



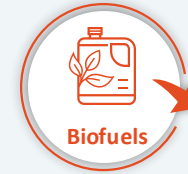
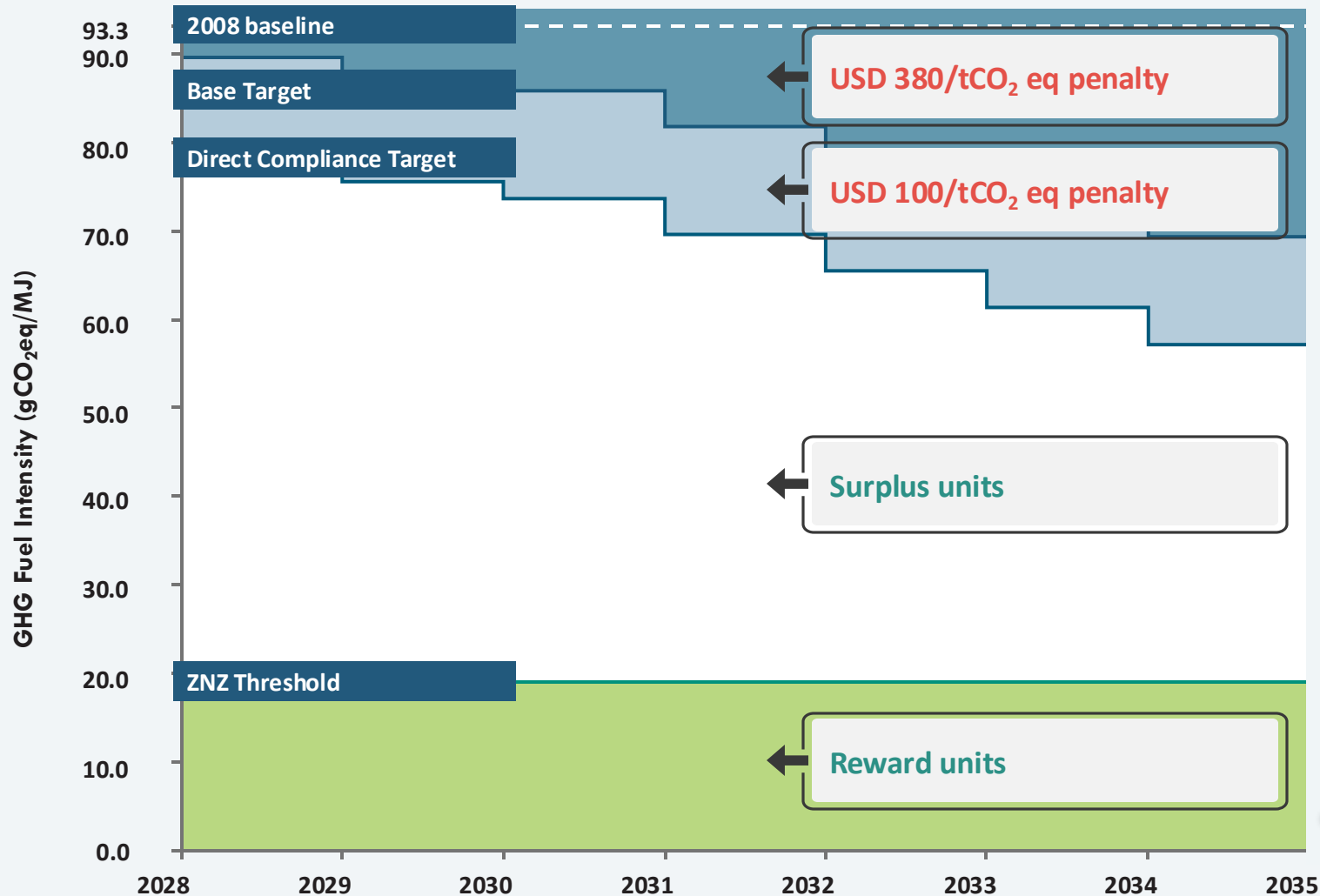
**Scaling energy efficiency retrofits:
Could a Pay-As-You-Save (PAYS) financing model be the
solution?**

Shane Balani, Director, Projects

Marine Money Week Asia 2025

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Contextualising GCMD's efforts



Biofuels:

Ensure **integrity** and find **new feedstocks**



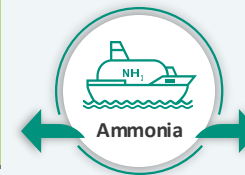
EETs:

Verify **fuel savings** efficacy and accelerate adoption



OCCS:

