Shell LNG Outlook 2023

Shell plc

Cautionary note

The companies in which Shell plc directly and indirectly owns investments are separate legal entities. In this LNG Outlook "Shell", "Shell Group" and "Group" are sometimes used for convenience where references are made to Shell plc and its subsidiaries in general. Likewise, the words "we", "us" and "our" are also used to refer to Shell plc and its subsidiaries in general or to those who work for them. These terms are also used where no useful purpose is served by identifying the particular entity or entities. ''Subsidiaries'', "Shell subsidiaries" and "Shell companies" as used in this LNG Outlook refer to entities over which Shell plc either directly or indirectly has control. Entities and unincorporated arrangements over which Shell has joint control are generally referred to as "joint ventures" and "joint operations", respectively. "Joint ventures" and "joint operations" are collectively referred to as "joint arrangements". Entities over which Shell has significant influence but neither control nor joint control are referred to as "associates". The term "Shell interest" is used for convenience to indicate the direct and/or indirect ownership interest held by Shell in an entity or unincorporated joint arrangement, after exclusion of all third-party interest.

Forward-Looking Statements

This LNG Outlook contains forward-looking statements (within the meaning of the U.S. Private Securities Litigation Reform Act of 1995) concerning the financial condition, results of operations and businesses of Shell. All statements other than statements of historical fact are, or may be deemed to be, forward-looking statements. Forward-looking statements are statements of future expectations that are based on management's current expectations and assumptions and involve known and unknown risks and uncertainties that could cause actual results, performance or events to differ materially from those expressed or implied in these statements. Forward-looking statements include, among other things, statements concerning the potential exposure of Shell to market risks and statements expressing management's expectations, beliefs, estimates, forecasts, projections and assumptions. These forward-looking statements are identified by their use of terms and phrases such as "aim", "ambition", ''anticipate'', ''believe'', ''could'', ''estimate'', ''expect'', ''goals'', ''intend'', ''may'', "milestones", ''objectives'', ''outlook'', ''plan'', ''probably'', ''project'', ''risks'', "schedule", ''seek'', ''should'', ''target'', ''will'' and similar terms and phrases. There are a number of factors that could affect the future operations of Shell and could cause those results to differ materially from those expressed in the forward-looking statements included in this LNG Outlook, including (without limitation): (a) price fluctuations in crude oil and natural gas; (b) changes in demand for Shell's products; (c) currency fluctuations; (d) drilling and production results; (e) reserves estimates; (f) loss of market share and industry competition; (g) environmental and physical risks; (h) risks associated with the identification of suitable potential acquisition properties and targets, and successful negotiation and completion of such transactions; (i) the risk of doing business in developing countries and countries subject to international sanctions; (j) legislative, judicial, fiscal and regulatory developments including regulatory measures addressing climate change; (k) economic and financial market conditions in various countries and regions; (l) political risks, including the risks of expropriation and renegotiation of the terms of contracts with governmental entities, delays or advancements in the approval of projects and delays in the reimbursement for shared costs; (m) risks associated with the impact of pandemics, such as the COVID-19 (coronavirus) outbreak; and (n) changes in trading conditions. No assurance is provided that future dividend payments will match or exceed previous dividend payments. All forward-looking statements contained in this LNG Outlook are expressly qualified in their entirety by the cautionary statements contained or referred to in this section. Readers should not place undue reliance on forward-looking statements. Additional risk factors that may affect future results are contained in Shell plc's Form 20-F for the year ended December 31, 2021 (available at www.shell.com/investor and www.sec.gov). These risk factors also expressly qualify all forward-looking statements contained in this LNG Outlook and should be considered by the reader. Each forward-looking statement speaks only as of the date of this LNG Outlook February 16, 2023. Neither Shell plc nor any of its subsidiaries undertake any obligation to publicly update or revise any forward-looking statement as a result of new information, future events or other information. In light of these risks, results could differ materially from those stated, implied or inferred from the forward-looking statements contained in this LNG Outlook.

Shell's net carbon footprint

Also, in this LNG Outlook we may refer to Shell's "Net Carbon Footprint" or "Net Carbon Intensity", which include Shell's carbon emissions from the production of our energy products, our suppliers' carbon emissions in supplying energy for that production and our customers' carbon emissions associated with their use of the energy products we sell. Shell only controls its own emissions. The use of the term Shell's "Net Carbon Footprint" or "Net Carbon Intensity" are for convenience only and not intended to suggest these emissions are those of Shell plc or its subsidiaries.

Shell's net-Zero Emissions Target

Shell's operating plan, outlook and budgets are forecasted for a ten-year period and are updated every year. They reflect the current economic environment and what we can reasonably expect to see over the next ten years. Accordingly, they reflect our Scope 1, Scope 2 and Net Carbon Footprint (NCF) targets over the next ten years. However, Shell's operating plans cannot reflect our 2050 net-zero emissions target and 2035 NCF target, as these targets are currently outside our planning period. In the future, as society moves towards net-zero emissions, we expect Shell's operating plans to reflect this movement. However, if society is not net zero in 2050, as of today, there would be significant risk that Shell may not meet this target.

Forward Looking Non-GAAP measures

This LNG Outlook may contain certain forward-looking non-GAAP measures such as cash capital expenditure and divestments. We are unable to provide a reconciliation of these forward-looking Non-GAAP measures to the most comparable GAAP financial measures because certain information needed to reconcile those Non-GAAP measures to the most comparable GAAP financial measures is dependent on future events some of which are outside the control of Shell, such as oil and gas prices, interest rates and exchange rates. Moreover, estimating such GAAP measures with the required precision necessary to provide a meaningful reconciliation is extremely difficult and could not be accomplished without unreasonable effort. Non-GAAP measures in respect of future periods which cannot be reconciled to the most comparable GAAP financial measure are calculated in a manner which is consistent with the accounting policies applied in Shell plc's consolidated financial statements.

The contents of websites referred to in this LNG Outlook do not form part of this LNG Outlook.

We may have used certain terms, such as resources, in this LNG Outlook that the United States Securities and Exchange Commission (SEC) strictly prohibits us from including in our filings with the SEC. Investors are urged to consider closely the disclosure in our Form 20-F, File No 1-32575, available on the SEC website www.sec.gov.

Europe benefits from LNG industry flexibility in 2022

1

Russia's invasion of Ukraine didn't just affect Europe. It impacted energy markets across the world, contributing to severe energy price volatility and deep economic and political uncertainty– impacts which may alter energy market dynamics for the foreseeable future.

To replace Russian pipeline gas imports, Europe turned to liquefied natural gas (LNG), driving prices to record levels to attract cargoes. A contraction in Chinese gas demand, a drop in South Asian imports and new US LNG supply supported Europe's need for LNG. As a result, LNG trade flows reversed in 2022 with the largest import growth seen in Europe and the biggest drop in Asia and South America.

Market volatility triggers energy security interventions – with lasting economic and emissions impacts

2

To ensure energy security, governments across the world intervened with policies to protect consumers from high energy prices. European policy makers prioritised LNG imports, resulting in quick build out of import infrastructure. Other levers that helped support Europe's energy balance were fuel switching and gas demand destruction, choices which come with tough mid and long-term consequences, particularly on emissions.

Gas will be needed in the long term to balance energy systems as the world transitions to a lower-emission future. And for that, gas needs to be decarbonised, especially for use in hard-to-electrify sectors like industry, transport and heating.

Global gas and LNG markets expected to evolve as market dynamics point to a structural change

3

2022 can go down as the year that reshaped global energy markets. The events of the year triggered some structural shifts in market dynamics that may impact the long-term trajectory of the LNG industry. These include emergence of sustained demand for LNG in Europe, displacement of Russia's lower cost gas reserve base, increased exposure to the US domestic gas market with new LNG supply concentrated among fewer exporters and a shifting policy landscape.

In the near-term, the global LNG market is expected to remain tight and exposed to supply and demand shocks, with limited new supply coming online. More investment in supply will be needed to meet future LNG demand.

Europe benefits from LNG industry flexibility in 2022

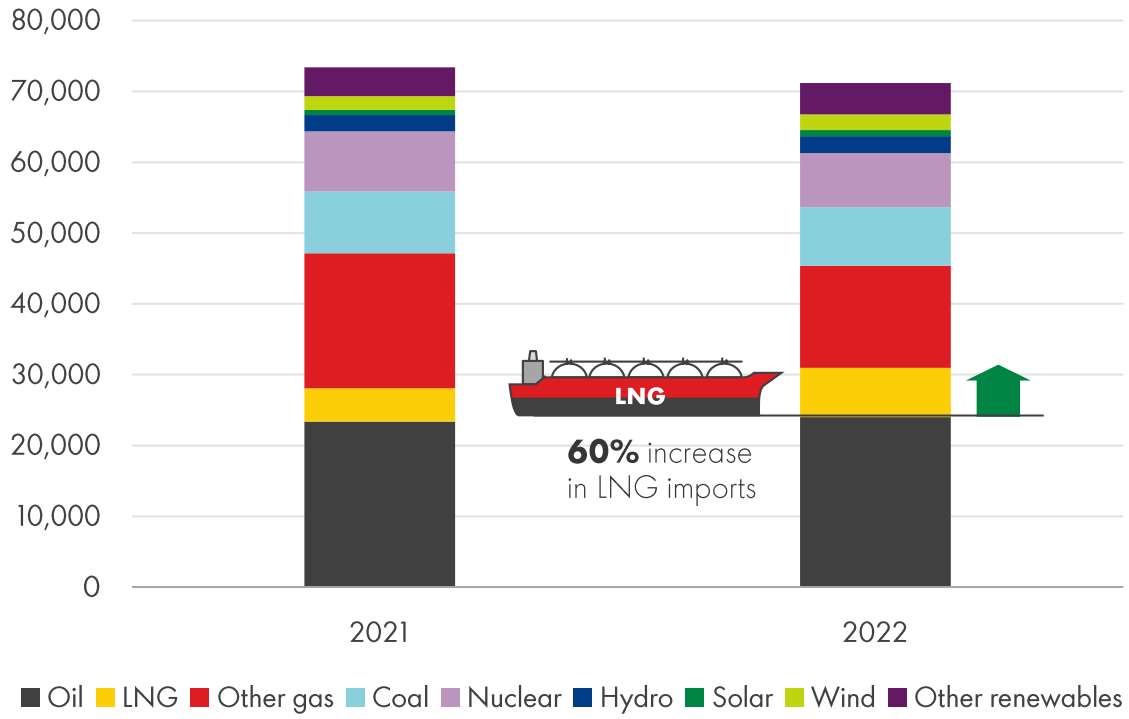
European LNG imports up by 60% to replace Russian gas

Lower Chinese imports helped balance the global LNG market

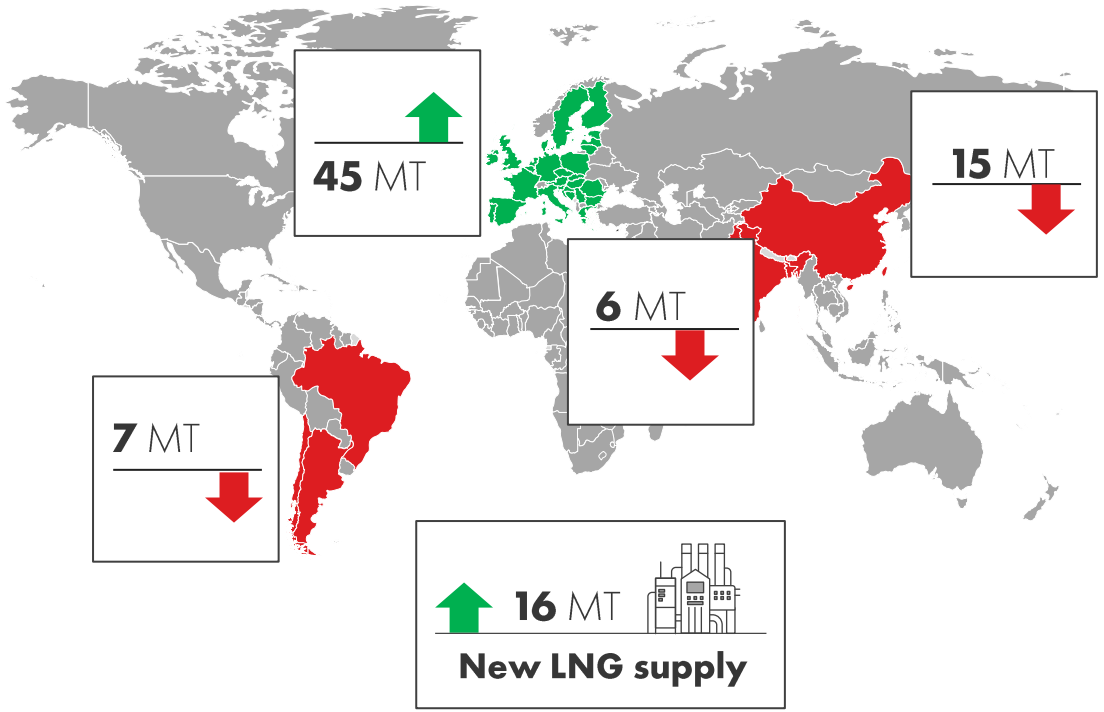
Shell LNG Outlook 2023

Total European primary energy demand

PJ



Changes in global LNG trade 2022*



Source: Shell interpretation of Kpler, Wood Mackenzie 2022 data

Europe – EU 35 (includes Turkey & UK) * YoY year on year

Global gas and LNG prices continued to be volatile

Hitting record levels in 2022

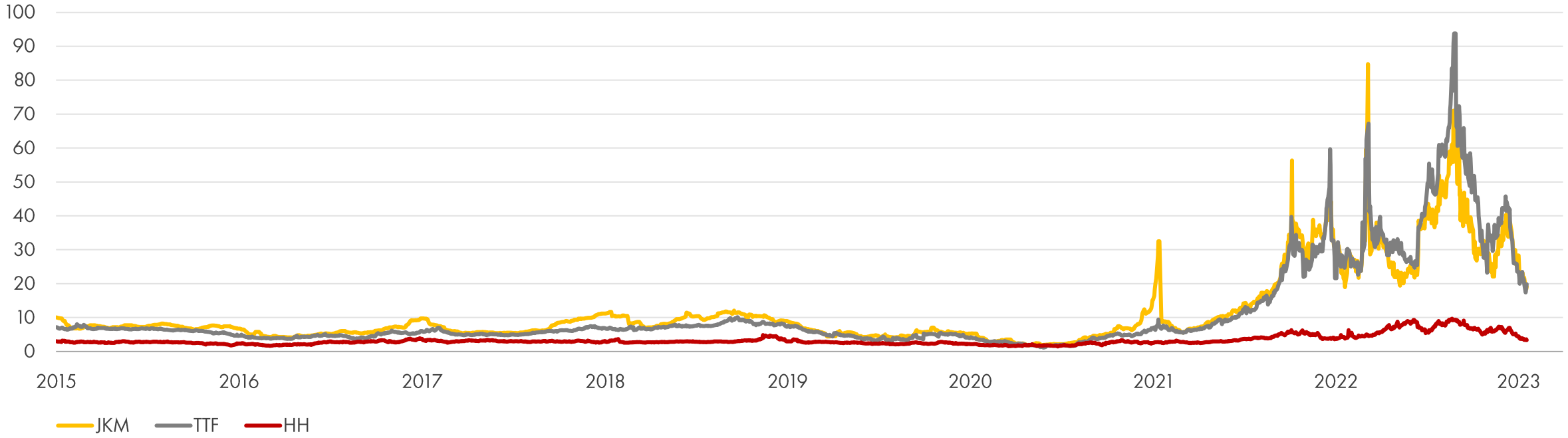
Global gas prices

$/MMBtu

JKM, the premium gas marker, prices seasonally increase through winter but do not exceed $12/MMBtu. TTF provides a floor.

