

Välkommen! Vi startar
kl.13.30

Svensk Sjöfarts
höstmötesdag:
Sjöfartens roll i en
grön återstart

Program

13.30 Inledning och välkomna

13.35 Svensk Sjöfart 2020 – hur har sjöfarten påverkats av covid-19 och hur vi går framåt?

13.45 Hur arbetar Sveriges regering med den gröna återstarten? - Sjöfartsverket

14.05 Hur arbetar våra myndigheter med den gröna återstarten? - Transportstyrelsen

14.45 Hur ser framtidens sjöfart ut efter covid-19?

- Hur kommer och ska vi resa i framtiden?
- Vad kommer vi att transportera i framtiden?
- Hur kommer sjöfarten att arbeta med hållbarhet?
- Hur ser framtidens rederi ut?

16.00 Slut





Svensk Sjöfart 2020 – hur har sjöfarten påverkats av covid-19 och hur vi går framåt?

Rikard Engström, VD Svensk Sjöfart



Samhällsrelevans

Persontransporter

Godstransporter





Foto: Drew Beamer, Unsplash



Hur arbetar Sveriges regering med den gröna återstarten?

Tomas Eneroth, Infrastrukturminister, Sveriges Regering





Hur arbetar våra myndigheter med den gröna återstarten?

Katarina Norén, generaldirektör, Sjöfartsverket





Sjöfartsverkets arbete med ”En grön omstart”

Ekologisk hållbarhet - Sjöfartsverket

A puzzle of a coastal scene. The puzzle pieces are white with interlocking edges. The background image shows a rocky coastline with a lighthouse on a cliff, waves crashing against the rocks, and two birds flying in the sky. The puzzle is arranged in a grid-like pattern.

Miljöincitament

Farledsutveckling

Fossilfri myndighet

Fossilfri flotta

Överflyttning

Kunskaps-
uppbyggnad

Remisser

Digitalisering

Miljömål



- Minska koldioxidutsläpp från egen verksamhet med 20 % jfr med 2012
- Minska energiförbrukningen för byggnader med 15 % jfr med 2012
- Minska koldioxidutsläpp från tjänsteresor med 20 % jfr med 2017
- Det har ställs miljökrav i minst 50 % av alla upphandlingar/produktavtal
- Miljöincitament i avgiftsmodellen fördubblas till 120 mkr*

*Ej ännu beslutad av styrelsen

Miljöincitamentet

- Miljöincitamentet innebär att vi riktar en del av de inkommande avgifterna mot miljöåtgärder
- Detta sker i dagsläget genom bonus-malus till rederier
- 62 mkr till 94 rederiet 2019
- Det system som används idag är CSI's poängsystem med tredjepartsverifiering
- Tas över av IVL svenska miljöinstitutet från 2021
- Pågår just nu ett forskningsprojekt VÄST där IVL, CSI samt Chalmers ser över vilka parametrar som anses viktigast för sjötrafiken- vi medverkar i referensgruppen från i höst



Sjöfartsverkets arbete för överflyttning

- Digitalisering
- Sjömätning
- Översyn och FOI avgifter i anlöpet
- Farledsutveckling
- Sakunderlag "Rapport Överflyttningspotential"
- Kunskapsuppbyggnad - miljö kvalitet
- Marknadsföring av sjöfarten som alternativ
- Stötta Trafikverkets samordnare



Miljöhandlingsplanen

Hur når vi miljömål 2027 inom ramen för ekonomiska förutsättningar ?

90 % av CO2-utsläppen sker från flottan

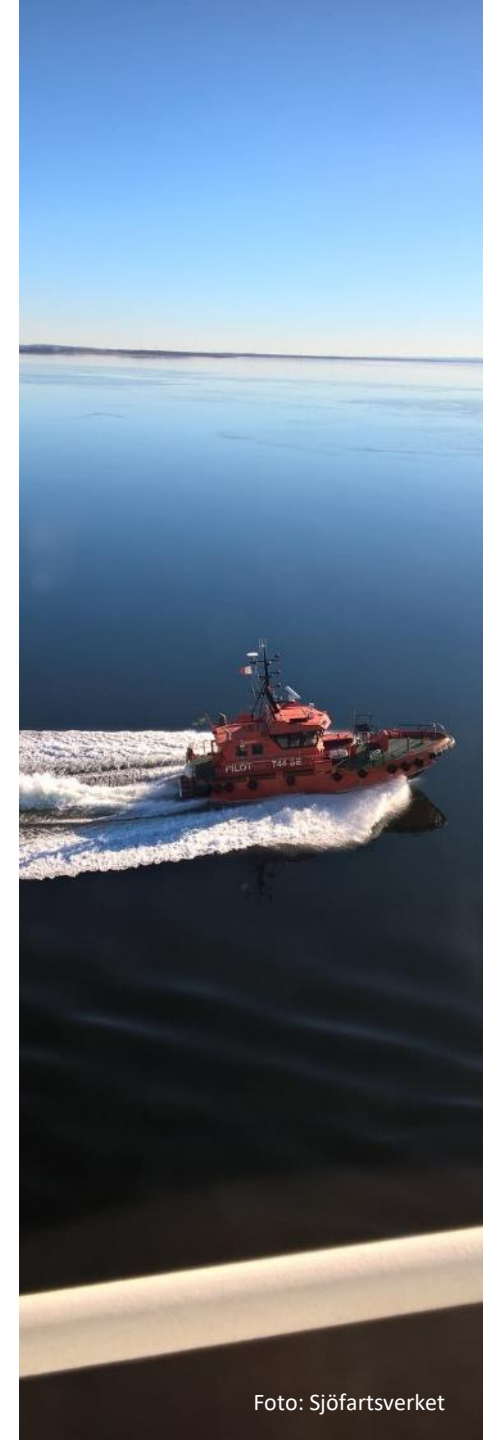
1. Operationell effektivisering
2. Teknisk effektivisering
3. Digitalisering
4. Bränslebyte - MK1 2021

Inom samtliga verksamheter finns uppdrag utlagda för att ta fram delstrategier och handlingsplaner under 2021.



Fossilfri flotta 2045 ?

- Regeringsuppdrag som sträcker sig till 31 januari 2021
- Sjöfartsverket ska se över hur vår båt- och fartygsflotta kan göras fossilfri
- Nära samarbete med KBV
- Referensgrupp med Naturvårdsverket, Energimyndigheten, Trafikverket, Havs och Vattenmyndigheten m fl.
- Forskningsprojekt fortsätter
- Interna handlingsplaner





Tack!

Frågor?





Hur arbetar våra myndigheter med den gröna återstarten?

Jonas Bjelfvenstam, generaldirektör, Transportstyrelsen



Transportstyrelsens arbete med grön återstart

Svensk sjöfarts höstmötesdag den 19 november

Budgetpropositionen 2021

- Få satsningar i budgetpaketet som direkt berör sjöfarten
- Positivt att paketet innehåller satsningar på ökad produktion av förnybara drivmedel
- Budgetpaketet har inte föranlett initieringen av nya arbeten på sjöfartsområdet
- Myndighetens fortsätter det viktiga arbetet med sjöfartens klimatomställning

Initiativ inom EU

- Återhämtningsplan som anknyter till tillväxtstrategin den Gröna given
- Gröna given innehåller flera initiativ som direkt och indirekt påverkar sjöfartens omställning, bl.a. nya generella utsläppsmål och arbete med alternativa bränslen
- ”Fuel-EU” och utvidgningen av EU:s utsläppshandelssystem har direkt påverkan på sjöfartssektorn

FuelEU

- Syftar till att stimulera användningen av bränslen med inga eller låga utsläpp
- Lagstiftningen förväntas omfatta krav både på bränsleproducenter, leverantörer och fartygsägare
- Omfattningen är ännu oklar; alla fartyg som ankommer EU-hamn eller endast fartyg som trafikerar EU
- Förslaget förväntas presenteras Q1 2021

Utvidgningen av EU:s utsläppshandelssystem

- En generell översyn pågår av systemet
- EU KOM har aviserat att man avser utvidga systemet till att inkludera bl.a. sjöfartssektorn
- Lagstiftningsförslaget förväntas presenteras Q1 2021 och översynen pågå till 2023
- Förhandlingen ska ses i ljuset av det arbete som pågår inom IMO

Initiativ inom IMO

- IMO prioriterar arbetet med att ta fram åtgärder som på kort sikt minskar sjöfartens växthusgasutsläpp
- Miljöskyddskommittén (MEPC 75) förväntas godkänna ett regelpaket i november
- Svåra förhandlingar som påverkats negativt av den pågående pandemin
- Kritik mot regelpaketet har framförts

- IMO ska initiera diskussioner om åtgärder som på medel- och lång sikt kan minska växthusgasutsläppen, t.ex. utsläppshandelssystem, skatt på fartygsbränsle
- Sverige och Transportstyrelsen välkomnar detta arbete och kommer att fortsätta att vara en aktiv röst i IMO och i klimatfrågan

Corona och TS

- Förlängda certifikat för svenska fartyg, besiktnings- och revisionstillfällen
- Förlängda certifikat och behörigheter
- Senare fakturering och frysta avgifter 2021
- Ytterligare förlängningar övervägs

Frågor?



