

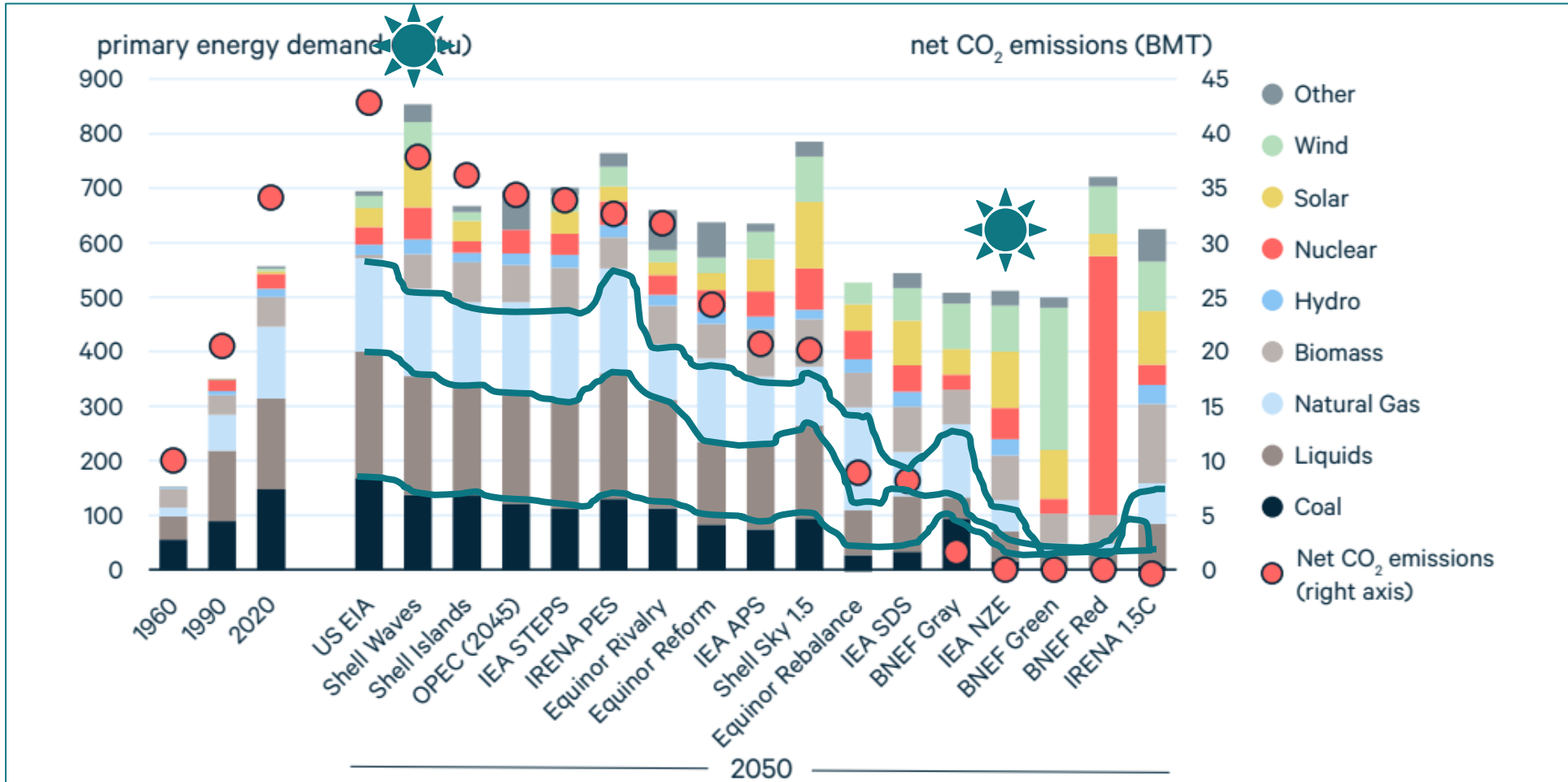
NORWEGIAN PETROLEUM
DIRECTORATE
50 years

RESOURCE REPORT 2022

an extract with focus
on gas

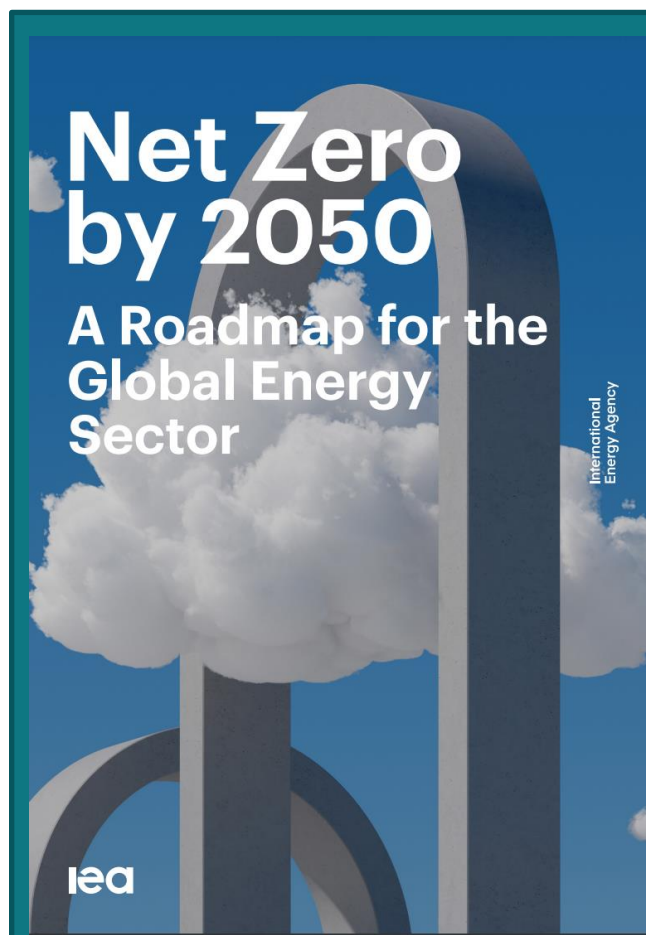
Terje Sørenes
Norwegian Petroleum Directorate
29. November 2022

Future energy mix has a large range of potential outcomes - different scenarios for global energy demand until 2050



Note: Ordered from highest to lowest levels of fossil fuel demand. US EIA excludes nonmarketed biomass. BNEF includes hydropower in "other."

