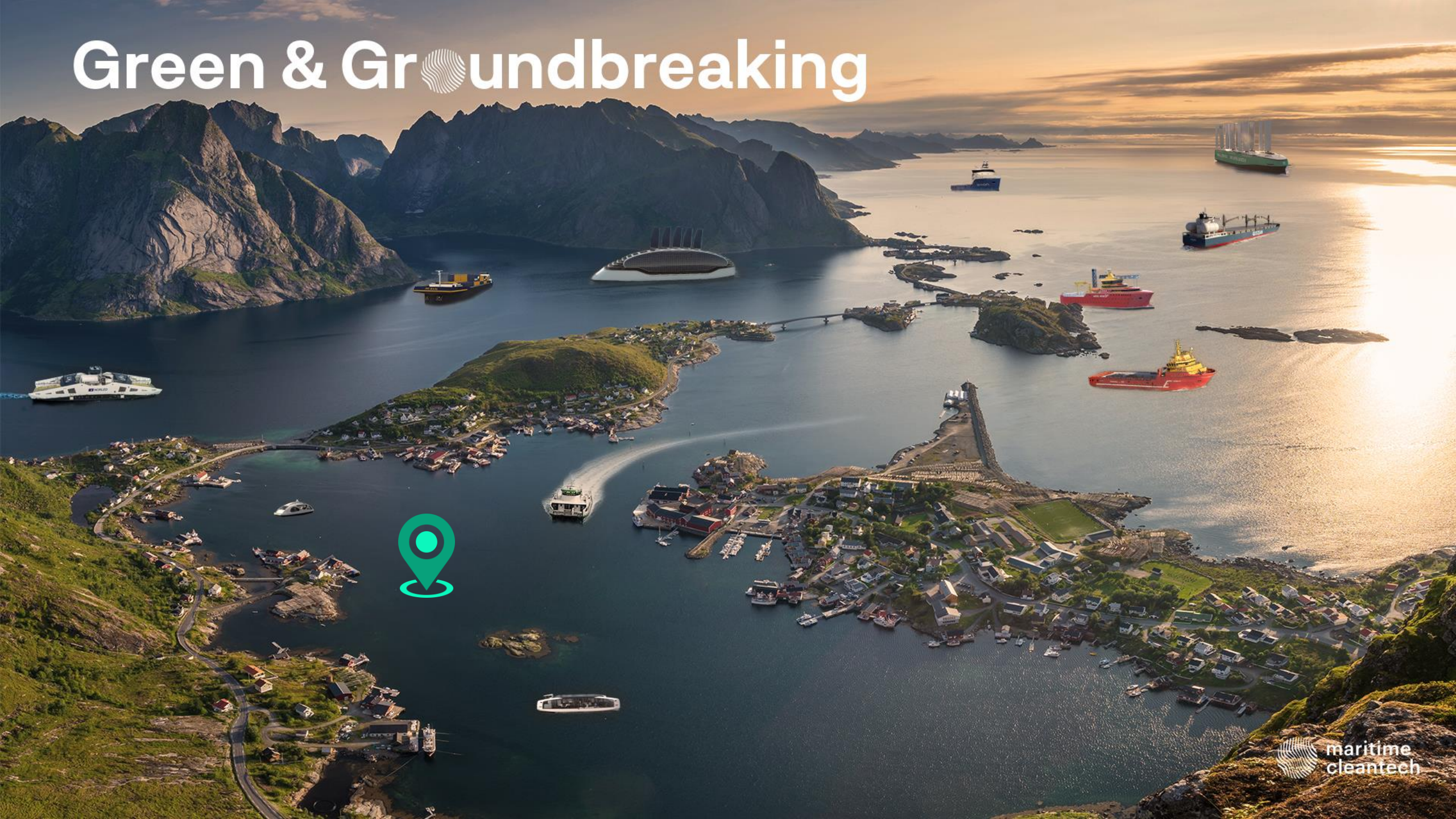
Low Carbon Solutions for the Maritime Sector