Establish viability, address **offloading** challenges and identify **end use**



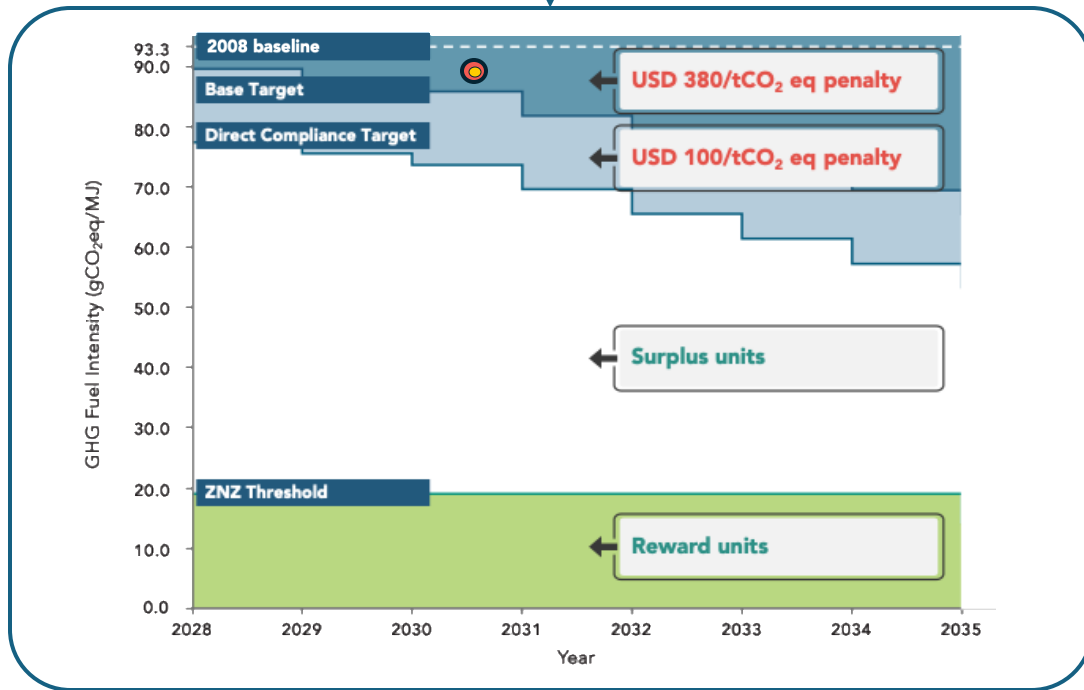
Ammonia:

Prepare and test **safe transfer** of ammonia

Energy source + savings impact emissions penalties

01 Energy savings

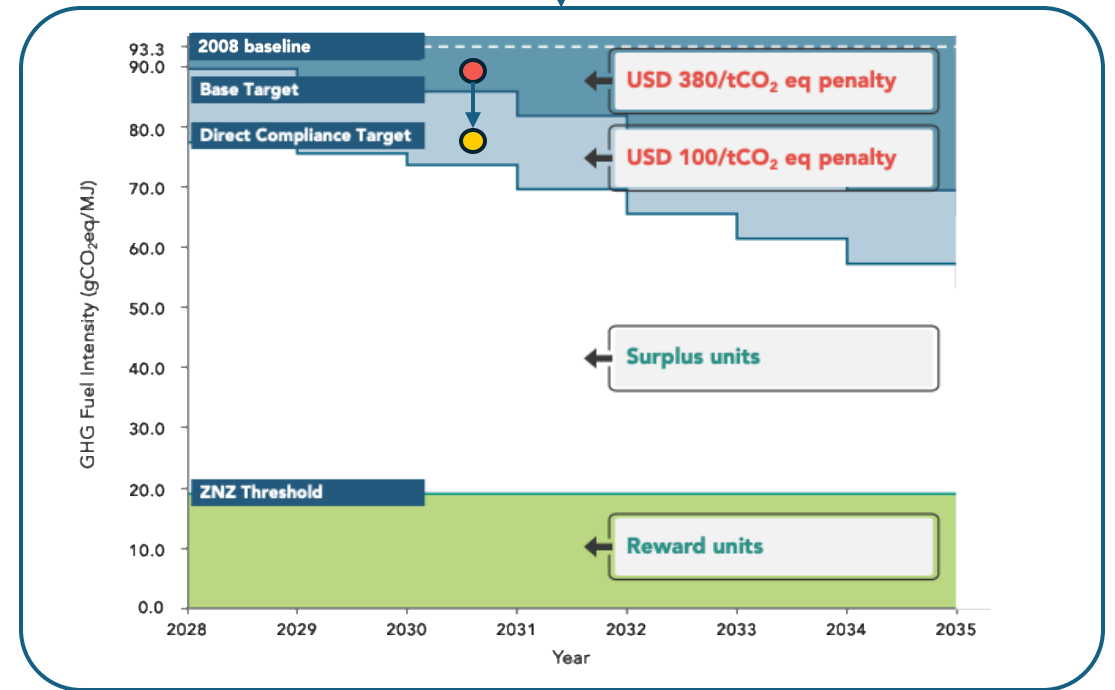
- + Advanced hull coatings
- + Air lubrication
- + ...



