

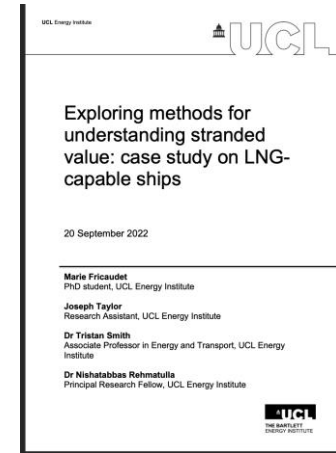
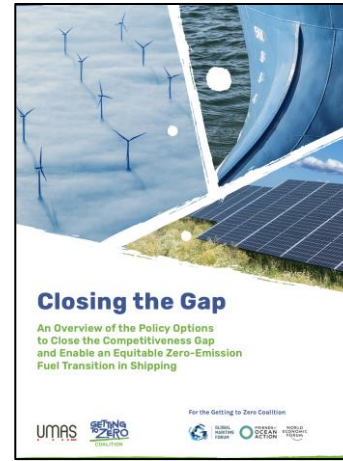
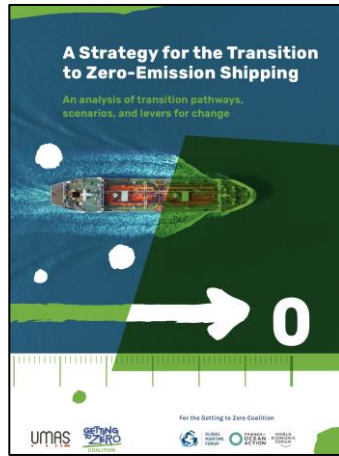
# **2023 IMO GHG Strategy and considerations for certification**

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## Zero-Emission Vessels 2030. How do we get there?

We're considering the drivers that will make Zero-Emission Vessels viable.  
Part of the Low Carbon Pathways 2050 series.

## Techno-economic assessment of zero-carbon fuels.

March 2020

## REDUCING THE MARITIME SECTOR'S CONTRIBUTION TO CLIMATE CHANGE AND AIR POLLUTION

Scenario Analysis: Take-up of Emissions Reduction Options and their Impacts on Emissions and Costs

