



equinor



## Equinor gas seminar

21 February, 2019

London, United Kingdom



**Seizing opportunities in the energy transition**

**Irene Rummelhoff**

Executive Vice President, Marketing, Midstream & Processing (MMP)



**Global energy demand continues to increase**

**Eirik Wærness**

Chief Economist & Senior Vice President, MMP Macro and Market Analysis (MMA)



**Strong demand for natural gas**

**Elisabeth Aarrestad**

Vice President, MMP MMA Market Analysis



**Creating value from premium market access**

**Tor Martin Anfinnsen**

Senior Vice President, MMP Marketing & Trading

# Forward-looking statement

This presentation contains certain forward-looking statements that involve risks and uncertainties. In some cases, we use words such as "ambition", "continue", "could", "estimate", "expect", "believe", "focus", "likely", "may", "outlook", "plan", "strategy", "will", "guidance" and similar expressions to identify forward-looking statements. All statements other than statements of historical fact, including, among others, statements regarding plans and expectations with respect to Equinor's returns, balance sheet and long-term underlying earnings growth; cash flow and returns and the average break-even price; start-up of projects through 2028, including Johan Sverdrup; Equinor's digitalisation and innovation; expected carbon emissions from the current portfolio; building a profitable renewable energy portfolio; market outlook and future economic projections and assumptions; capital expenditure and exploration guidance for 2019 and beyond; production guidance through 2025 and unit production cost through 2020; CAGR for the period 2019 – 2025; organic capital expenditure for 2019; Equinor's intention to mature its portfolio; exploration and development activities, including estimates regarding exploration activity levels; ambition to keep unit of production cost in the top quartile of its peer group; equity production and expectations for 2019; planned maintenance activity and the effects thereof for 2019; expected dividend payments and dividend subscription price; estimated provisions and liabilities, including the COSL Offshore Management AS litigation; implementation of IFRS 16, and the impact thereof; planned and announced acquisitions and divestments, including timing and impact thereof, including the acquisition of lease OCS-A 0520 in Massachusetts, the swap of interests with Faroe Petroleum in the NCS, the acquisition of Danske Commodities, the acquisition of Chevron's interest in the Rosebank project and other pending acquisitions and divestments discussed in this report; and the projected impact or timing of administrative or governmental rules, standards, decisions or laws, including with respect to and future impact of legal proceedings are forward-looking statements.

You should not place undue reliance on these forward-looking statements. Our actual results could differ materially from those anticipated in the forward-looking statements for many reasons.

These forward-looking statements reflect current views about future events and are, by their nature, subject to significant risks and uncertainties because they relate to events and depend on circumstances that will occur in the future. There are a number of factors that could cause actual results and developments to differ materially from those expressed or implied by these forward-looking statements, including levels of industry product

supply, demand and pricing; price and availability of alternative fuels; currency exchange rate and interest rate fluctuations; the political and economic policies of Norway and other oil-producing countries; EU developments; general economic conditions; political and social stability and economic growth in relevant areas of the world; global political events and actions, including war, political hostilities and terrorism; economic sanctions, security breaches; changes or uncertainty in or non-compliance with laws and governmental regulations; the timing of bringing new fields or wells on stream; an inability to exploit growth or investment opportunities; material differences from reserves estimates; unsuccessful drilling; an inability to find and develop reserves; ineffectiveness of crisis management systems; adverse changes in tax regimes; the development and use of new technology; geological or technical difficulties; operational problems; operator error; inadequate insurance coverage; the lack of necessary transportation infrastructure when a field is in a remote location and other transportation problems; the actions of competitors; the actions of field partners; the actions of governments (including the Norwegian state as majority shareholder); counterparty defaults; natural disasters and adverse weather conditions, climate change, and other changes to business conditions; an inability to attract and retain personnel; relevant governmental approvals; labour relations and industrial actions by workers and other factors discussed elsewhere in this report. Additional information, including information on factors that may affect Equinor's business, is contained in Equinor's Annual Report on Form 20-F for the year ended December 31, 2017, filed with the U.S. Securities and Exchange Commission (and section 2.11 Risk review – Risk factors thereof). Equinor's 2017 Annual Report and Form 20-F is available at Equinor's website [www.equinor.com](http://www.equinor.com).

Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot assure you that our future results, level of activity, performance or achievements will meet these expectations. Moreover, neither we nor any other person assumes responsibility for the accuracy and completeness of these forward-looking statements. Any forward-looking statement speaks only as of the date on which such statement is made, and, except as required by applicable law, we undertake no obligation to update any of these statements after the date of this report, whether to make them either conform to actual results or changes in our expectations or otherwise.

Prices used in the presentation material are given in real 2018 value, unless otherwise stated.



## Seizing opportunities in the energy transition

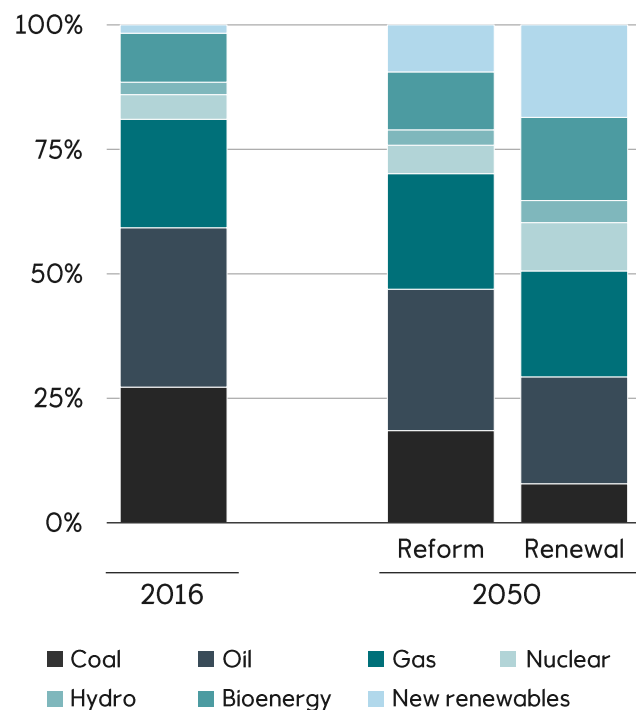
**Irene Rummelhoff**

Executive Vice President, MMP

# Need for significant new energy supply

## Global energy mix <sup>1</sup>

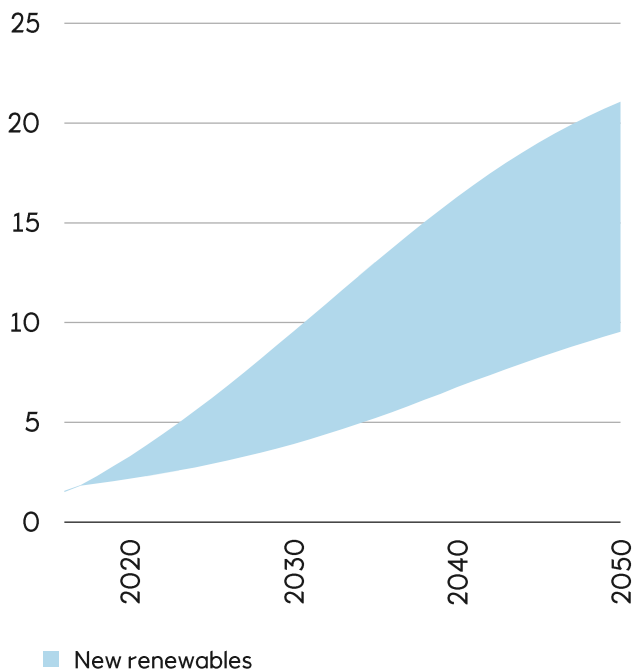
Percent



1. 2050 energy mix based on Reform and Renewal (2° scenario) scenarios in Equinor's 2018 Energy Perspectives report (Energy Perspectives).

## Substantial growth in new renewables <sup>2,3</sup>

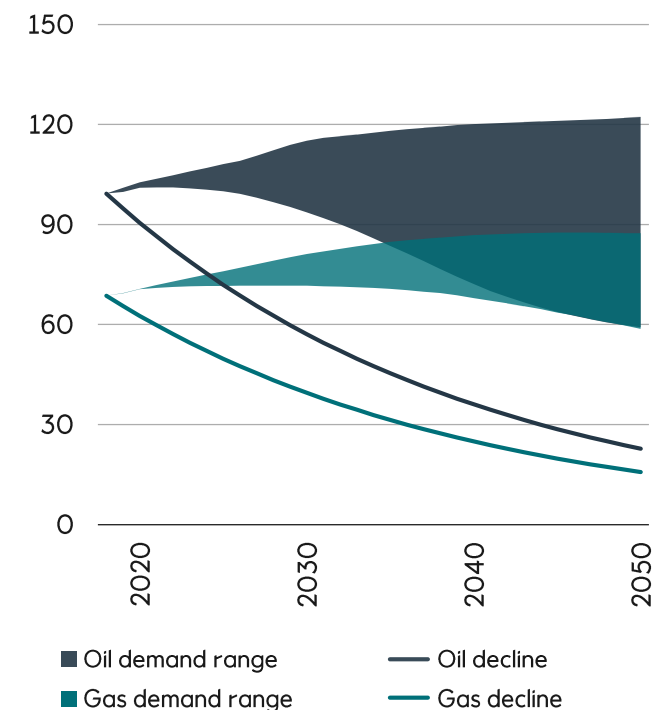
Thousand TWh



2. New renewables include solar, wind, geothermal and marine electricity.  
 3. Range is the outcome space of the three scenarios in Energy Perspectives: Reform, Renewal and Rivalry.

## Need for new oil and gas <sup>4,5</sup>

Million boe per day



4. Range is the outcome space of the three scenarios in Energy Perspectives 2018: Reform, Renewal and Rivalry.  
 5. Oil and gas production assumed to decline by 4.5% per year.

# Creating value from premium market access

- Cost-effective infrastructure
- Growing asset backed trading
- Increasing trades to Asia – capturing margins
- Expanding electricity marketing and trading



## Global and flexible trading system

Liquids trading volume

> 800

million bbl

2018 Equinor equity and 3rd party volumes.

Gas sales volume

> 100

bcm

2018 Equinor equity and 3rd party volumes.

Electricity trading volume

~ 300

TWh

2018 volumes, including Danske Commodities.

Average annual MMP result

~ 1.7

bn USD

Adjusted earnings from 2015 to 2018.

EBIT Danske Commodities


~ 80

million USD

Estimated 2018 result, final audited result to be published 14 Mar 2019.



## MMP 2020 ambition Passion to improve

ALWAYS SAFE	HIGH VALUE	LOW CARBON
		
0 is the goal	\$250-500m adjusted earnings/qtr	4% reduction in emissions

## Digitalisation Connecting minds and technology



*Trading desk in Danske Commodities*

- Data-driven operations to see the big picture
- Automation and integrated operations center
- Robots and drones to make work safer, easier, cost efficient
- 3d-printing to repair or print new equipment faster, cheaper, better

## Reliable, competitive & sustainable energy

USD 26 bn

in total 2018 gas sales

Largest producer of gas on NCS,  
2<sup>nd</sup> largest gas supplier to Europe

Reserves and resources to supply for years, actively exploring for NCS gas

Preparing to capitalize on higher demand for shorter indices in our trading

## Growing global positions

- US onshore
- Brazil
- Asia (LNG and asset-backed trading)

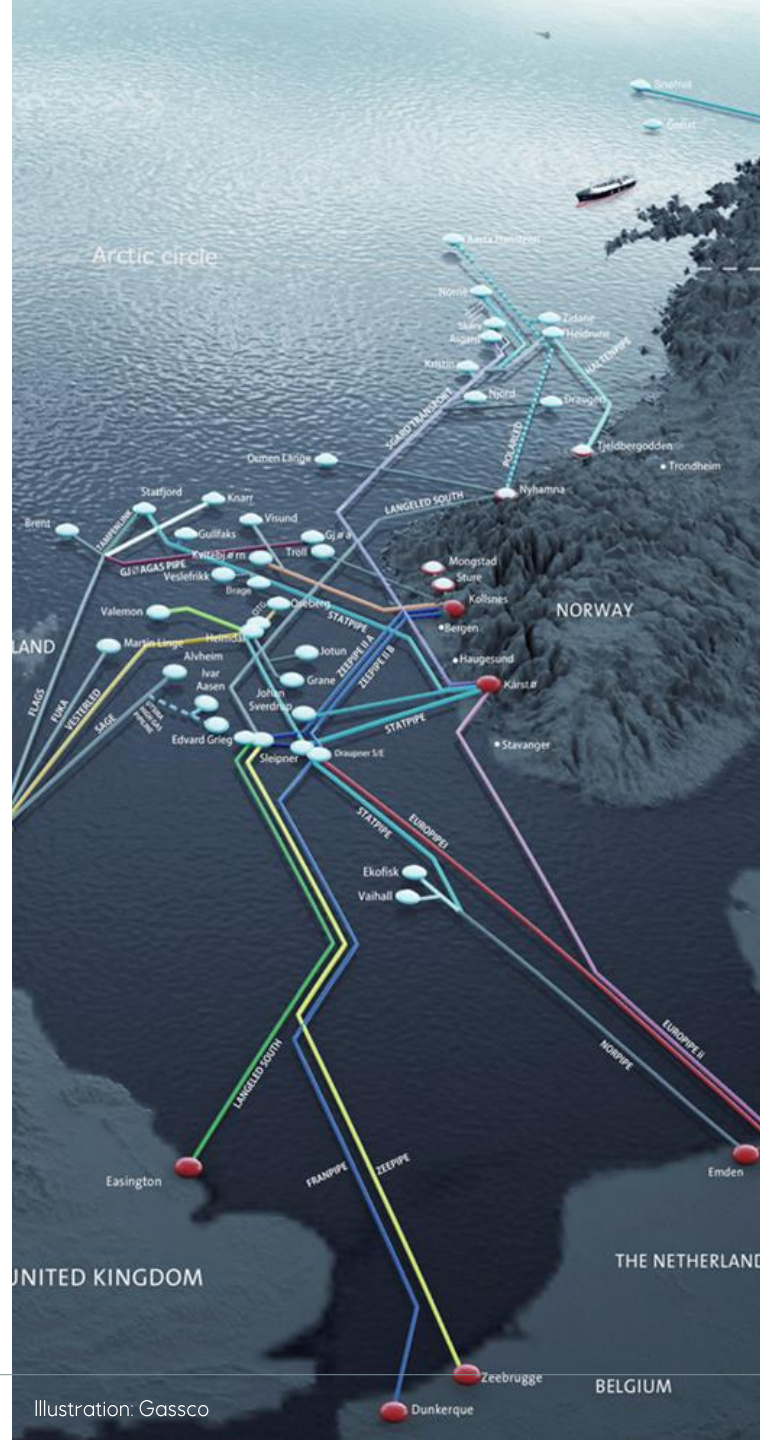


Illustration: Gassco

## Gas contributes to low carbon future

Gas can reduce CO<sub>2</sub> by more than 50% when replacing coal

Gas can provide needed back-up to enable more wind and solar

Gas can be decarbonised as hydrogen for long-term







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## Global energy demand continues to increase