Energy savings lower penalties **linearly**

02 GFI of energy used

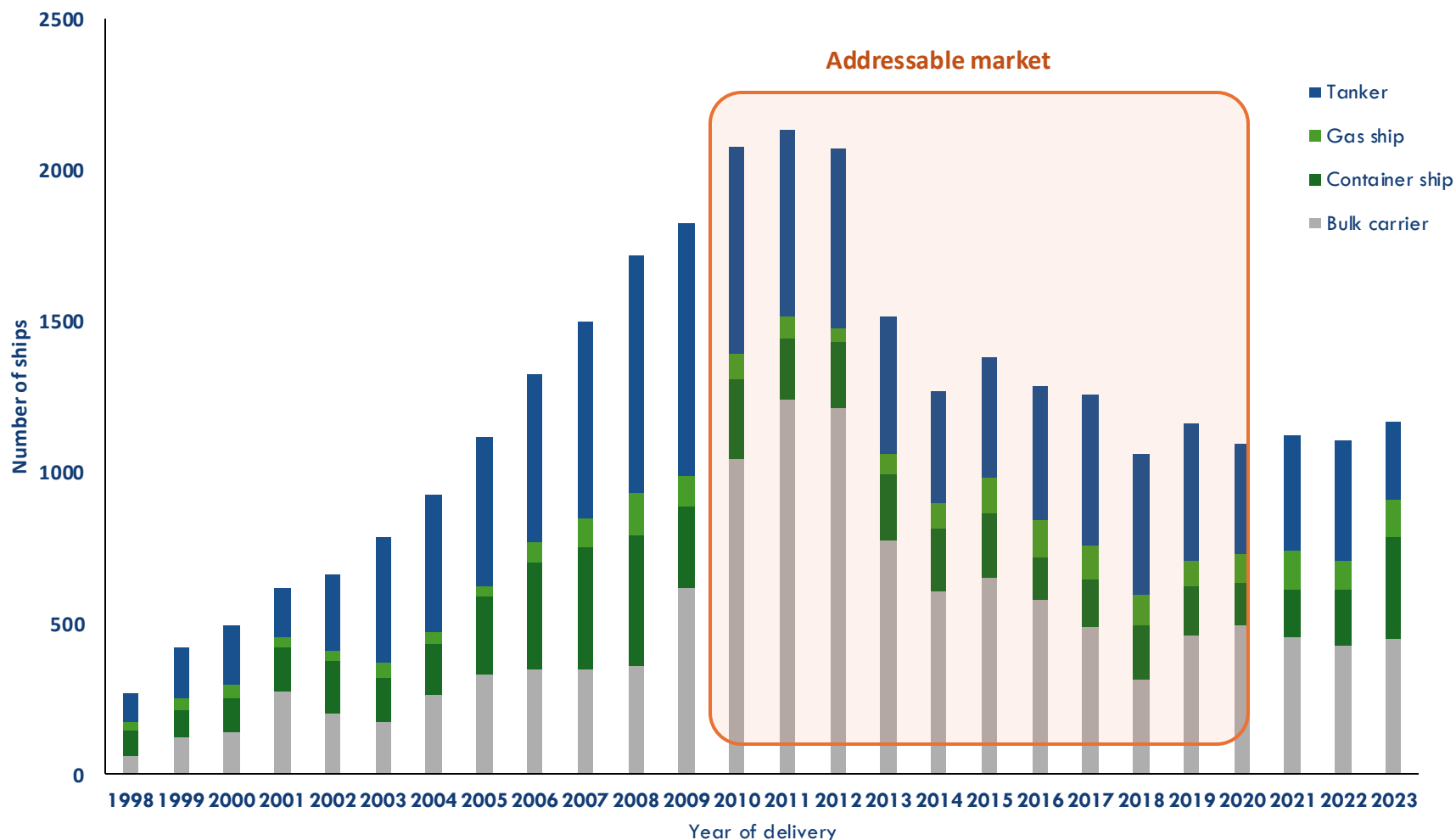
- + Fuel switch
- + Drop-in fuels
- + Wind and solar energy