IEA May 2021: no new investments in oil, gas and coal



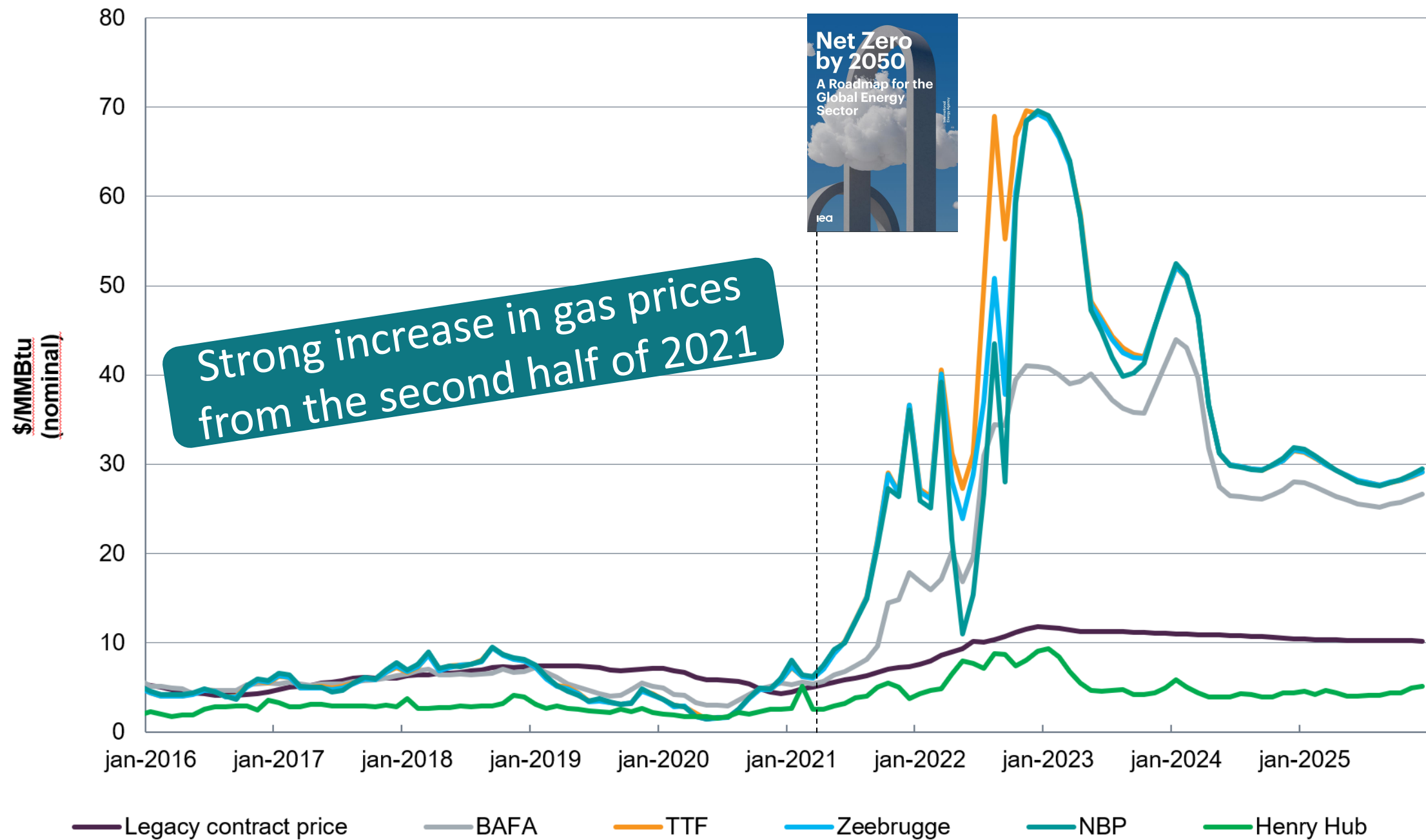
“If governments are serious about the climate crisis, there can be no new investments in oil, gas and coal, from now – from this year.”



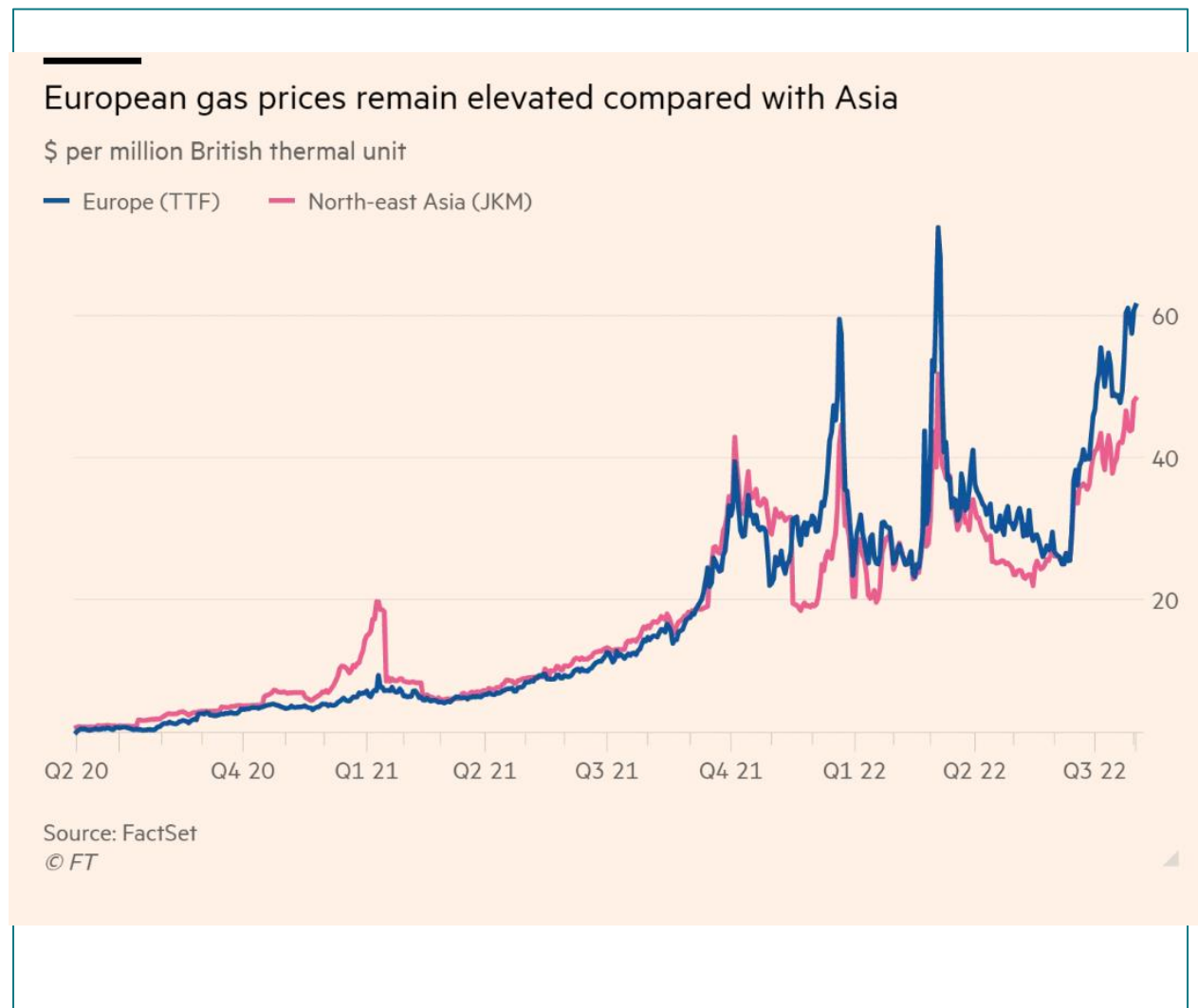
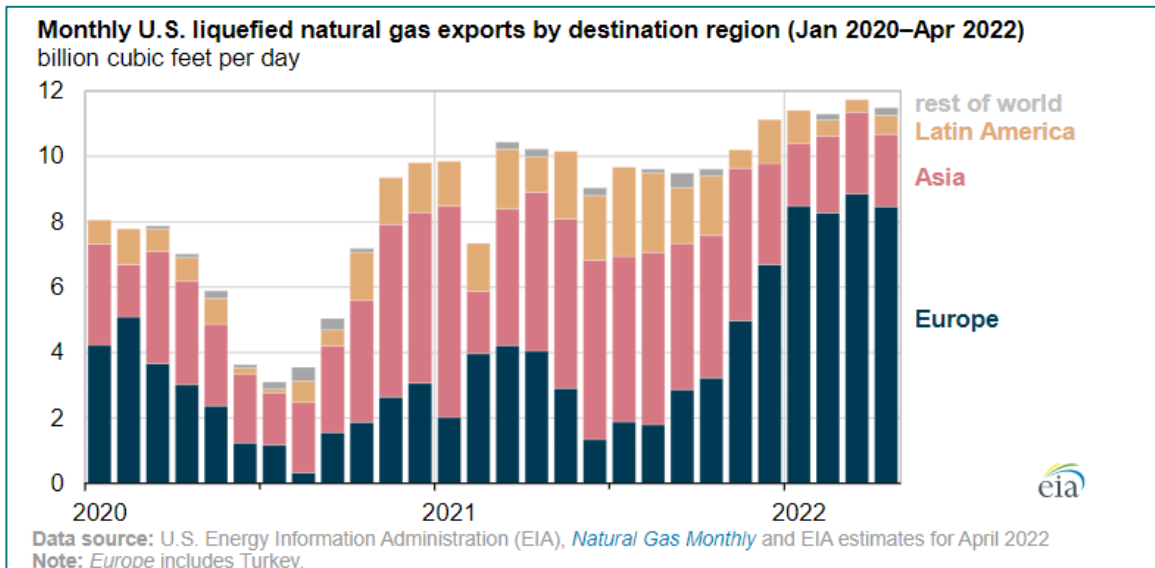
ENERGY