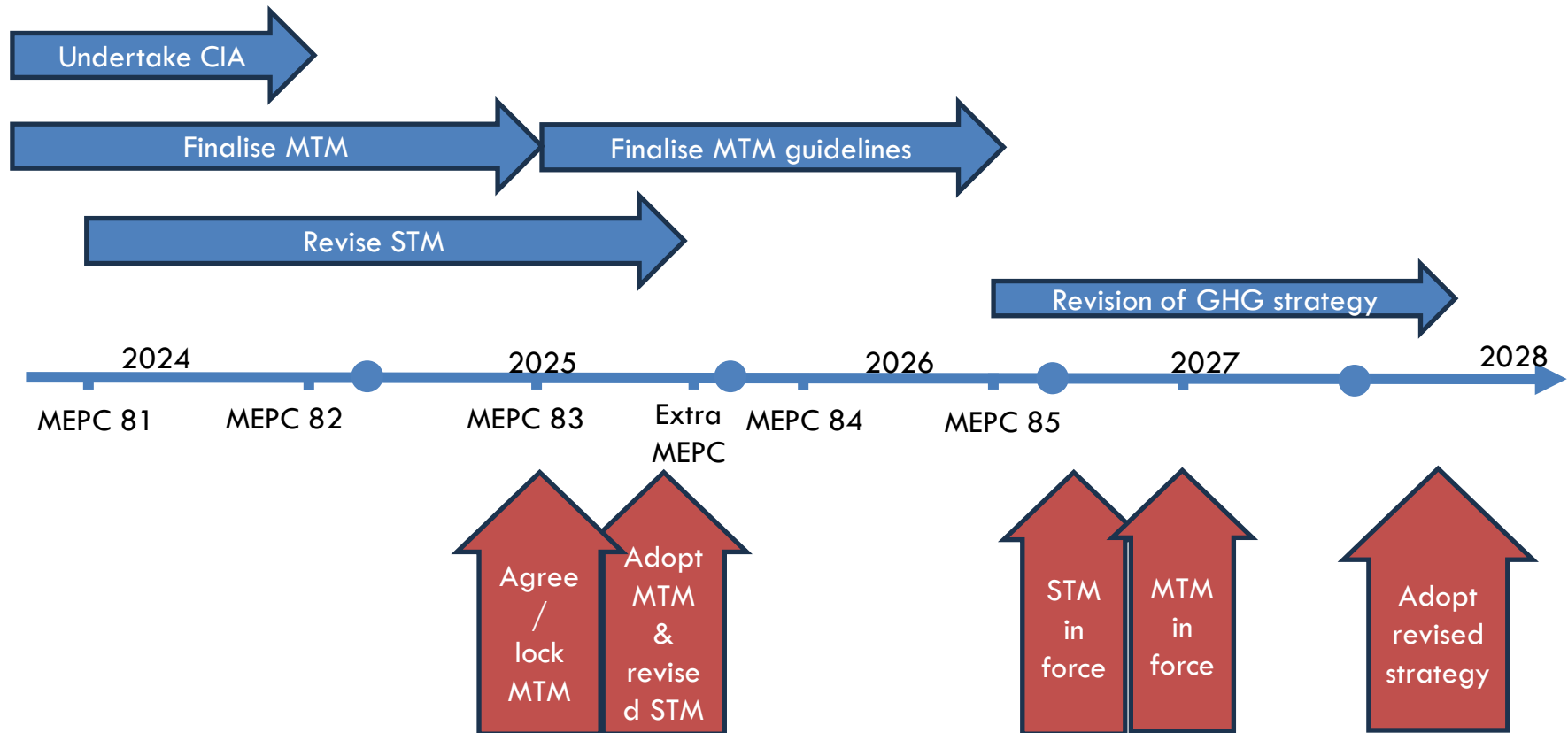
A Report for the Department for Transport

July 2019

# IMO's revised strategy

- WTW GHG reductions:
    - 20-30% by 2030
    - 70-80% by 2040
  - Net zero ~2050
  - 5-10% (by energy content) zero and near-zero GHG emissions fuel by 2030
  - Adopted by 2025, in force 2027:
    - GHG pricing
    - GHG fuel standard
- } - promote the energy transition of shipping  
 - provide the world fleet a needed incentive  
 - contribute to a level playing field and a just and equitable transition

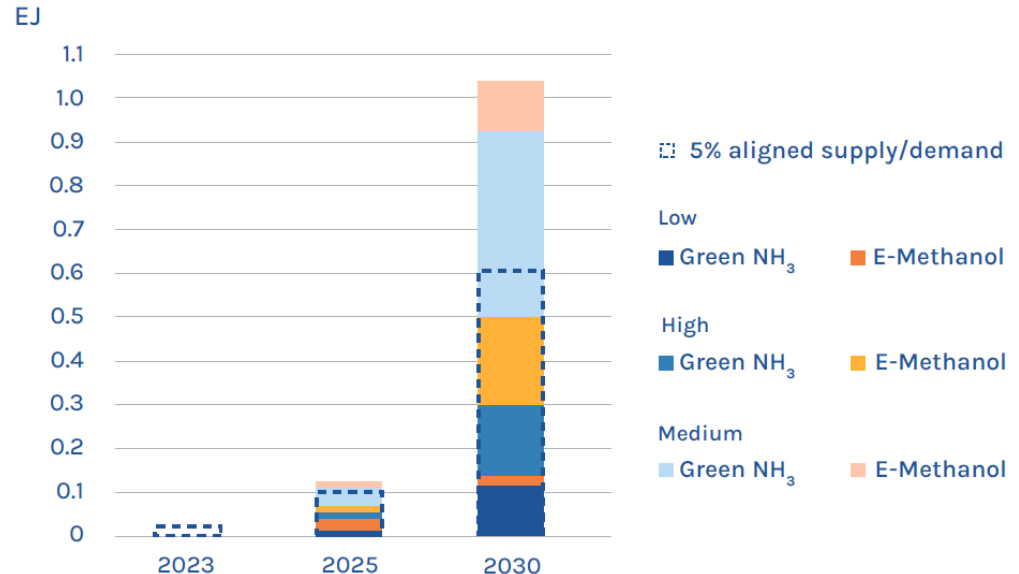
# IMO regulations will be a key driver of business cases, IMO committed to clarify by end 2025