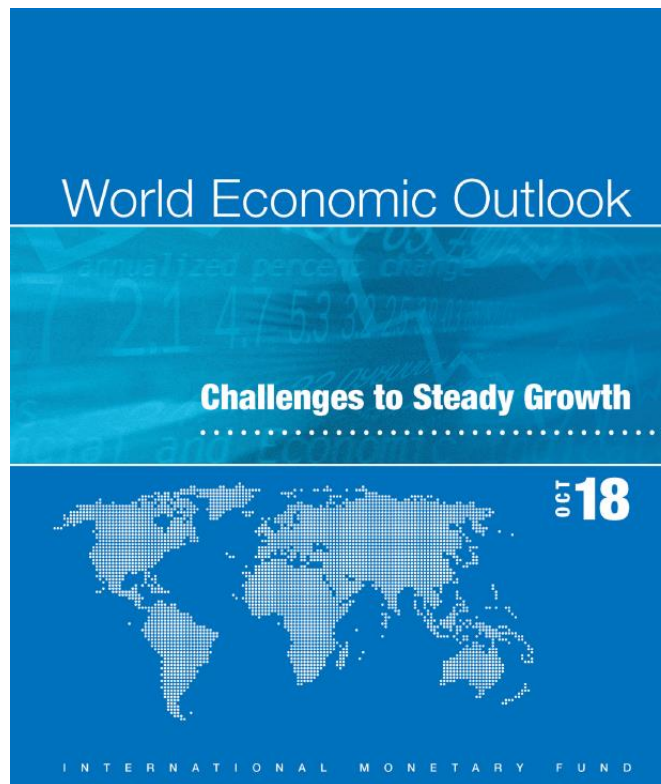
Eirik Wærness, Chief Economist and SVP MMP

Macroeconomics and Market Analysis

# The peak of global economic growth is behind us

## ... but we project robust short- and medium-term gas demand growth

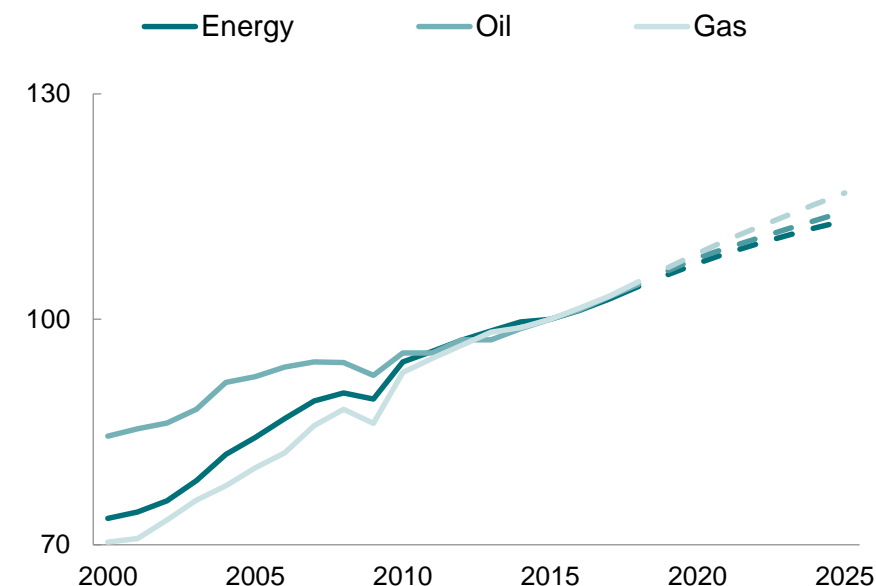
World Economic and Financial Surveys



Global GDP growth  
(% change y/y, 2000-2025)



Global energy, oil and gas demand  
(Indexed, 2015=100)

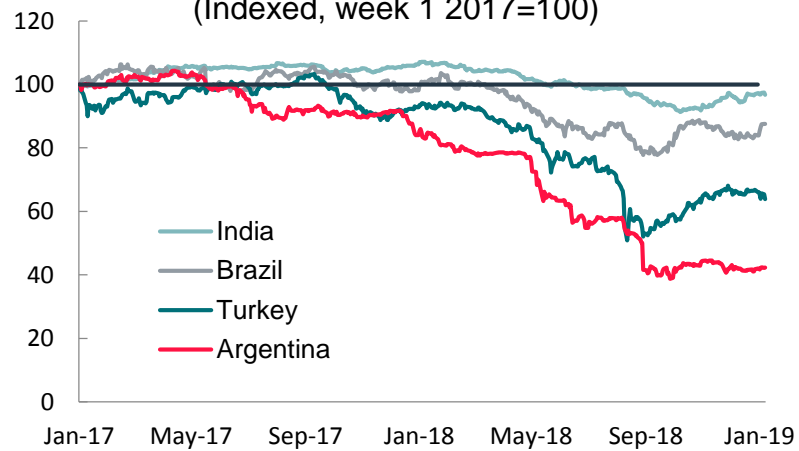


Source: IMF, IHS Markit, IEA (history) and Equinor (projections)

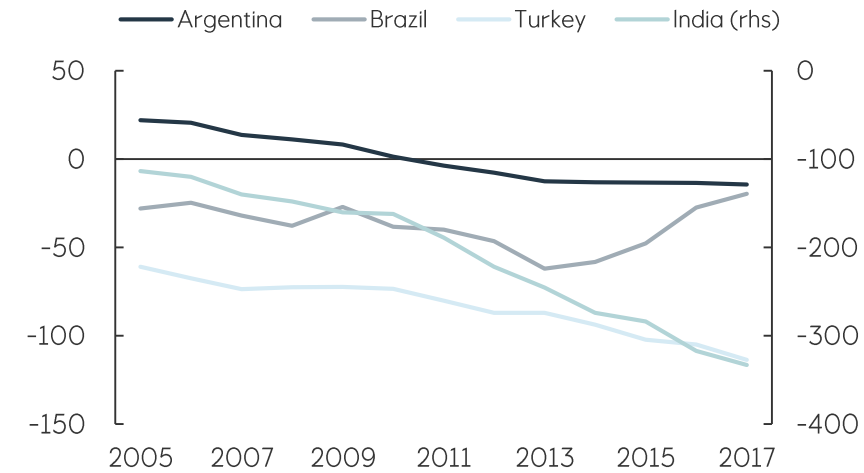
# Emerging markets with double deficits are under pressure

... rising energy import bills are an important part of the picture

Emerging markets fx rates USD/local currency  
(Indexed, week 1 2017=100)



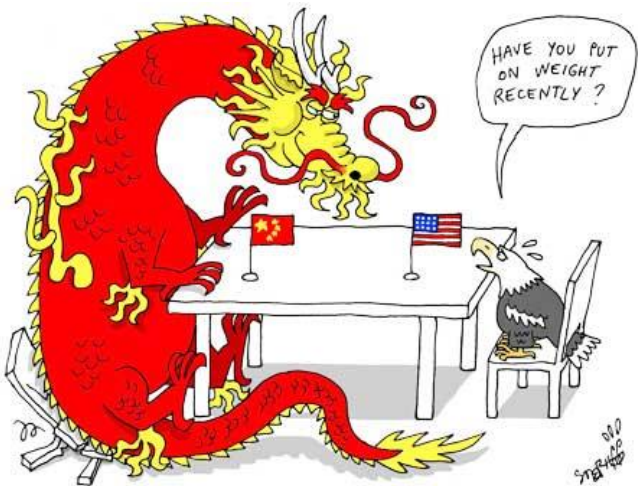
Net fossil fuel exports, selected emerging markets (mtoe)



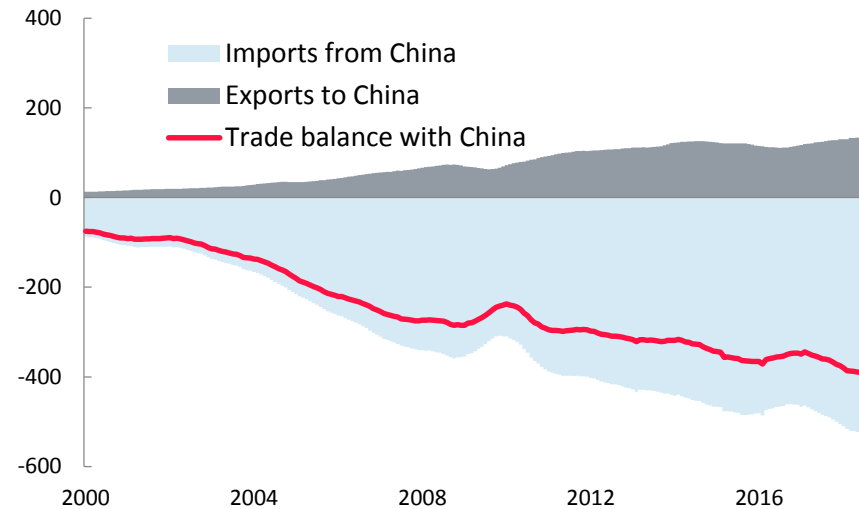
Source: Thomson Reuters Datastream, The Guardian, BP Statistical Review 2018

# Escalation of trade tensions starts to bite and influence commodity flows

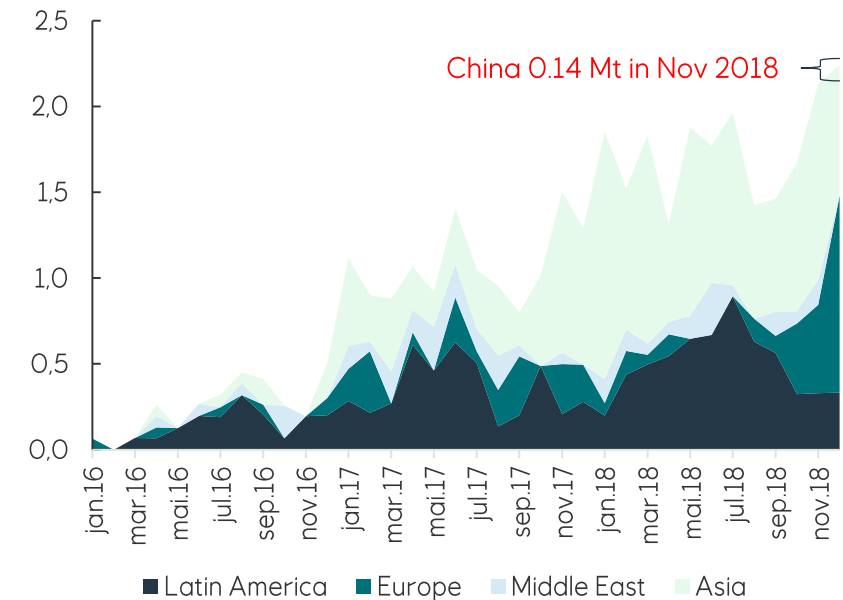
## ...but recent talks give reason for cautious optimism



US goods trade balance with China  
(bn USD, cumulative 12-months rolling)