CRISIS

NBP and Continental European gas prices (\$/MMBtu)



Battle for "replacement gas"



Europe is facing both a gas and a power crisis



Europe's industrial sector could be wiped out by the energy crisis



By Anne-Sophie Corbeau
Sep 27 2022 · 2 min read

August 2022



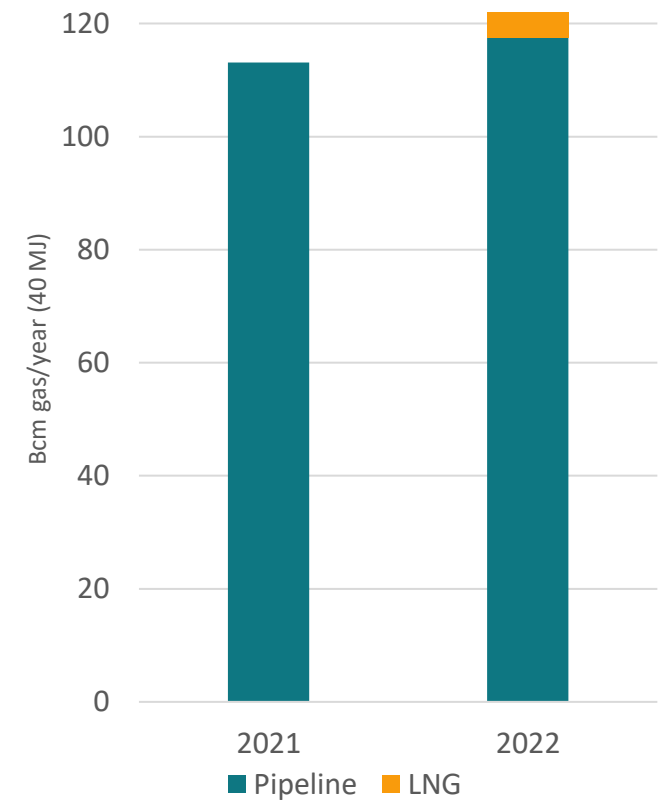
Great if you send gas to Europe



Dr. Fatih Birol, (IEA).

Short Term Actions Taken by Companies

- Reduction of non-critical maintenance
 - «winter production» also during the summer
- Increased heating value
 - NGLs
- Earlier gas production
 - Reduced gas injection
 - Started gas blow down earlier
- Restart of Hammerfest LNG
 - Shut in since 2020 after a fire



Dilemmas

Options:

- Reduce gas injection
- Accelerate gas blowdown
- Drill more gas wells than planned (change drainage strategy)
- Increased heating value (NGL)
- Deferring maintenance to maximize gas exports



Challenges:

- Value of lost oil
- Faster falling reservoir pressure => increased compression costs
- Accelerated production shutdown and field removal
- Deferring maintenance

Need for gas - Also in the Longer Term

The EU supports Norway's continued exploration and investments to bring oil and gas to the European market....also in the longer term beyond 2030.

Joint Statement

Brussels 23. june 2022.



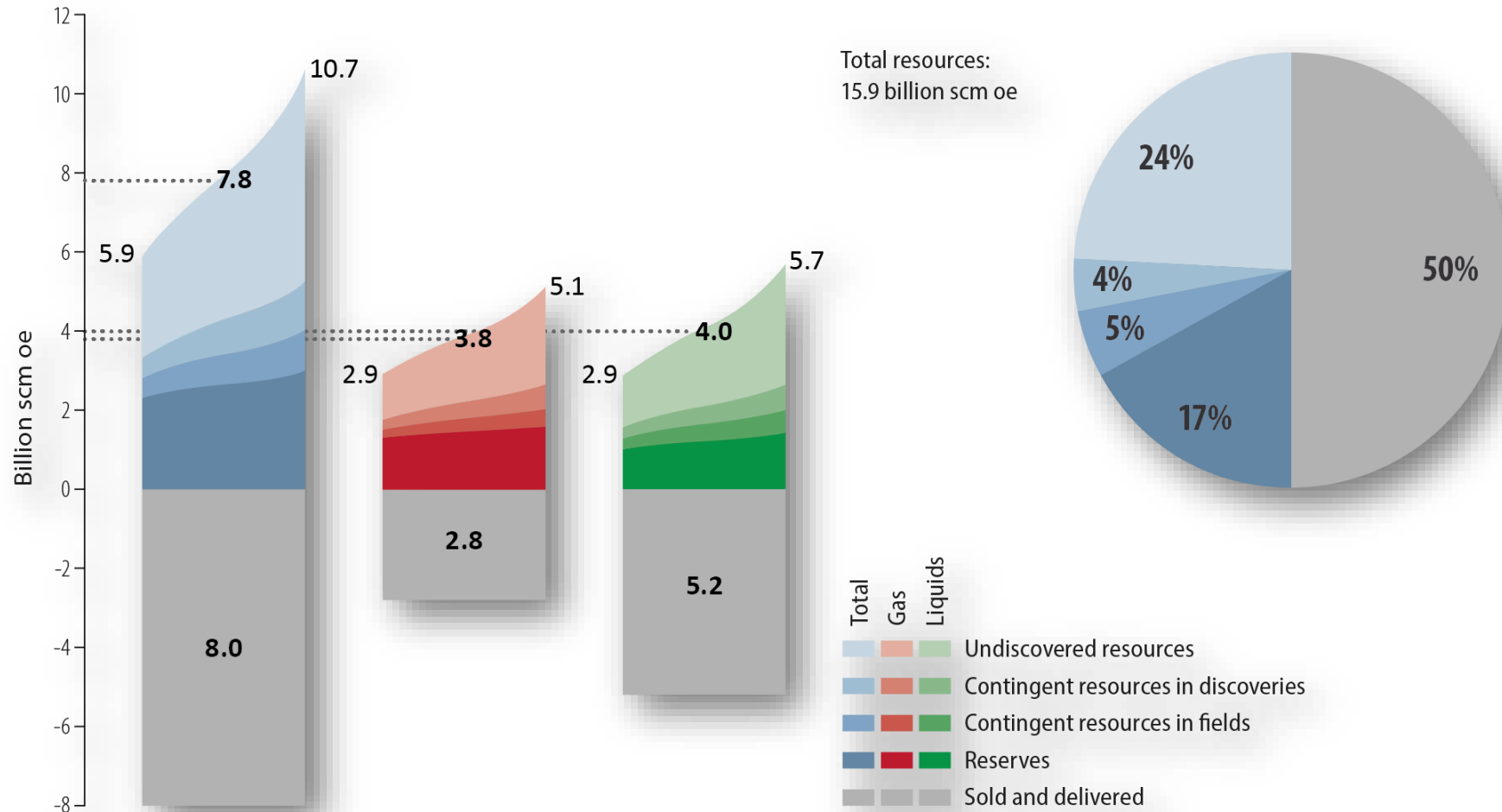
Oil and Energy Minister Terje Aasland in a meeting with EU Commission Vice-President Frans Timmermans