H2 Conference Norway - Post Conference Seminar

Øystein Huglen CTO // 12. September 2025

Green & Groundbreaking



Estimated Global Fuel Production

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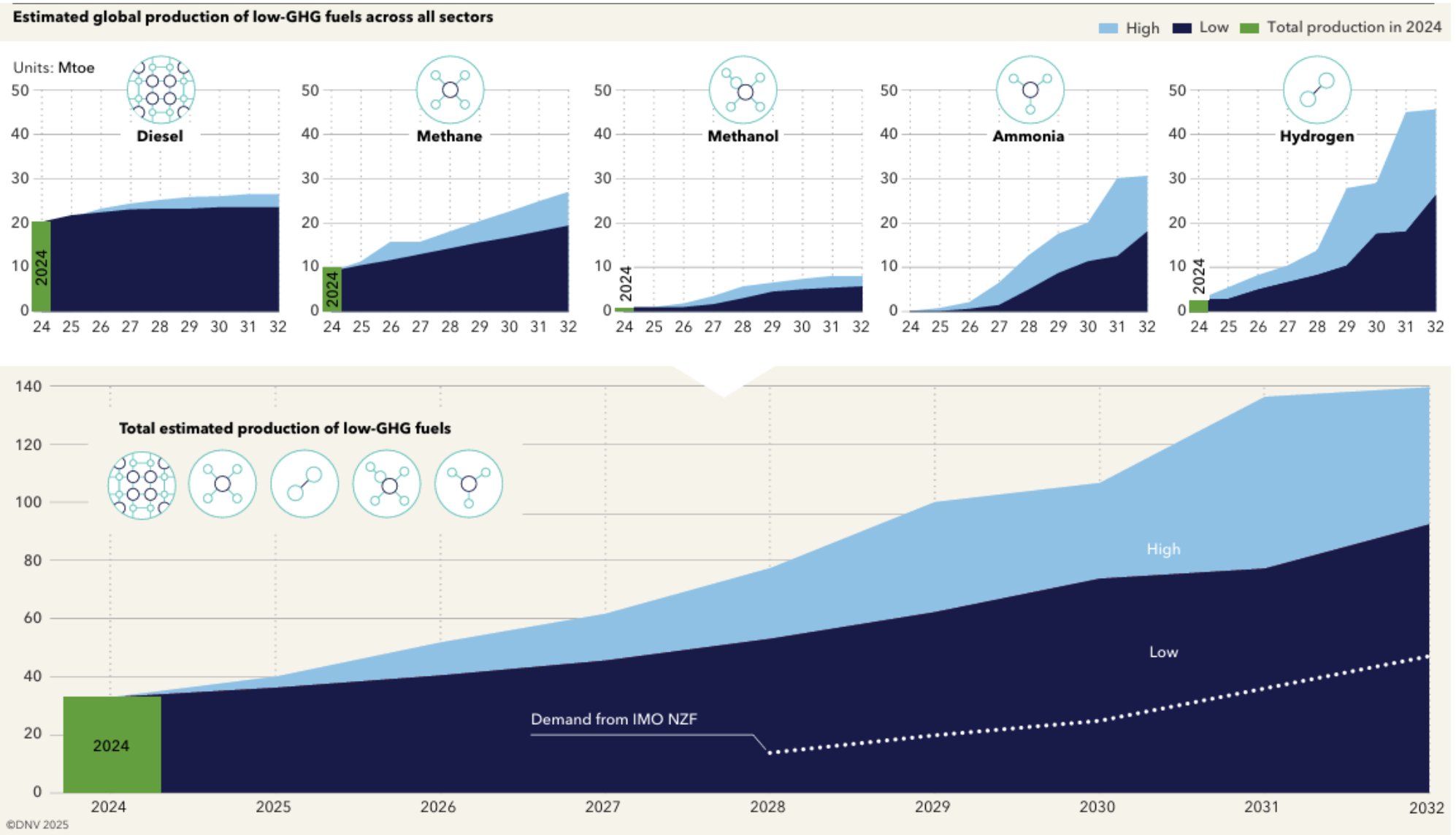


IMO
wind
SOS!
Help!!
Net Zero
Renewable
climate
CO_2
Ammonia
Zero Emission
LNG
Electric
CCS
Hybrid
NOx
Short sea
H_2
Battery
Deep sea
nding
Cruise
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No. 1 in World's firsts

VIKING ENERGY
First Ammonia Offshore Vessel

HAVILA POLLUX
First Cruise Ship sailing World Heritage fjords emission-free

AMPERE
First electric ferry

HÖEGH AUTOLINERS AURORA
First ammonia-ready car carrier

HYDRA
First hydrogen passenger vesel

YARA BIRKELAND
First all-electric and autonomous container vessel

NORTHERN PIONEER
First CO_2 Carrier

MEDSTRAUM
First electric fast-ferry

SOLVANG CLIPPER ERIS
First OCC Ship


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The world´s first vessel to operate solely on liquid hydrogen
MF HYDRA
LENGTH: 82,4 M
WIDTH: 17,5 M
FUEL CELLS: BALLARD (2X200 kW)
YARD: SEAM
SHIP OF THE YEAR
NORLED
NORLED
HYDRA

EU Hub for Green Maritime Innovation

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STEESMAT

Developing a next-gen power distribution system to streamline green energy use on ships and boost efficiency.