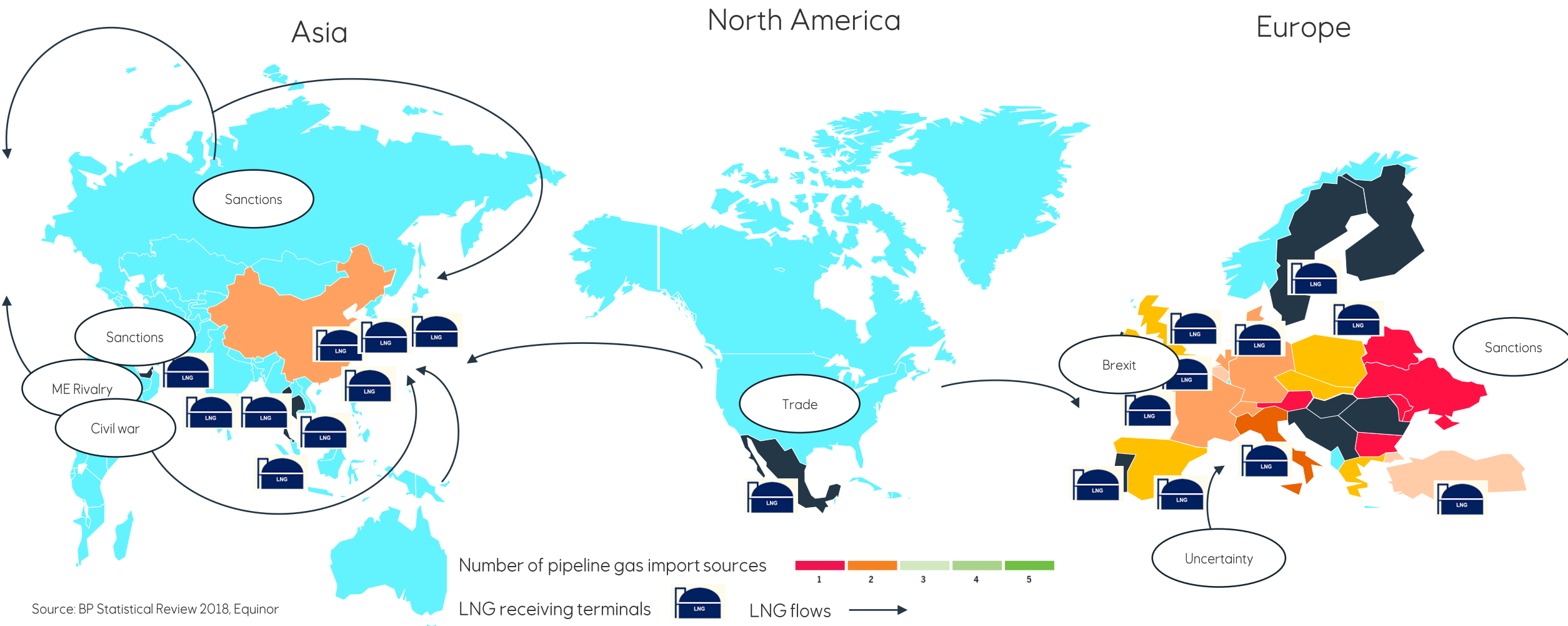


US LNG exports by region  
(Mt per month)



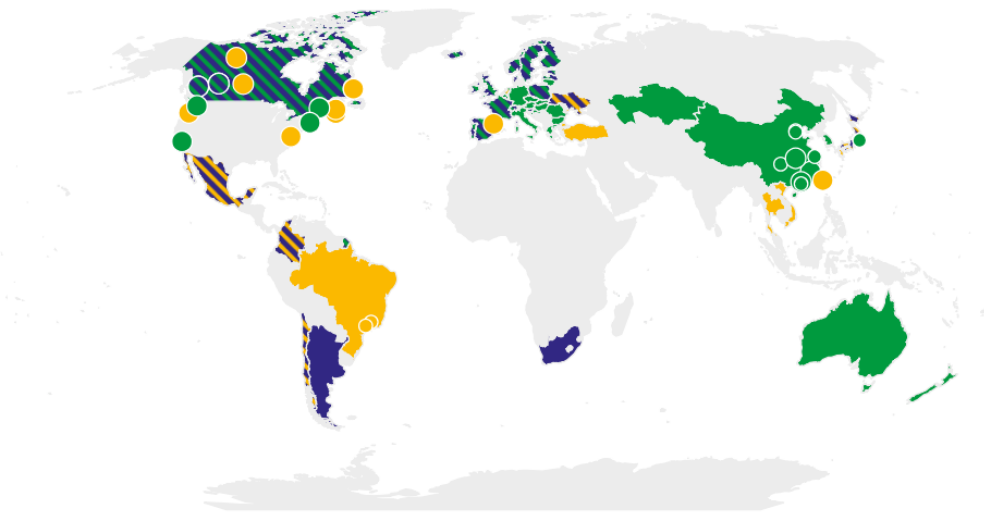
Source: Global Intentions, Thomson Reuters Datastream, IHS Waterborne

# Gas market globalisation contributes to global price setting and security of supply ...but brings higher exposure to geopolitics



Source: BP Statistical Review 2018, Equinor

# Climate policies reach more geographies and increase long-term ambitions ...but global collaboration is a challenge



- ETS implemented or scheduled for implementation
- ETS or carbon tax under consideration
- ETS implemented or scheduled, tax under consideration
- Carbon tax implemented or scheduled for implementation
- ETS and carbon tax implemented or scheduled
- Carbon tax implemented or scheduled, ETS under consider...

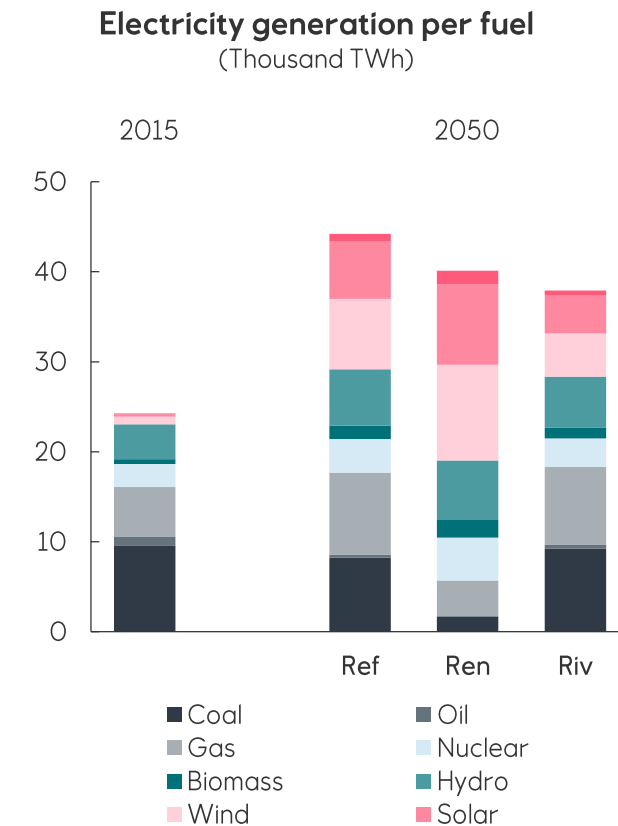
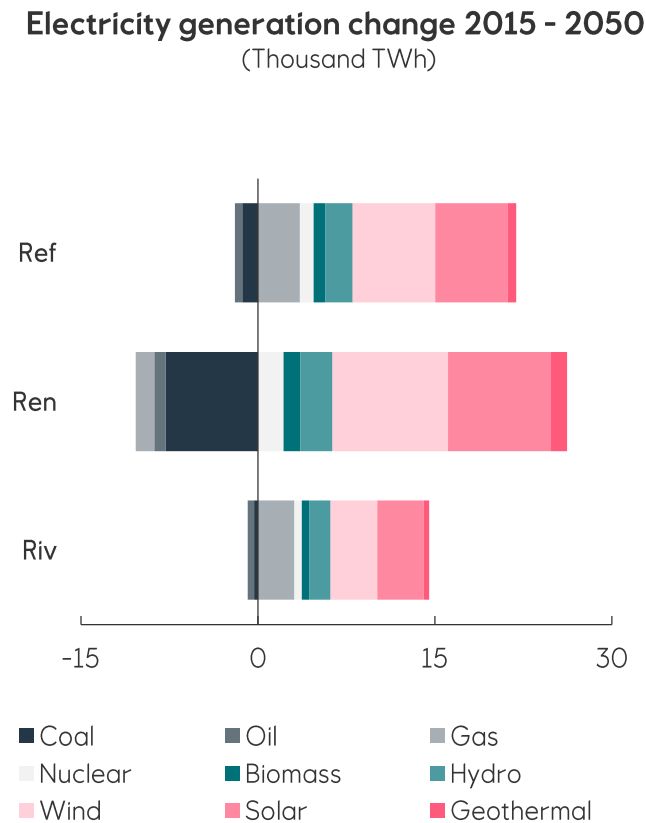
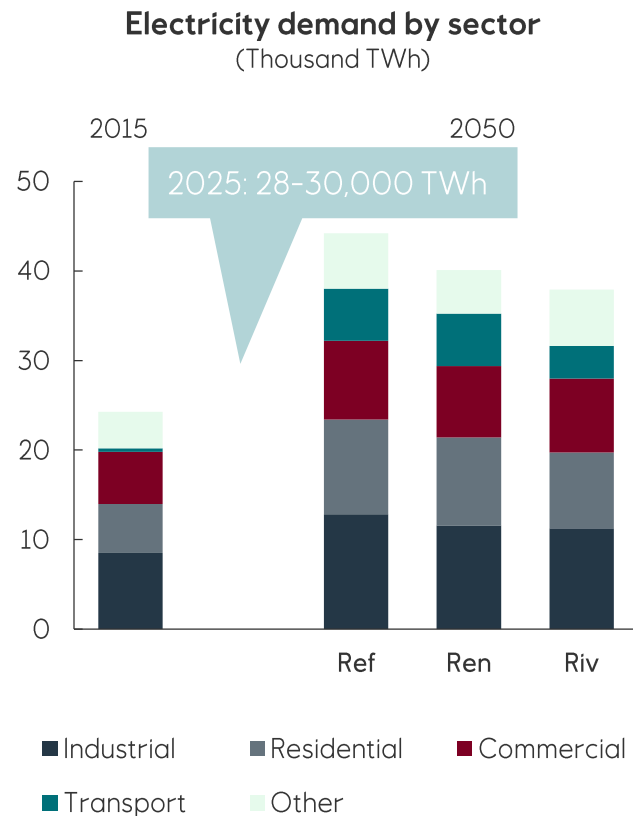


EU ETS price development  
EUR/t



# Long term: Strong global electricity demand growth in all scenarios

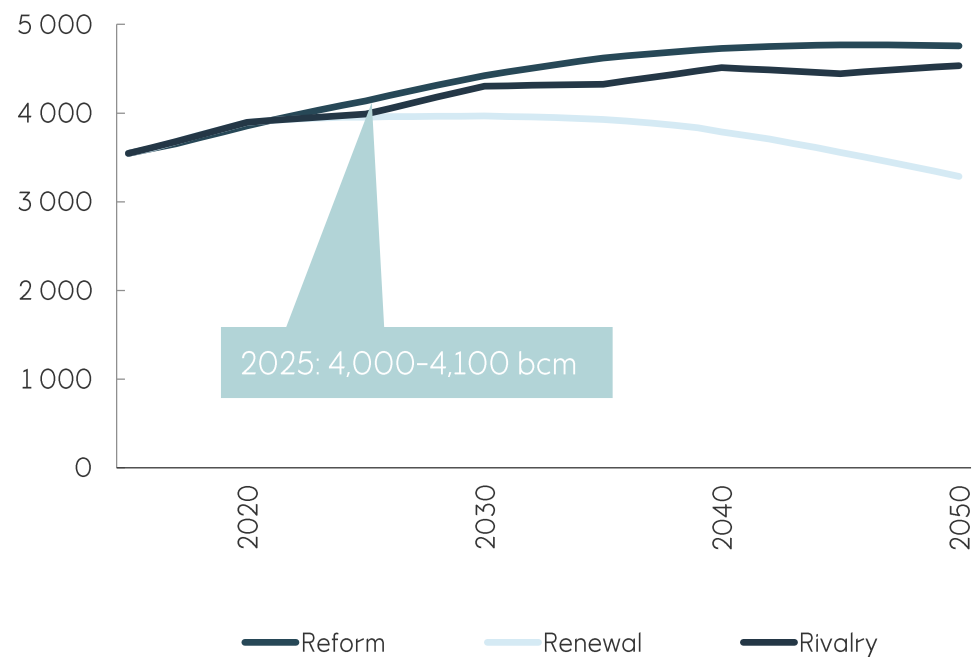
## ... with the generation mix developing differently in the long run, but only after 2025



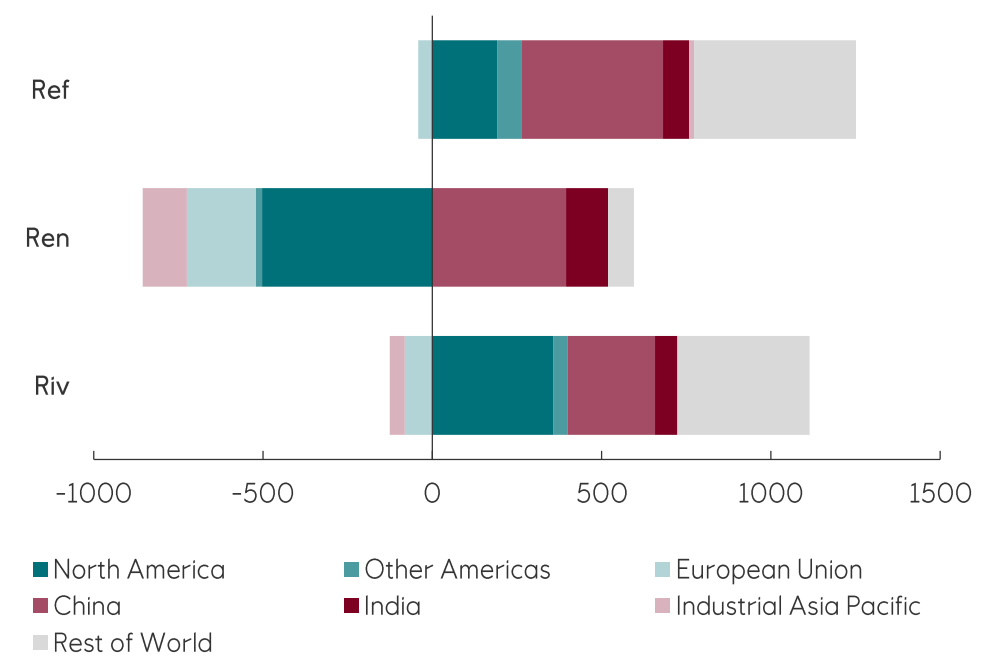
Source: IEA (history), Equinor (projections)