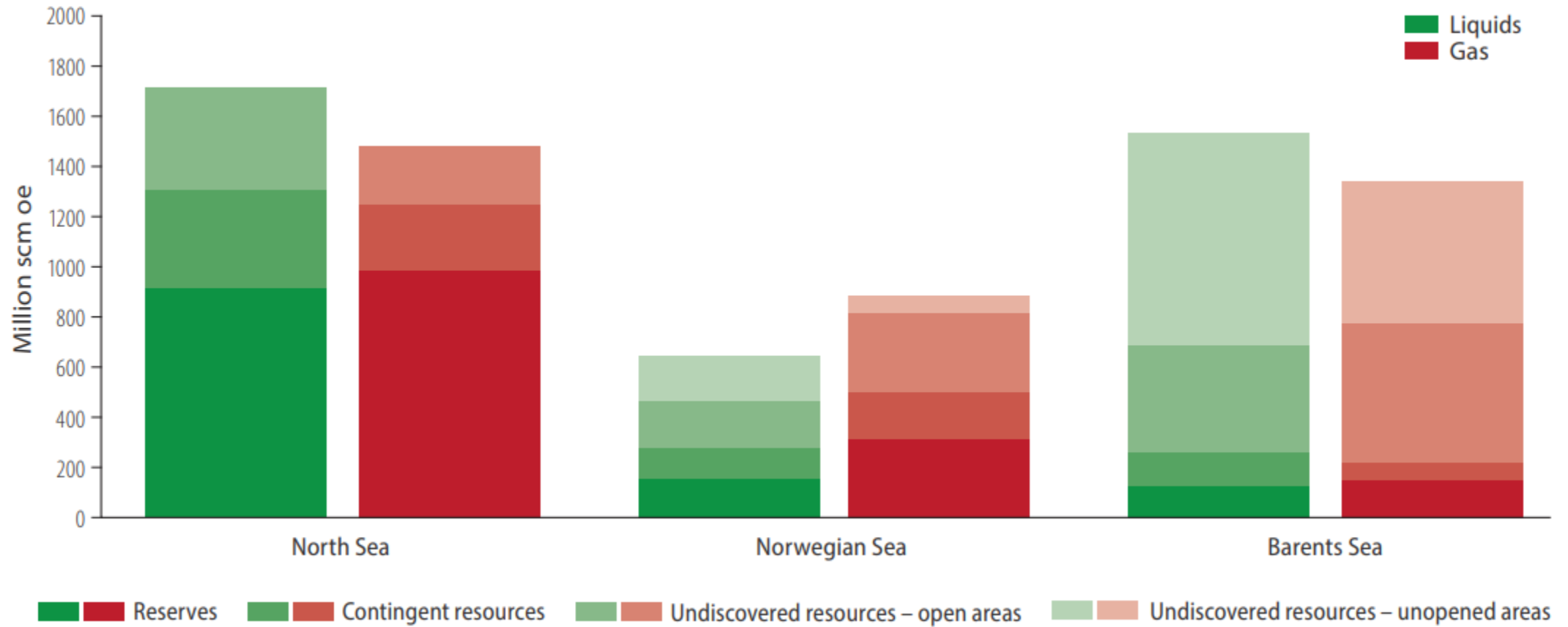
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DIRECTORATE
≈ 50 years ≈