Gas demand declines sharply during pandemic resulting in global prices converging with both TTF and JKM dipping below HH.

Global gas prices rise to record levels through H2 2021; extreme volatility remains through 2022 as Russia curtails pipeline gas supplies.



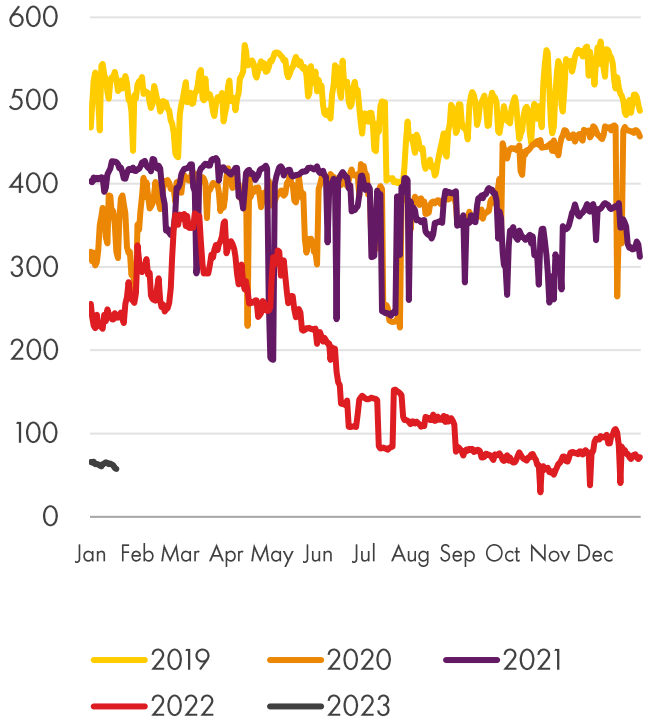
Source: Shell interpretation of ICE, CME, S&P Global Commodity Insights 2022 & 2023 data

TTF: Transfer Title Facility HH: Henry Hub JKM: Japan Korea Marker NBP: National Balancing Point

Drop in Russian gas supply was offset by LNG imports and demand destruction in Europe

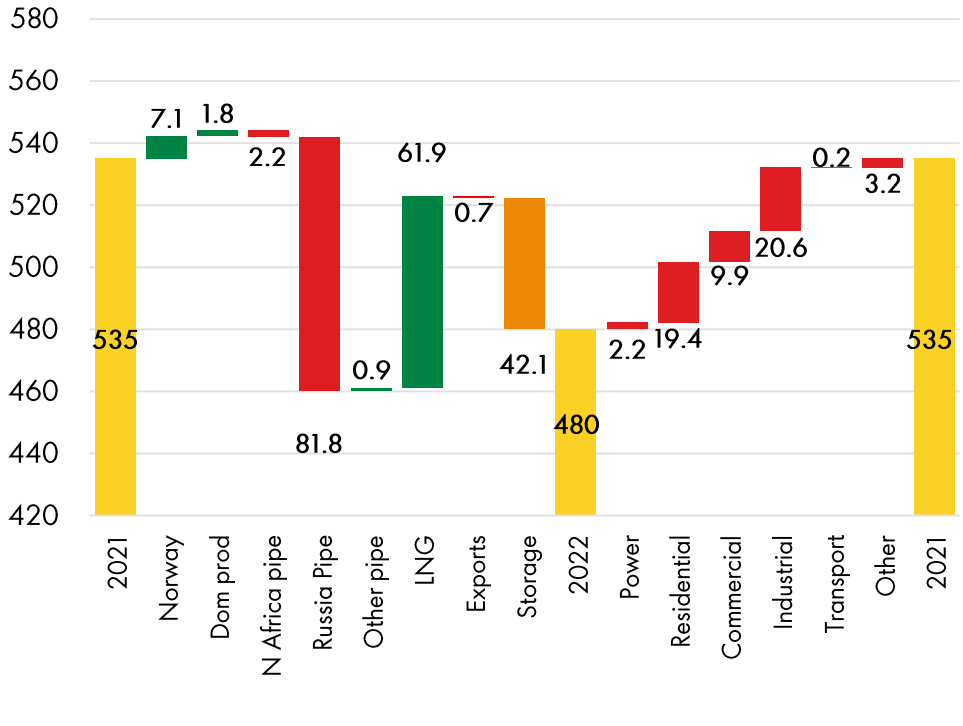
Russian pipeline imports

MMCM/d



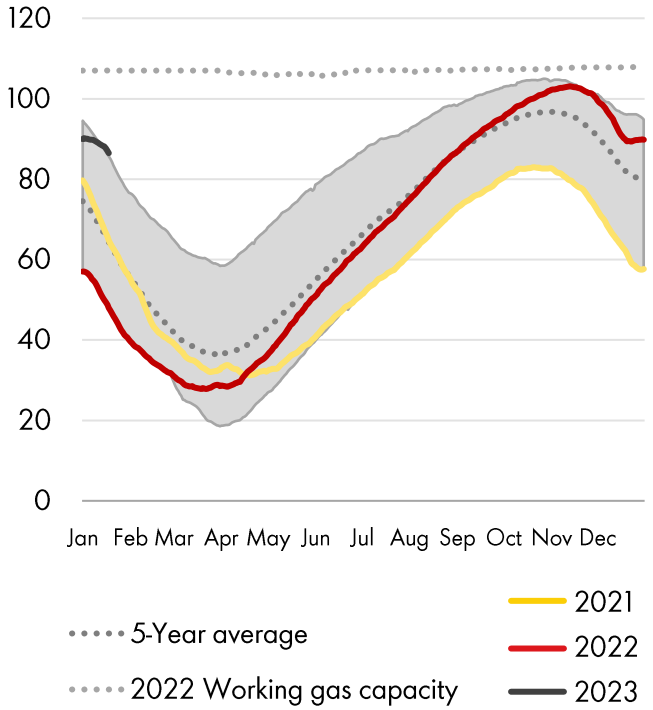
Change in European gas supply & demand

BCM



European & UK gas inventories

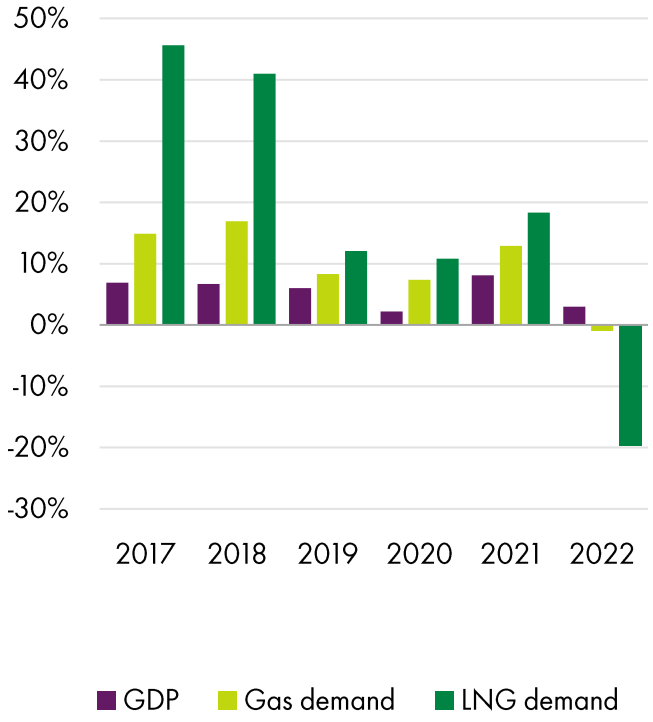
BCM



Source: Shell interpretation of AGSI, TSO & Wood Mackenzie 2022 & 2023 data

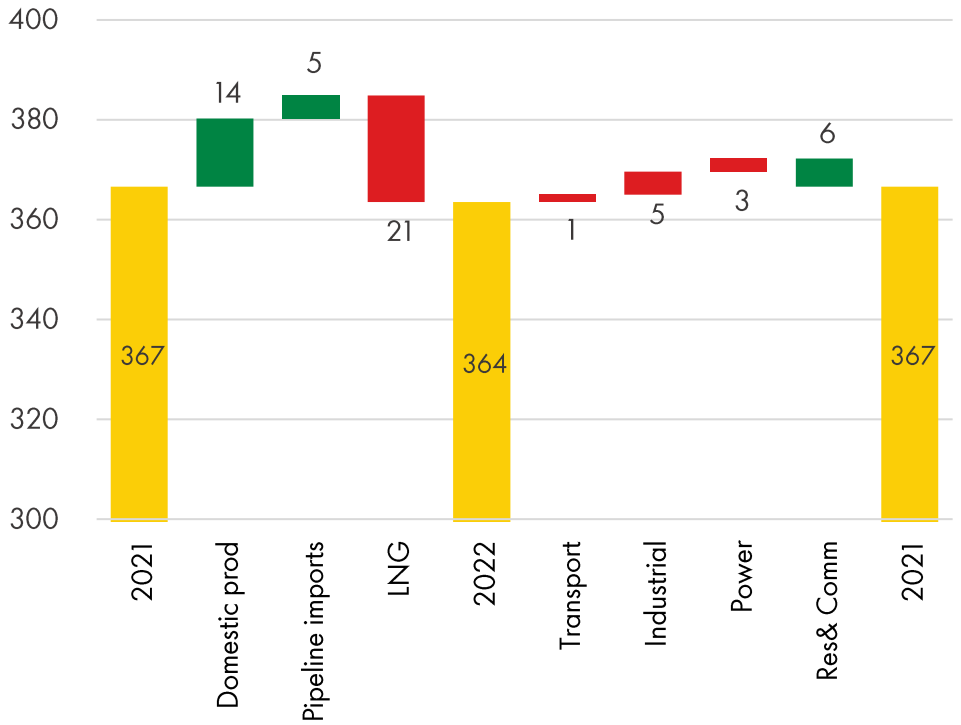
Continued lockdowns and lower economic growth led to a contraction in Chinese gas demand

Macroenvironment: GDP vs gas demand



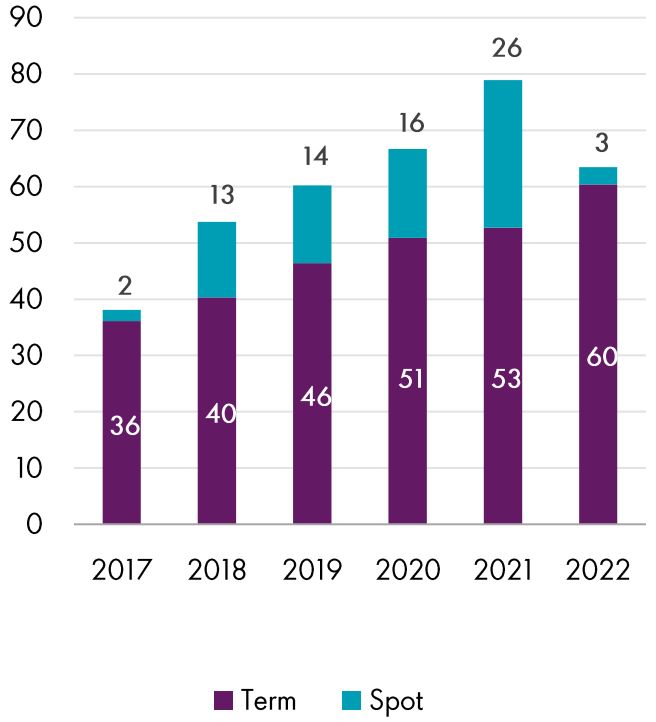
Change in China gas supply & demand

BCM



China LNG imports: term vs spot

MT



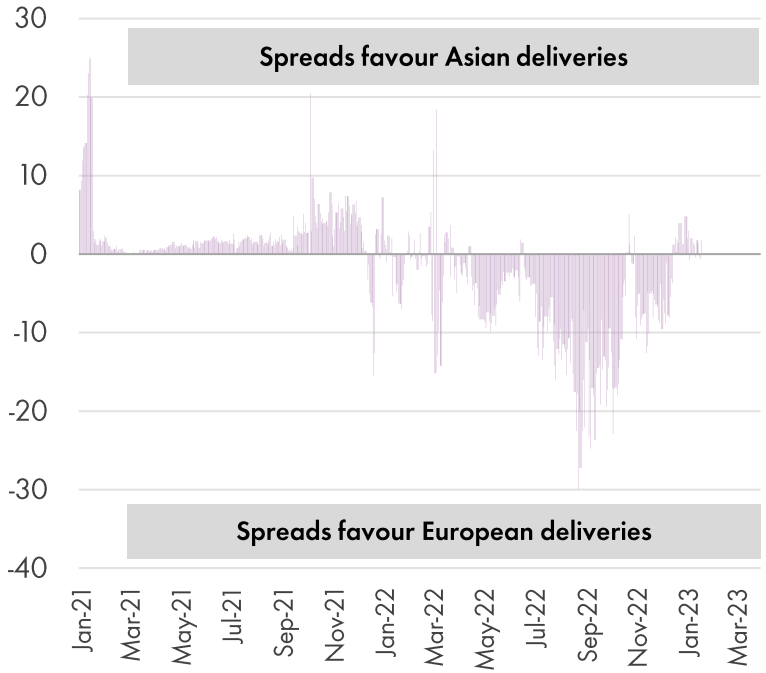
Source: Shell interpretation of China Customs, National Bureau of Statistics of China , Poten & Partners, S&P Global Commodity Insights and Wood Mackenzie 2022 data

US LNG exports flowed to Europe

As TTF priced at a premium

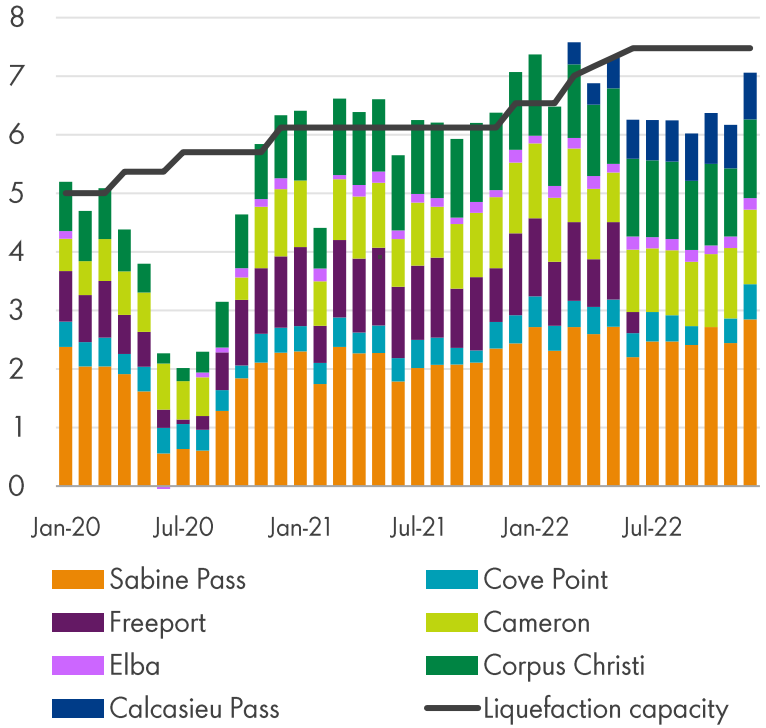
JKM/TTF spreads

$/MMBtu



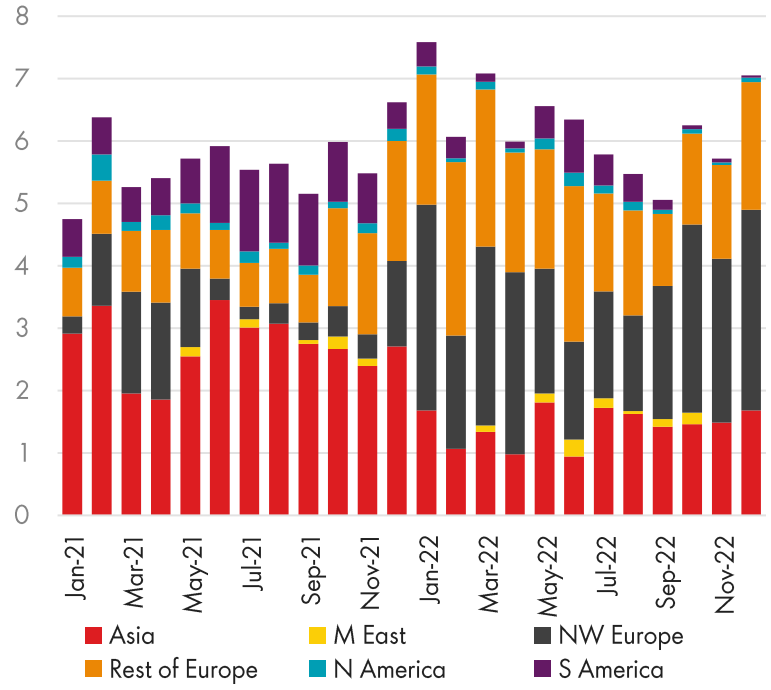
US LNG exports

MT



LNG imports from US

MT (DES)