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16.00 Slut





Hur ser framtidens sjöfart ut efter covid-19?





Hur kommer och ska vi resa i framtiden?

Lottie Knutson

Styrelseproffs och föreläsare





Vad kommer vi att transportera i framtiden?

Thina Margrethe Saltvedt

Chief analyst avdelningen Sustainable Finance, Norde



Nordea



Vad kommer vi att transportera i framtiden? Svensk Sjøfart årlige høstmøte

Thina Margrethe Saltvedt (Ph. D.), Chief Analyst Sustainable Finance, 19 November 2020

Source: Financial Times, Ingram Pinn

Nordea

**How has the global energy market
been affected by Covid-19?**



Covid-19: Investors have not stopped worrying about climate change and sustainability...

European Investment Bank to phase out fossil fuel financing

EU's lending arm to become first 'climate bank' by ending financing of oil, gas and coal projects after 2021



BlackRock to target companies on governance despite coronavirus

Executive pay and climate policies gauged against sustainable investment expectations



BlackRock boss Larry Fink's plans to put sustainability at the heart of its investment process © Bloomberg

Norges Bank Investment Management

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Norway's new oil fund chief seeks more ESG-driven divestments

Nicolai Tangen says \$1tn sovereign wealth fund should improve its use of risk to boost returns



Nicolai Tangen said the overall aim was 'not to increase the risk but use it better' © Danny Mejia

Shareholder climate rebellions surge despite coronavirus crisis

Investors pile pressure on companies including JPMorgan and Rio Tinto over global warming



Rio Tinto was among those that suffered big shareholder revolts over climate change this year © REUTERS

Investors that manage US\$47tn demand world's biggest polluters back plan for net-zero emissions

Climate Action 100+ group put 161 fossil fuel, mining, transport and other big-emitting companies on notice in latest campaign by shareholders



▲ Extinction Rebellion join a protest outside the London office of oil company Shell last week. Royal Dutch Shell have also been targeted by the Climate Action 100+ group as part of a push to make big polluters support strategies to reach net-zero greenhouse gas emissions. Photograph: Barcroft Media/Getty Images

... the outcome of the US presidential election is particularly good news

You tell us: US voters chose Biden. Now what?

FT readers respond to the outcome of the US election

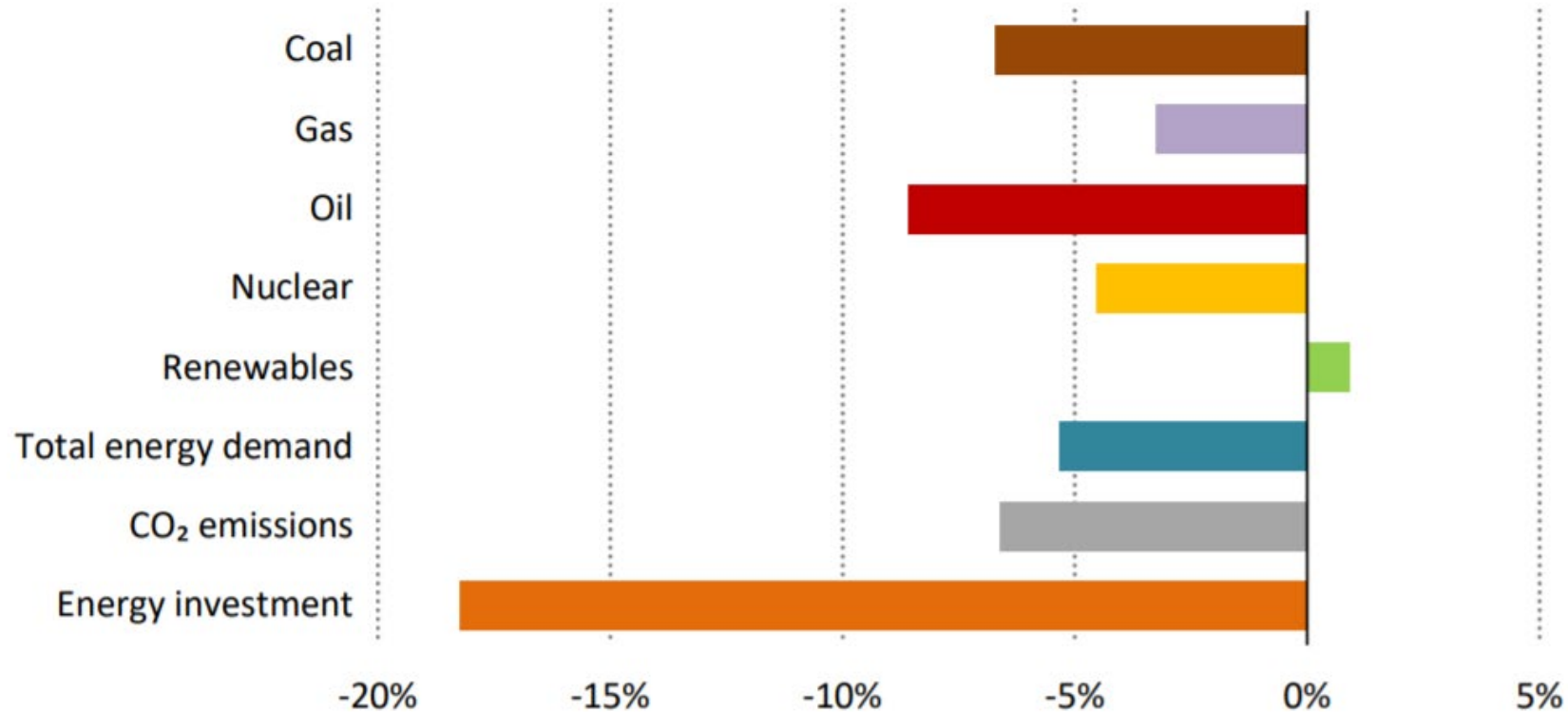


Biden shift on climate change welcomed by world leaders

President-elect pledges to rejoin Paris accord on day one and launch \$2tn green stimulus package