REMAINING PETROLEUM RESOURCES

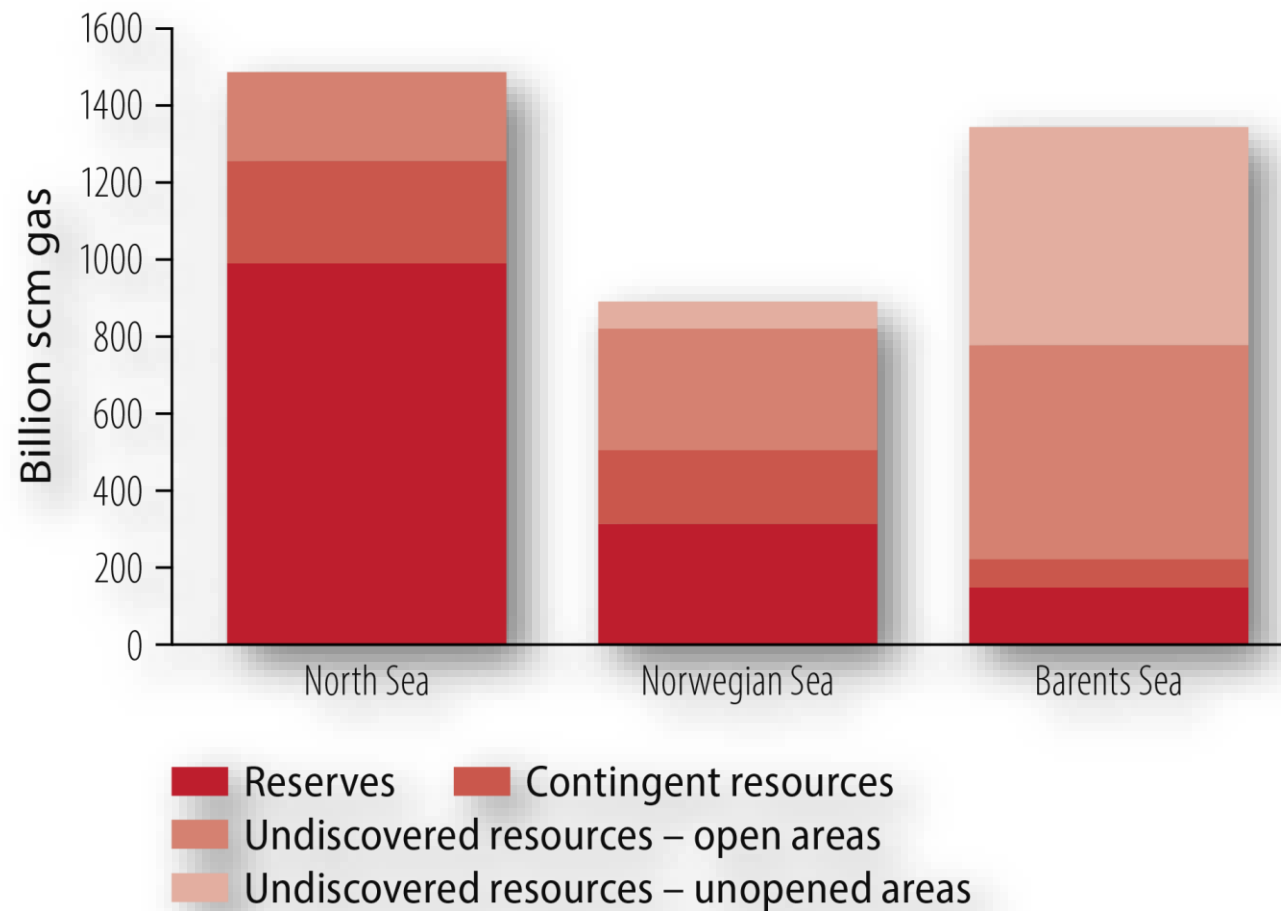
Half has been sold and delivered



Distribution of remaining liquid and gas resources by NCS area and class



Focus on gas



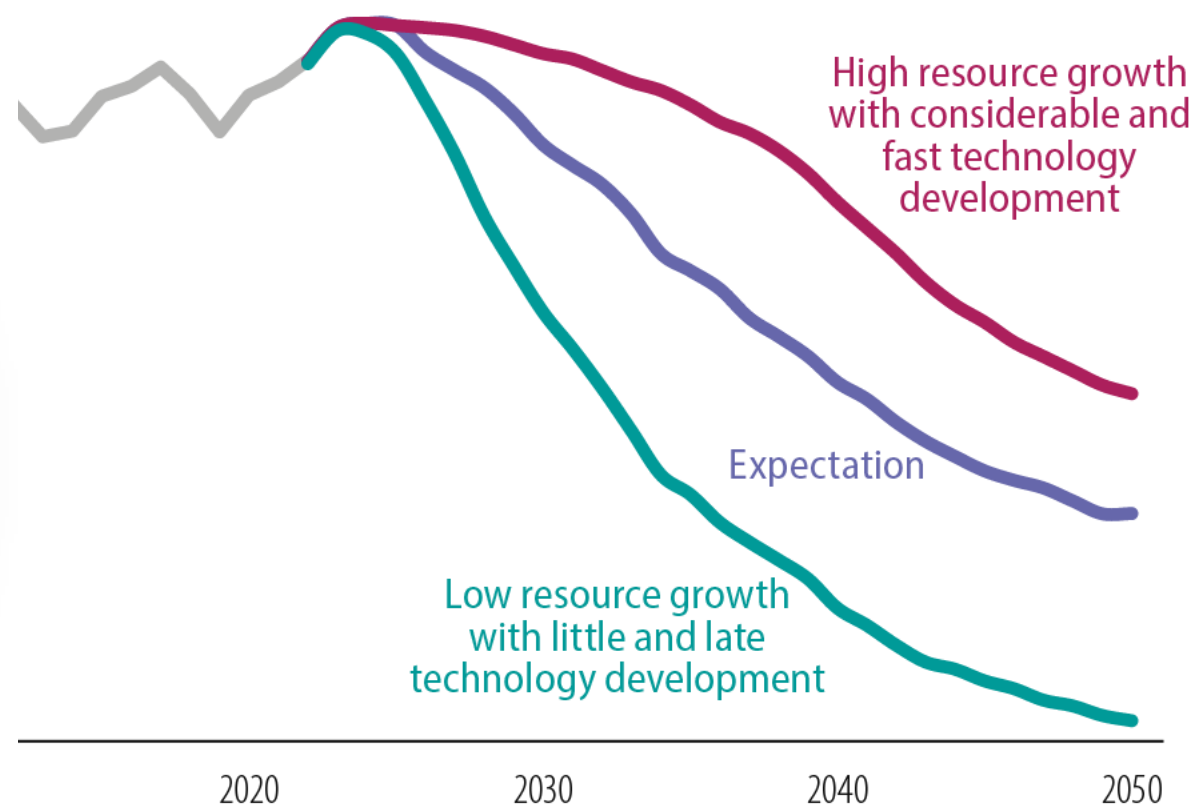
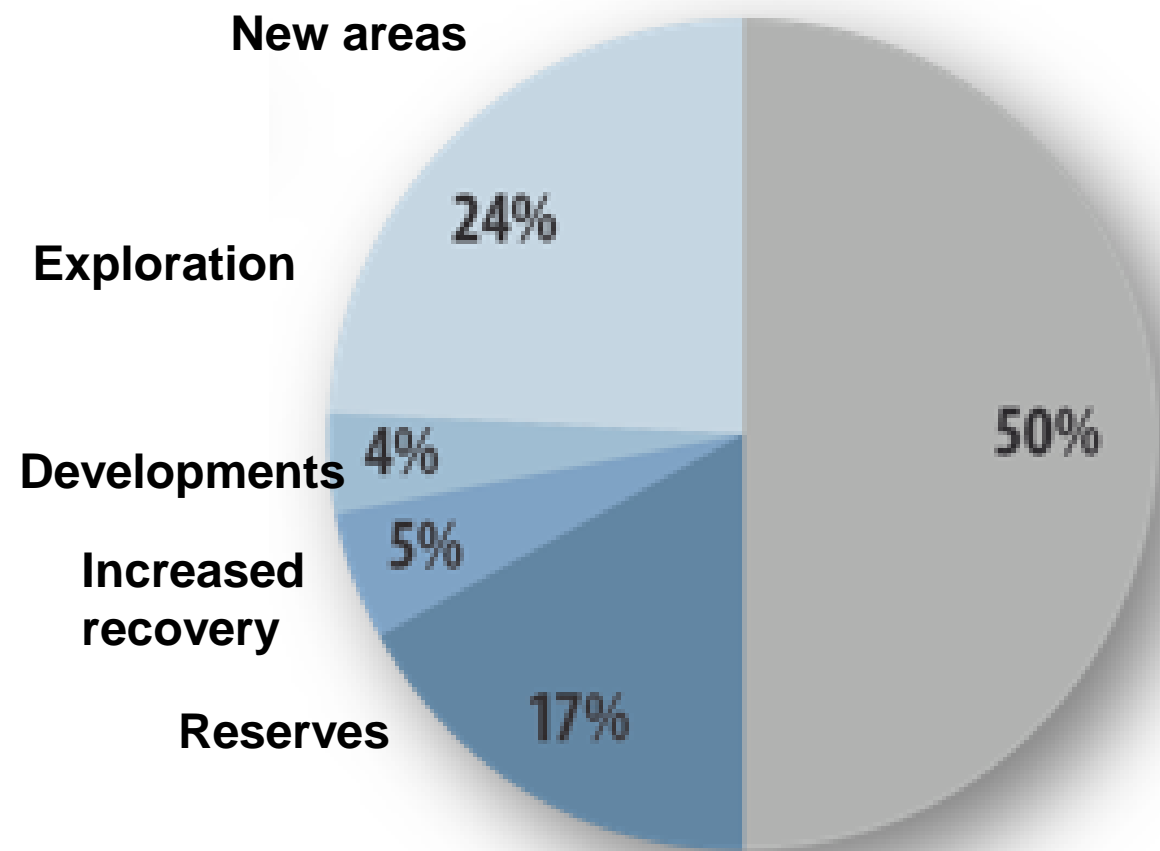


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50 years

STABLE, LONG-TERM
AND SAFE OIL- AND
GAS PROVIDER TO
EUROPE

WHAT DOES IT TAKE?