Reduction in **GFI** lowers penalties **disproportionately**

Addressable market for EET is >USD 20B¹ and growing

A large fleet that may require retrofits



Retrofitting opportunities for these vessels

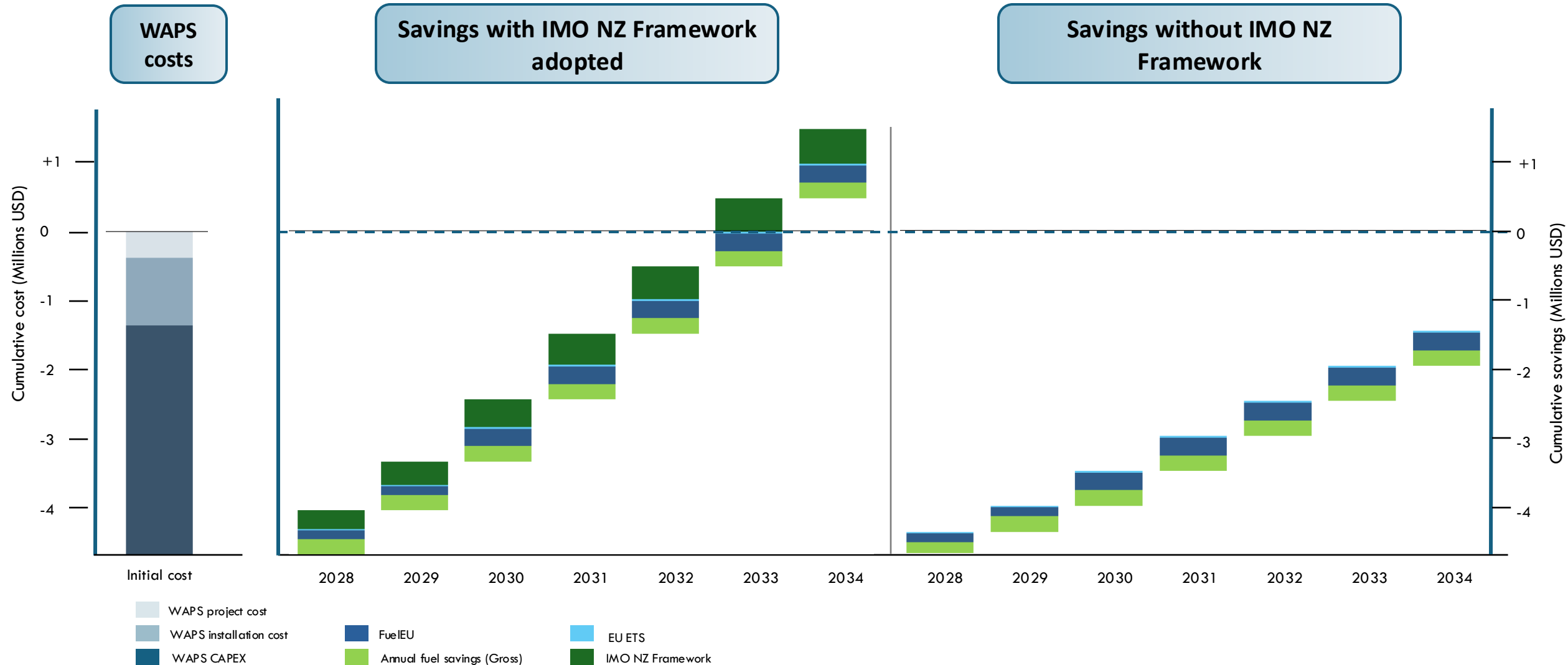
- + Most of these vessels are mid-sized and less efficient than newer EEDI-designed vessels, making them ideal candidates for retrofitting.
- + Given global orderbook backlogs, many are expected to remain in operation until at least 2030.

Source: GCMD analysis, Clarksons Research, Kpler

Notes: 1) High level estimates based on total vessels of c. 16,500 between 2010 – 2020, 50% uptake and USD 2.5M per EET. Addressable market size is expected to grow at a significant pace as more regulations come in force

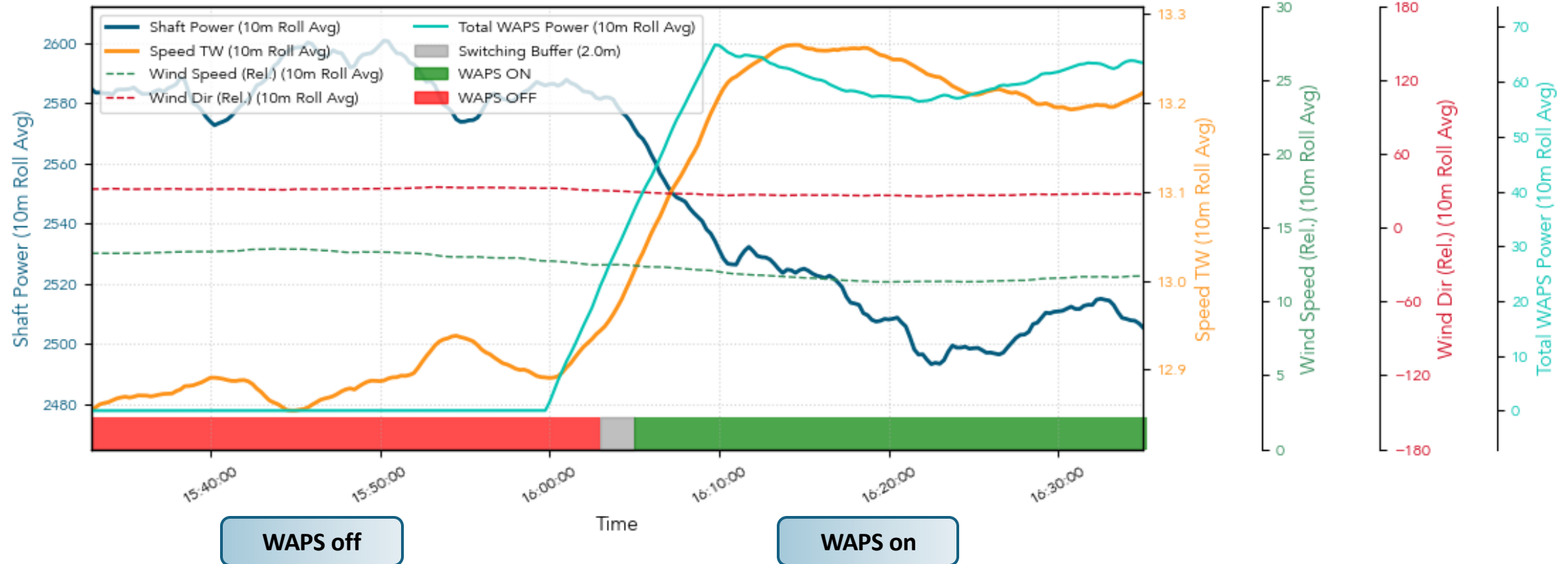
Regulations can build the foundation for a business case