# Global gas demand is set to increase in the short to medium term ...with Asia standing out

Gas demand by scenario 2015-2050  
(bcm)



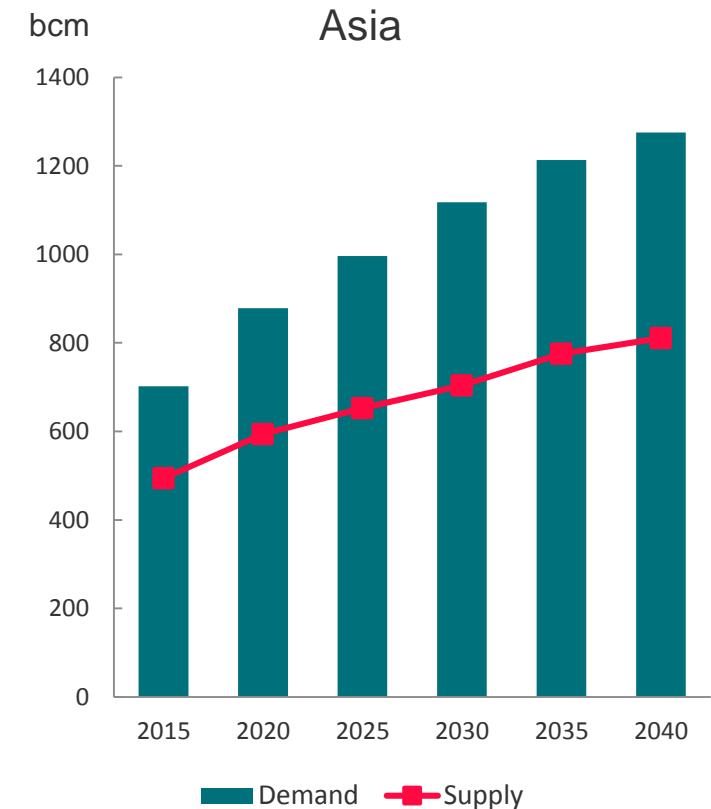
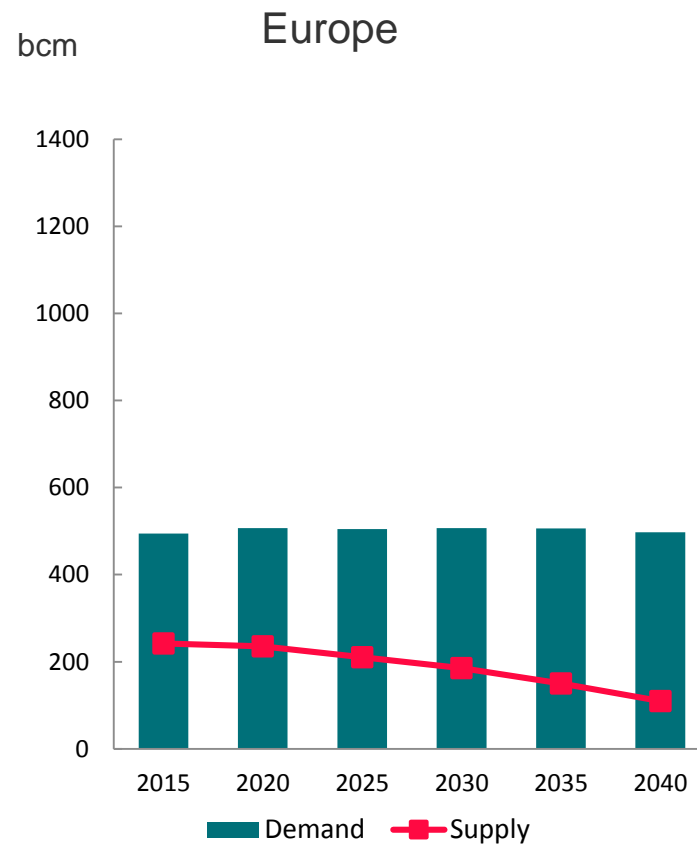
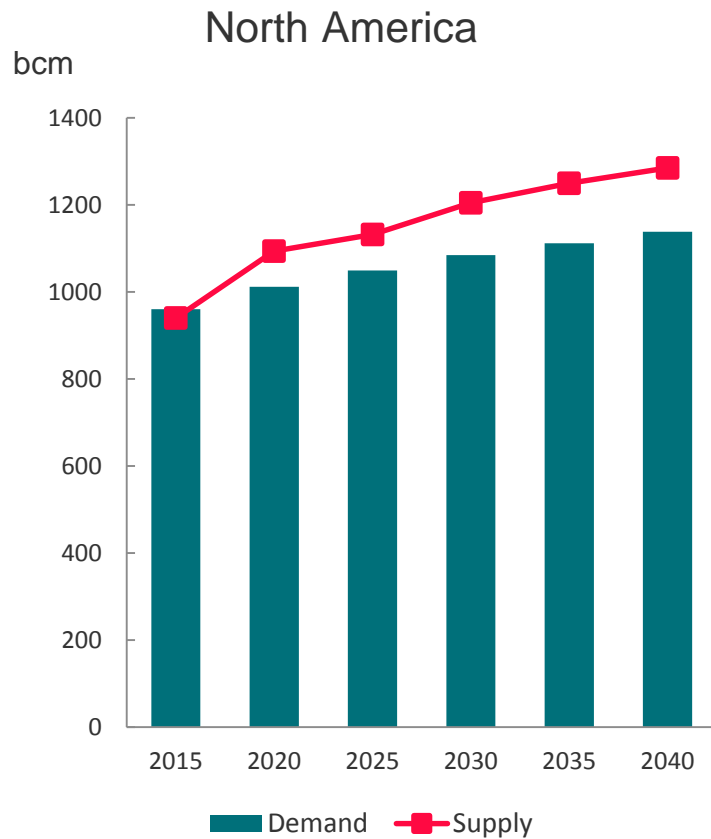
Change in gas demand by region 2015-2050  
(bcm)



Source: IEA (history), Equinor (projections)



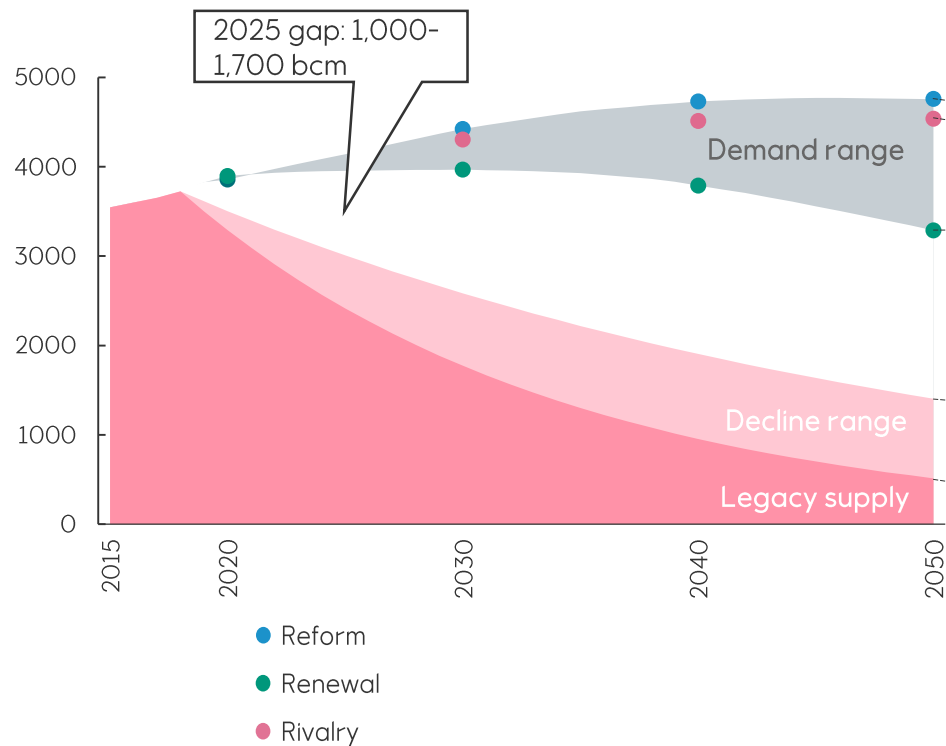
# Regional gas balances reveal significant need for import in Europe and Asia ...with the US strengthening its export potential (and Russia/MENA being key for global balance)



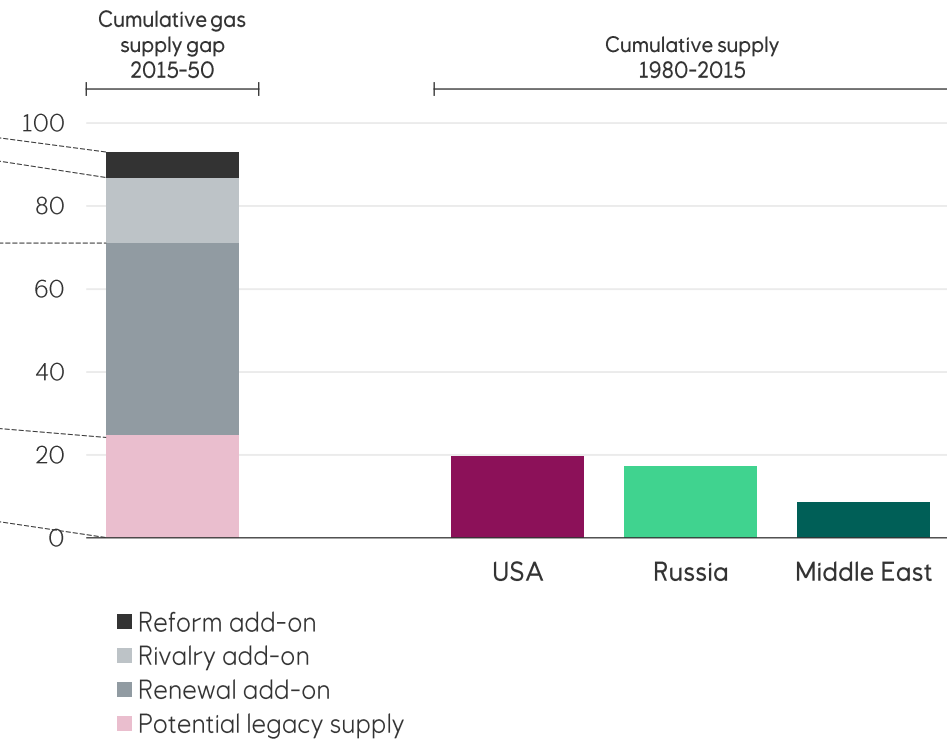
Source: Equinor, EP18 Reform

# Large investments are needed in gas value chains ...which will require healthy prices going forward

**Global gas demand and supply from existing fields**  
Billion cubic meters



**Cumulative gas supply gap 2015-50, compared**  
Trillion cubic meters



Source: IEA and BP (history), Equinor (projections)



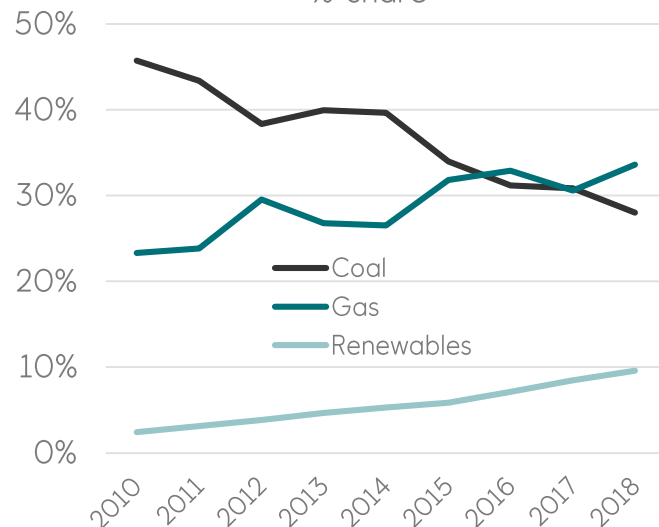
## Strong demand for natural gas

Elisabeth Aarrestad, Vice President

Market Analysis

# What did we say last time around? February 2018 .....

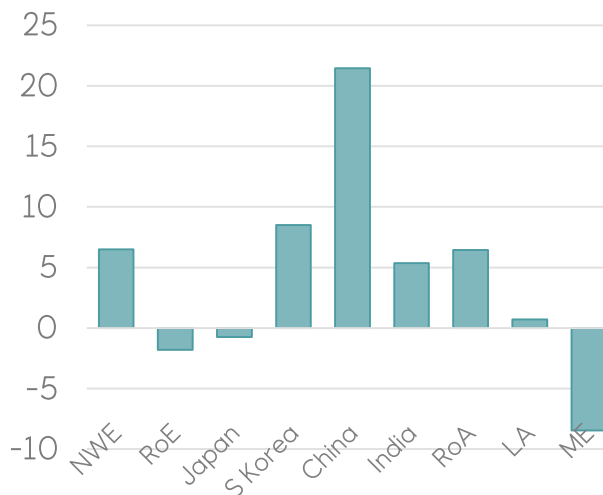
US share of gas, renewables and coal  
in electricity generation  
%-share