Source: Shell interpretation of ICE, Kpler, S&P Global Commodity Insights and Wood Mackenzie 2022 & 2023 data

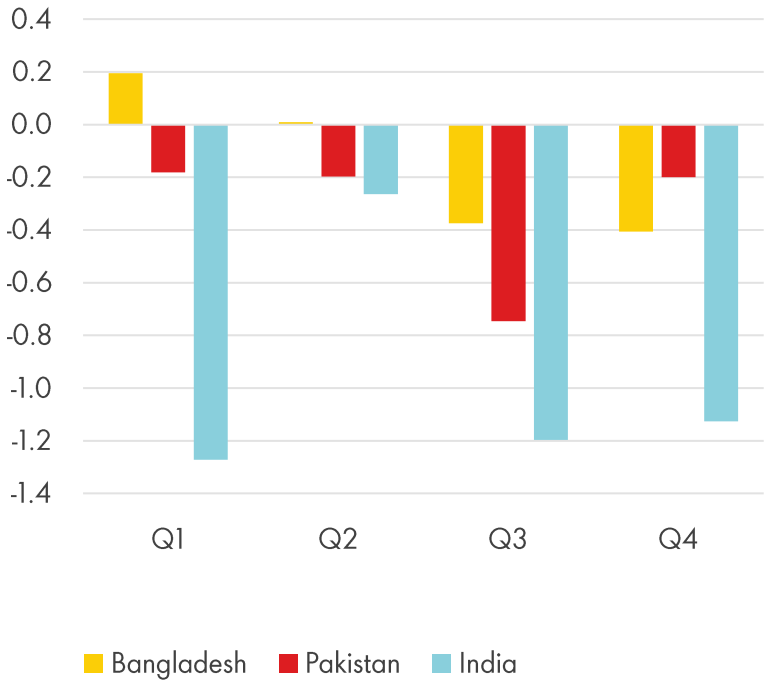
DES: Delivered ex ship

Europe's demand for LNG impacted other markets

Fuel switching in South Asia as LNG price went up

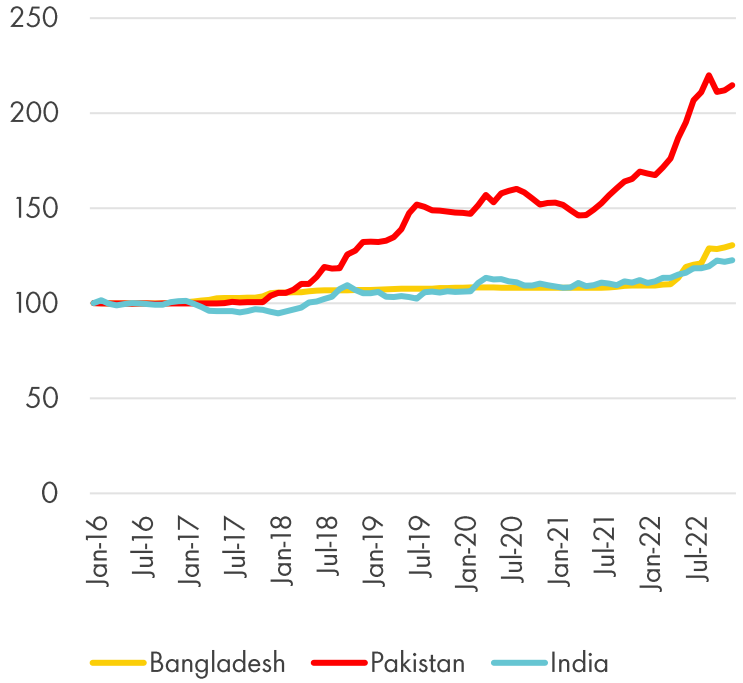
LNG imports 2022 (YoY)

MT



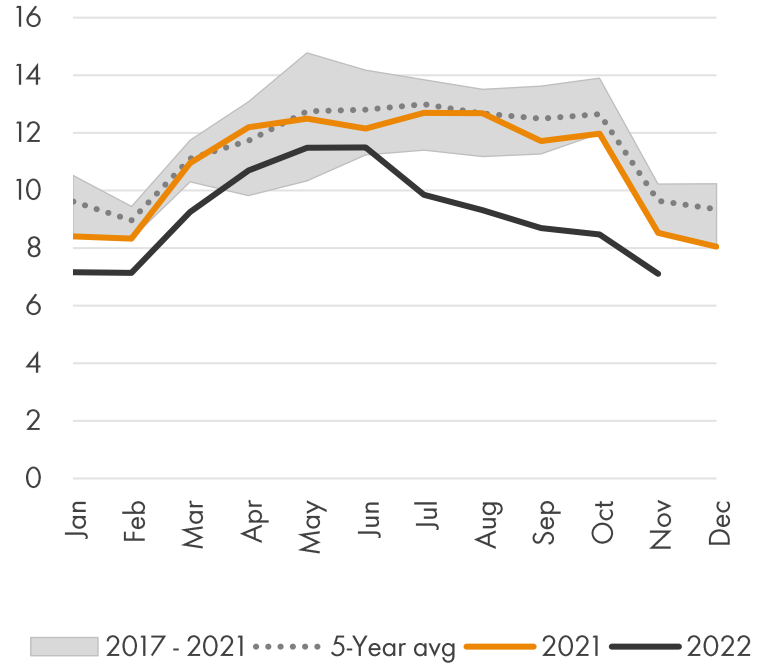
Monthly exchange rate indices

Exchange rate (per US Dollar), Jan 2016 = 100



Gas fired generation Bangladesh, India & Pakistan

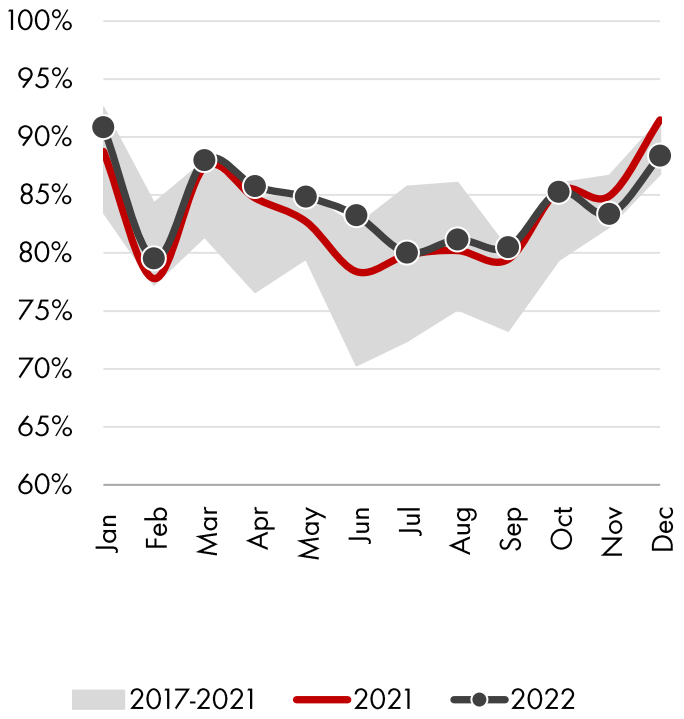
TWh



Source: Shell interpretation of Power Grid Company of Bangladesh (PGCR), Pakistan National Electric Regulatory Authority (NEPRA), Thomson Reuters, S&P Global Commodity Insights and Wood Mackenzie 2022 data

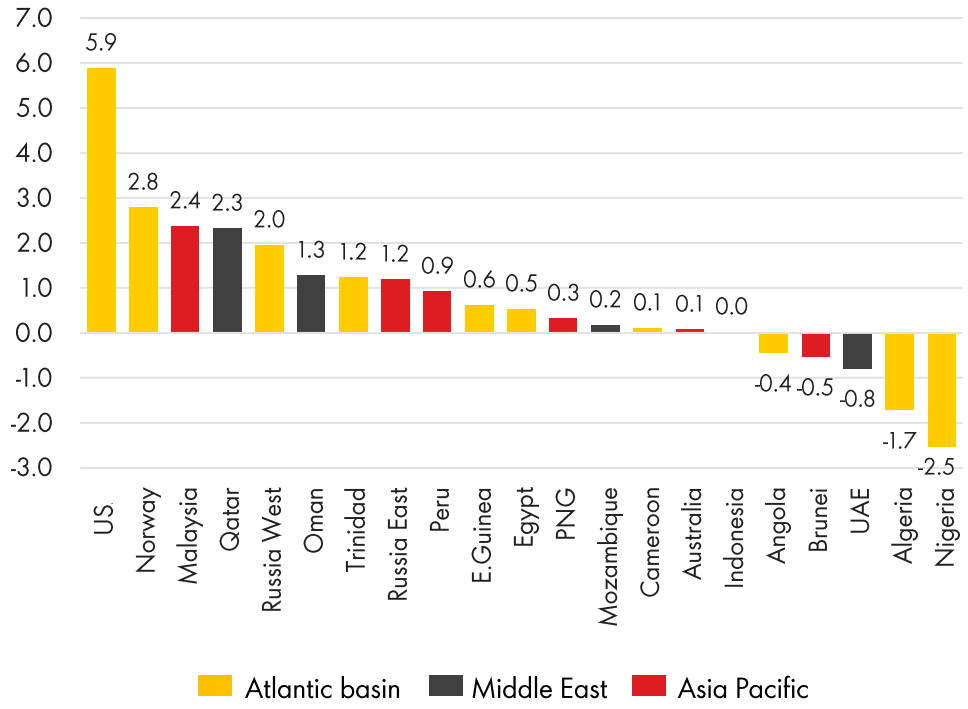
New US liquefaction helped balance global LNG supply

Global liquefaction utilisation



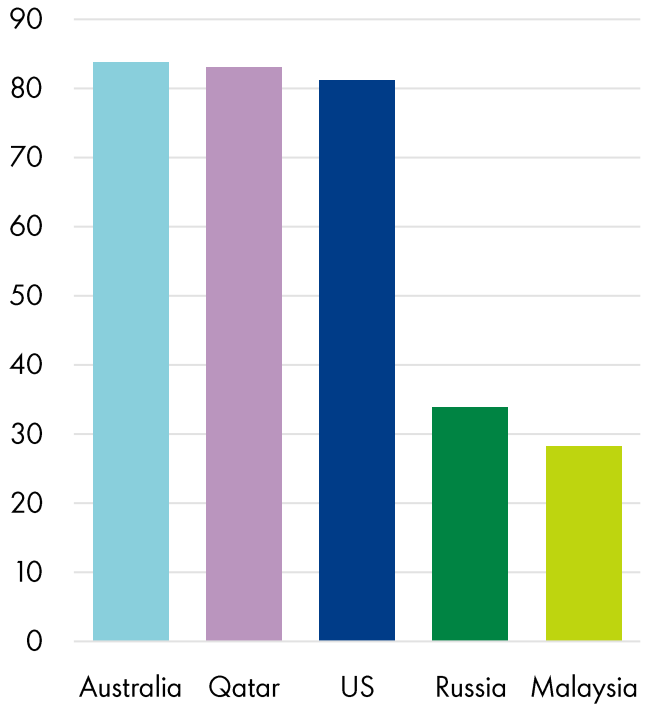
YoY change in net LNG exports

MT



Top exporting countries

MT

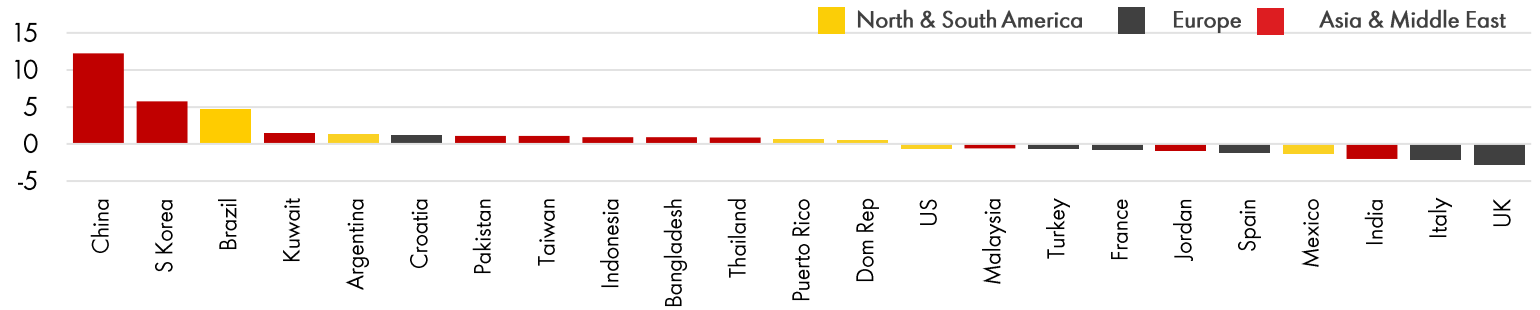


Source: Shell interpretation of S&P Global Commodity Insights and Kpler 2022 data