Based on an LR Tanker trading globally, with and without the IMO NZ Framework



Fuel savings highly volatile and depend on controllable and uncontrollable operating conditions

- + Measuring fuel savings is fraught with uncertainties, assumptions and conflicting methodologies.
- + Standardised tests to switch WAPS on or off for 30 minutes isolates the WAPS savings from other factors which affect performance, such as hull fouling, waves or mechanical engine efficiency.
- + Even with standardised methodologies instantaneous savings remain volatile.

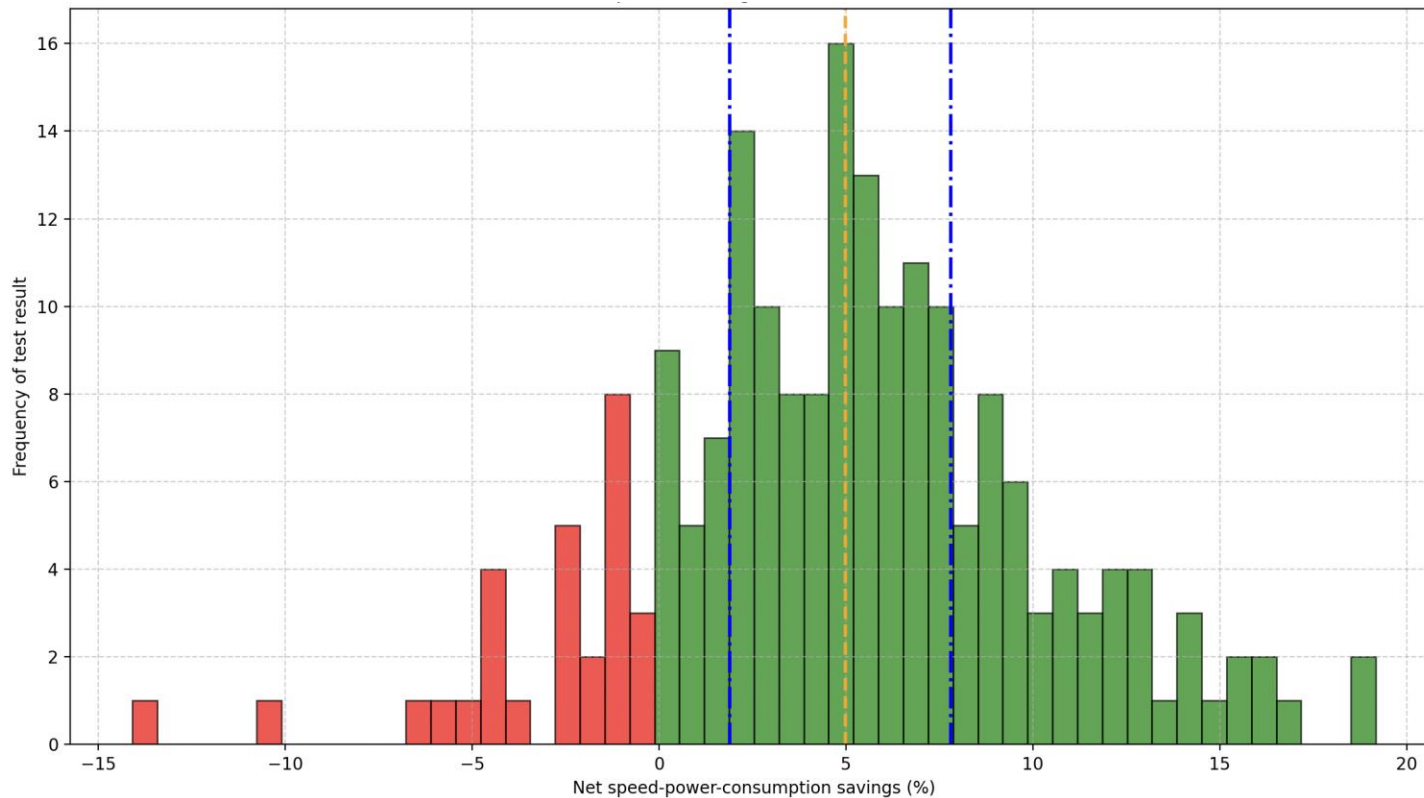


Fuel savings fluctuate depending on weather conditions

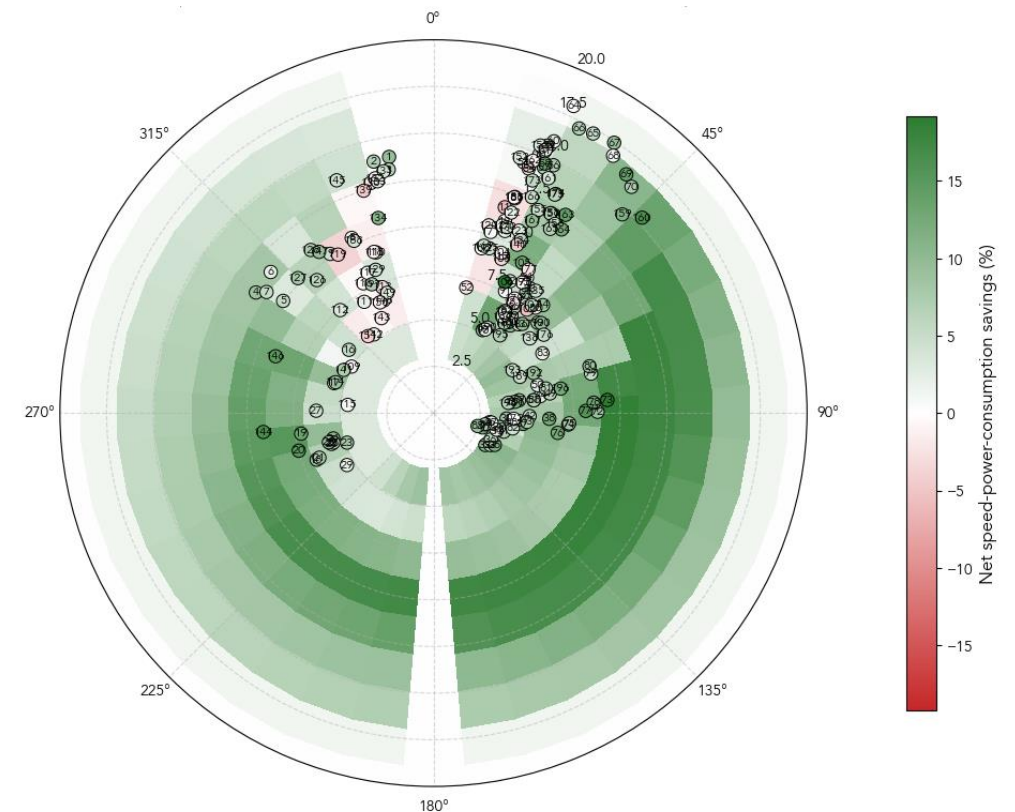
Mid-size tanker with wind assistance propulsion trading since May 2025

- + Tracking weather and other operational parameters during systematic on/off tests allows us to separate operational uncertainty from technology uncertainty