Gas important source for  
electricity generation both  
in the US and in Europe



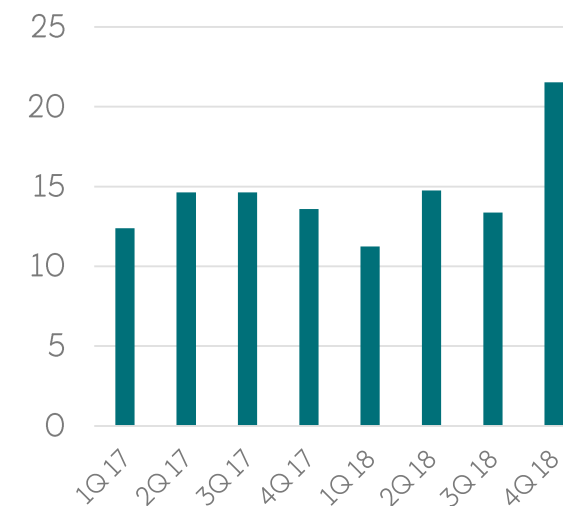
Global LNG import,  
2017 vs 2018  
bcm



China and Asia  
engine for global gas  
demand growth



European LNG import,  
2017 vs 2018  
bcm

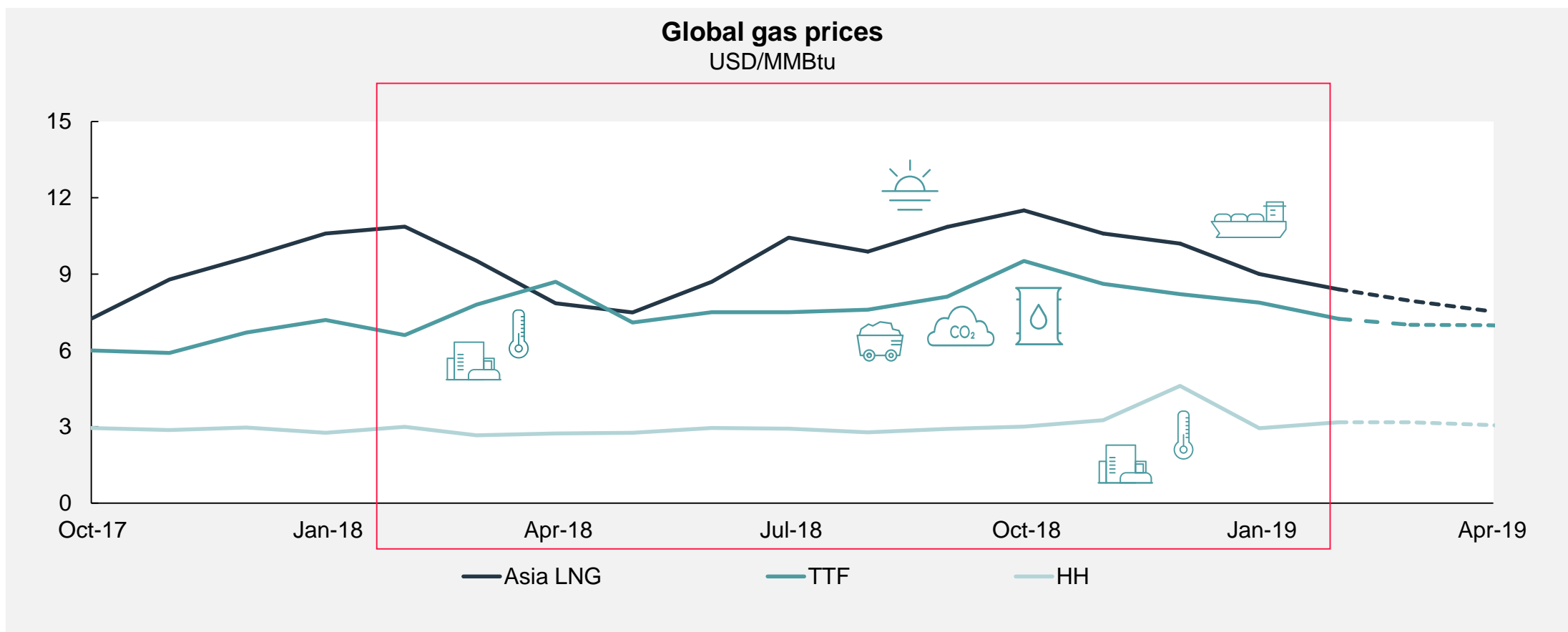


Europe increasingly reliant on gas  
imports and will face competition  
to attract the required LNG



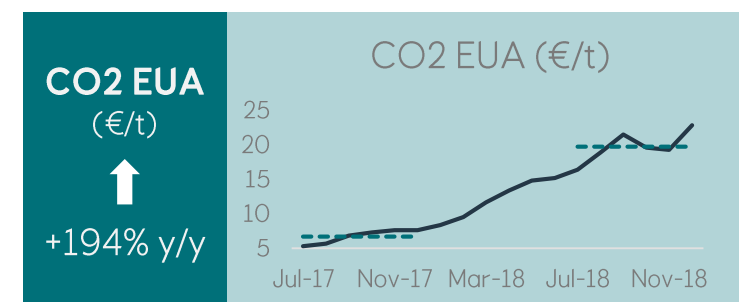
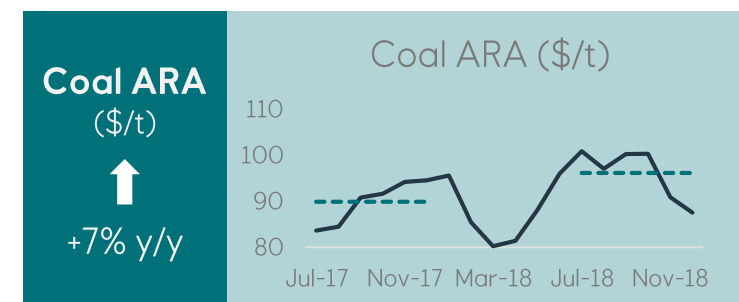
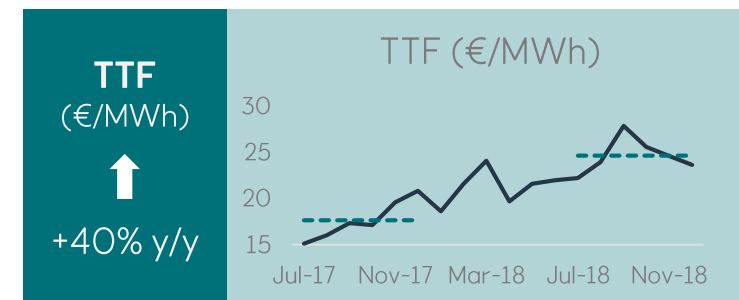
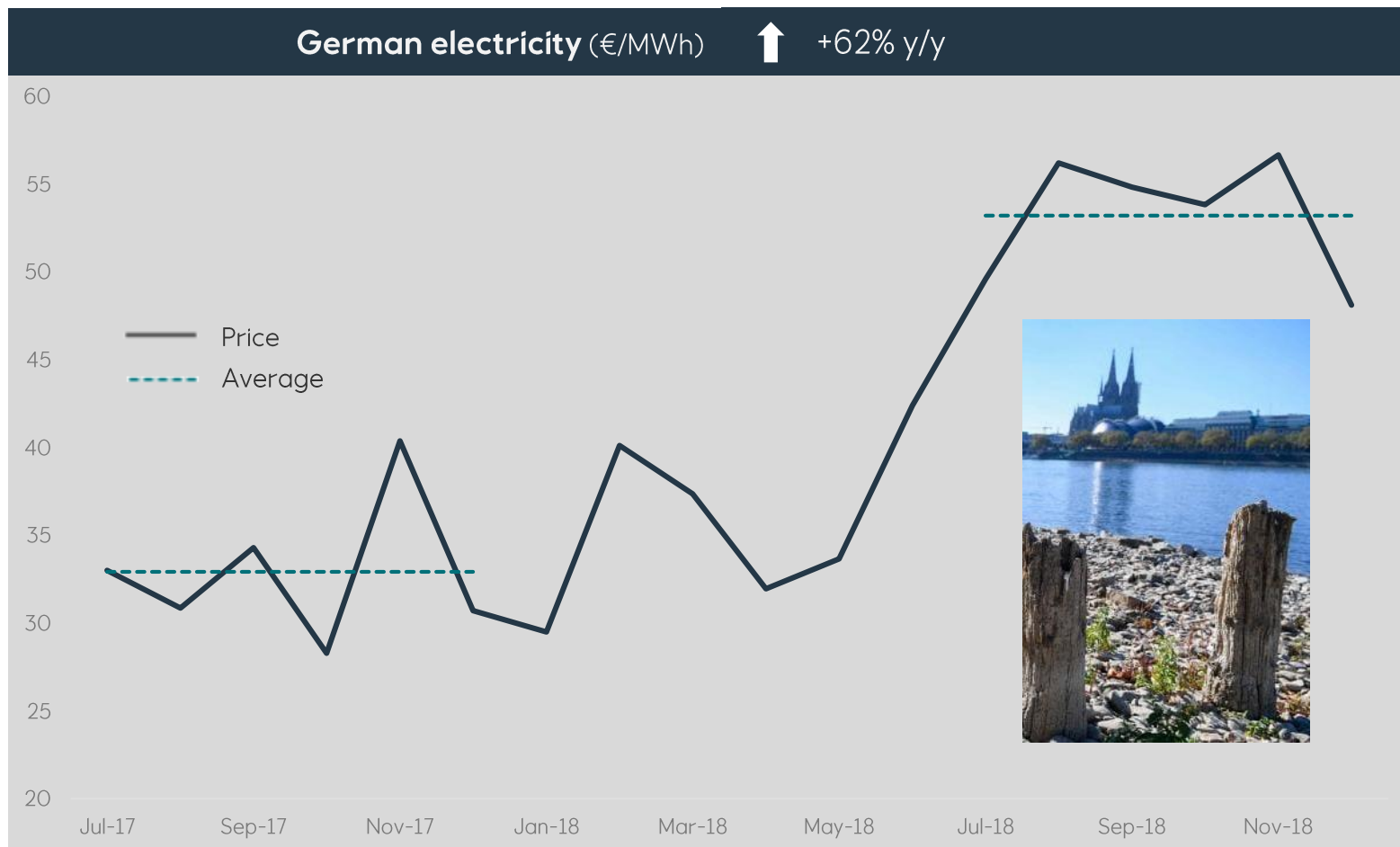
# Strong gas prices Asia and Europe