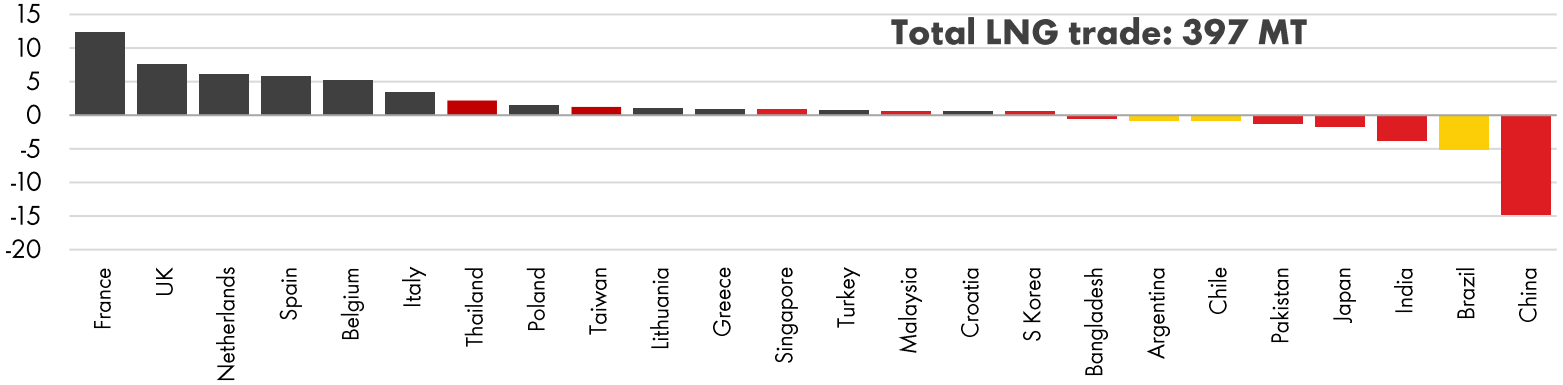
Global trade flows reversed in 2022

With structural demand seen emerging in Europe

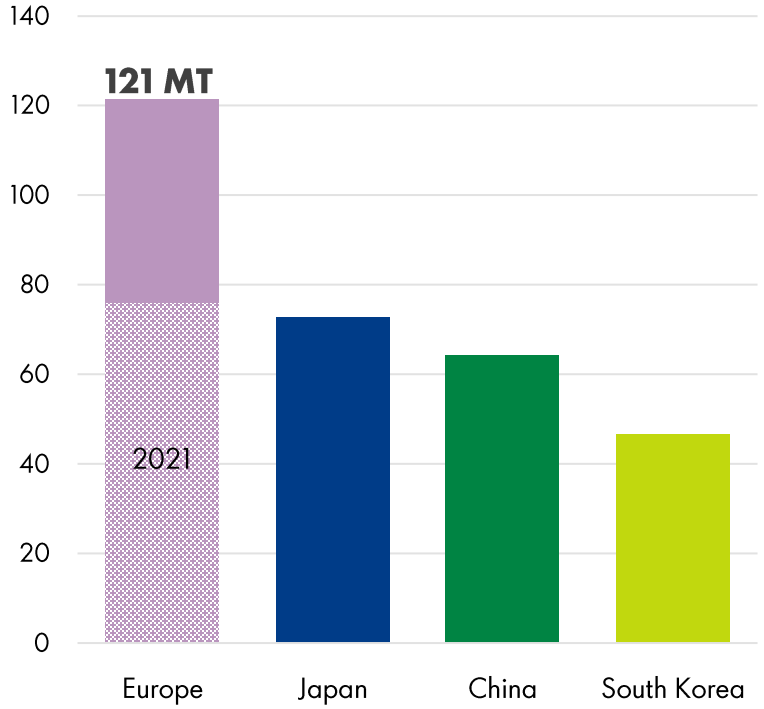
Y-o-Y change in global LNG imports in 2021 (MT)



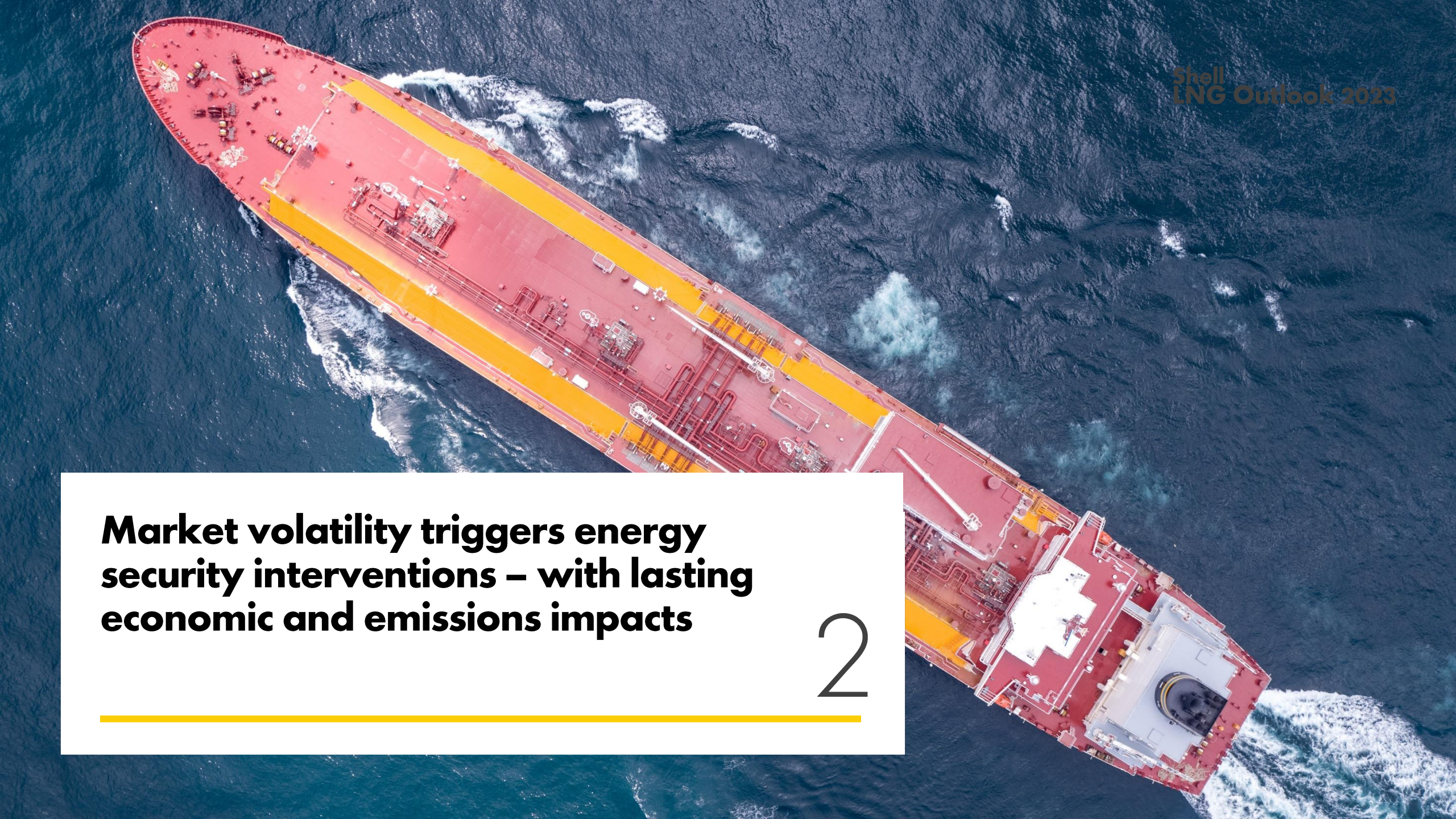
Y-o-Y change in global LNG imports in 2022 (MT)



Top LNG importers in 2022 (MT)



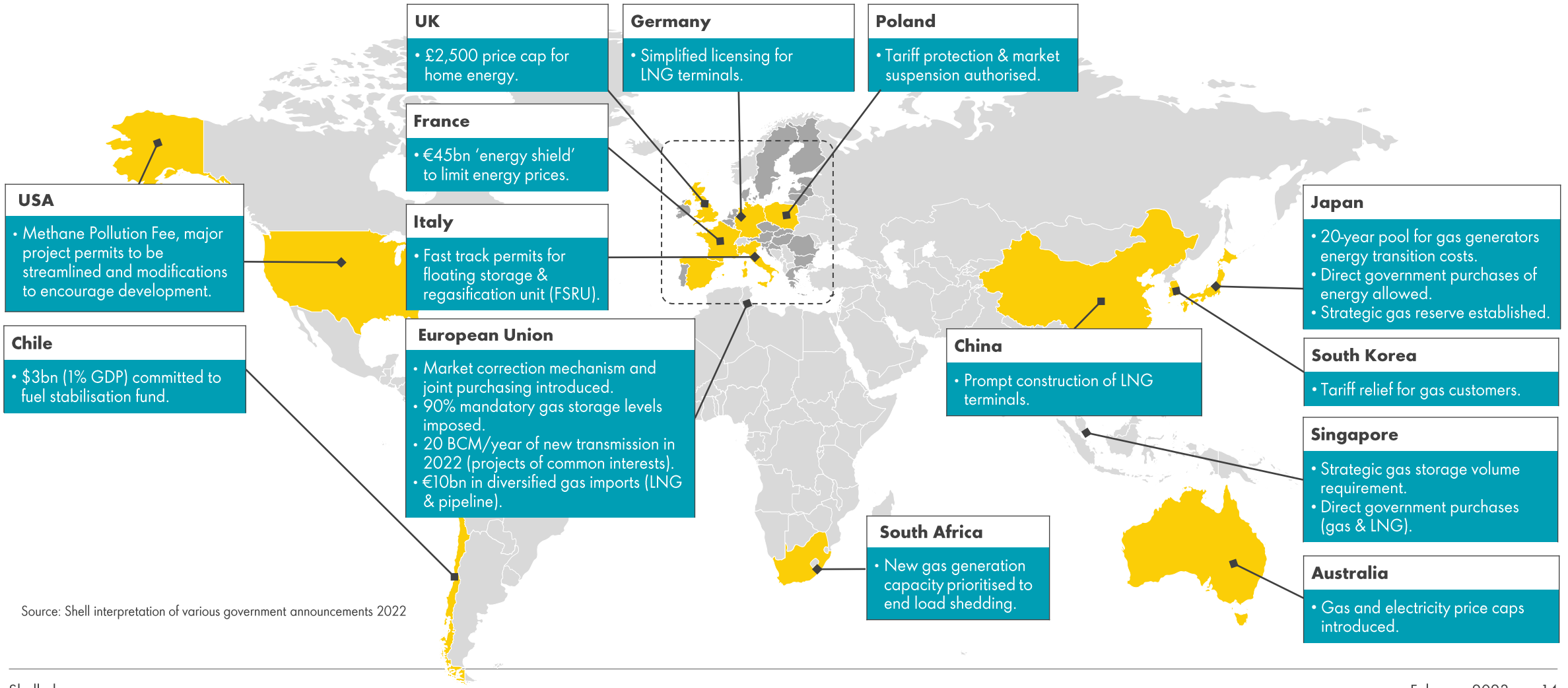
Source: Shell interpretation of Kpler and Wood Mackenzie 2022 data



Market volatility triggers energy security interventions – with lasting economic and emissions impacts

2

Immediate policy actions in 2022 to manage energy security and high energy prices



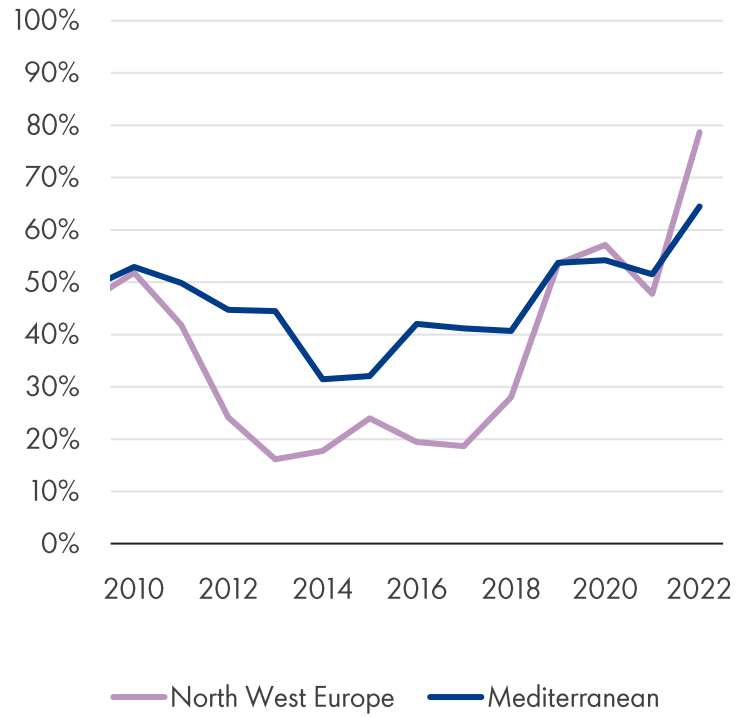
Source: Shell interpretation of various government announcements 2022

The power of effective policy making

Two terminals set up in six months for importing LNG to replace Russian gas

LNG capacity utilisation in Europe

Terminal use



New European regasification capacity

MT

Source: Shell interpretation of Wood Mackenzie 2022 data

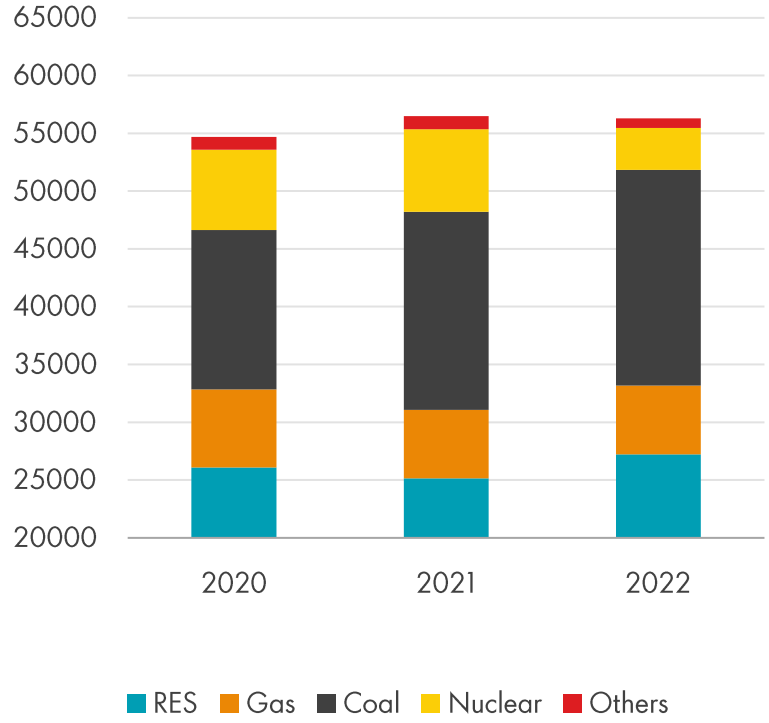
Picture courtesy EemsEnergy Terminal

Germany fires up coal plants to reduce the energy gap

At a cost to near-term air quality and impact on CO_2 footprint

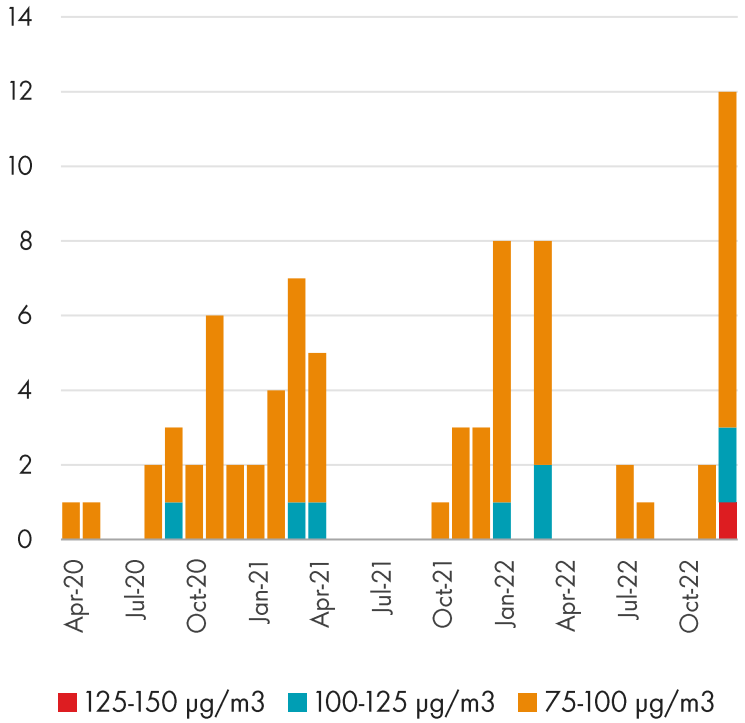
Power generation Germany

MWh/day



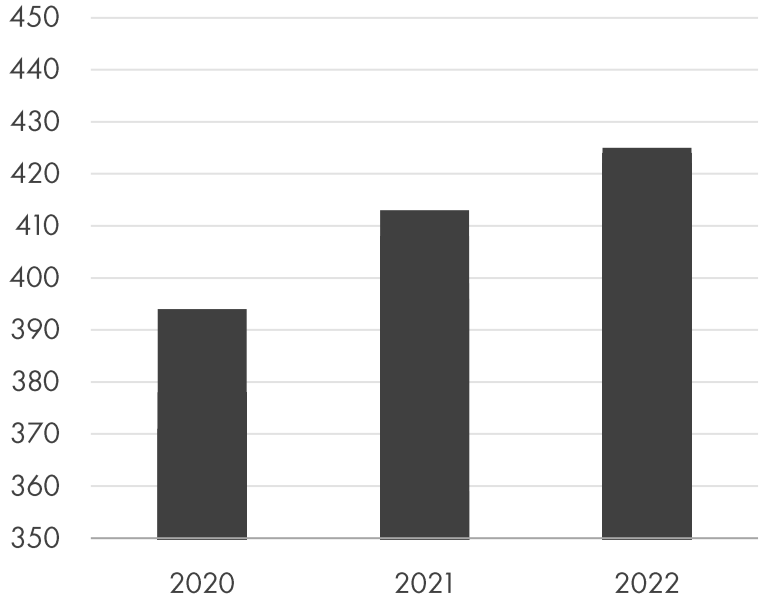
Air quality in Rhineland*

Poor air quality days $PM_{2.5}$



German electricity CO_2 emissions

Average CO_2eq/KWh



Source: Shell interpretation of ENTSO-E, AQICN, Centre for Research on Energy and Clean Air, Nowtricity 2022 & 2023 data