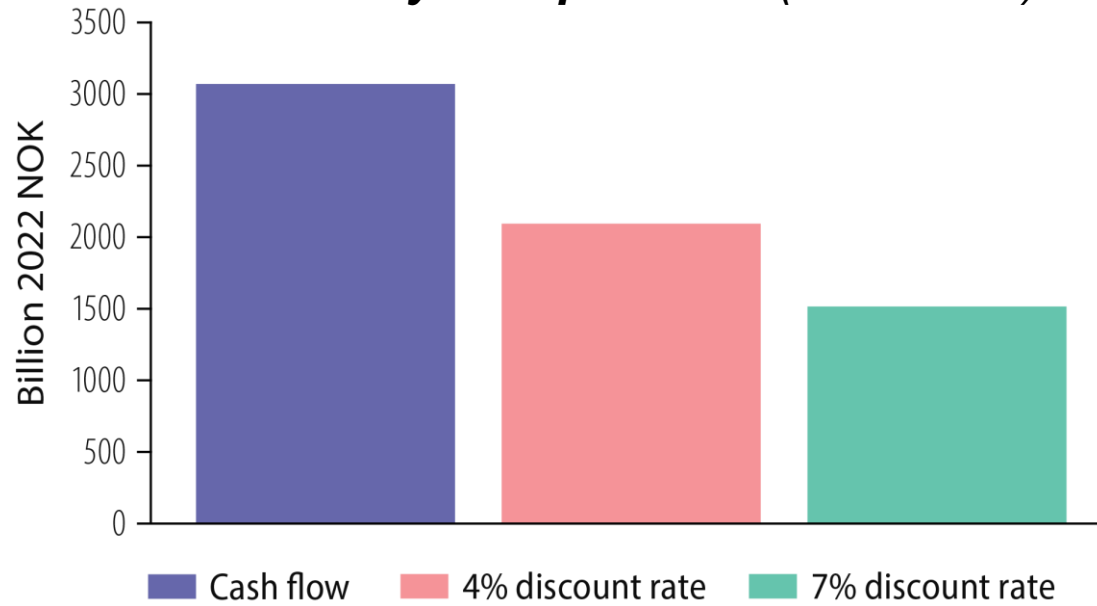
Broad approach needed



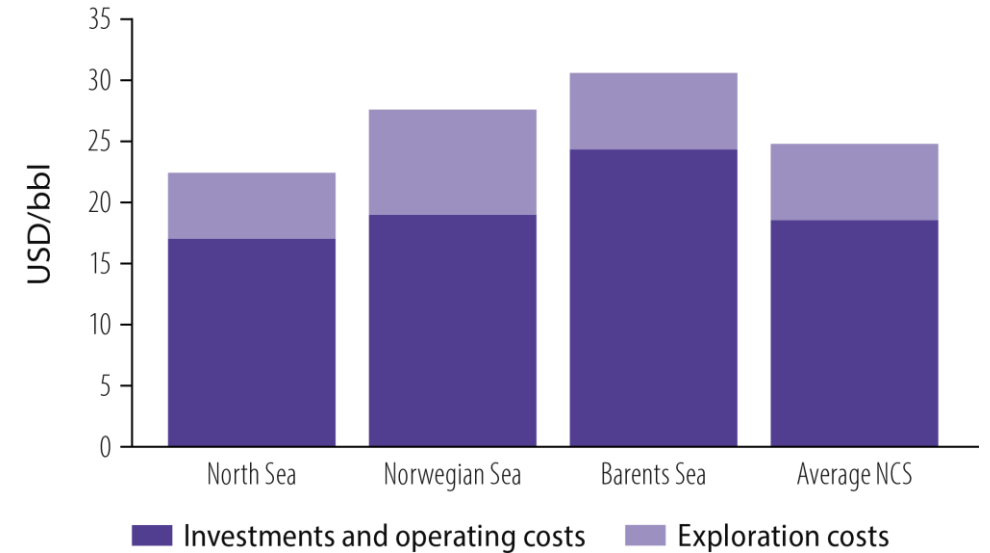
Exploration is profitable and has added great value to society



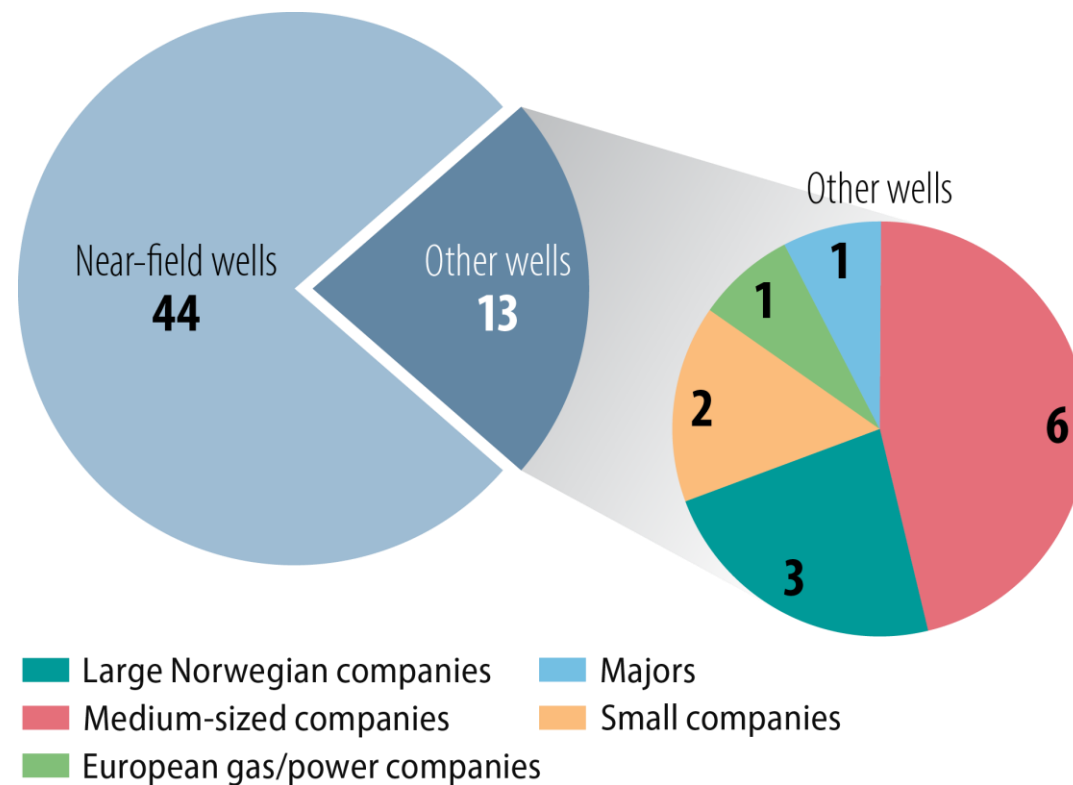
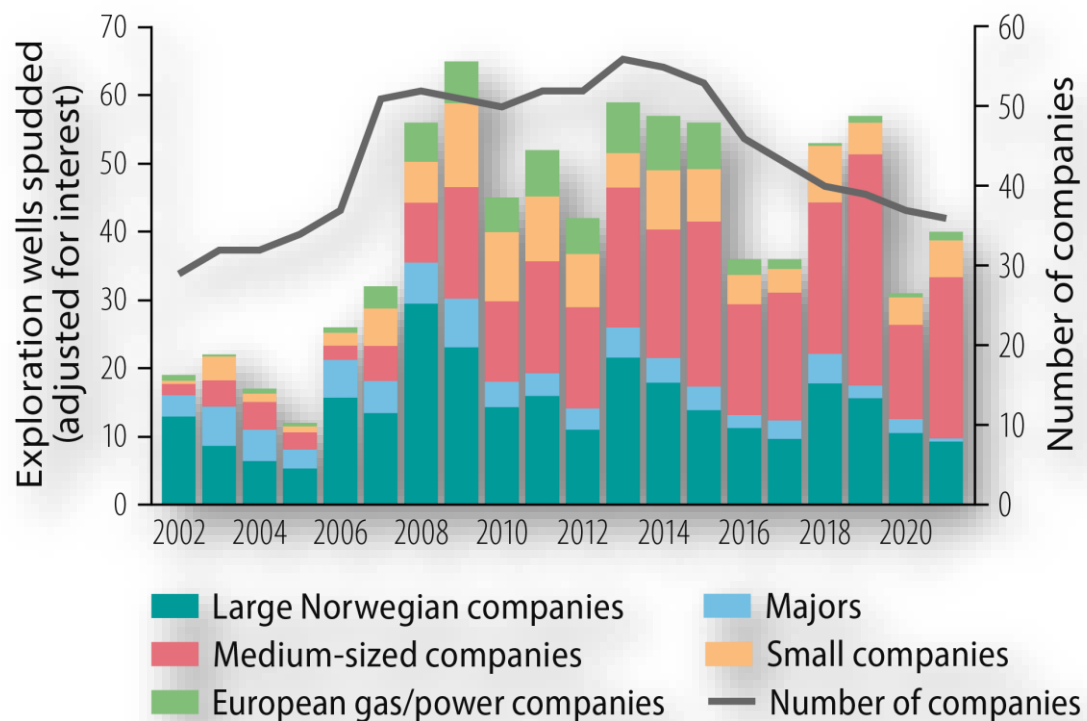
Profitability of exploration (2002-2021)