## Fundamental drivers influencing price movements

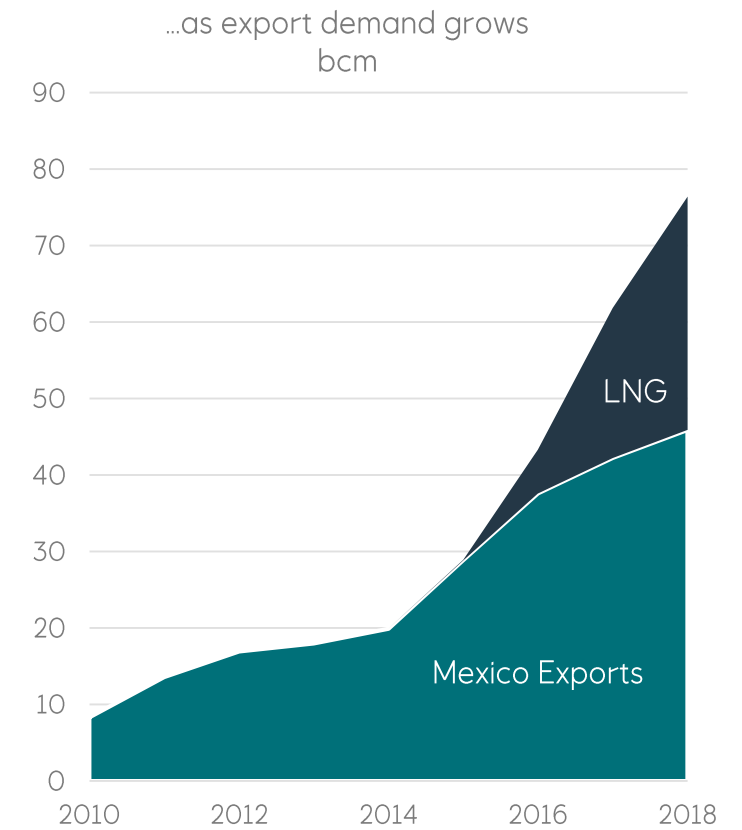
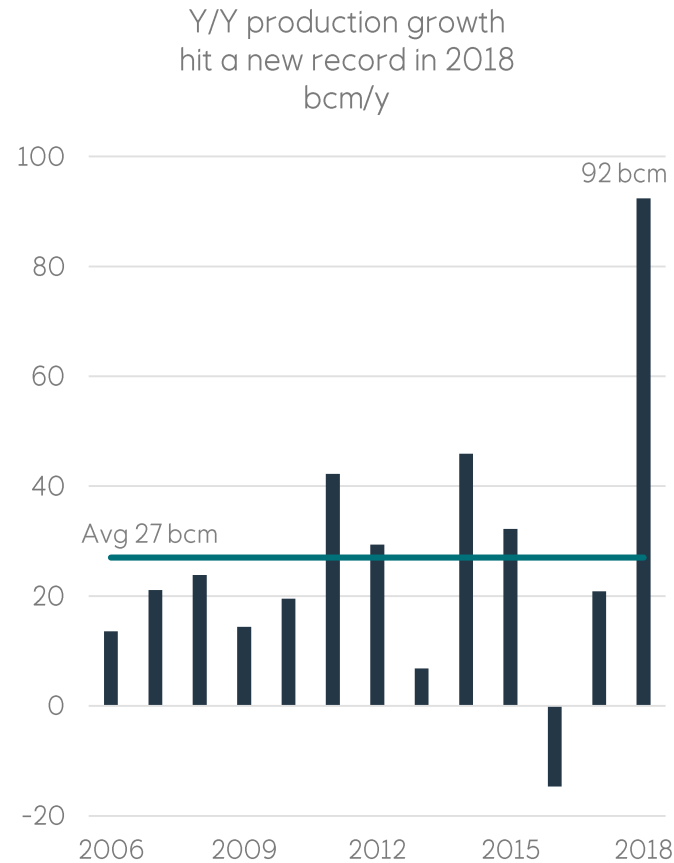
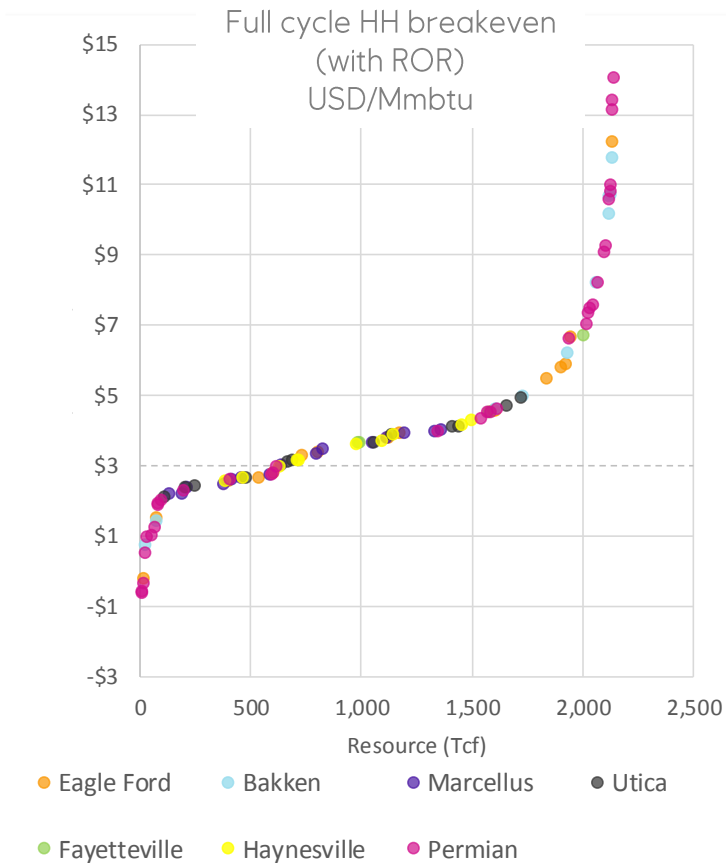


# Fundamentals driving strong electricity prices

Gas, coal and carbon leading the way, helped by extraordinary summer temperatures

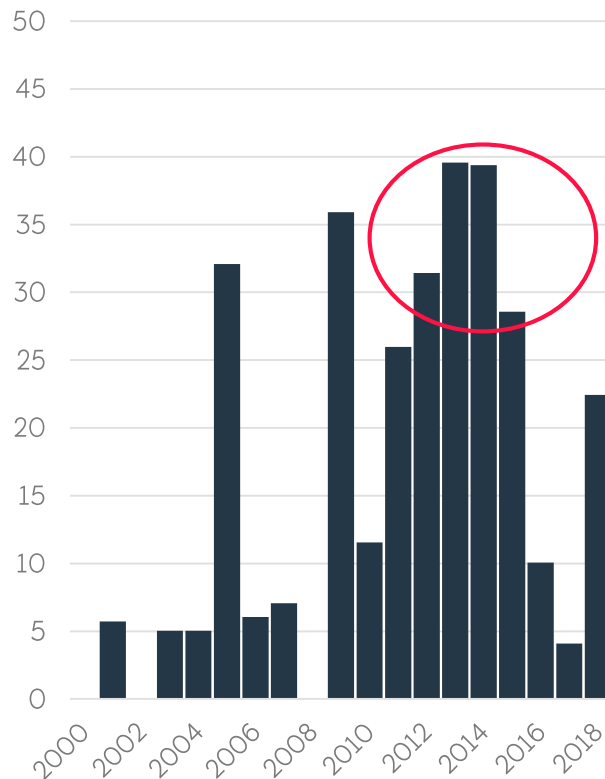


# US record production growth is resulting in higher export levels... ...keeping market balances tighter than many had expected

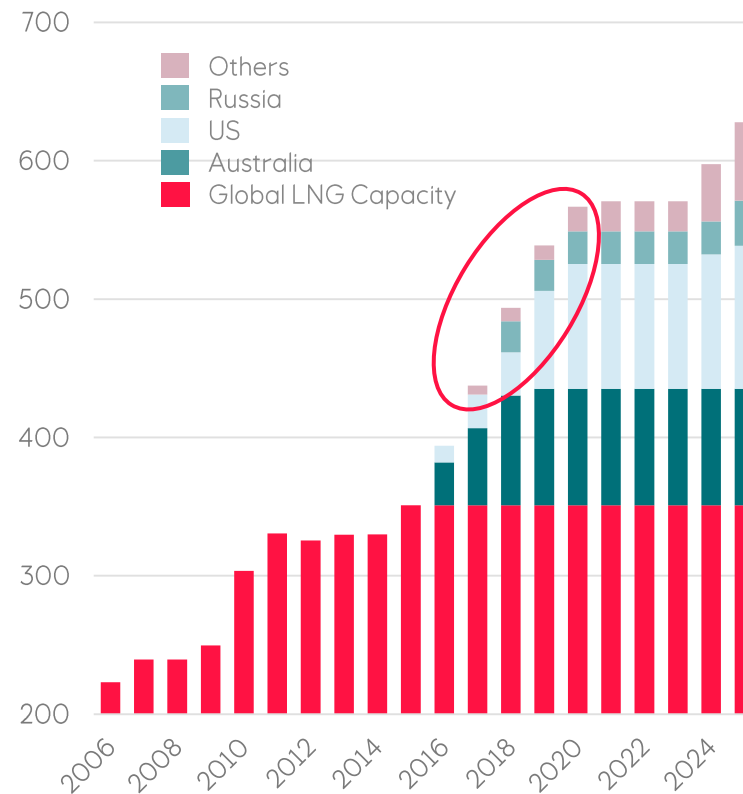


# The global LNG market is growing and cyclical... ...and it will tighten earlier than previously assumed

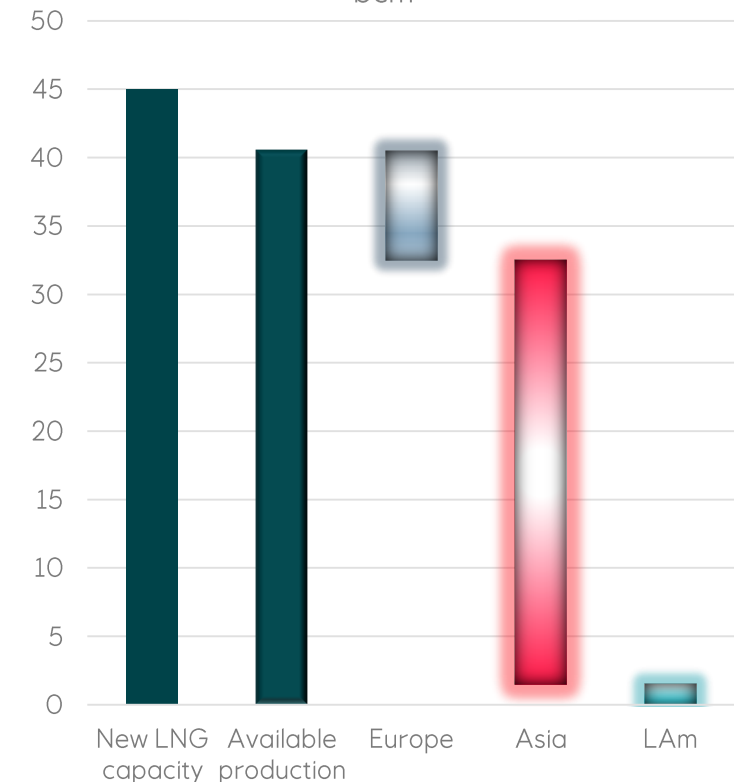
LNG investment cycles  
sanctioned capacity  
bcm



LNG capacity ramp-up  
bcm



Incremental LNG  
demand in 2019  
bcm

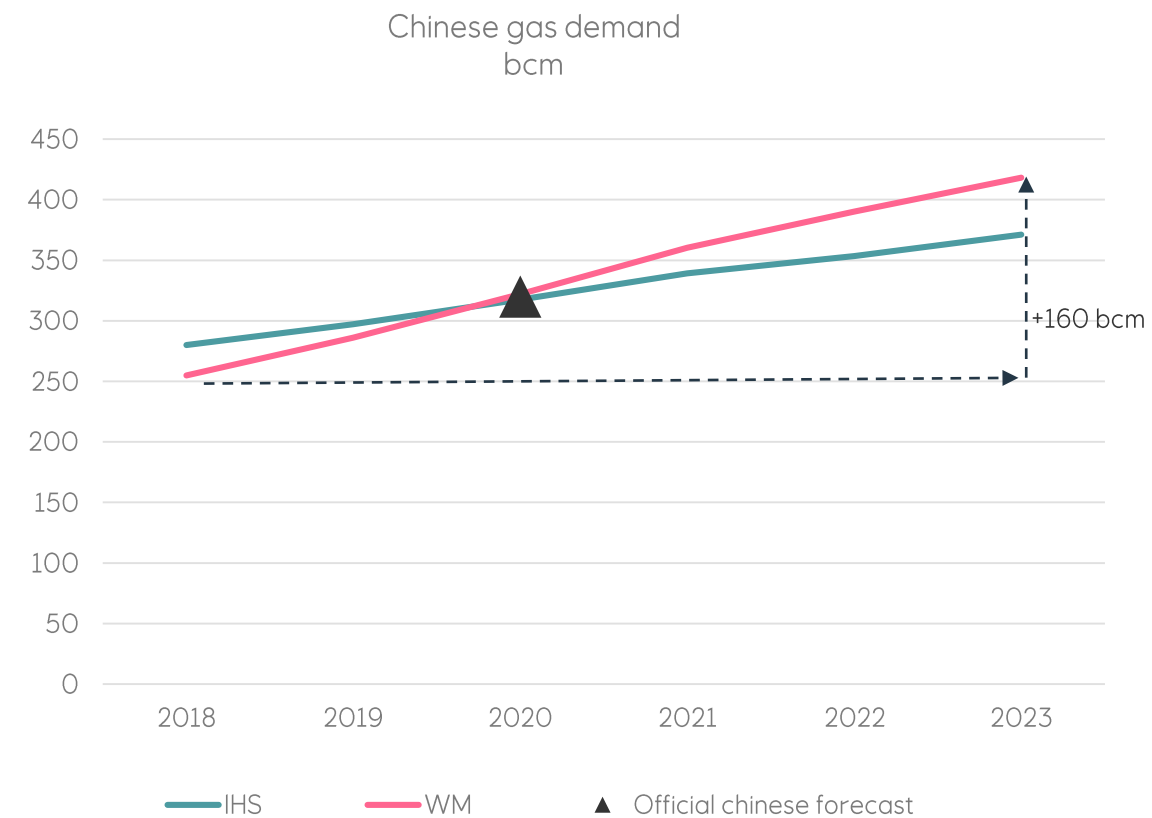
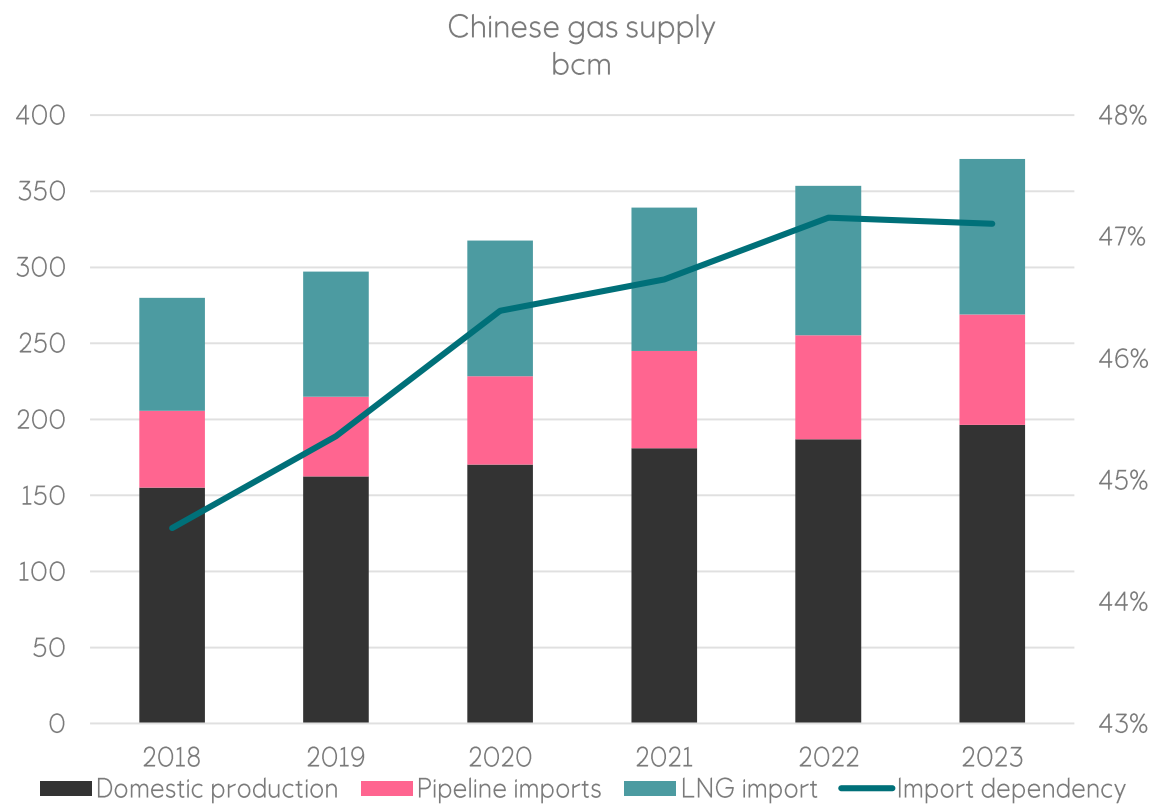