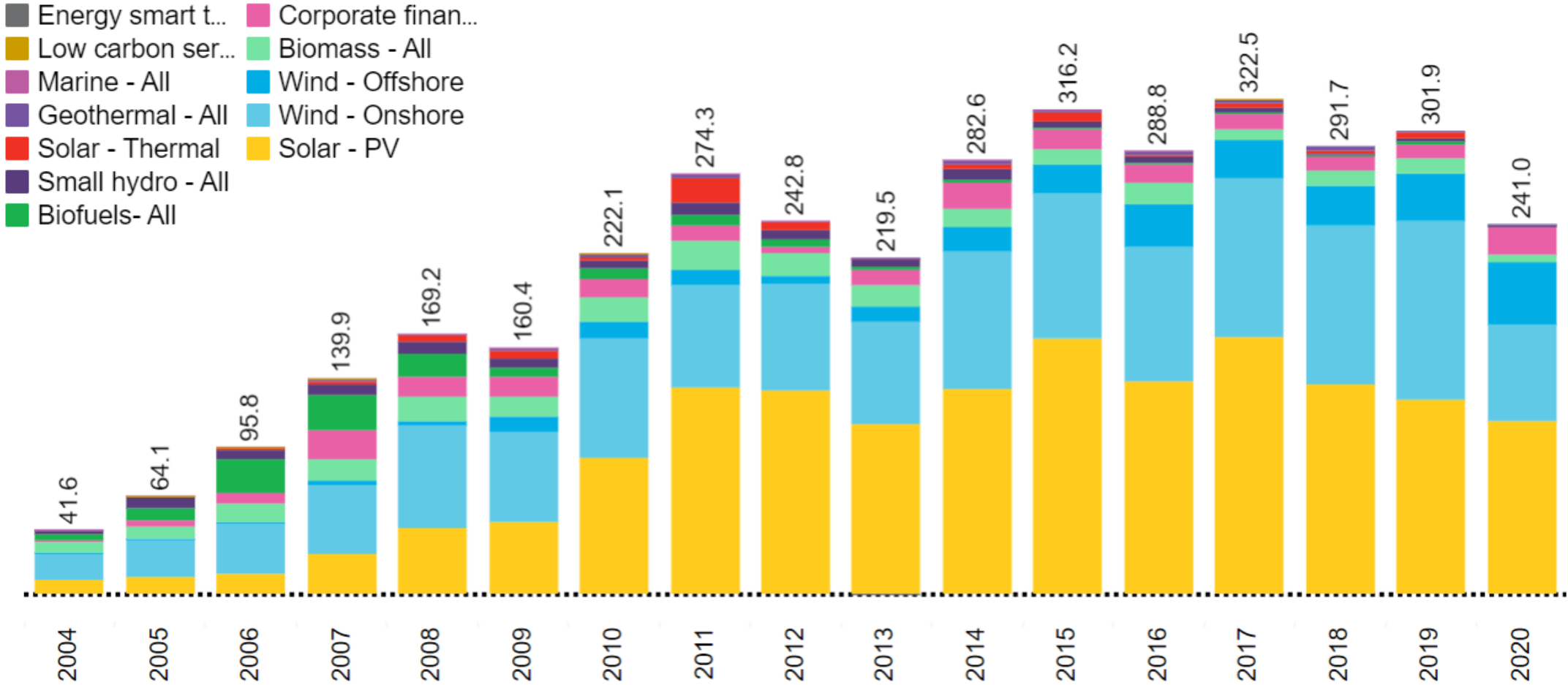


While oil demand collapsed, renewable consumption increased slightly in 2020 Expected change in energy demand in 2020 versus 2019

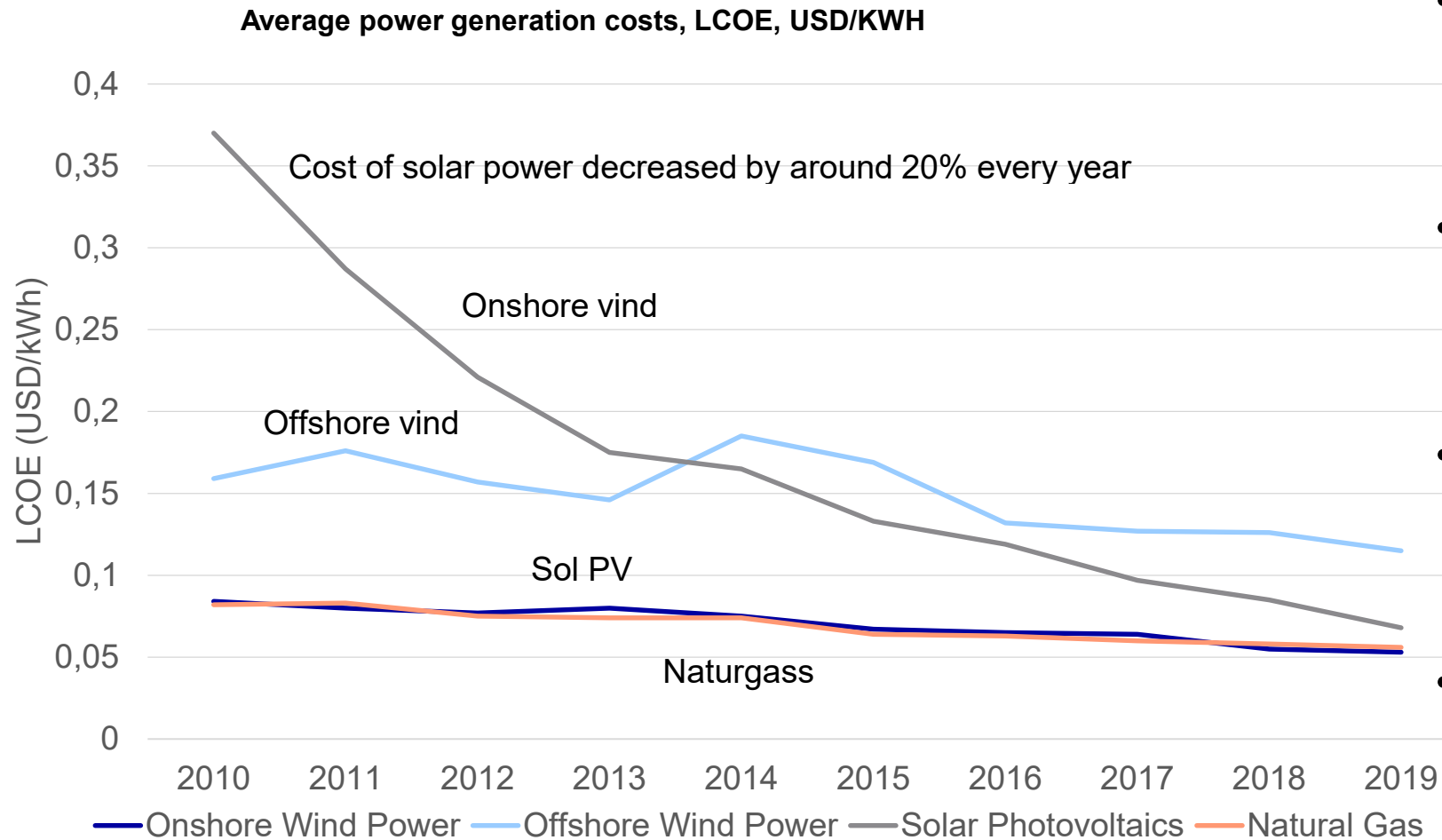


Resilient renewables output means the fall in emissions in 2020 is larger than the estimated 5% fall in energy demand, while investment plunges by 18%

Clean energy investments continues to grow despite the Covid, split on energy source in USD bn



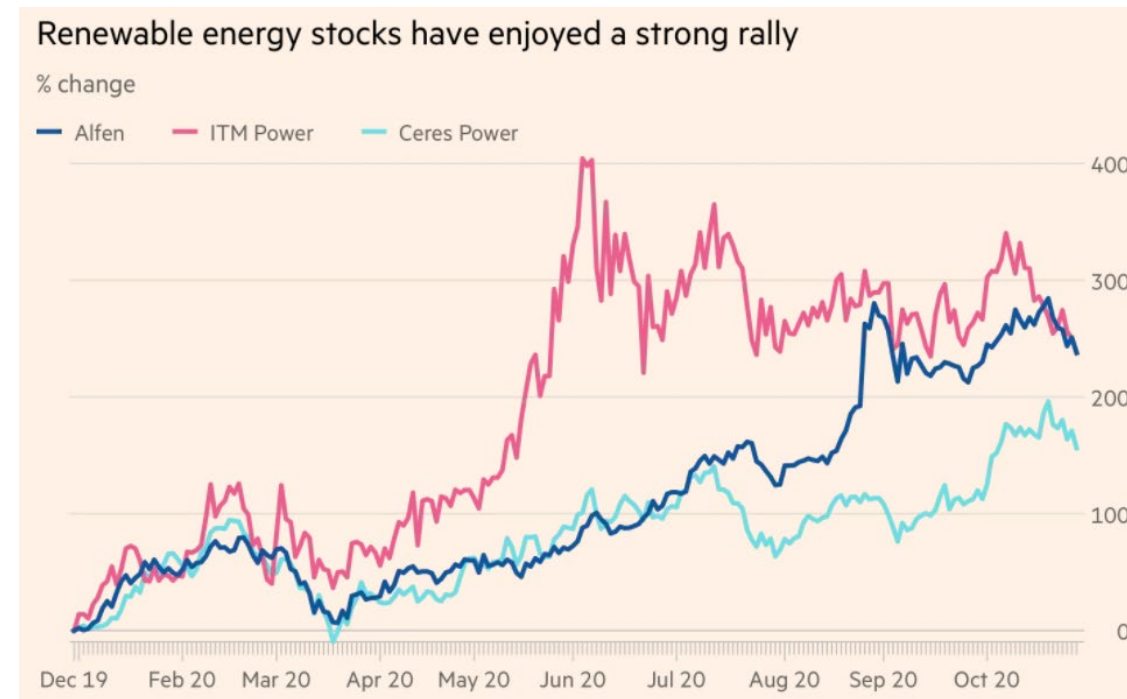
Technology is contributing to a sharp drop in production costs for renewable energy