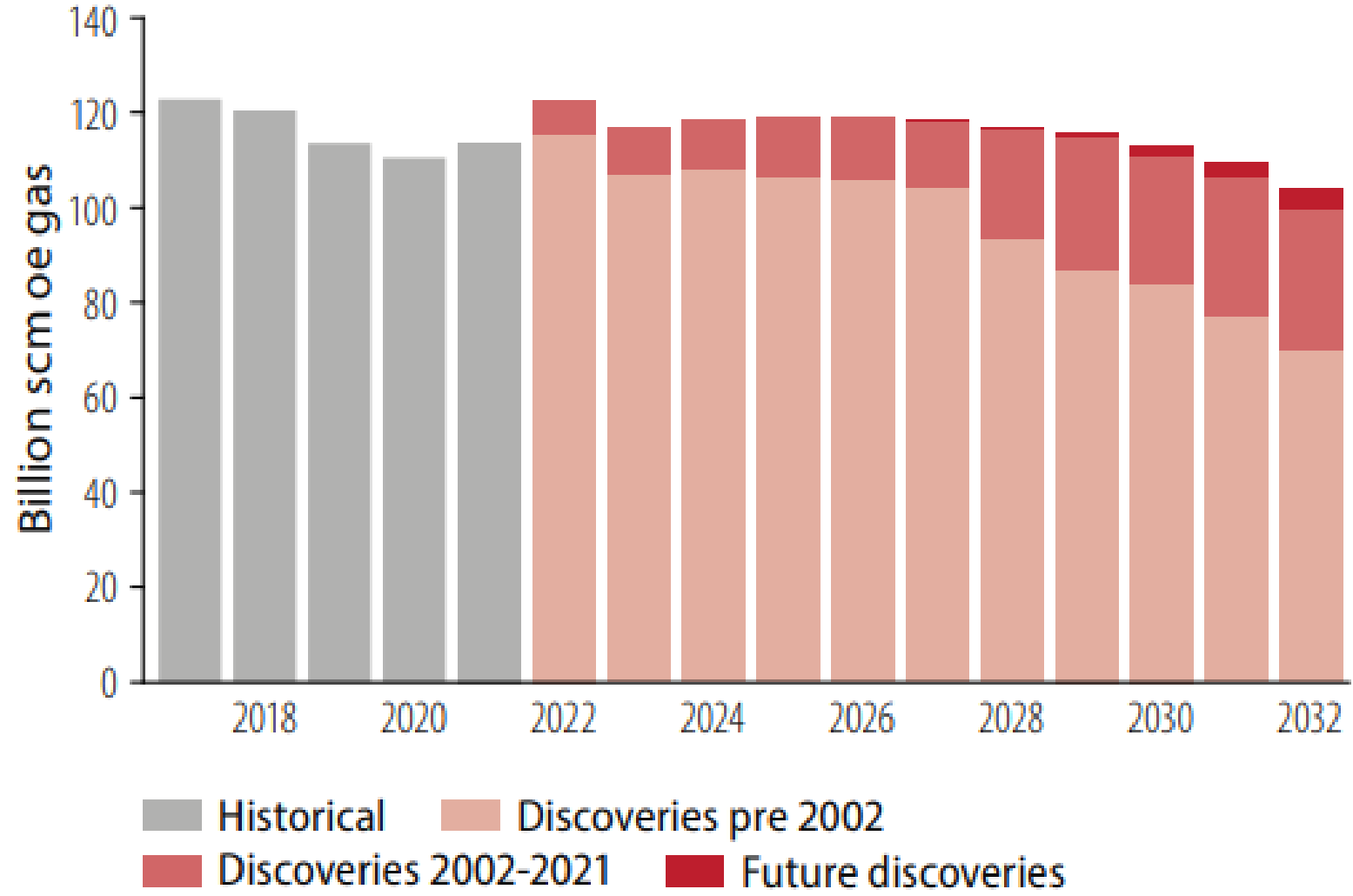
Unit costs discoveries (2002-2021)