Sources: IHS, Equinor Analysis



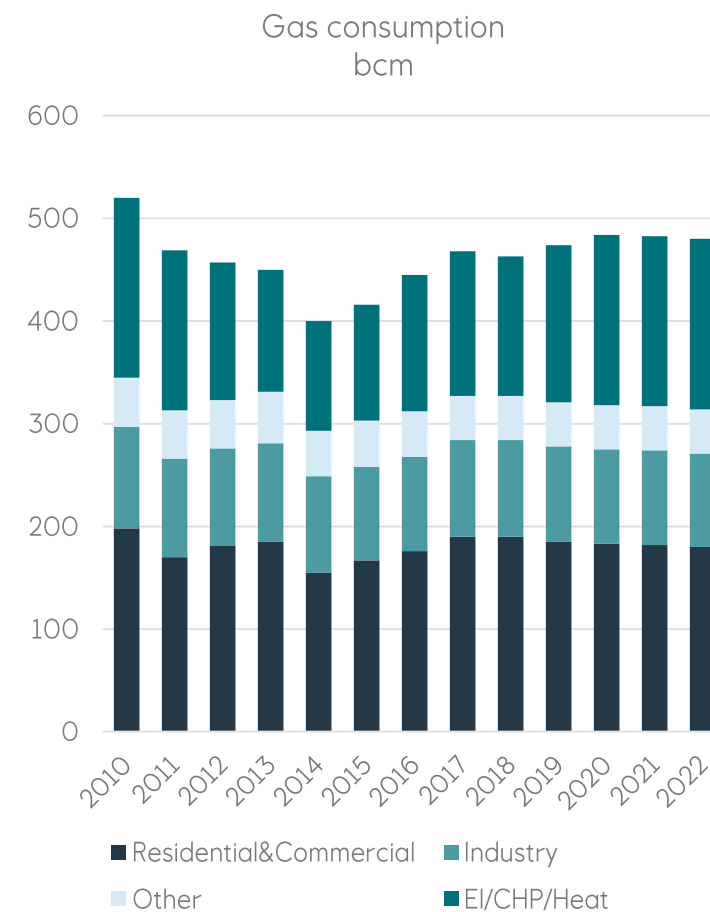
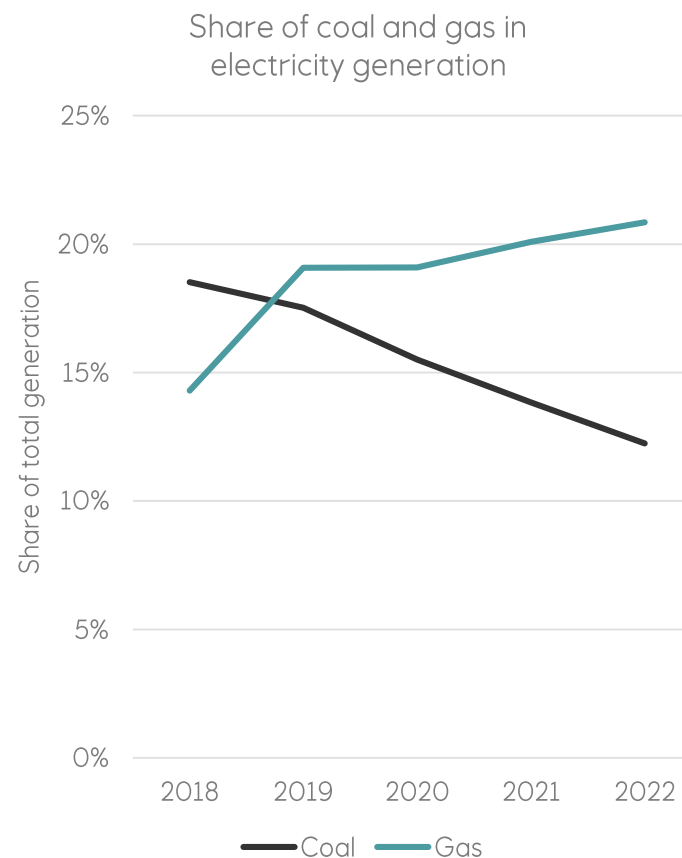
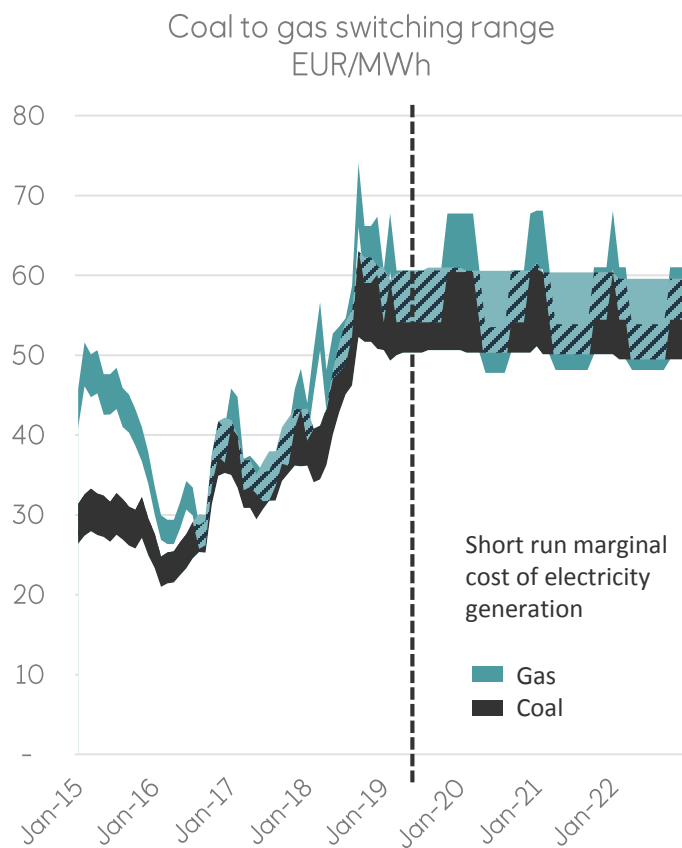
# Chinese gas supply and demand projections

## Large growth potential based on Chinese governmental targets



# Firm European demand

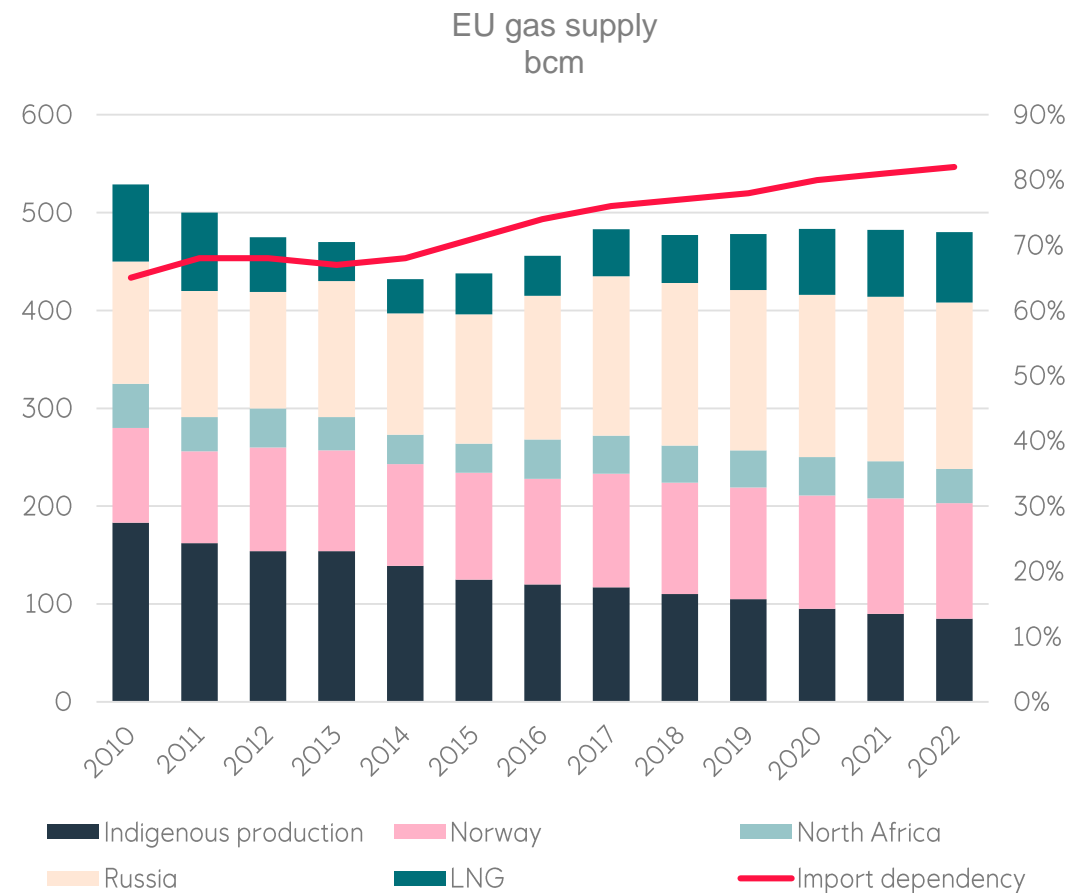
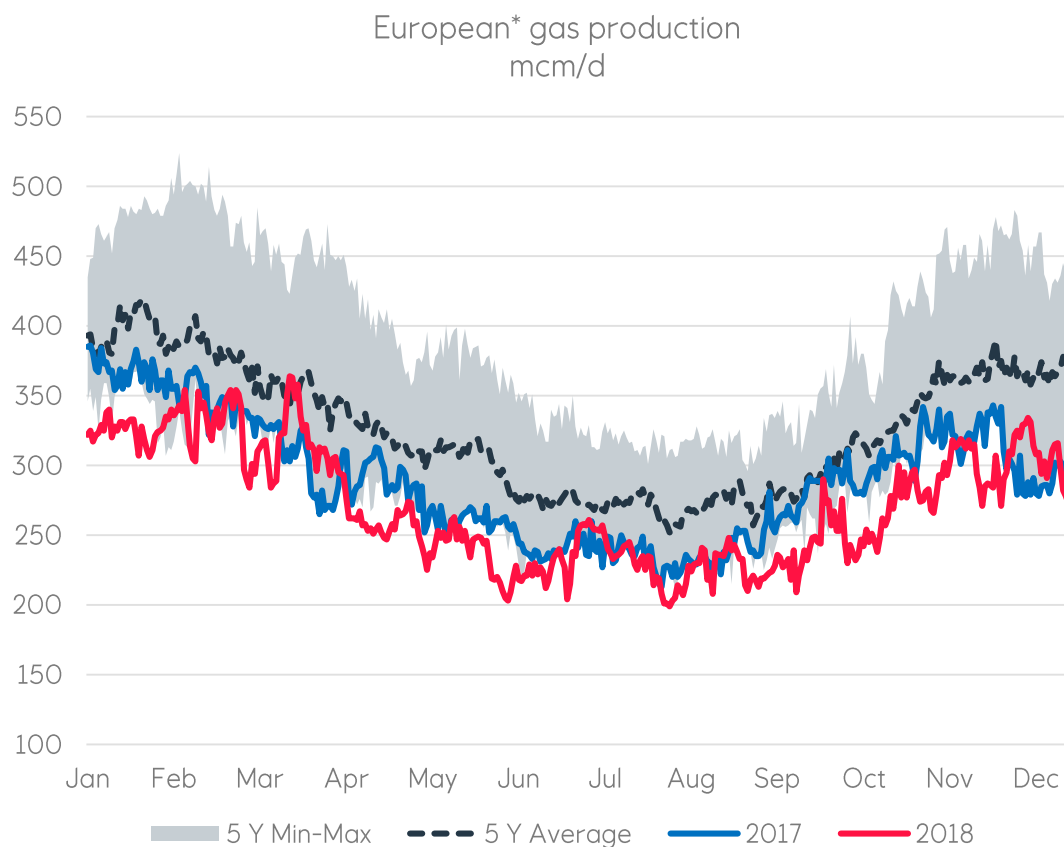
## Increasing space for gas in the European generation mix