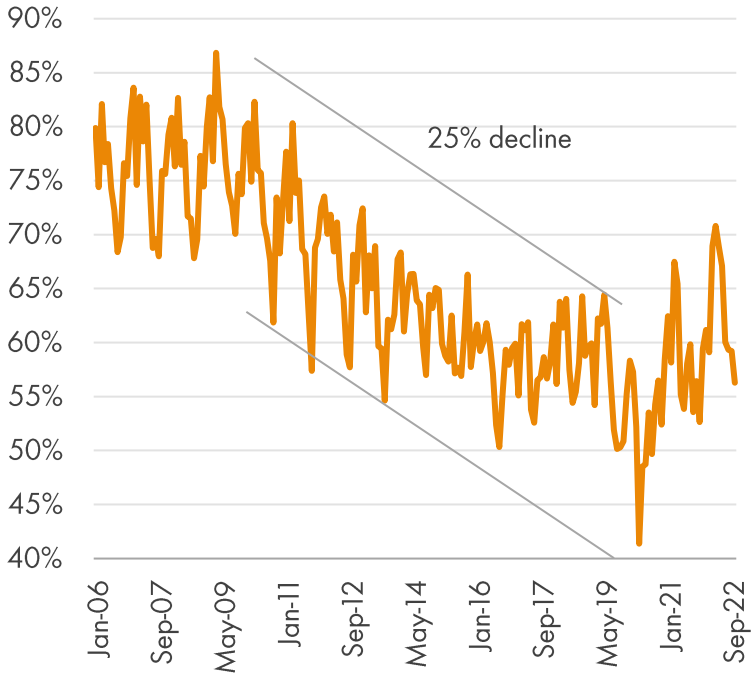
*Duisburg Bruckhausen RES: Renewables Safe WHO $PM_{2.5}$ = 15 µg/m^3

Coal use rebounds in major Asian economies

With lasting impacts on global emissions

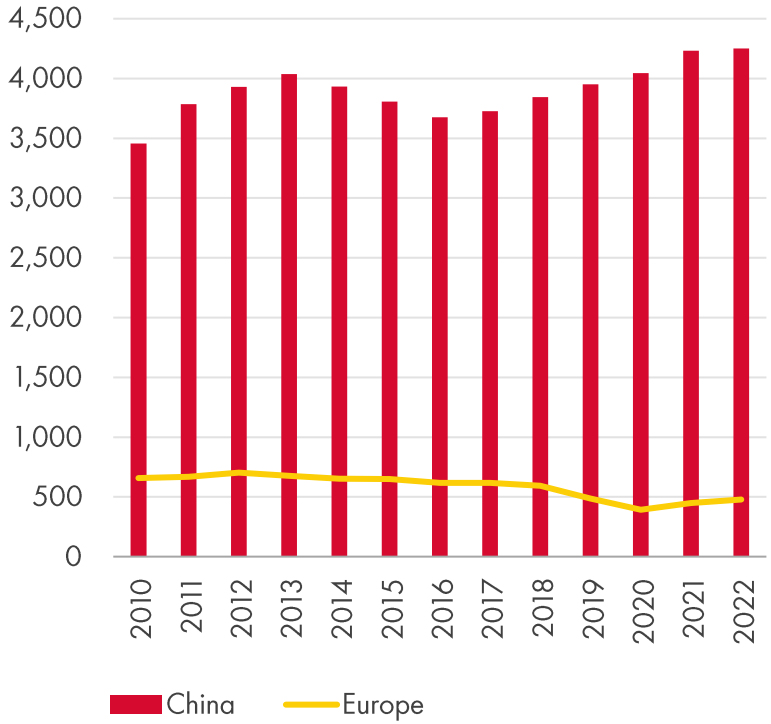
Coal utilisation in India

Monthly coal fired generation load factor

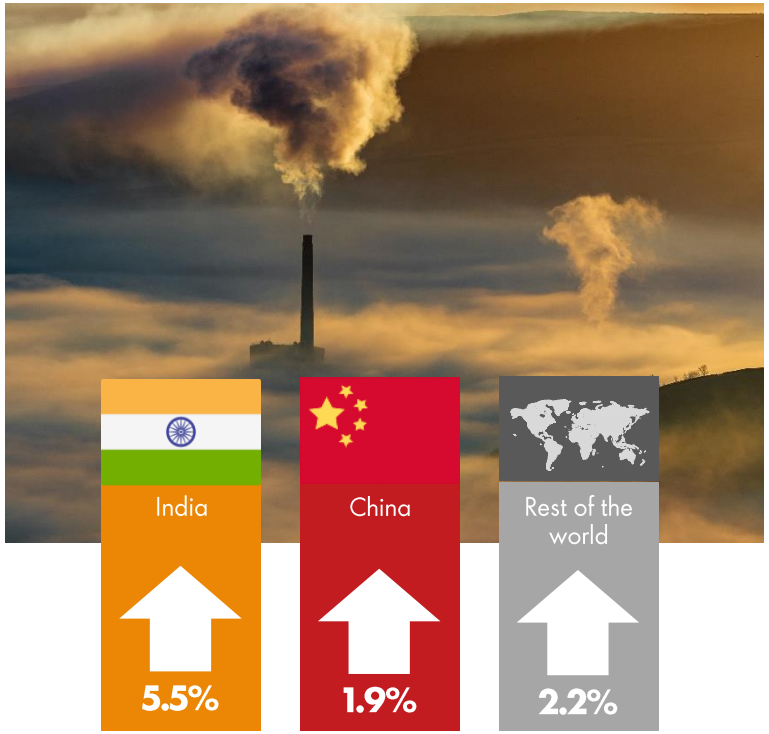


China coal use

Annualised coal use (MT)



Change in GHG emissions 2022



Source: Shell interpretation of S&P Global Commodity Insights , IEA, National Bureau of Statistics of China and Wood Mackenzie 2023 data

Rest of the world excluding India and China

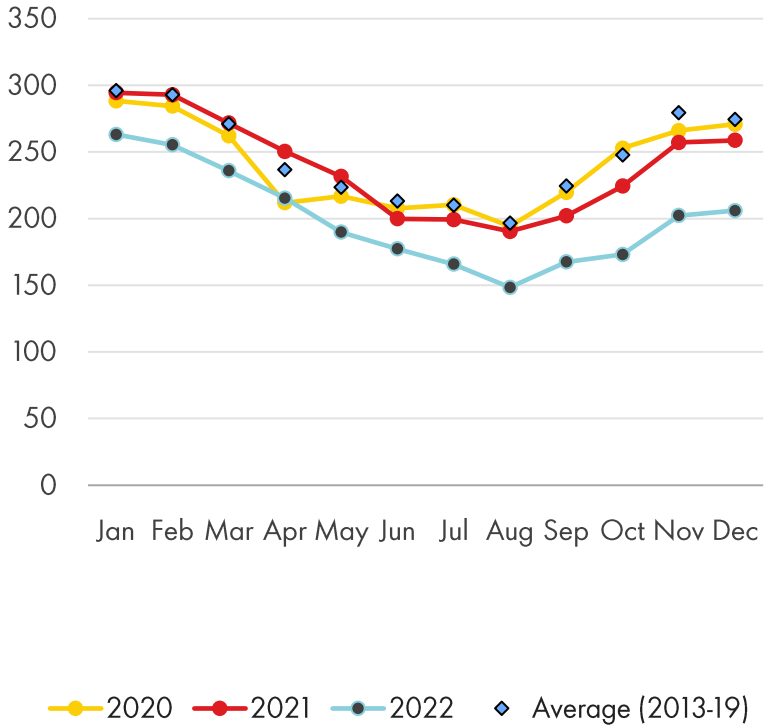
Gas demand destruction hits European industrial sector

Limited investment in diversifying energy supply over the years takes a toll

Shell LNG Outlook 2023

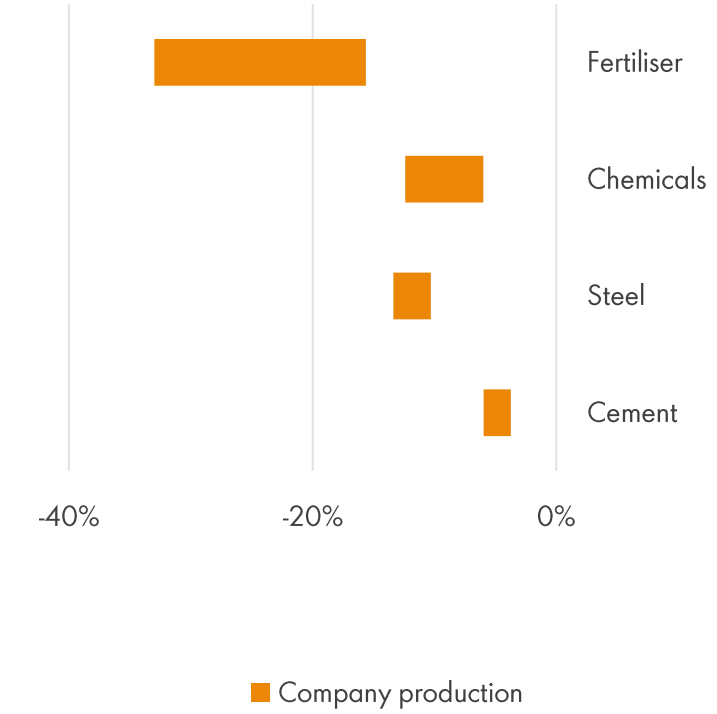
European industrial gas demand

mcm/d



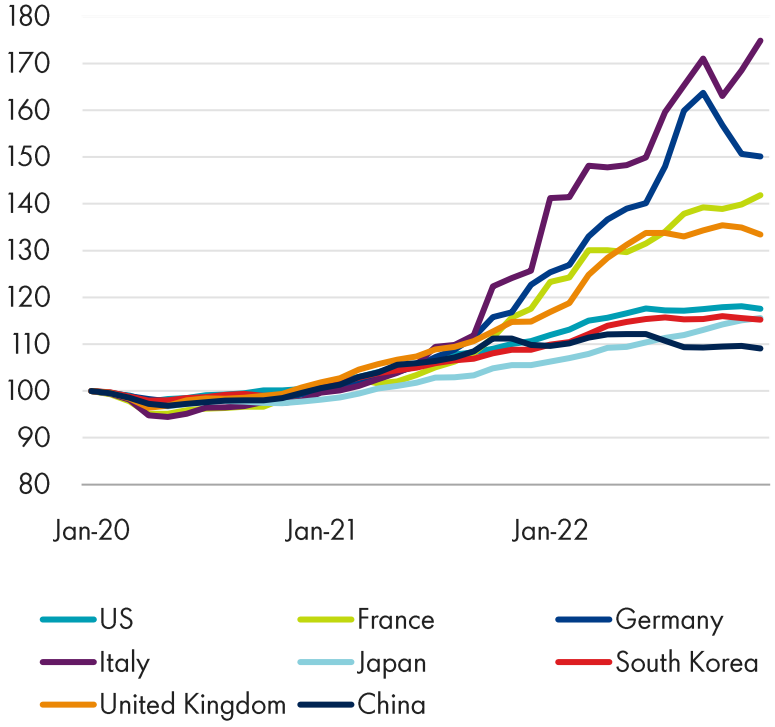
Decrease in company production*

% change 3Q 22 3Q 21



"Factory gate" price index

Jan 2020 = 100



Source: Shell's interpretation of transmission system operator data (Belgium, Germany, Netherlands, France, UK and Italy), National statistics – UK Office of National Statistics, Eurostat, Bank of Japan, Bank of Korea, China NBS and U.S. Bureau of Labor Statistics 2022 & 2023 data

*Quarterly production change taken from select large company reports (European producers)

Continued uptake of gas in transport

With increasing clarity on zero-emission pathways for gas-based fuels

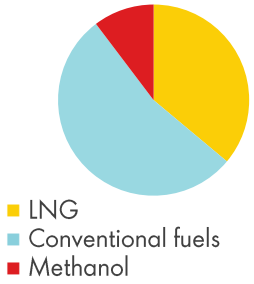
355

↑41% Operating LNG vessels

521

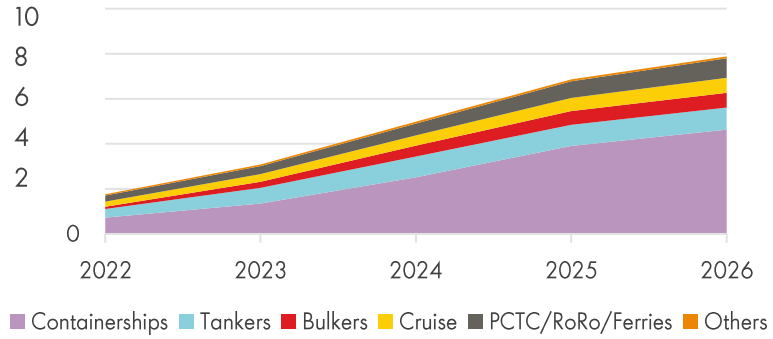
↑30% LNG vessels on order

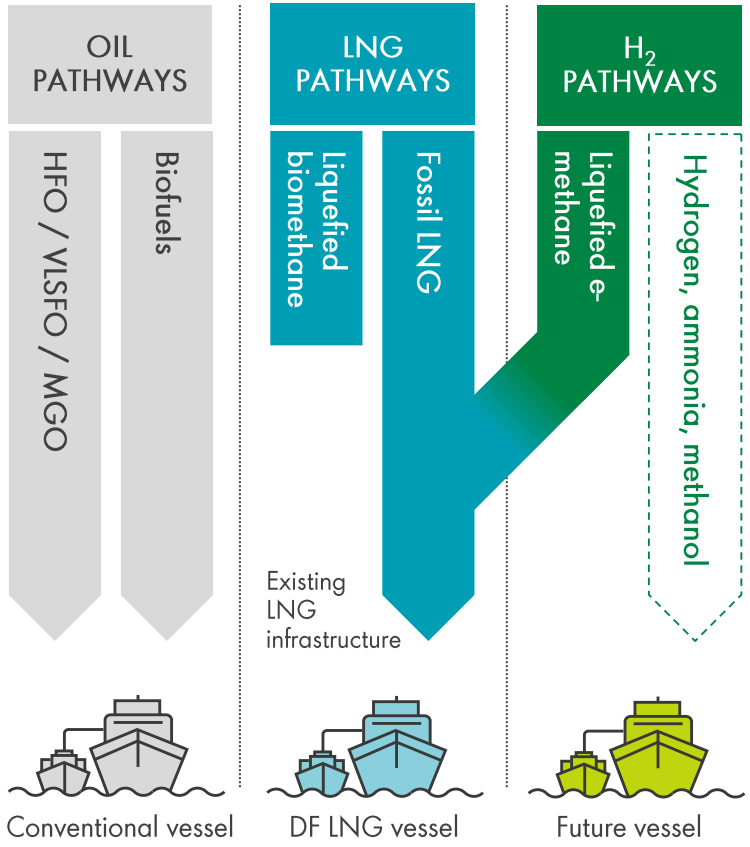
LNG order book



LNG demand in the marine sector

MTPA





Europe heavy-duty road transport

635

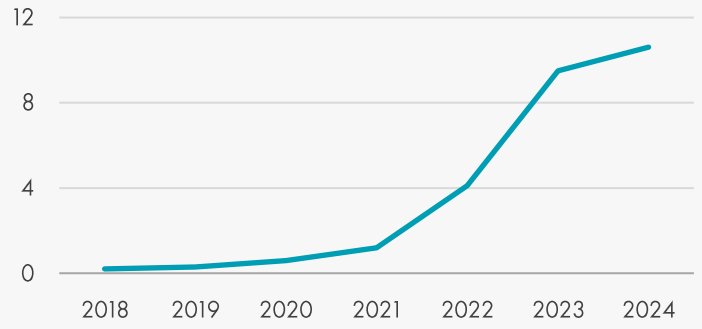
LNG fuelling stations (some with bioLNG)