- The costs of producing solar, wind and battery technology have fallen sharply
- Renewable energy is capital intensive, low interest rates support investment
- Low oil prices no longer provide super returns for oil companies
- Investors are increasingly concerned about climate risk

Source: EIA, IRENA, Lazard and Macrobond

Oil stocks have fallen sharply, while interest in renewable energy has risen sharply during the corona crisis

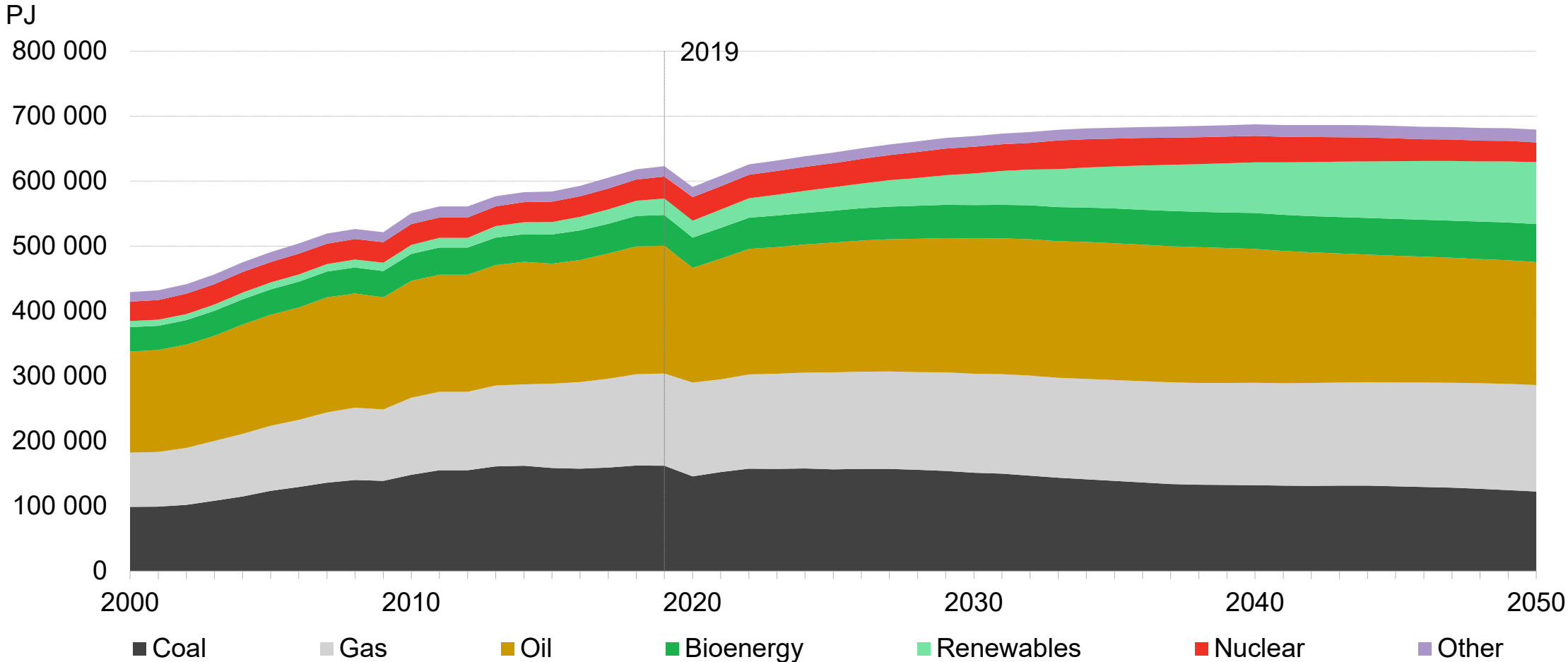


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**How will the transport sector
be influenced by the changes
in energy mix and green
transition?**