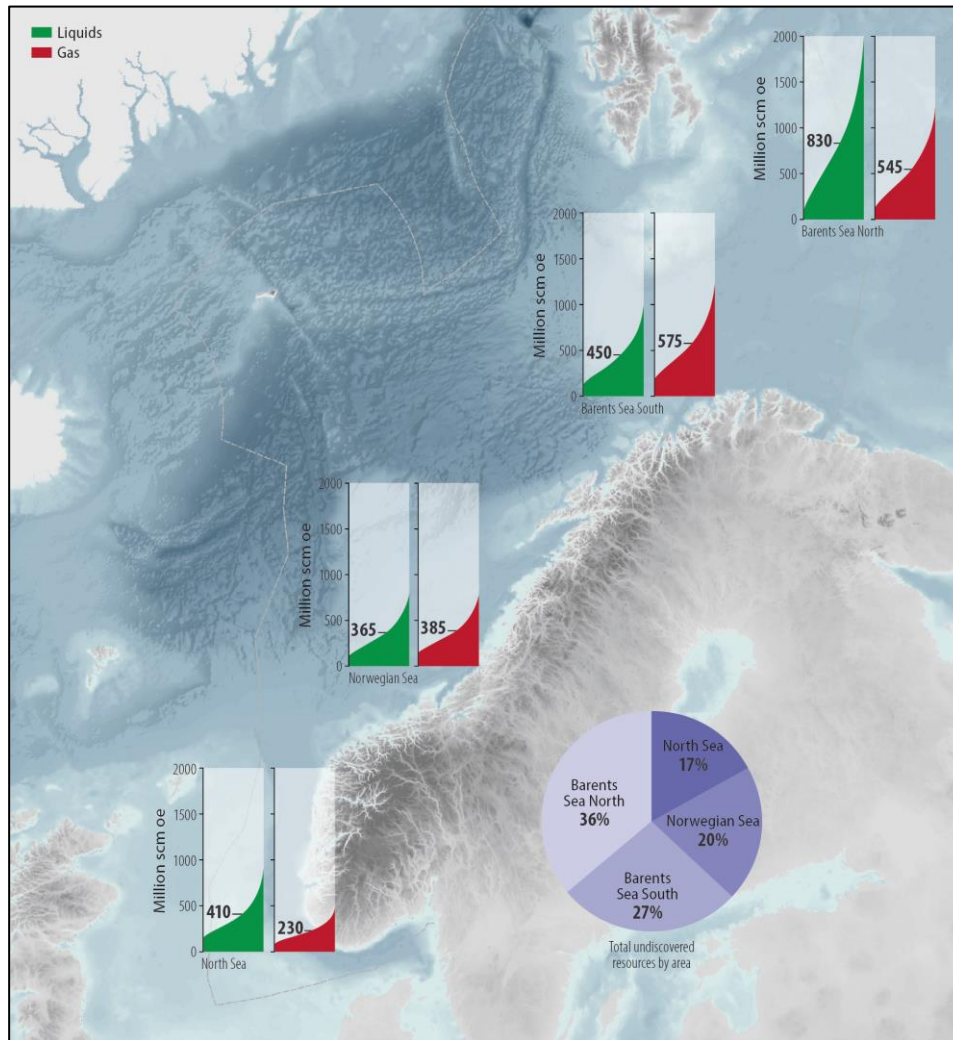
Ability and willingness to explore



We need to explore and find more gas

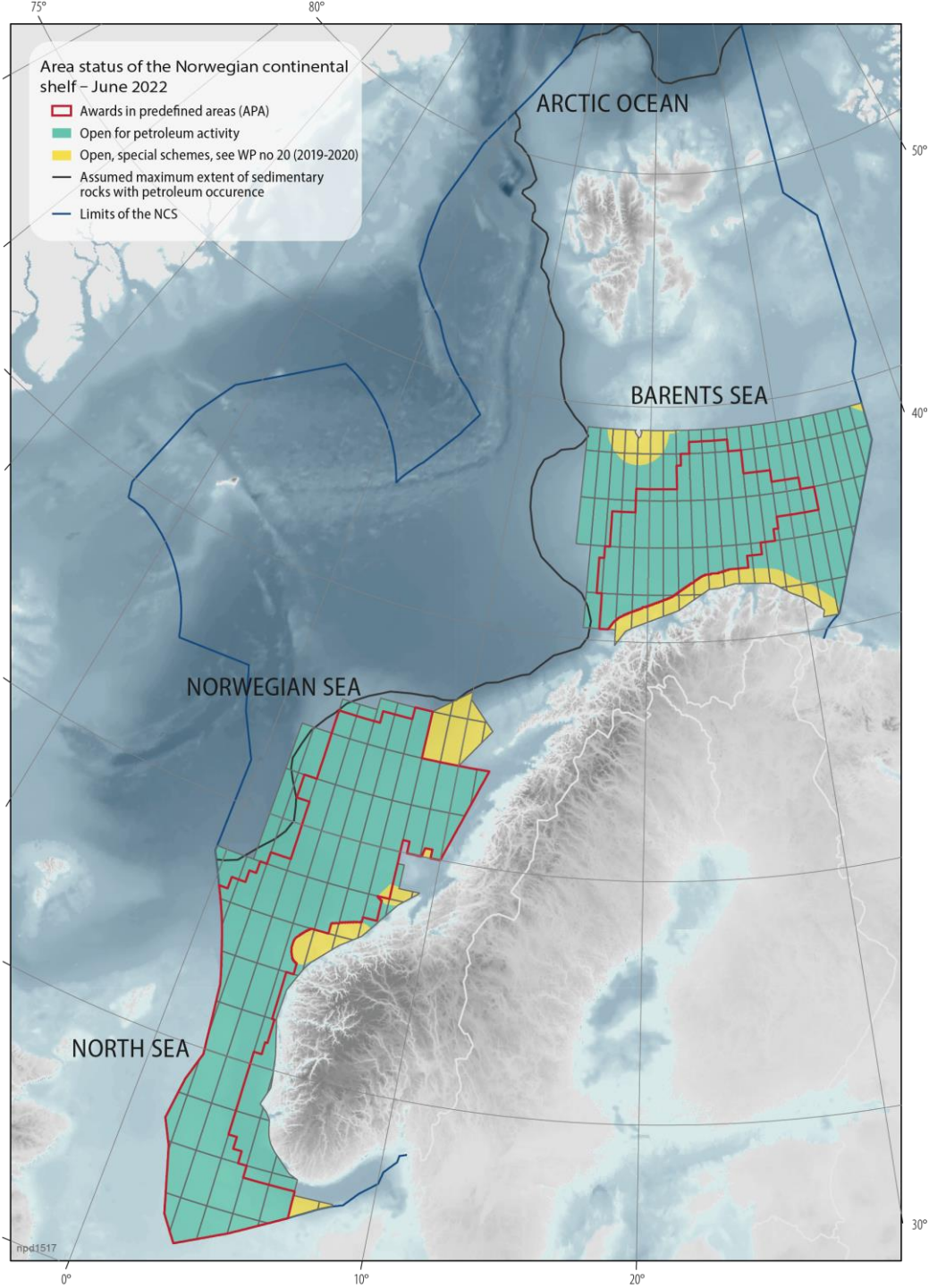


More gas export capacity in the north is needed

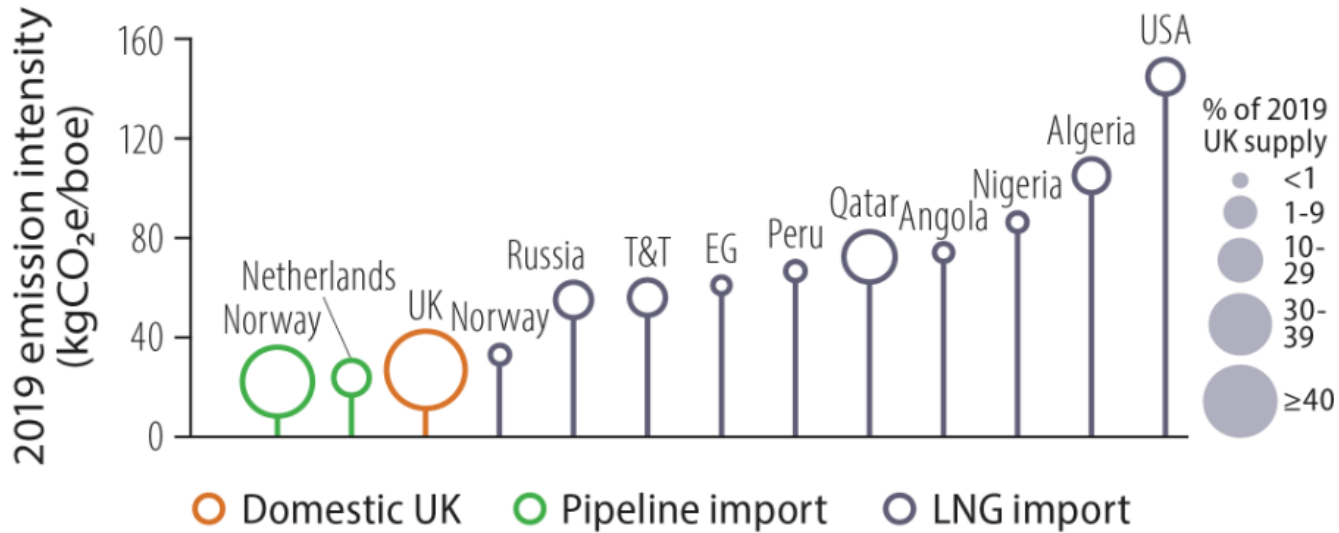


Substantial undiscovered resources in the Barents Sea

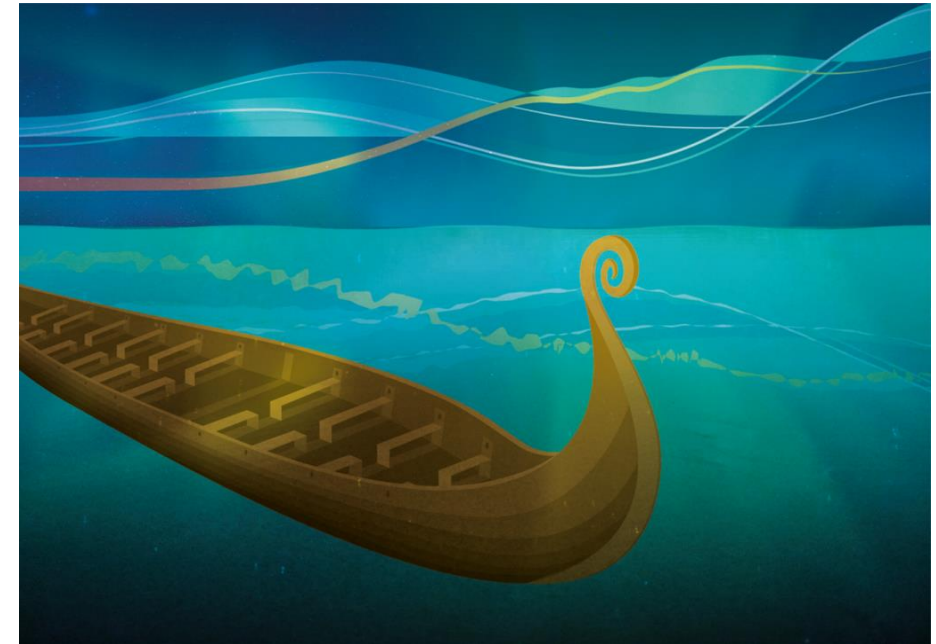
- Fifty-nine per cent of resources in the Barents Sea lie in areas which have not been opened for petroleum activities, mostly in Barents Sea North.
- That area has the highest probability of making large new discoveries on the NCS.



The energy transition – gas can contribute



Emission intensity for natural gas deliveries to the UK. Source: OGA (2020).







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