



# Promising options for low carbon maritime

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**REA – Decarbonising trucks, trains, boats  
and planes**

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# Ports matter – the UK’s main global gateways, catalysts for coastal prosperity, hubs for economic activity

## The UK’s global gateways



- 95% of the UK’s global physical trade moves via its ports
- 8 out of 10 cars made in the UK are exported via a port
- Half our food & feed needs are imported via a port
- £9.7bn direct value to UK plc

## Catalysts for coastal jobs & prosperity



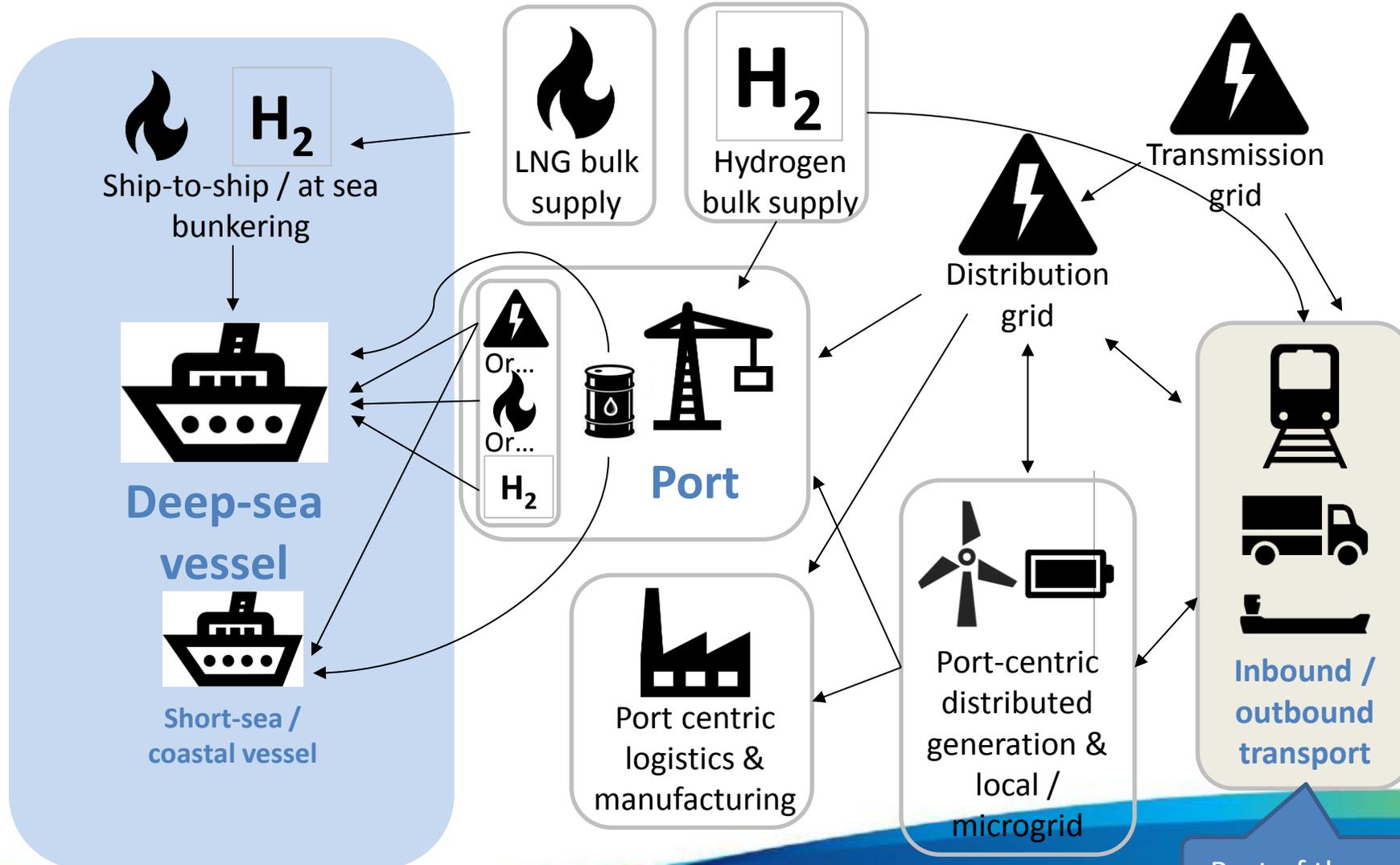
- £600m investment annually
- 115,000+ people are directly employed in UK ports
- 7 jobs for each direct job
- £1 spent on a port road scheme generates £4 for the wider coastal economy