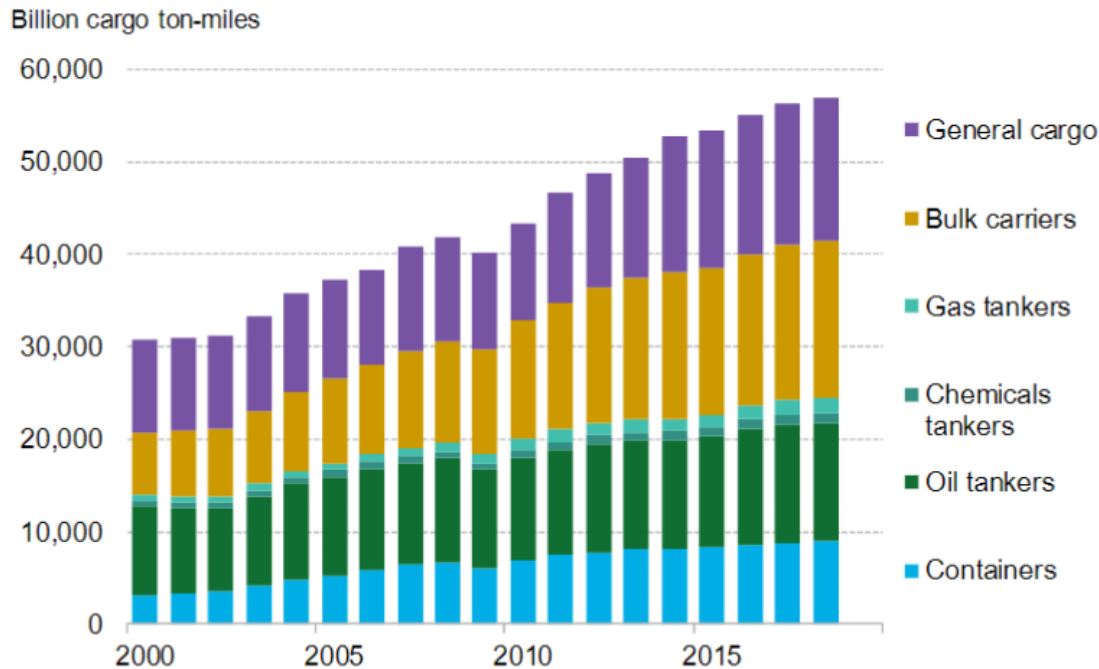


Projections of the total primary energy demand by source to 2050, in PJ



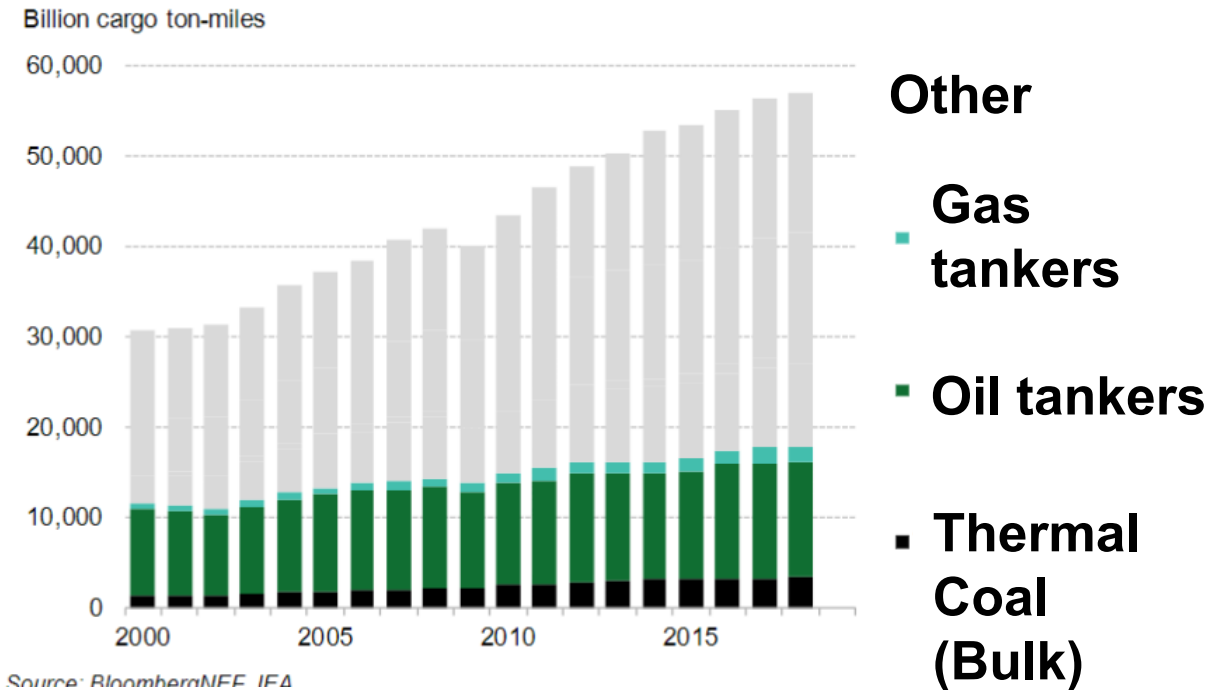
Demand for shipping almost doubled in the last 20 years

Demand for shipping has almost doubled in last 20 years



Source: IEA

Of the one third of shipping dedicated to moving fossil fuels around, 70% is carrying oil



Source: BloombergNEF, IEA



The risk of “stranded assets” goes beyond oil and gas production



The Big Read Oil & Gas industry [+ Add to myFT](#)

Lex in depth: the \$900bn cost of ‘stranded energy assets’

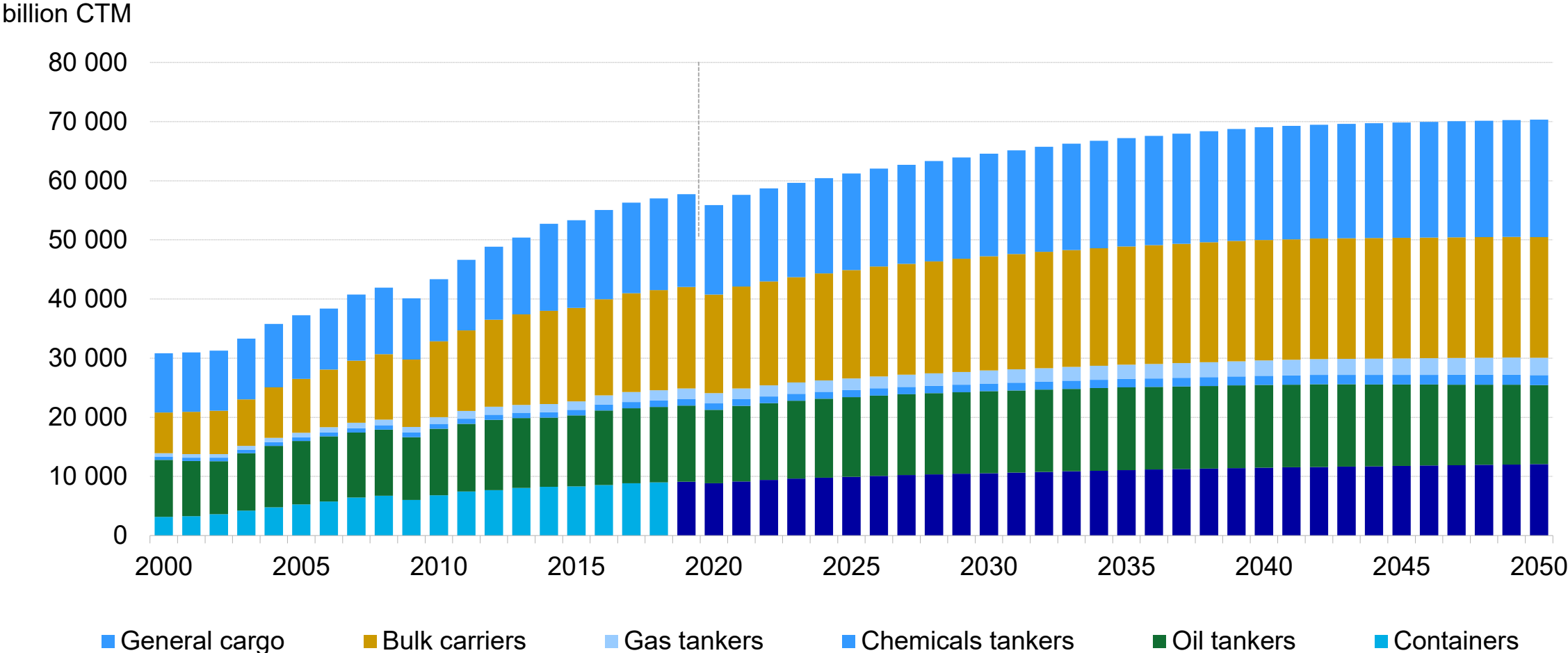
Oil tankers risk becoming ‘stranded asset’ in climate push

Report warns that declining use of fossil fuels poses significant risks to shipping industry