39,600

LNG & bioLNG fuelled vehicles

BioLNG production capacity

TWh/year



Source: Shell interpretation of Clarkson WFR, McKinsey & Company and EBA Statistical Report 2022

PCTC: Pure car & truck carriers RoRo: Roll-on/roll-off DF: Dual-fueled HFO: Heavy fuel oil VLSFO: Very low sulphur fuel oil MGO: Marine gasoil

For future energy security, gas needs to be decarbonised

Not all energy demand can be electrified

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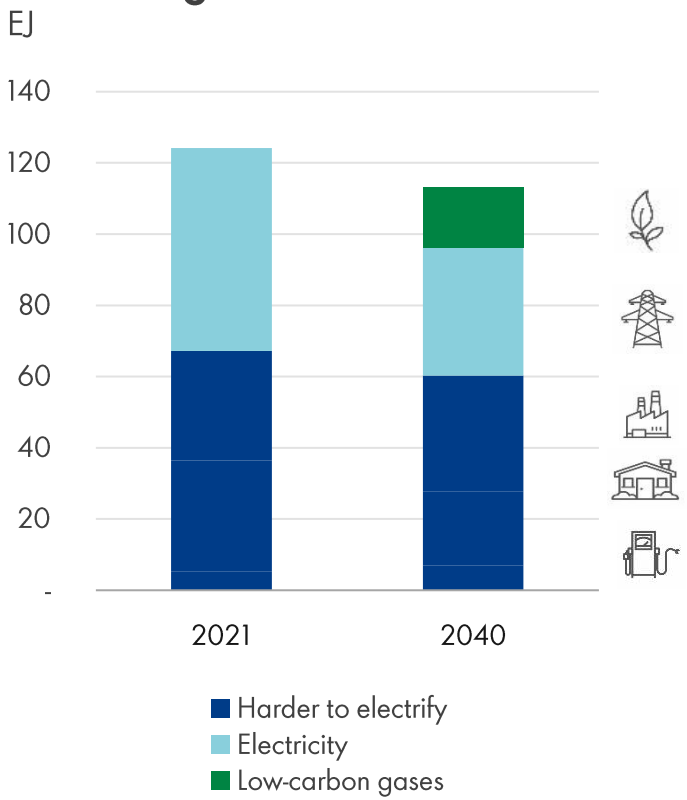
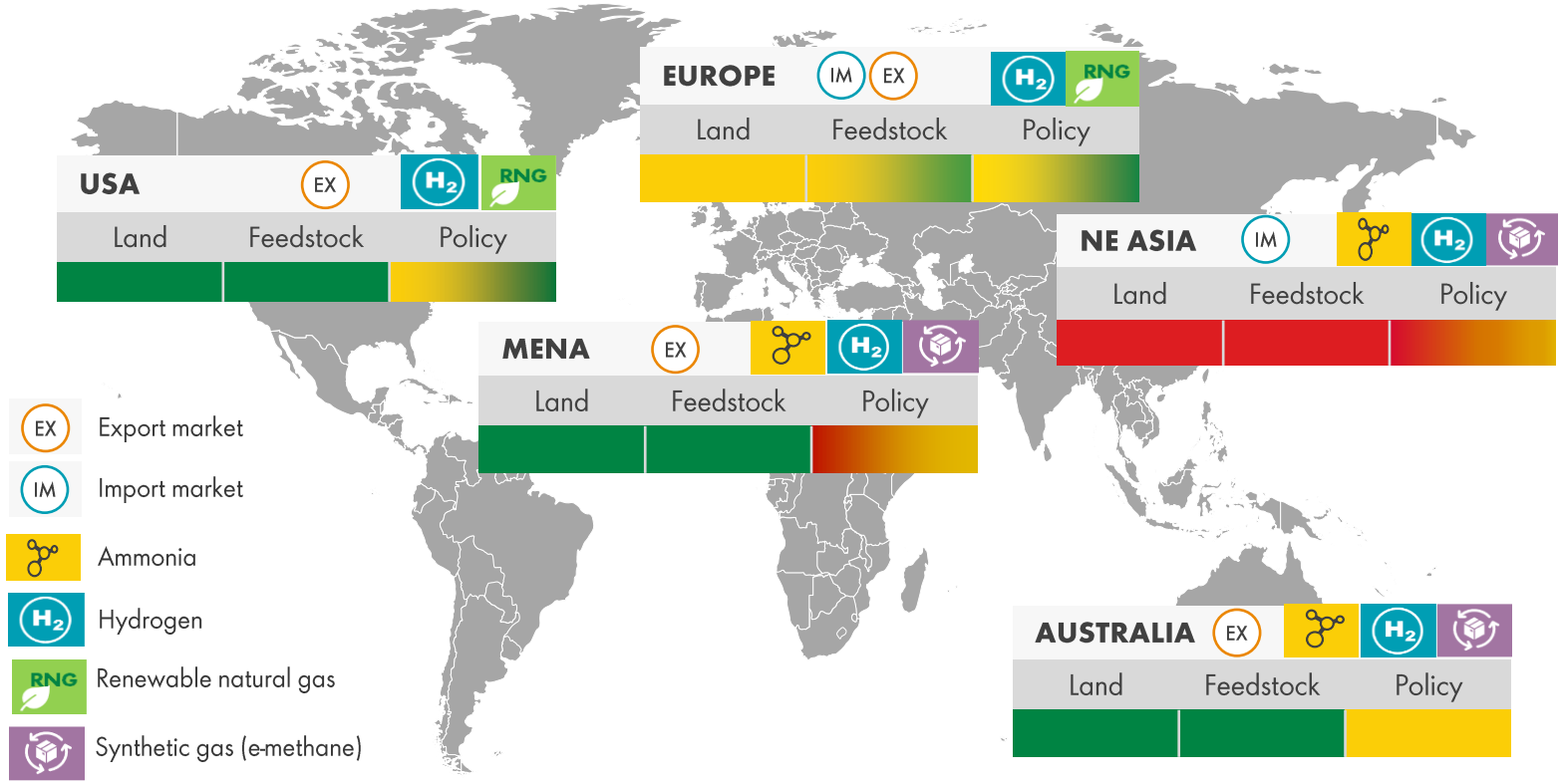
Natural gas end use



Developing potential of decarbonised gas trade



Shell interpretation of IEA Announced Pledges Scenario data 2022
MENA – Middle East and North Africa
Land, feedstock and policy support for developing domestic renewables

Global gas and LNG markets expected to evolve as market dynamics point to a structural change

3

Europe and China to compete for limited LNG volumes

Continued volatility expected in the near term

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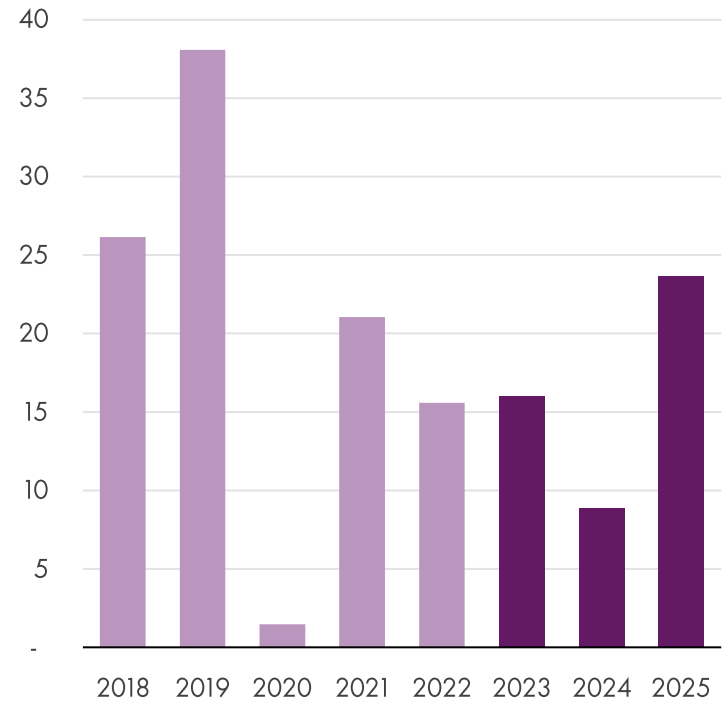
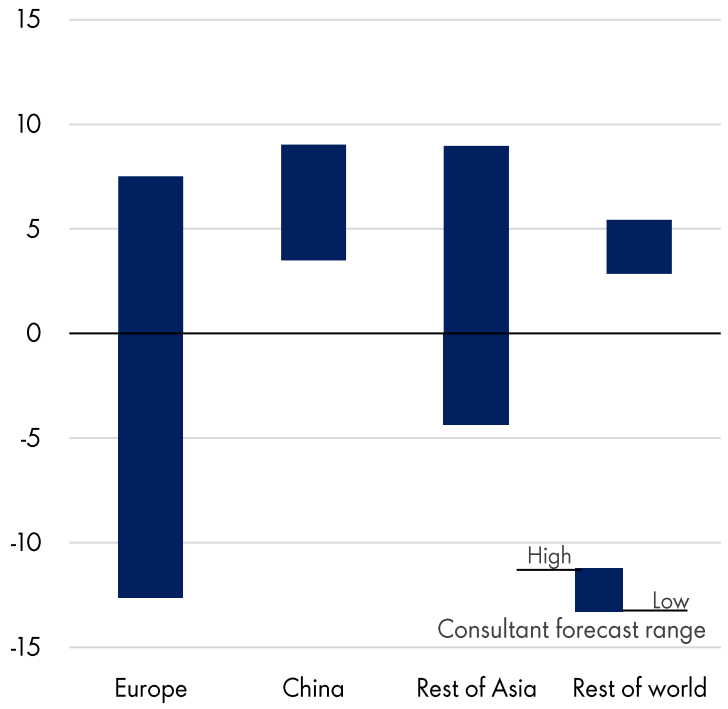
Global LNG supply growth

MTPA



2023 LNG demand growth range

MTPA



LNG market swing factors

Supply reliability

LNG production performance remains uncertain across basins

Economic growth

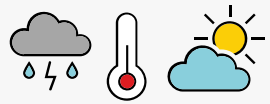
Uncertain macroeconomic conditions and inflationary environment

Pace of China's economic recovery from dropping its zero-COVID policy

Fuel substitutes

Material movements in price of fuel substitutes in either direction will impact gas and LNG demand, particularly in China

Weather events



Sustained above/below normal temperatures

Source: Shell interpretation of Wood Mackenzie, S&P Global Commodity Insights and Poten & Partners 2022 & 2023 data

LNG becomes a core energy supply source for Europe

Loss of Russian piped imports have structurally altered Europe's gas market

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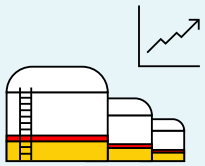
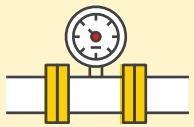
Structural shift in Europe's gas market

Security of supply driven

- Mandated storage targets
- New regasification terminals
- Price caps
- New price indices

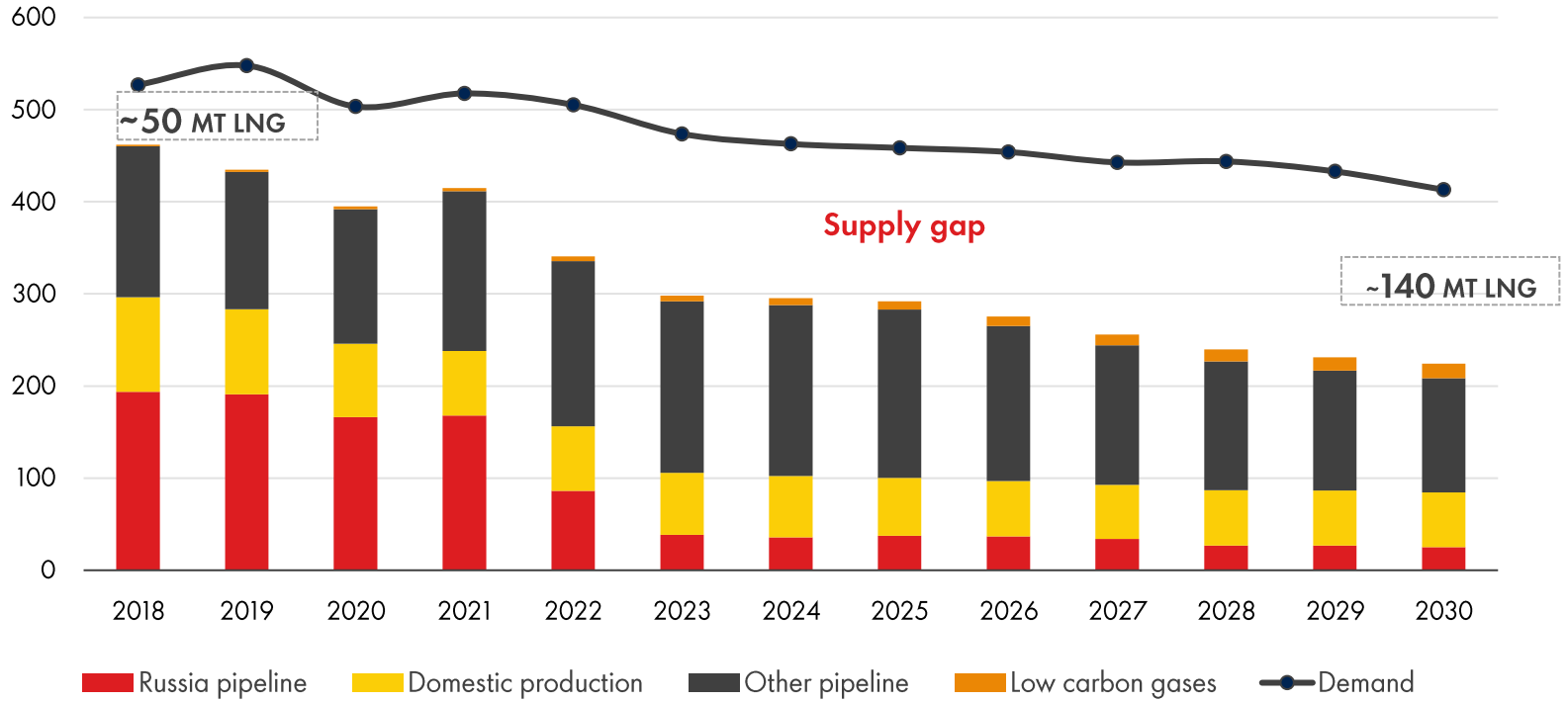


Altered pipeline flows



US LNG as the marginal supplier

Europe gas balance

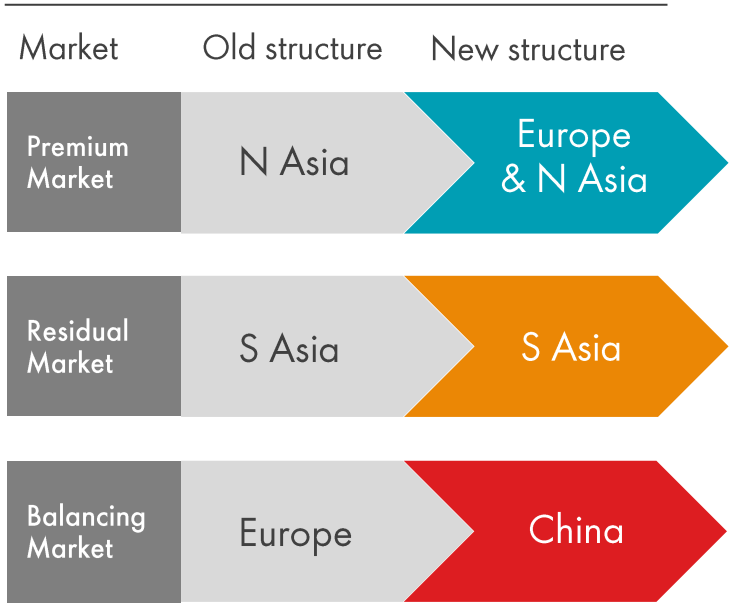


Source: Shell interpretation of Wood Mackenzie, S&P Global Commodity Insights 2022 & 2023 data