# Supply of hydrogen-derived fuels is potentially significant

- Current pipeline of green ammonia production announcements represents 192 Mt (4.3 EJ).
- Data from the Methanol Institute (Methanol Institute, 2023) suggests there is a current pipeline of e-methanol production representing around 6 Mt (0.1 EJ)
- Depending on considerations of future capacity growth rate for green ammonia and e-methanol, a range of potential future capacity scenarios for SZEf can be created.

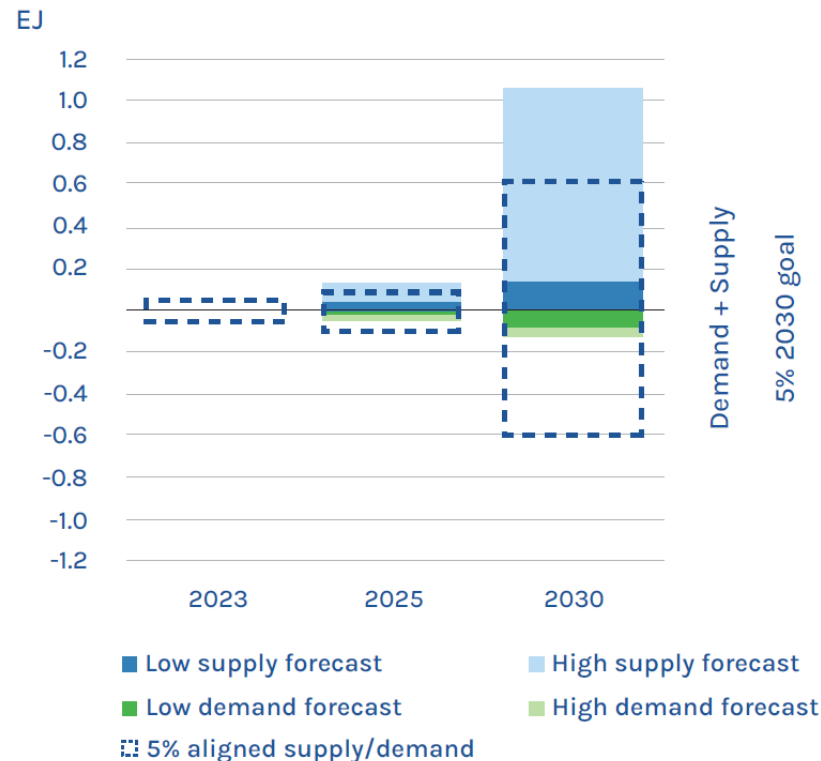
Estimated total supply from SZEf for maritime usage compared to 0.6 EJ 2030 requirement in line with the 5% SZEf 2030 goal.



# Supply vs demand

- More progress in supply
- Less progress in demand
- This could change in future
- Depends on multitude of factors
- Intermediary steps important

Estimated total SZEf supply and demand for shipping compared to 5% 2030 SZEf goal aligned supply/demand up to 2030 (i.e., 0.6 EJ in 2030).



# What does this mean for certification?

- Mid-term measures from IMO to be agreed later this decade
- Need for ammonia for ships earlier than that with clear knowledge of lifecycle emissions
- Multiple discussions on LCA guidelines – need to understand where Ammonia comes from (E.g. blue, green, etc.)

**Thank you**