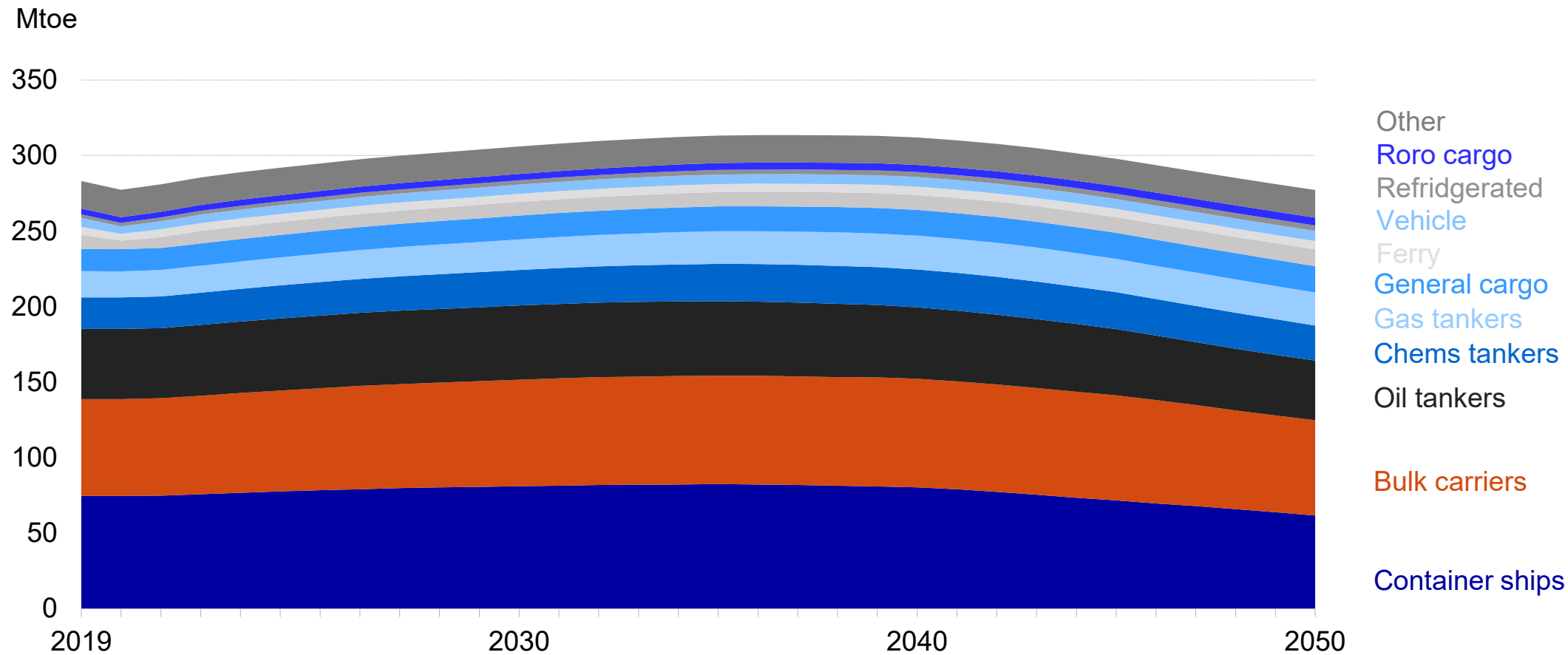


© Bloomberg

Global marine trade split on vessel/ship category, forecast by Bloomberg NEF 2019 to 2050 in billion



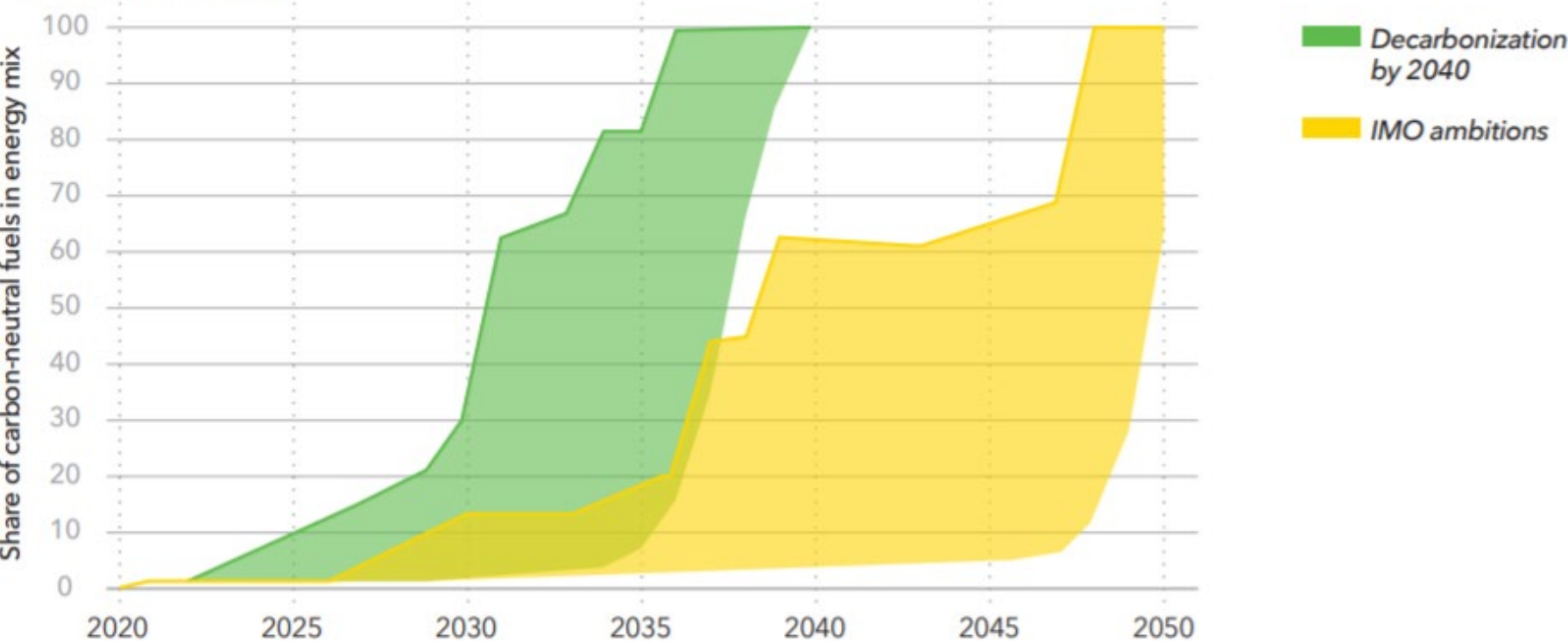
Global marine fuel consumption by vessel type



Share of carbon-neutral fuels in shipping mix towards 2050 for the IMO ambitions and decarbonisation by 2040 pathways, DNV GL prognosis

Share of carbon-neutral fuels in shipping energy mix towards 2050 for the *IMO ambitions* and *Decarbonization by 2040* pathways. The range covers the minimum and maximum share per year across all scenarios for the particular pathway.

Units: Percentage (%)



©DNV GL 2020

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The role of the financial industry in the green transformation



How do we define clear and unified measures of climate risk and sustainability for the oceans?



POSEIDON PRINCIPLES

Objectives

- **Creating awareness** for the GHG impact of the finance decisions taken
- **Providing a common target** for the intended annual improvement
- **Underlining the commitment** of the ship finance community for global GHG challenges



We need a common framework for Blue Finance:

Assessment of climate and sustainability alignment

Transparency

Enforcement

Accountability

Banks tighten grip on emissions, climate and sustainability: Poseidon principles and Responsible Ship Recycling Standards

Maritime chiefs call for ship speed limits to cut emissions

Executives' letter to International Maritime Organisation says sector needs to address global temperature rises



Shipping is the new frontier in the climate change fight

Campaigners fear the Trump administration wants to block new environmental rules

GILLIAN TETT [+ Add to myFT](#)



Source: Financial Times, DNV GL, The Maritime Executive

Banks Backs Responsible Ship Recycling Standards



Global banks agree framework to promote green shipping

Lenders including Citi and Société Générale to consider climate impact in loan decisions



Source: Financial Times

Poseidon Principles have implications for signatories and clients

Annual collection of emission data

Calculating measures such as

- Average Efficiency Ratio
- Climate alignment factor

Reporting of results

Assessment of energy efficiency in any new finance decision

Management of portfolio in line with increasing requirements

ESG

ENVIRONMENT

- **Climate Change**
- **Natural Capital**
- **Pollution & Waste**
- **Environmental Opportunities**

SOCIAL

- **Human Capital**
- **Product Liability**
- **Stakeholder Opposition**
- **Social Opportunities**

GOVERNANCE

- **Corporate Governance**
- **Corporate Behaviour**

Developments in the ESG (Environmental, Social and Governance) Leaders Index compared to Global Equities (MSCI All Country World) in the last 12M