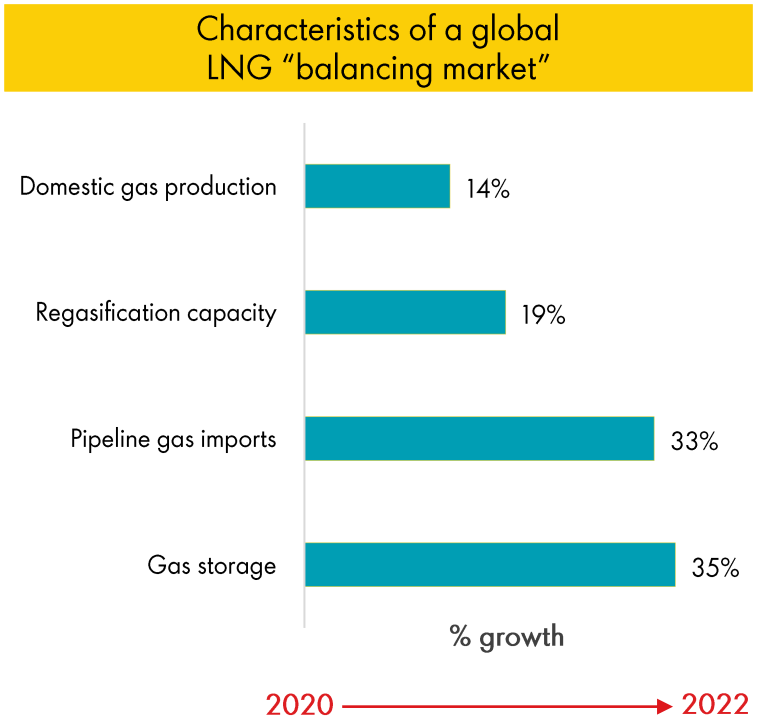
China's changing role in the global LNG market

From driver of growth to providing flexibility

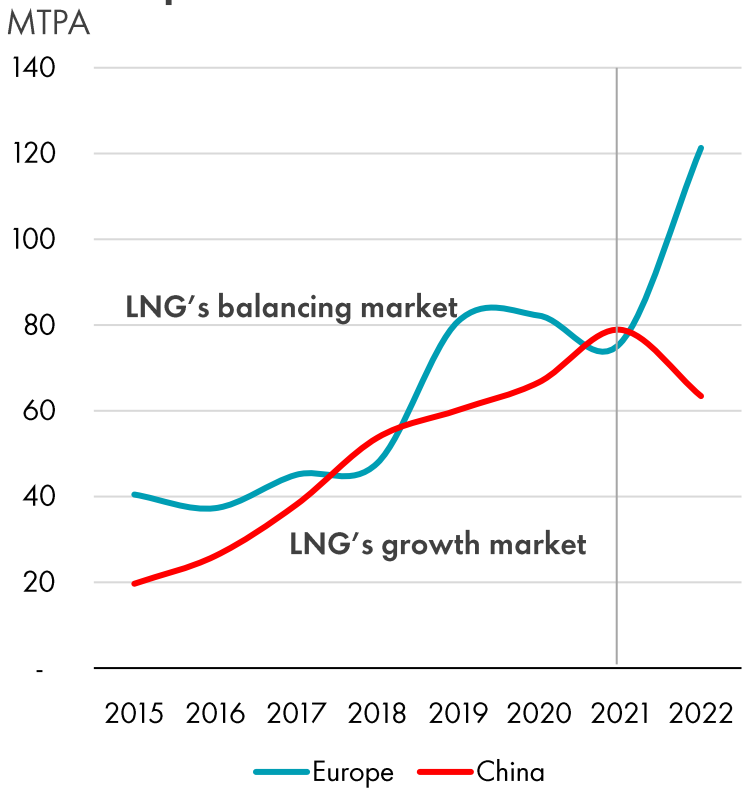
Global LNG market structures



China gas market evolution



LNG imports



Source: Shell interpretation of Wood Mackenzie, S&P Global Commodity Insights and National Bureau of Statistics of China 2022 & 2023 data

About 80% of new LNG supply by 2030 from Qatar & US

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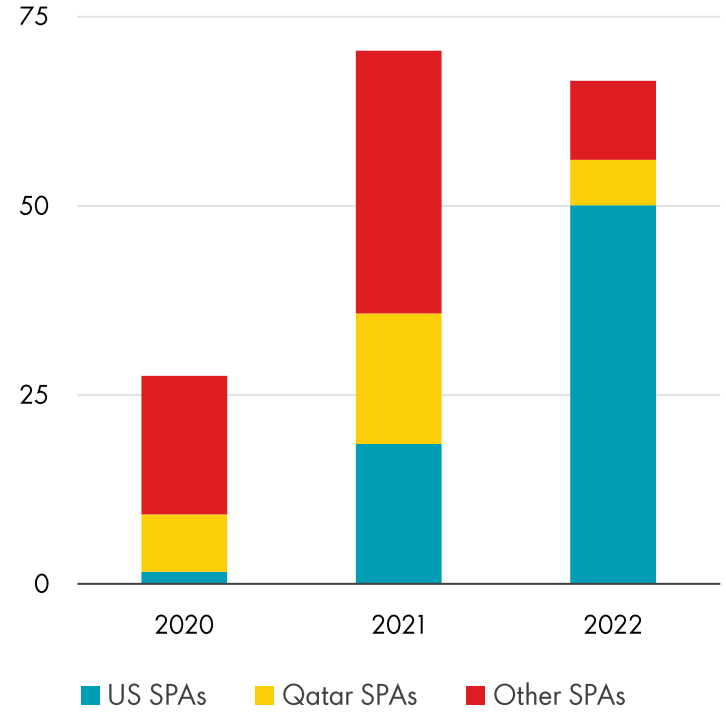
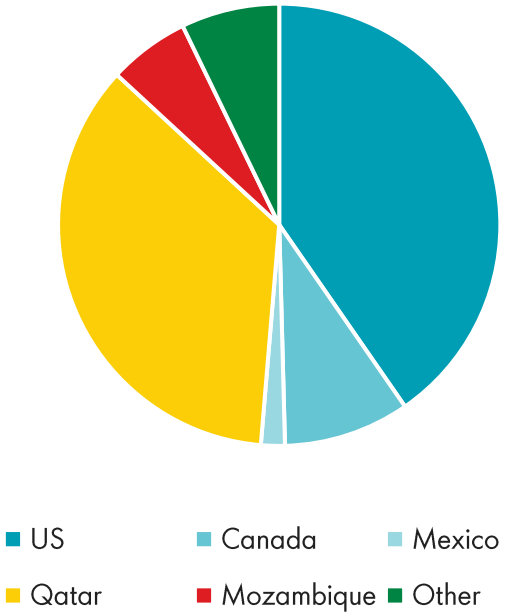
Three independent commercial structures for LNG to co-exist

Long-term LNG SPA signings

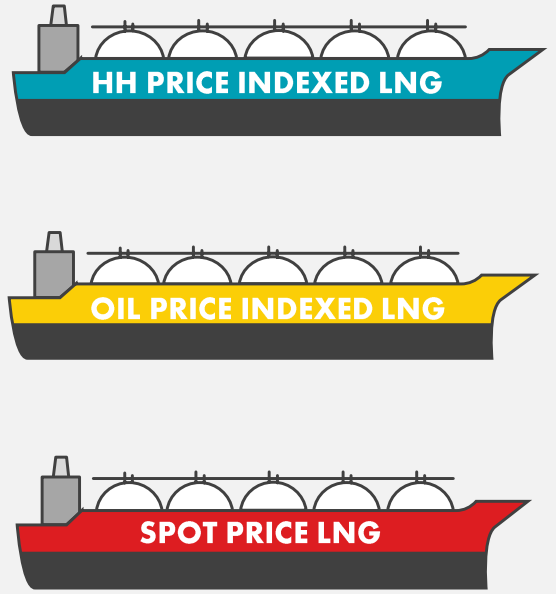
MTPA



LNG supply growth 2025 - 2030



Emerging commercial structure

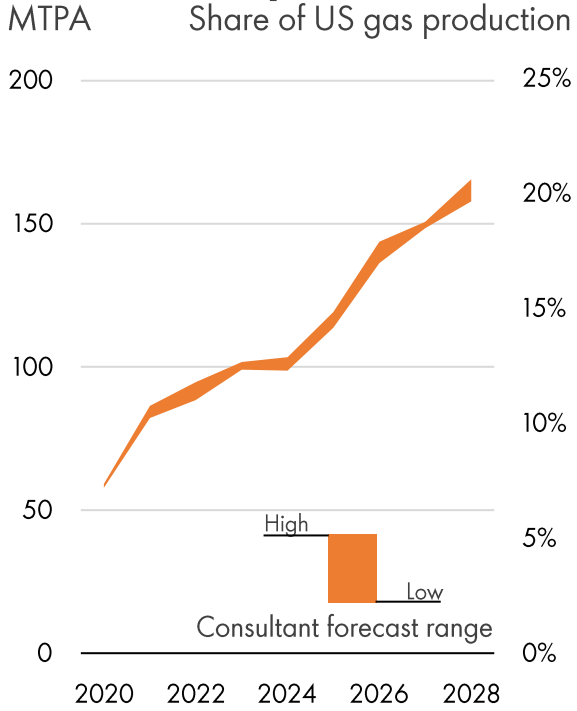


Source: Shell interpretation of Wood Mackenzie and S&P Global Commodity Insights 2022 data

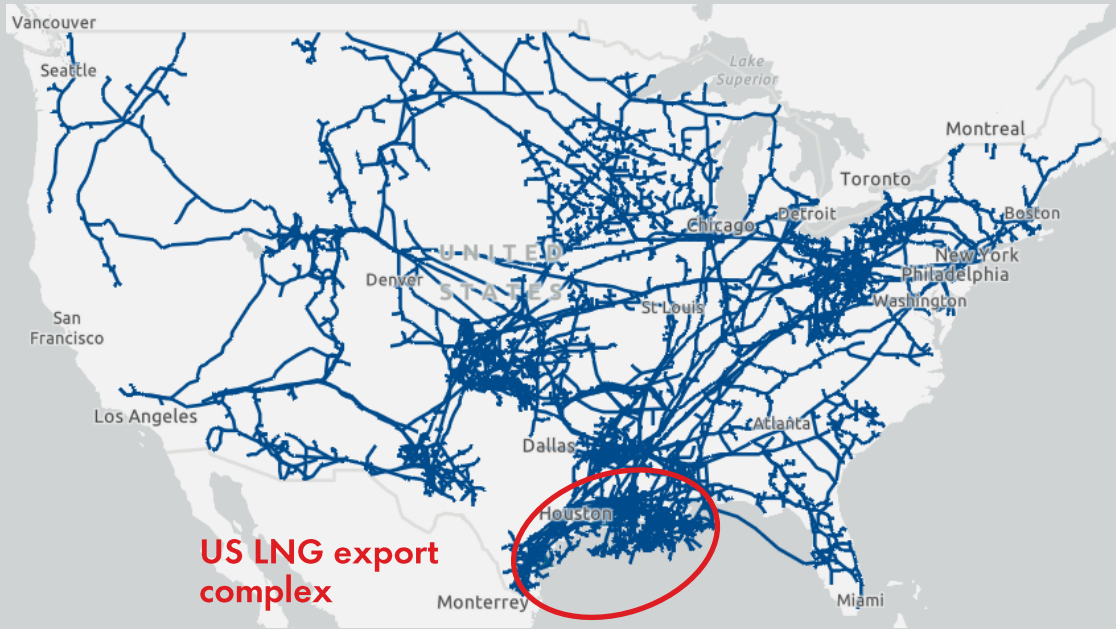
SPA: Sales and Purchase Agreement; does not include Heads of Agreement or Memoranda of Understanding

Growing role of US supply in global LNG market increases exposure to US gas market risks

US LNG exports

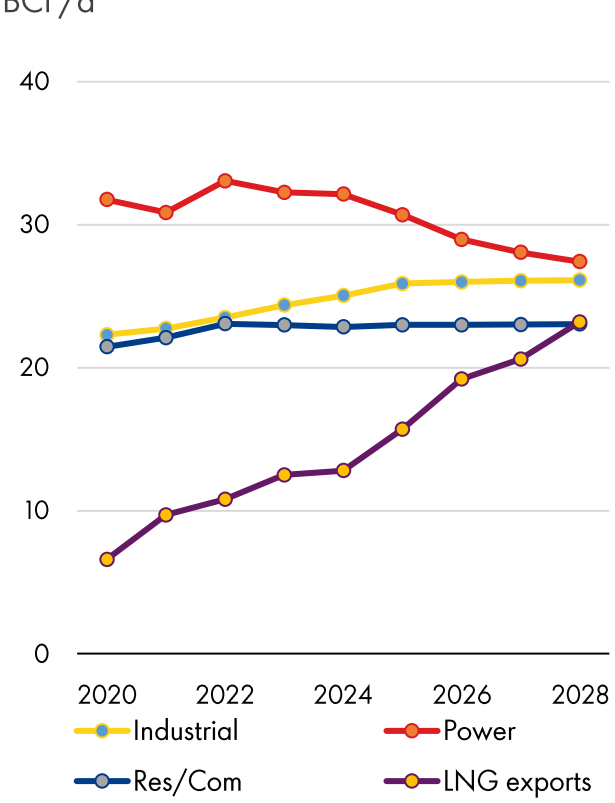


US gas pipelines*



>95% of 2030 US LNG capacity concentrated in two states

US gas demand



Source: Shell interpretation of Wood Mackenzie, S&P Global Commodity Insights and US Energy Information Administration 2022 data

