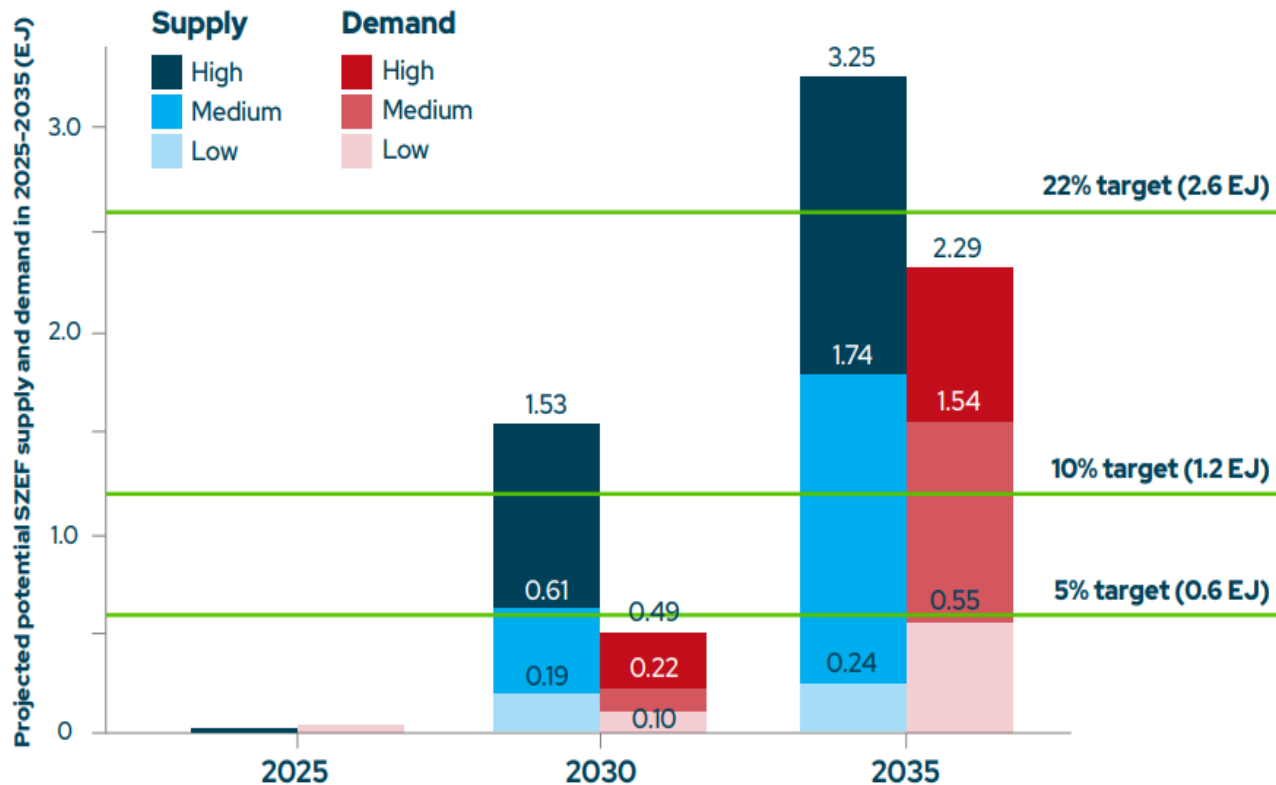


IMO NZF – initial parameters, no reward

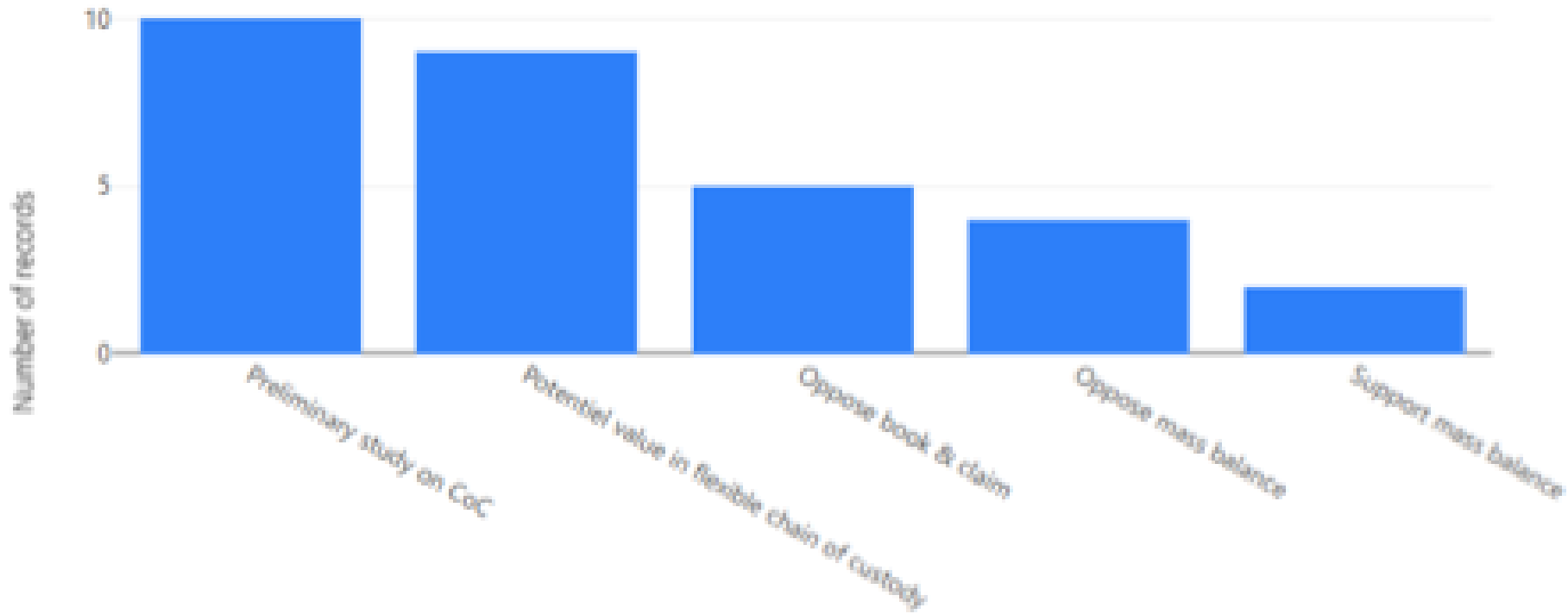


Supply and demand picture – partially on track

Figure 2: Estimated total SZEF supply and demand for shipping compared to 5-10% 2030 SZEF goal (i.e., 0.6 EJ in 2030)



ISWG-GHG 20 debate on Chains of Custody



Concluding remarks

- IMO's revised strategy commits it to a rapid transition away from fossil fuel in the next 15-20 years
- Scalability of e-fuel and competition for bio are both generally accepted, hence perception of ammonia as the likely long-term solution