Kilde: Refinitiv Datastream

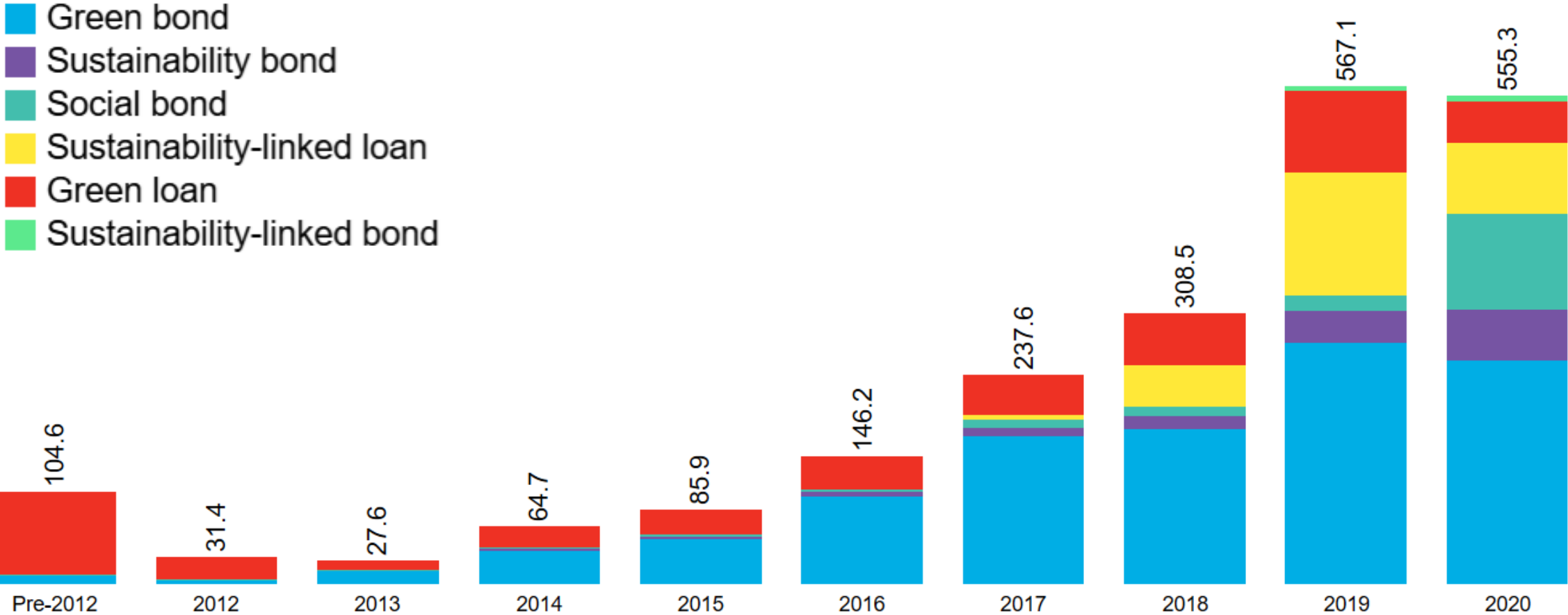
Coronavirus is strengthening the hand of ESG investors

Pandemic has coincided with strong flows into funds with sustainability mandates

BILLY NAUMAN [+ Add to myFT](#)



Sustainable Debt Issues by instrument type, in USD bn



Thank you!

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Hur kommer sjöfarten att arbeta med hållbarhet?

Dr Lucy Gilliam

Transport and Environment



*"Creating globally successful and sustainable
marine engineering and shipbuilding"*



smart green shipping



OPPORTUNITY: 21st CENTURY SHIPPING SYSTEM DESIGN

- Collaborative - from cargo owner to naval architects
- Mission Oriented and Systemic
- Doughnut Economics in practice
- System design - across Three Horizons
- Five interconnected areas of development
- Technically and commercially superior **100% renewable** by 2030



THE FLAGSHIPS FOR THE FUTURE

The FELLOWSHIP of the WILLING

HUMPHREYS
YACHT DESIGN

 Malin Marine

INAL

 Lloyd's Register

 Ultrabulk

drax

 SIMEC



GIBSON
SHIPPING ENERGY

 group partners



**Capital
Law**


Willis
Towers
Watson

WOLFSON UNIT
FOR MARINE TECHNOLOGY AND INDUSTRIAL AERODYNAMICS

 UK INNOVATION &
SCIENCE SEED FUND

 UKRI
Innovate
UK

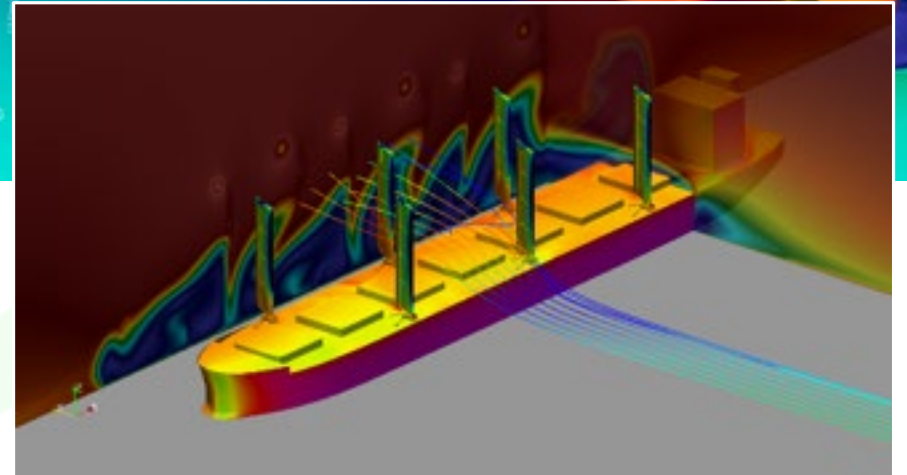
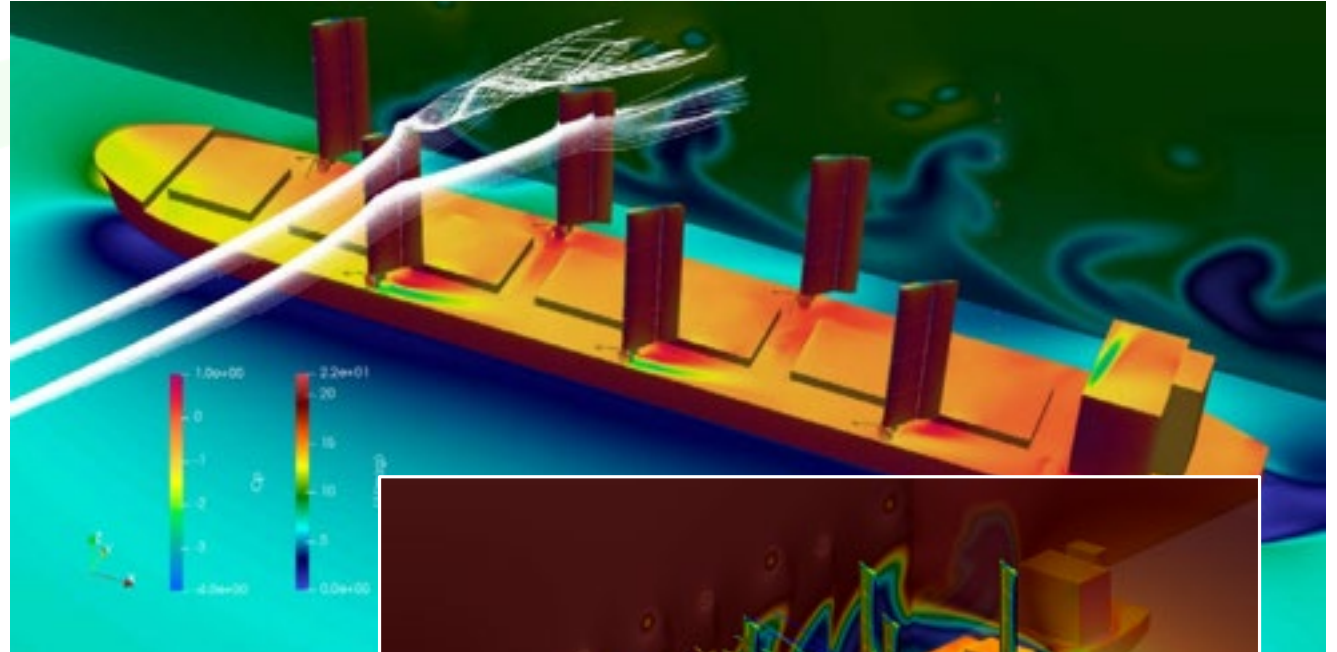
 esa
business incubation centre
UK