Co-funded by the European Union

FLAGSHIPS

Two commercially operated hydrogen fuel cell vessels.

Clean Hydrogen Partnership

Co-funded by the European Union

LOWNOISER

Tackling maritime noise pollution by developing noise reduction technologies and regulatory standards

Co-funded by the European Union

ORCELLE HORIZON

World's first wind-powered RoRo vessel

Co-funded by the European Union

SHIP-AH2OY

A scalable, green and sustainable technology for power and heat generation on board ships

Co-funded by the European Union

APOLLO

The highway to low emission shipping

Co-funded by the European Union

Greenhouse Gas Reduction Potentials

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Decarbonization solutions that can contribute to reducing a ship's energy consumption and emissions from energy use, and their GHG-reduction potentials

NET-ZERO FRAMEWORK

LOGISTICS AND DIGITALIZATION	HYDRODYNAMICS	MACHINERY	ENERGY	AFTER-TREATMENT
Speed reduction	Hull coating	Machinery efficiency improvements	LNG, LPG	Carbon capture and storage
Vessel utilization	Hull-form optimization	Waste-heat recovery	Biofuels	
Vessel size	Air lubrication	Engine de-rating	Electrification	
Alternative routes	Cleaning	Battery hybridization	Methanol	
		Fuel cells	Ammonia	
			Hydrogen	
			Wind power	
			Nuclear	
>20%	5%-15%	5%-20%	0%-100%	0%-90%

Wind Assisted Propulsion

Are We Ready for Broad Implementation?

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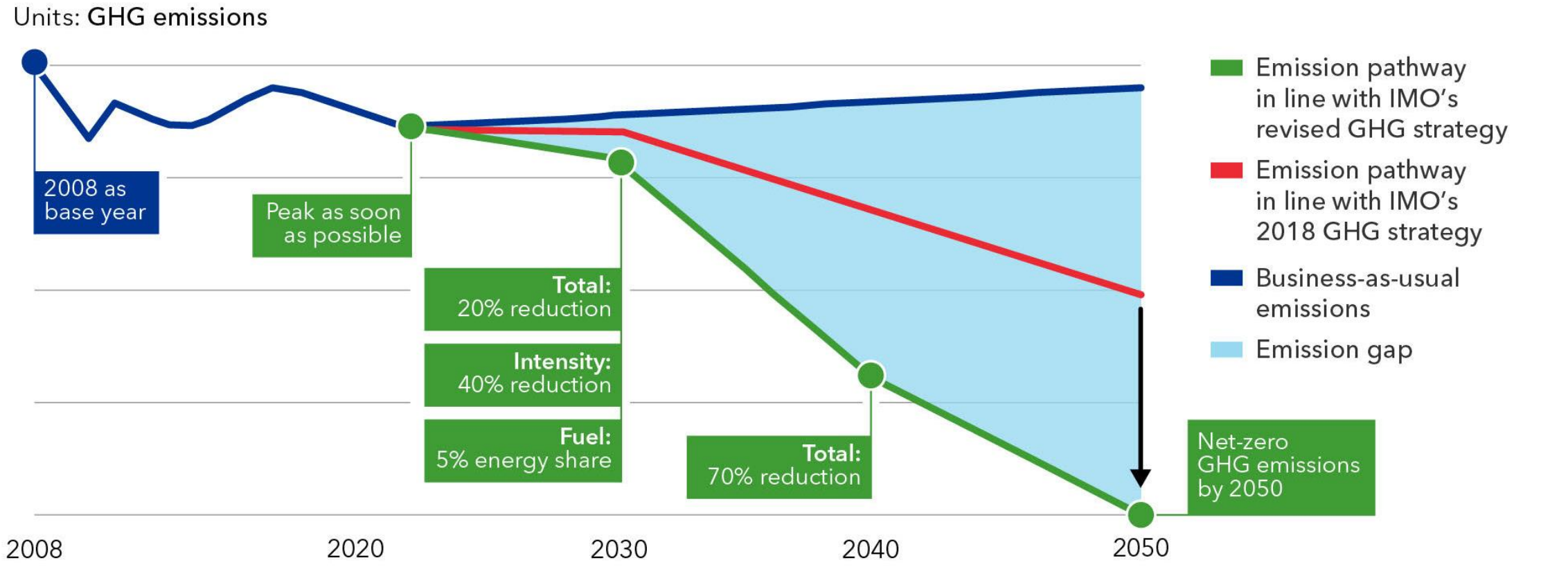
Large Gap – Large Industry Opportunity



Total: Well-to-wake GHG emissions; **Intensity:** CO_2 emitted per transport work; **Fuel:** Uptake of zero or near-zero GHG technologies, fuels and/or energy sources


maritime
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Out of the blue comes green.