## Hubs for economic activity



- Bases for maritime industries – cruise, offshore wind etc.
- ‘Port-centric’ models of logistics & manufacturing
- Hubs for value addition – manufacturing and infrastructure development
- Even film studios!

# Maritime – on sea, on land via a complicated ecosystem of pipes and wires (and regulation & competitiveness)!



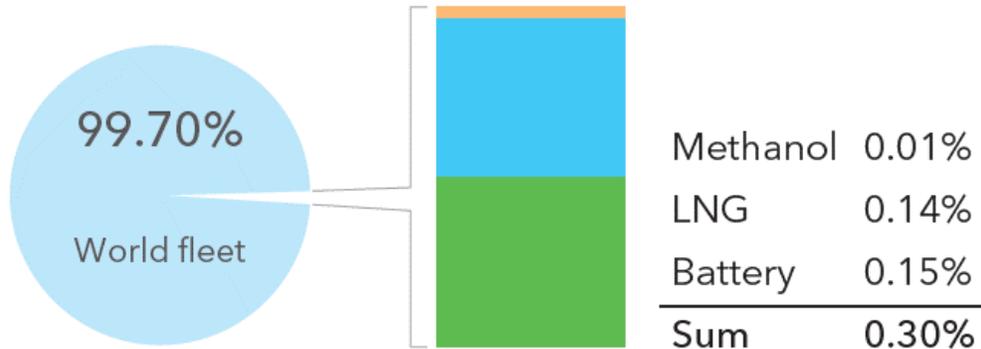
The 'physical' tied up with issues like:

- Safety
- Investment & competitiveness
- Regulatory

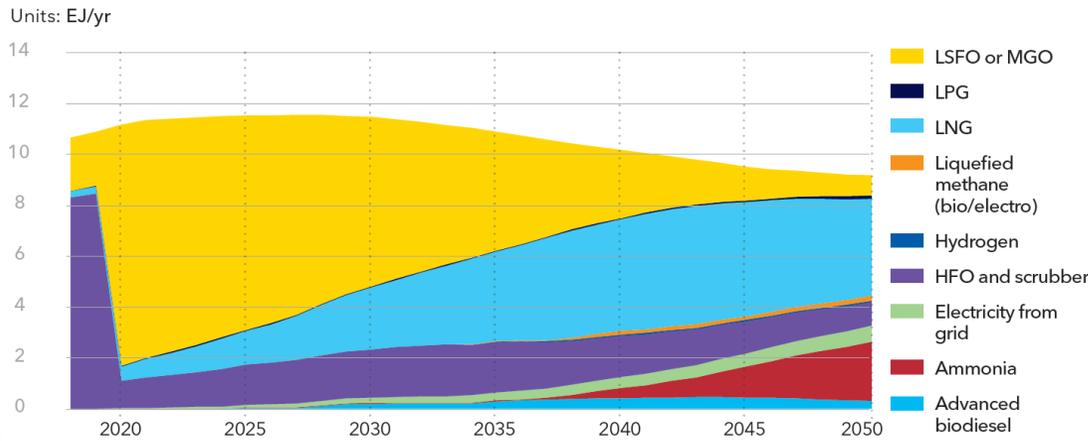
Rest of the conference!