**Institution of
MECHANICAL
ENGINEERS**



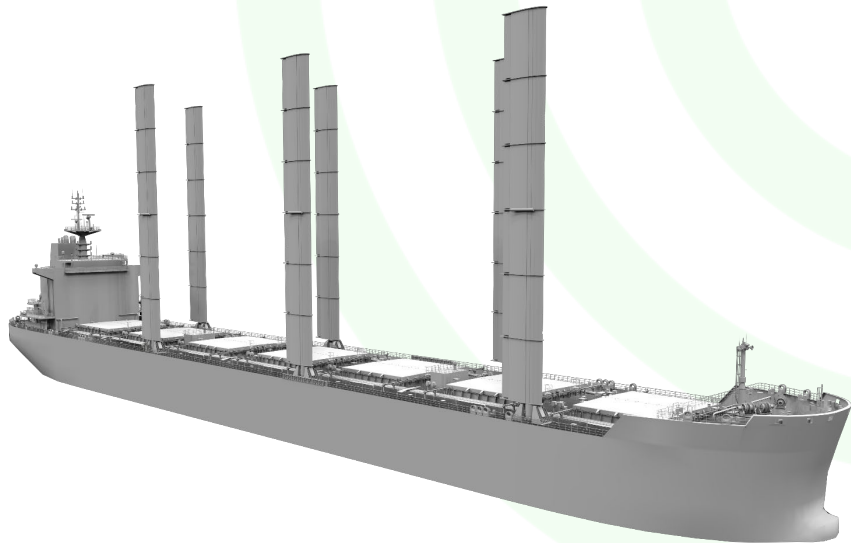
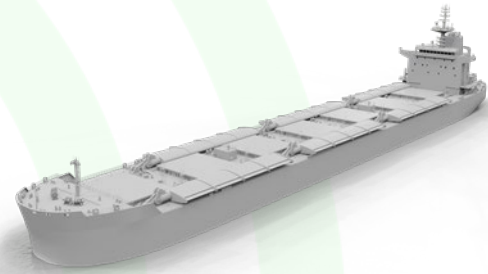
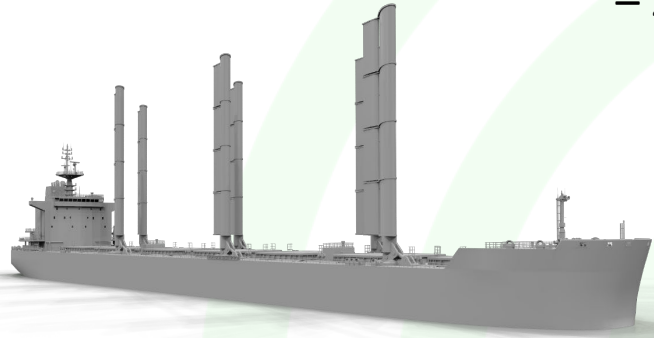
FastRig & TradeWind: Successful Simulations

- HYD modelled the *Ultrabulk Tiger* for computational fluid dynamics (CFD) analysis
- FastRig modelled in this 3D system and 'fitted' on the virtual *Tiger*
- University of Southampton's Wolfson Unit for Marine Technology and Industrial Aerodynamics ([WUMTIA](#)) ran simulated models through their CFD code to generate force and moment data to input in to the VPP to analyse performance and fuel saving potential across of all combinations of **wind speed and angle, and with varying degrees of engine propulsive thrust**
- Dr Graeme Winn - [pioneering](#) designer of custom-built tactical route optimisation Americas Cup teams created a wind-assist routing tool for commercial shipping to optimise fuel savings to wind-fitted ships.





Designed with owner/operator input - accessible
– retractable, robust, commercially accessible
– 20% fuel save enables lease-finance



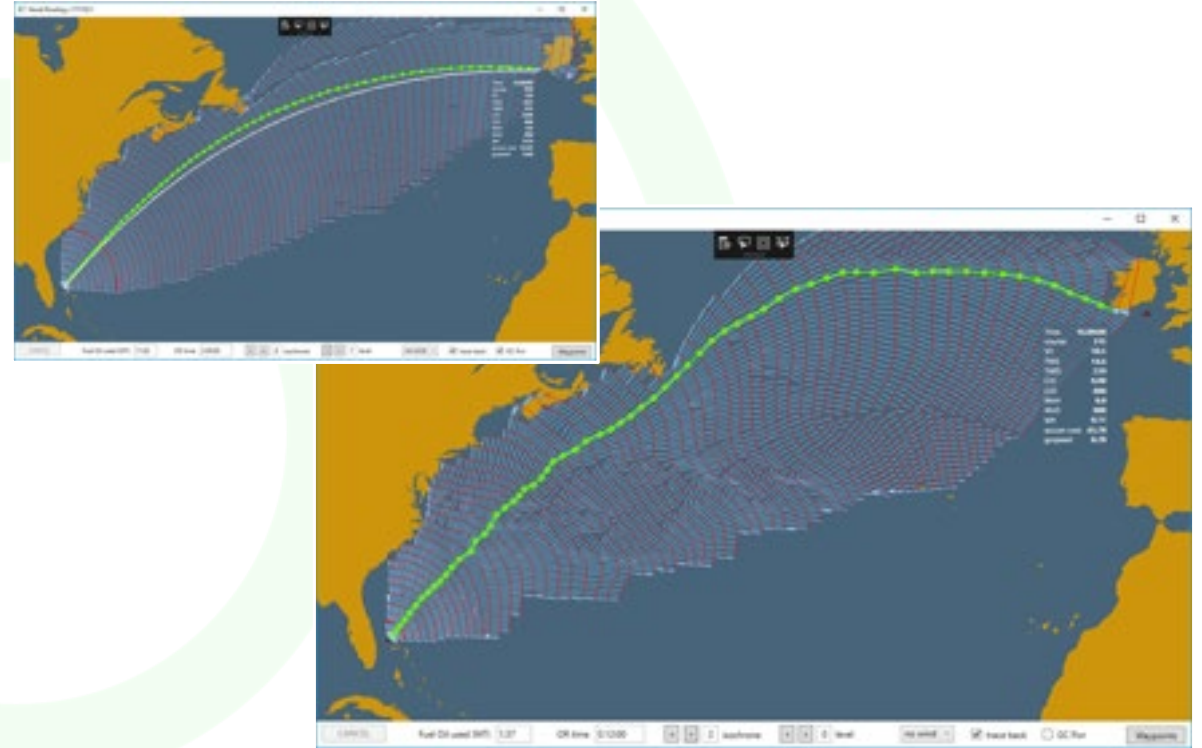
NEXT ITERATION

- More savings to come – double height
- Leading Edge' perpetual upgrade customer proposition to overcome 'first-mover' fears and continuously improve fuel/GH save



ESA BIC: FastRig & Tradewind: Successful Simulations

- Using NOAA meteorological data sets covering three decades of statistical likelihood of wind speed and direction we modelled the route that the ship serving the Drax power plant
- Using Ultrabulk's normal operational speeds at 4 start dates within each season, i.e. 16 voyages in total
- For each of these 16 voyages we measured the ship fuel consumption every six hours along the route, for the ship with and without FastRigs to quantify the difference
- This vast amount of data was aggregated to produce a **20% average annual fuel savings** across all seasons at normal operating speeds
- By 'playing' with speed and routing optimisation better savings may be achievable in real life. Ships can go faster for the same fuel consumption, or save even more by slow steaming



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- ESA funding is to develop this fuel saving analysis tool, TradeWind, with Dr Winn.
- Real world Demonstrator will prove/enhance CFD analysis.



CIRCULAR SHIPPING – a UK opportunity

- Research with Uni of Manchester showed 29% emissions saved when designing ships for 100% re-use, 10% when 50% re-use
- Circular Economy (CE) business models create significant value estimated by Ellen MacArthur Foundation to be [\\$1trillion](#)
- Little research on opportunities for shipbuilding. One initiative [The Circular Shipping Initiative](#) financed by the Danish Maritime Fund
- Why now? A [dramatic fall](#) in orders for new build ships in 2020.
- A market in decline is ripe for disruption



WAYPOINT ONE:
TEST FASTRIG
DISPLAYED AT COP 26
GLASGOW





WAYPOINT TWO

DEMONSTRATOR LAUNCHED Q3 2022

- ~20% FUEL/GHG FROM FASTRIGS – ROI 3-4 YEARS (OIL PRICE DEPENDENT)
- BIOMASS FOR DRAX FROM USA
- SHIP OPERATOR ULTRABULK
- WIND OPTIMISATION VIA TRADEWIND
- SOLUTION SUITABLE FOR 10,000 SHIPS WORLDWIDE
- DEMONSTRATOR PROVIDES REAL WORLD DATA, SALES PLATFORM





Hur ser framtidens rederi ut?

Karin Orsel

CEO MF Shipping Group





Tack!