Distribution of power savings results from all on-off tests



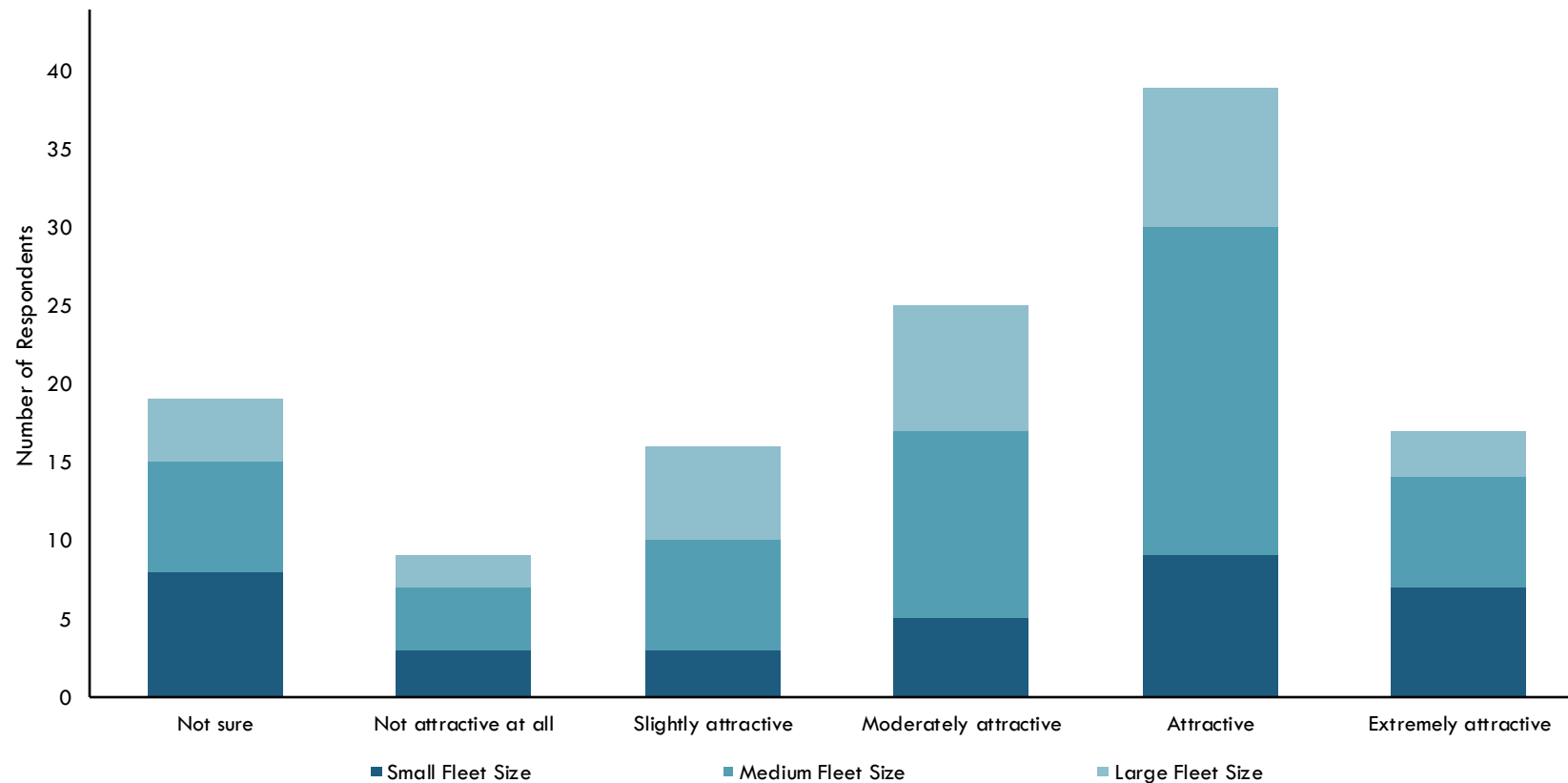
Polar heatmap of power savings



Pay-as-you-save to manage the weather uncertainty

- + Weather conditions vary mainly due to the location where the ship sails
- + Pay-as-you-save (PAYS) mitigates the operational uncertainty by tying payback directly to real-world savings

Would a pay-as-you-save leasing model be attractive to derisk adoption of nascent EETs?



Scaling PAYS deployment from vessels to fleets

01

Why the urgency to scale?



The increasing gap between EET uptake and IMO GHG targets underscores the risk of ***falling short of our targets.***

02

Who is most impacted?



Smaller shipowners who may ***face difficulties obtaining capital*** and are less willing to take risks on technologies with variable performance.

03

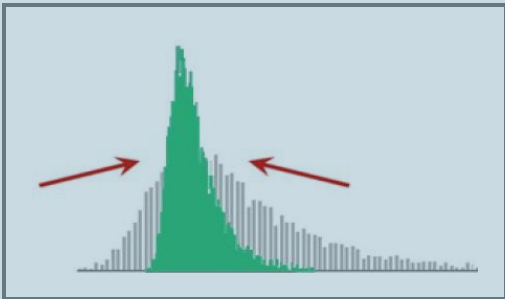
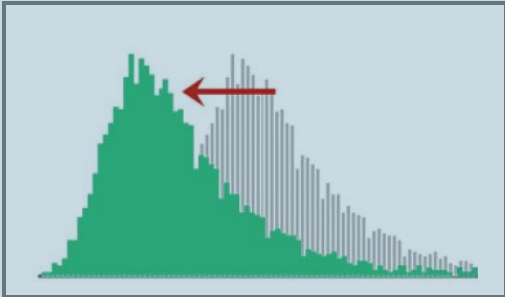
How can we scale?



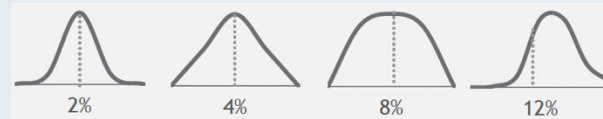
PAYS, designed to mitigate performance and security risks, can be applied to ***fleets of ships***, addressing cash and risk constraints.