# For vessels – we’re starting from a low base (although change is happening) and the future is a mix

## Alternative fuel uptake (percentage of ships)<sup>a</sup> Ships in operation



Energy use and projected fuel mix 2018-2050 for the simulated IMO ambitions pathway with main focus on design requirements



Sources: DNV “Energy Transition Outlook 2019”; Port of London Authority / Goodchild Marine; Carnival

# A patchwork of solutions, with some crucial enablers

## Reduce and replace

Reduce demand for (any) fuel – efficiency / optimisation, supplemental renewables

Replace more polluting kit / fuel – retrofit, EN590

The human interface – kit, training, incentives, ‘hearts & minds’

## Provide a transition

LNG / CNG

Biofuels

Scrubbers?

## Grow alternatives

Electrification

Alternative fuels (H2, NH4...)

Renewables

**Financing**  
Public, Private

**Regulation**  
Maritime, Terrestrial

# Government ambition & desire to take leadership – Clean Maritime Plan



Maritime 2050 zero emission shipping **ambition**:

“In 2050, zero emission ships are commonplace globally. The UK has taken a proactive role in driving the transition to zero emission shipping in UK waters and is seen globally as a role model in this field, moving faster than other countries and faster than international standards. As a result, the UK has successfully captured a significant share of the economic, environmental and health benefits associated with this transition.”

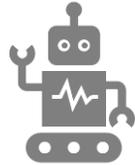
Government wants to be a **leader**:

- Maritime Minister repeatedly talks about international leadership
- High Ambition coalition in IMO negotiations
- UK will host and Chair COP26 in Glasgow in December 2020

Some **financial commitment** but more to be looked at (hopefully):

- Some R&D funding calls
- Consultations on RTFO extension & other non-tax incentives
- Government eager to use its convening power

# Sounds great! Why isn't it happening right now / faster?



**Technology uncertainty**



**Demand – Low, variable**



**Supply – Infrastructure needs, cost recovery**



**Global, fragmented sector**

# Summary

- Decarbonising maritime is more than ships, and it interacts with the ‘terrestrial’ landscape
- Different types of vessels & activities / ports probably lend themselves to different solutions
- A complex patchwork of options is emerging, with different time horizons
- The UK Government is ambitious for change, but currently there’s not a lot of money behind it
- That’s important because the ‘commercial’ business case is not there yet for accelerate change
- **Major port operators are committed to playing their role in a zero emissions future**



# Thank you!

**UKMPG**  
UK Major Ports Group

## Member ports

Some examples of activity

The UK's major ports handle **75%** of UK seaborne trade – fundamental for a confident, global trading nation

**GRANGEMOUTH**  
Scotland's largest container port, handling up to 30% of Scotland's GDP

**TEES**  
Versatile gateway to the North and cornerstone of regional regeneration

**HULL**  
Ground breaking joint venture with Siemens to produce wind turbine blades on the port

**IMMINGHAM**  
UK's largest port by volume from a wide range of cargoes

**FELIXSTOWE**  
UK's largest container port, handling the world's largest vessels in operation for 50 years

**TILBURY**  
£100m Tilbury2 development, regenerating a former power station site

**LONDON GATEWAY**  
£1.5bn invested in creating a cutting edge container port on a former oil terminal site

**LONDON**  
Ensuring safe navigation for UK's busiest inland waterway. First port to launch air quality strategy

**BELFAST**  
Major development & revitalisation of port area – including a film studio

**LIVERPOOL**  
£400m investment in Liverpool2 expansion of UK's largest transatlantic port

**PORT TALBOT**  
Critical to the UK steel sector and the manufacturing it supports

**BRISTOL**  
Providing offsite modular construction as well as port facilities to support strategic energy infrastructure development

**SOUTHAMPTON**  
UK's largest cruise terminal and a crucial export point for the UK car industry

### UKMPG Members

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