Sources: TSO's data, Equinor Analysis, Thema













# European supply

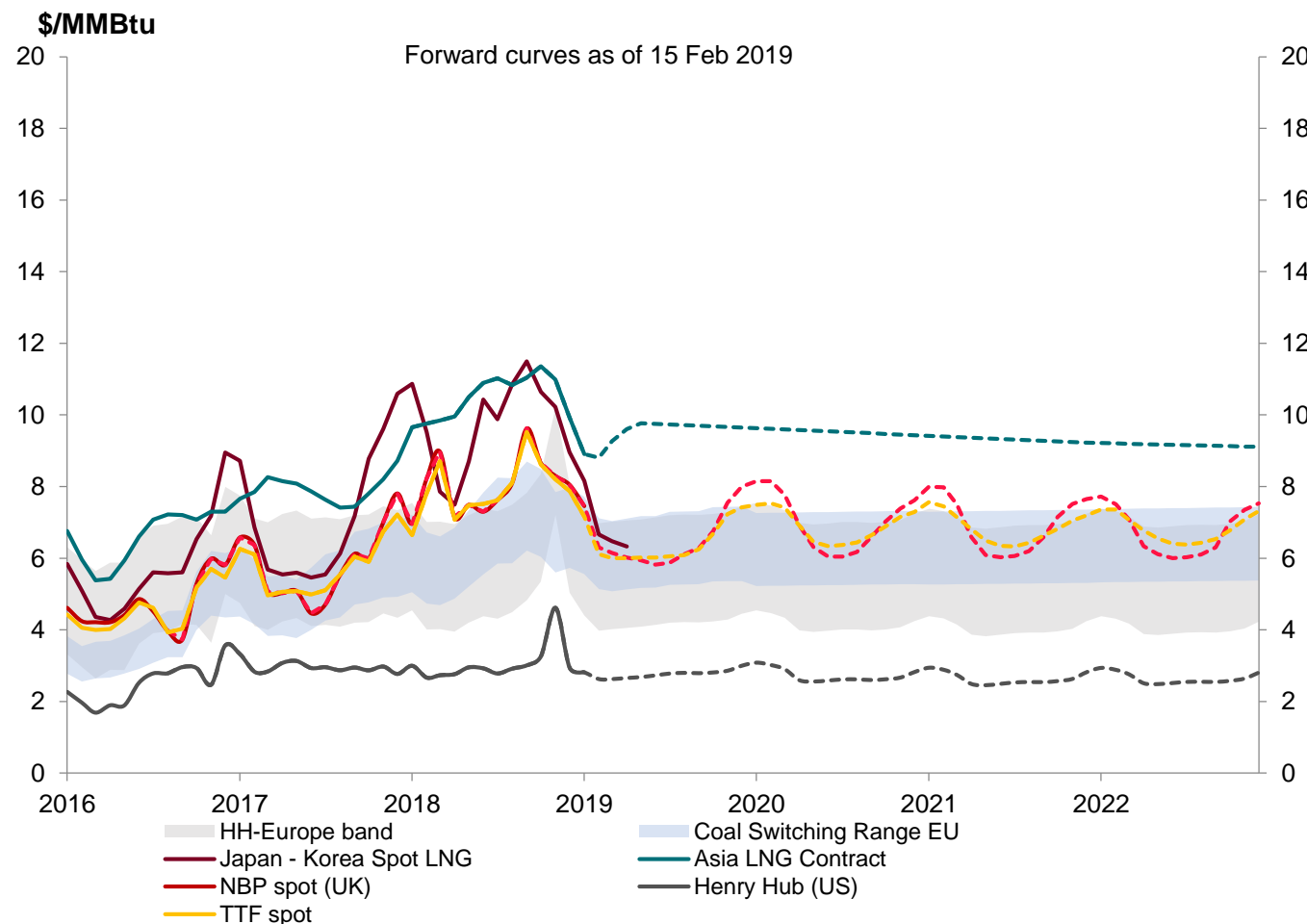
European import dependency increases as a result of decline in indigenous production



Sources: TSO's data, Equinor Analysis

# European gas price outlook

Key drivers Europe	Impact on price	
	2019	2022 ->
Domestic production		
Pipeline imports		
Storage inventories		
Demand factors		
Global LNG demand		
Global LNG supply		



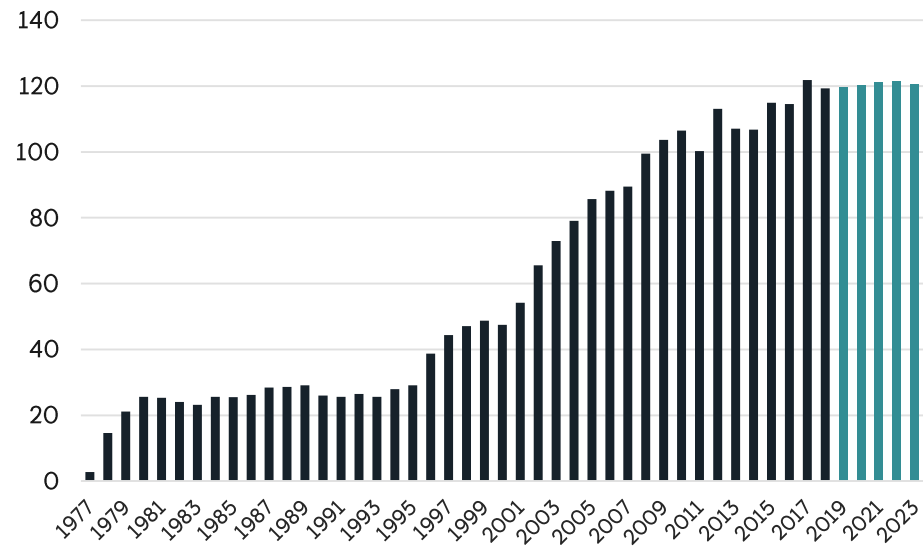


## Creating value from premium market access

Tor Martin Anfinnsen, Senior Vice President  
Marketing and Trading

# Supplying gas markets with record volumes

Historical and expected production in Norway's gas in BCM, The Norwegian Petroleum Directorate



# Maintaining a competitive NCS

Troll phase 3



Aasta Hansteen



Polarled



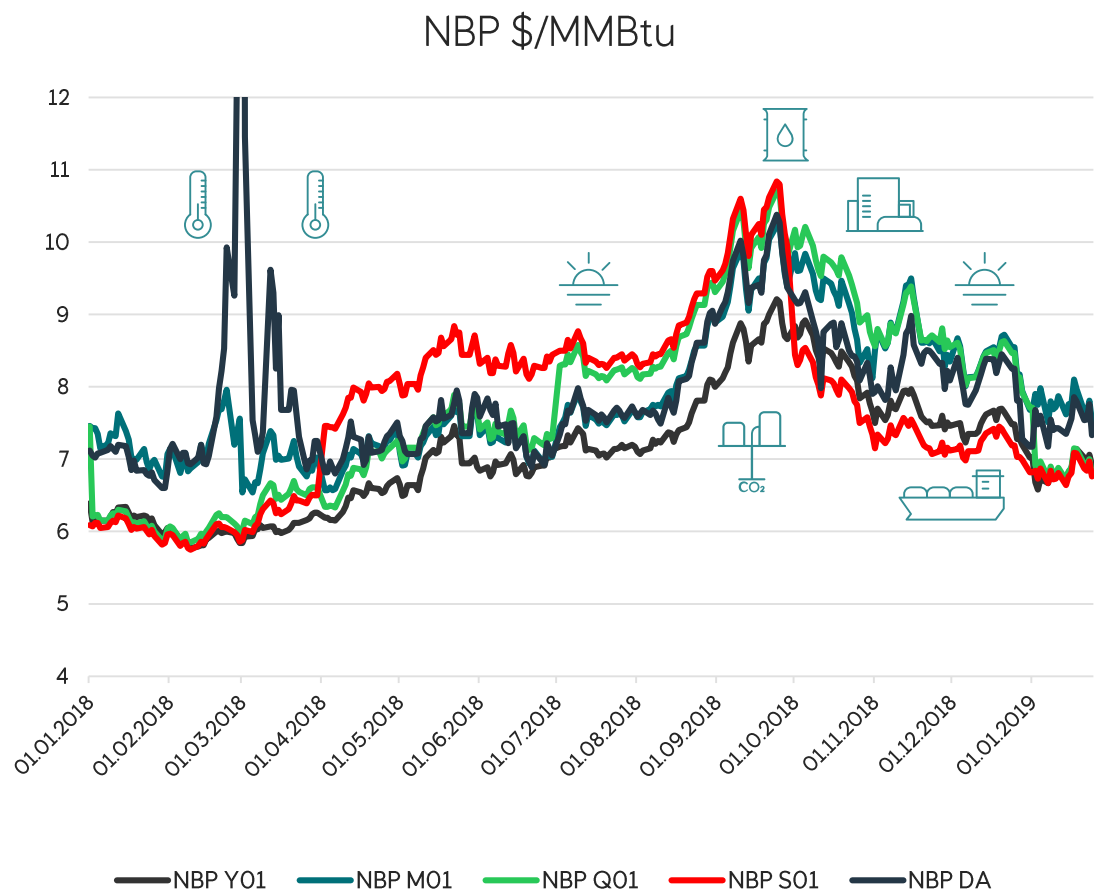
## Export capacity to key markets



- Production of ~10 BCM/yr from Marcellus, Utica and Eagle Ford
- Export capacity to markets around New York, Toronto and eastern Canada
- Towards demand growth area in the Gulf Coast



# Capture value in volatile markets

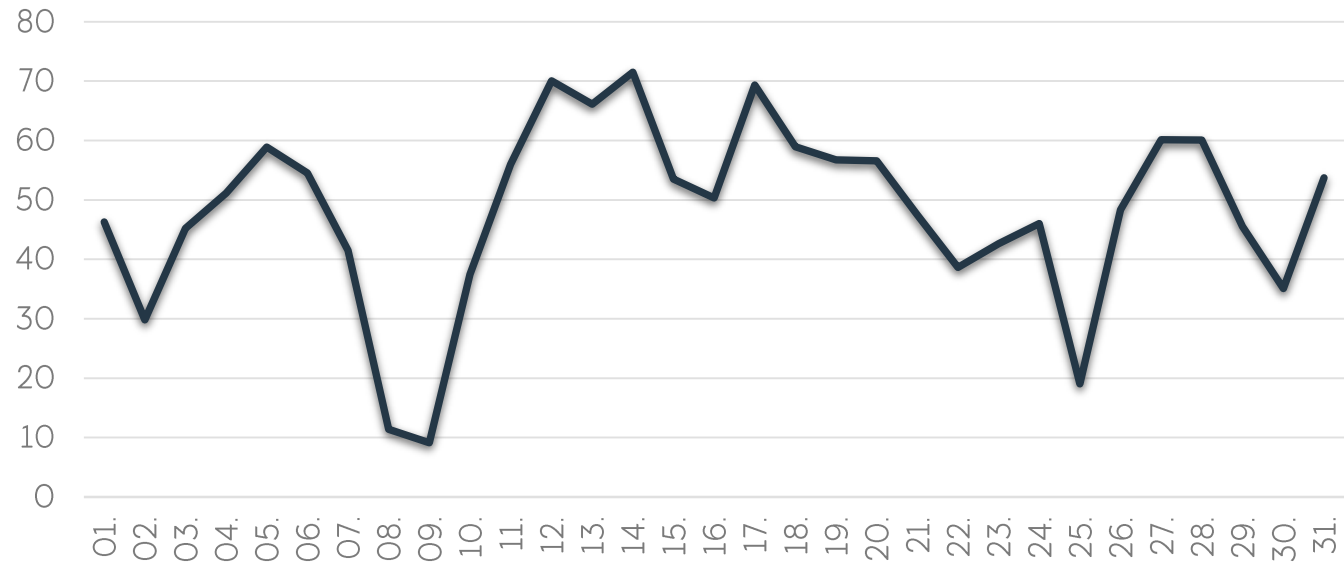


- Volatility is expected to stay high.
- Implying significant variations between markets.
- Demand for gas as a flexible backup will increase.
- Value creation in such markets requires quick adjustments and more active portfolio management.
- Towards 2020 a higher proportion of volumes will be sold on short term indices.

# Capitalising on the acquisition of DC

- Extensive power trading opportunities brings additional dimension
- Reinforce trading capabilities - algorithm trading, risk management tools and processes
- 4000 trades a day
- Annual EBIT ~80 million USD 2018

EUR/Mwh Day ahead prices Germany December 2018



Danske Commodities



## Key messages

### Need for significant energy supply

- Changing global energy markets
- The world needs more energy...
- ... but lower emissions

### Gas contributes to low-carbon future

- Can reduce CO<sub>2</sub> >50% replacing coal
- Can enable more renewable energy
- Can be decarbonised as hydrogen

### Equinor is well-positioned

- Second-largest gas supplier to Europe
- Significant global positions
- Reflecting market changes in our trading

# Investor Relations in Equinor

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