Blended finance and project diversification can unlock PAYS

Simulations provide confidence in the expected savings



Spread is key to understanding the financial risk for each investor, for any given project, given the seniority preference



Project A

Project B

Project C

Project D

Senior finance



Mezzanine



Equity

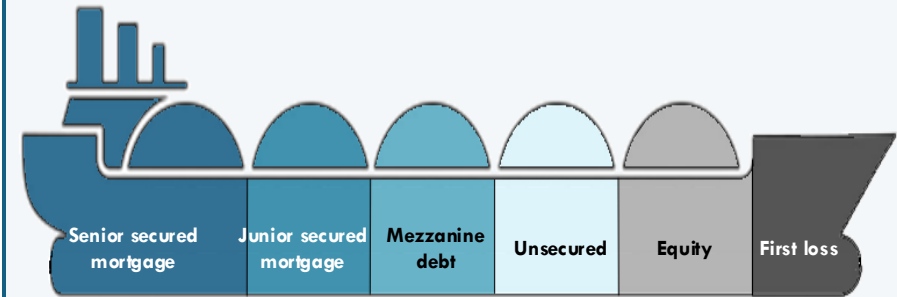


Catalytic equity

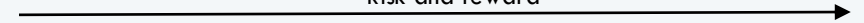


Likely to receive payout contribution

Security

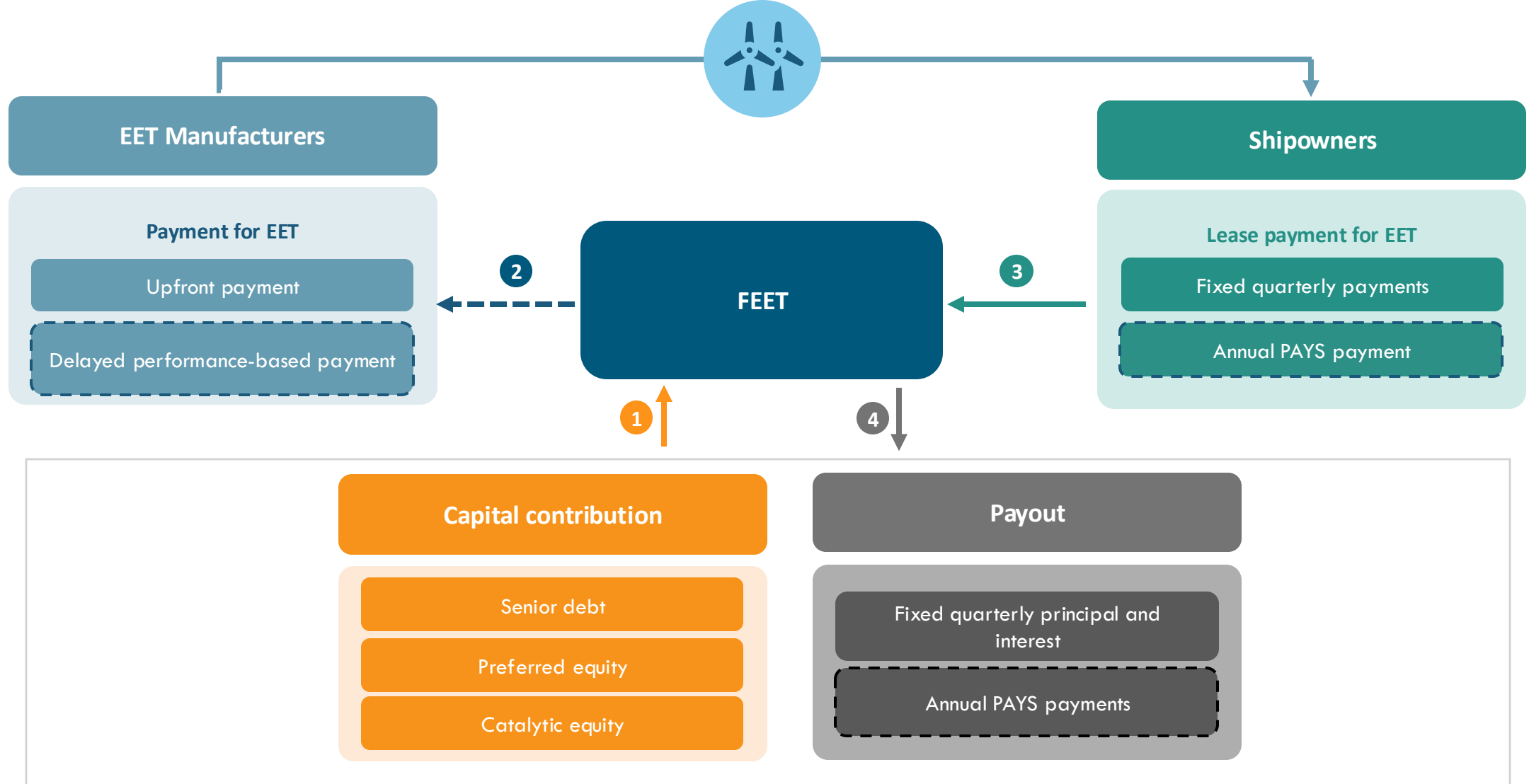


Risk and reward




A first-of-a-kind blended finance model

A pilot fund featuring a a PAYS leasing structure to accelerate EET adoption






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