- NZF 'as is' can level a playing field between e-fuel and biofuel, but would be capped. Biofuels able to price below $\sim \$1500/\text{t}$ LSFOe equivalent should see clear opportunity
- IMO sustainability criteria, LCA, certification all remain large unknowns, and will likely have a large impact on which pathways/feedstocks enjoy viability/competitiveness
- Biomethane's potential seems reliant on IMO adoption EU style 'mass balance' which looks unlikely given political composition of IMO

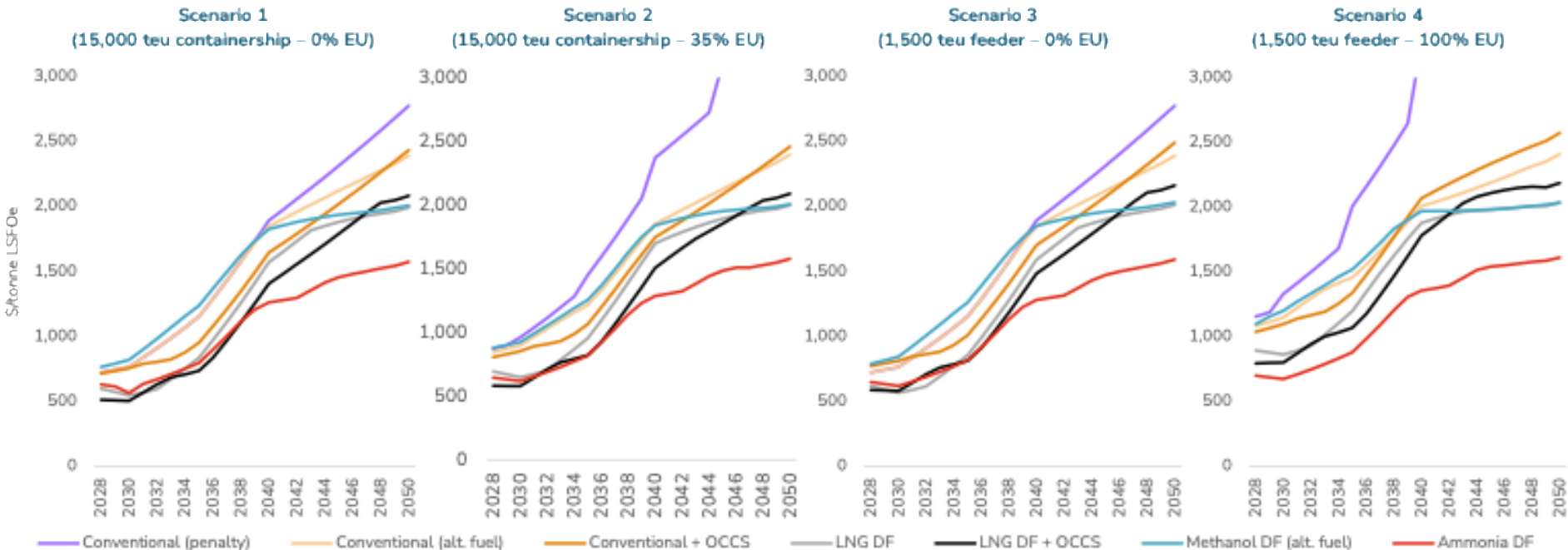
Thank you

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What about under combined IMO and EU regulation?



Platts Dec pricing bio and e-fuel...