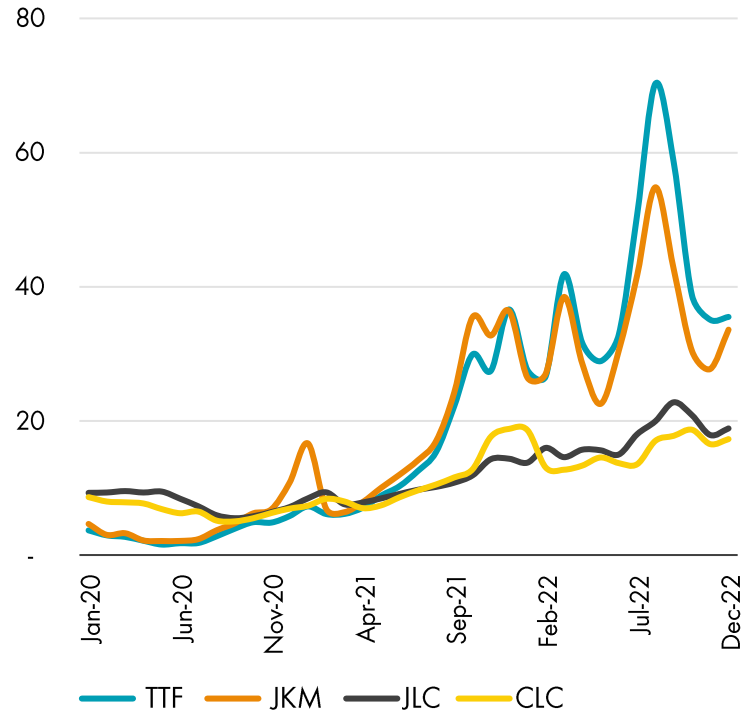
*This is a representation of the US interstate pipeline network – actual may vary

Term LNG contracts reduce exposure to price volatility

Portfolio players stepping up to secure future supply

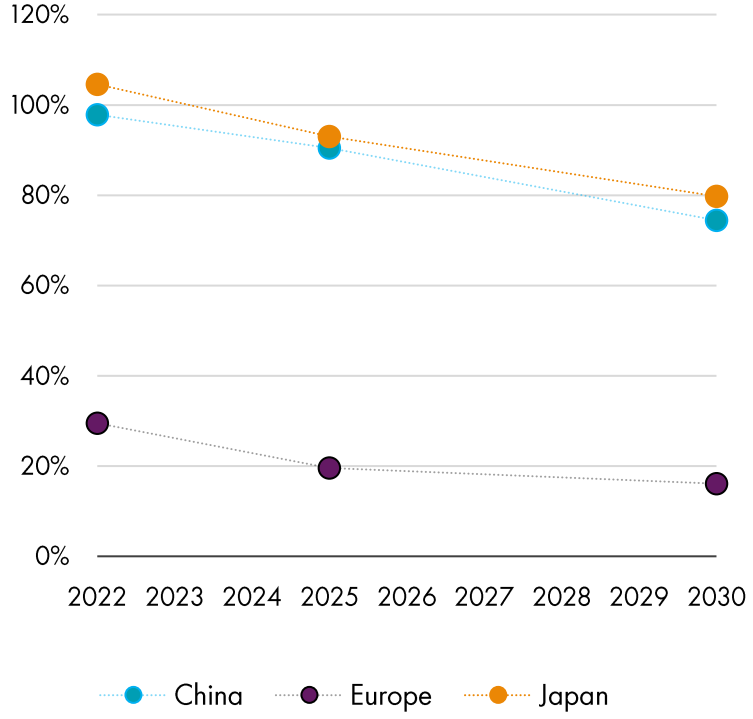
Global LNG prices

$/MMBtu



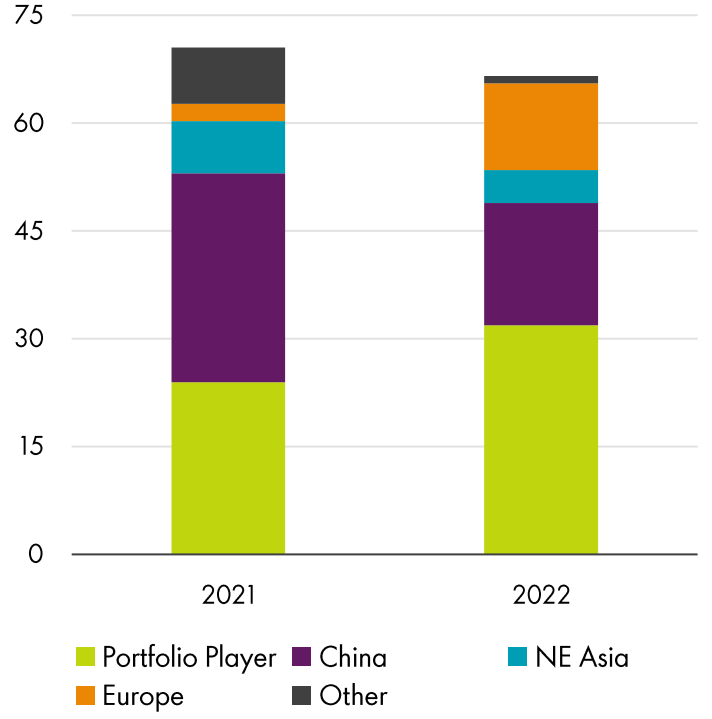
LNG term contract coverage

% of forecast LNG demand under term contract



Long-term LNG SPA signings

MTPA



Source: Shell interpretation of ICE, Wood Mackenzie, China and Japan Customs and S&P Global Commodity Insights 2023 data

JLC = Japan Landed Cost (weighted average cost of LNG imports) CLC = China Landed Cost (weighted average cost of LNG imports)

Investment needed to meet forecast LNG demand

Conflicting energy transition scenarios can deter investors & policy makers

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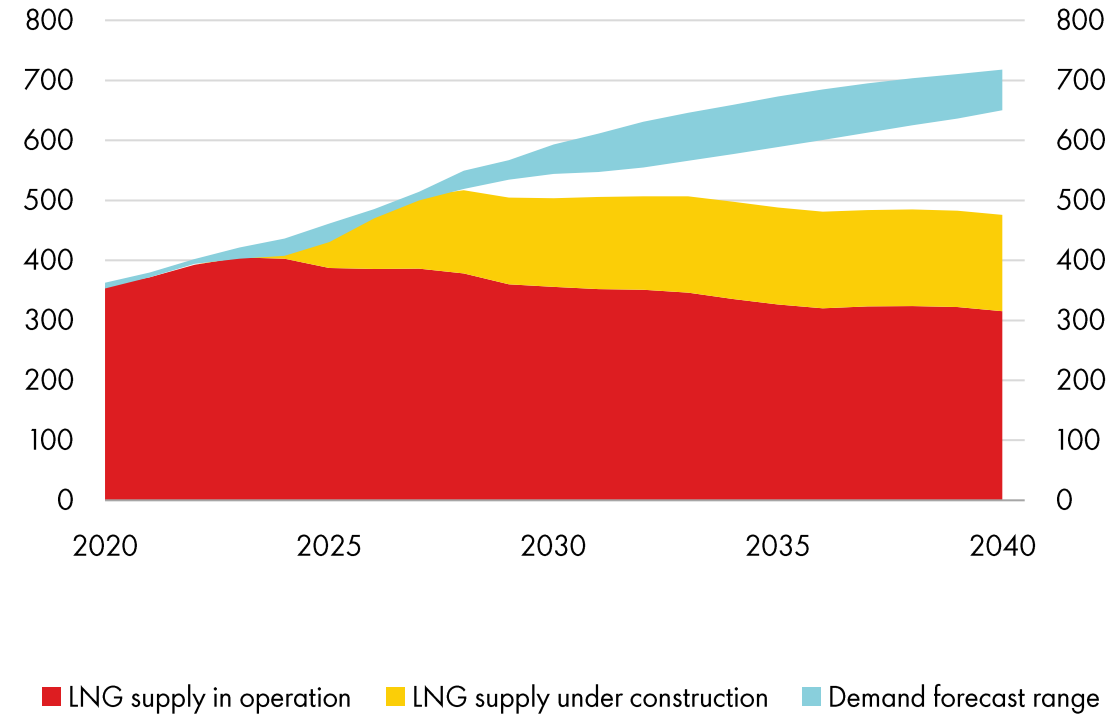
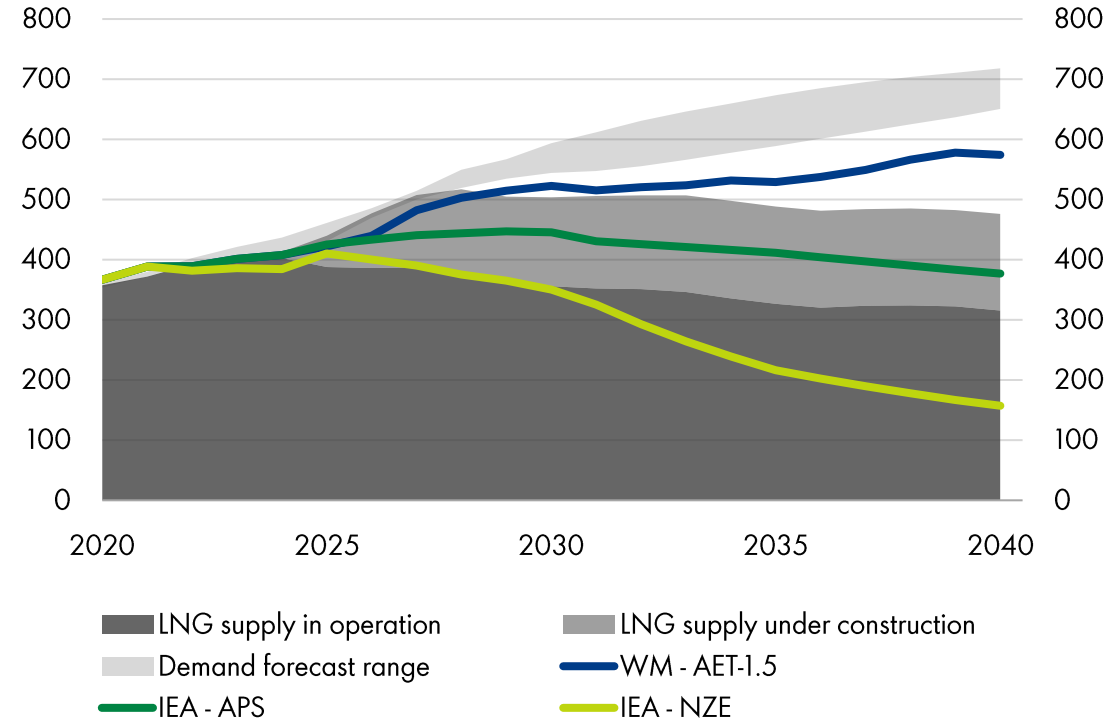
Global LNG supply vs demand forecast range

MTPA



Global LNG supply vs demand scenarios

MTPA



Source: Shell interpretation of Wood Mackenzie, Poten & Partners, IEA, S&P Global Commodity Insights and FGE 2022 & 2023 data.

AET-1.5 = Accelerated Energy Transition -1.5-degree; APS = Announced Pledges Scenario; NZE: Net Zero Emissions by 2050 Scenario - Note: depiction of IEA scenarios has been adjusted for format

Progress on developing lower emission LNG technologies

While adopting more transparency & accuracy in emissions reporting

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Progress on quantifying & compensating emissions

Progress on certified natural gas

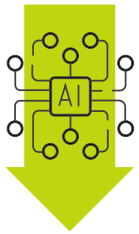
17% of US natural gas supply in 2022, equivalent to around 1,000 US LNG cargoes certified using the **MIQ methane emissions certification standard.**

Chevron and Project Canary announced a **pilot project to certify well-to-well gas production at five US sites** using the TrustWell™ Certification programme.

Equitable Origin independently certified **around 12% of North American gas production.**

Using Artificial Intelligence to reduce emissions

Shell used AI to modify operations at an existing LNG plant to **reduce annual emissions by ~ 130,000 tonnes** for a single train of process units, when operating at full capacity.



First GIIGNL-aligned GHG-neutral LNG cargo

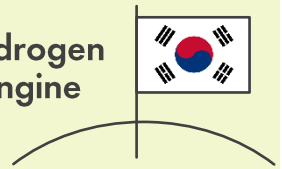
First delivery of a **GHG-neutral LNG cargo** aligned to GIIGNL's Monitoring, Reporting and Verification (MRV) and GHG Neutral Framework.

Technologies developments in 2022

CCUS with LNG plants up by 28%

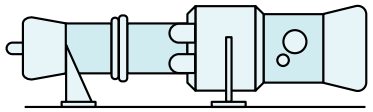
Carbon capture utilisation & storage (CCUS) projects adoption continued in 2022 with six LNG projects with a total LNG capacity for of 67.5 MTPA announcing plans.

LNG/hydrogen hybrid engine



Hyundai Heavy Industries Group has successfully tested **South Korea's first combined LNG/ hydrogen-powered engine.**

Hydrogen-powered gas turbines



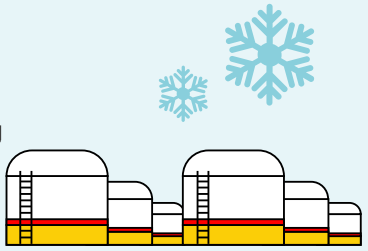
GE Gas Power and Shell Global Solutions are collaborating to develop **100% hydrogen powered gas turbine technology for LNG production,** without the use of diluent.

Recovering boil-off gas

Samsung Heavy Industries successfully tested a new system **which enables LNG-powered ships to reliquefy and collect boil-off gas.**

Harnessing cold energy

JGC Japan Corporation has begun technical development on **capturing carbon through applying unused cold energy** captured at an LNG liquefaction plant.



Source: Shell interpretation of various news announcements

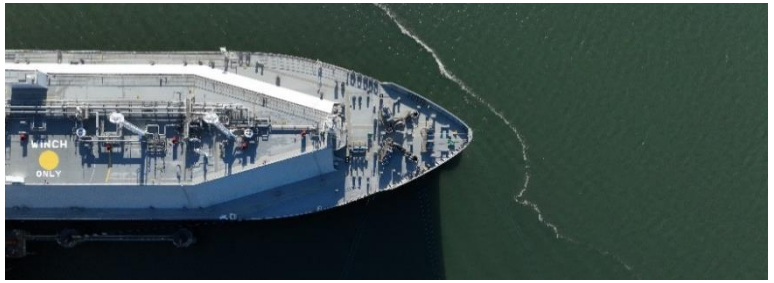
Summary

Europe benefits from LNG industry flexibility in 2022

- European LNG imports up by 60% to replace Russian gas
- Global gas and LNG prices remain volatile hitting record levels in 2022
- Drop in Russian gas supply was offset by LNG imports and demand destruction in Europe
- Continued lockdowns and lower economic growth led to a contraction in Chinese gas demand
- Europe's appetite for LNG impacted other markets
- New US liquefaction helped balance global LNG supply
- Global trade flows reversed in 2022

Market volatility triggers energy security interventions – with lasting economic and emissions impacts

- Immediate policy actions in 2022 to manage energy security and high energy prices
- The power of effective policy making - two terminals set up in six months for importing LNG to replace Russian gas
- Germany fires up coal plants to meet the energy gap
- Coal use rebounds in major Asian economies
- Gas demand destruction hits European industrial sector
- Not all energy demand can be electrified - For future energy security, gas needs to be decarbonised
- Continued uptake of gas in transport



Global gas and LNG markets expected to evolve as market dynamics point to a structural change

- Continued volatility expected in the near term
- Loss of Russian piped imports have structurally altered Europe's gas market
- Changing role of China– from an LNG growth market to flexible market
- Three independent commercial structures for LNG to co-exist
- Increasing role of US supply in global LNG market increases exposure to US gas market risks
- Term contracts reduce exposure to price volatility Portfolio players stepping up to secure future supply
- Investment needed to meet forecasted LNG demand
- Progress on developing lower emission LNG technologies