

**Fifth IEA-IEF-OPEC Symposium on Gas and Coal Market Outlooks**

# **The GECF's Natural Gas and Coal Outlooks**

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**GECF**



# What are the main evolutions observed during COVID-19 outbreak?



Competitive natural gas and LNG prices have been predominant in most of the regions



Increasing awareness about the value of having a clean air after lockdowns



Increasing commitments towards net-zero emissions



Upward revision of renewables ambition



Accelerated disengagement or downward revision of coal development plans



Scaling up the deployment of gas decarbonization options (LNG offsetting; CCUS; conversion to hydrogen)

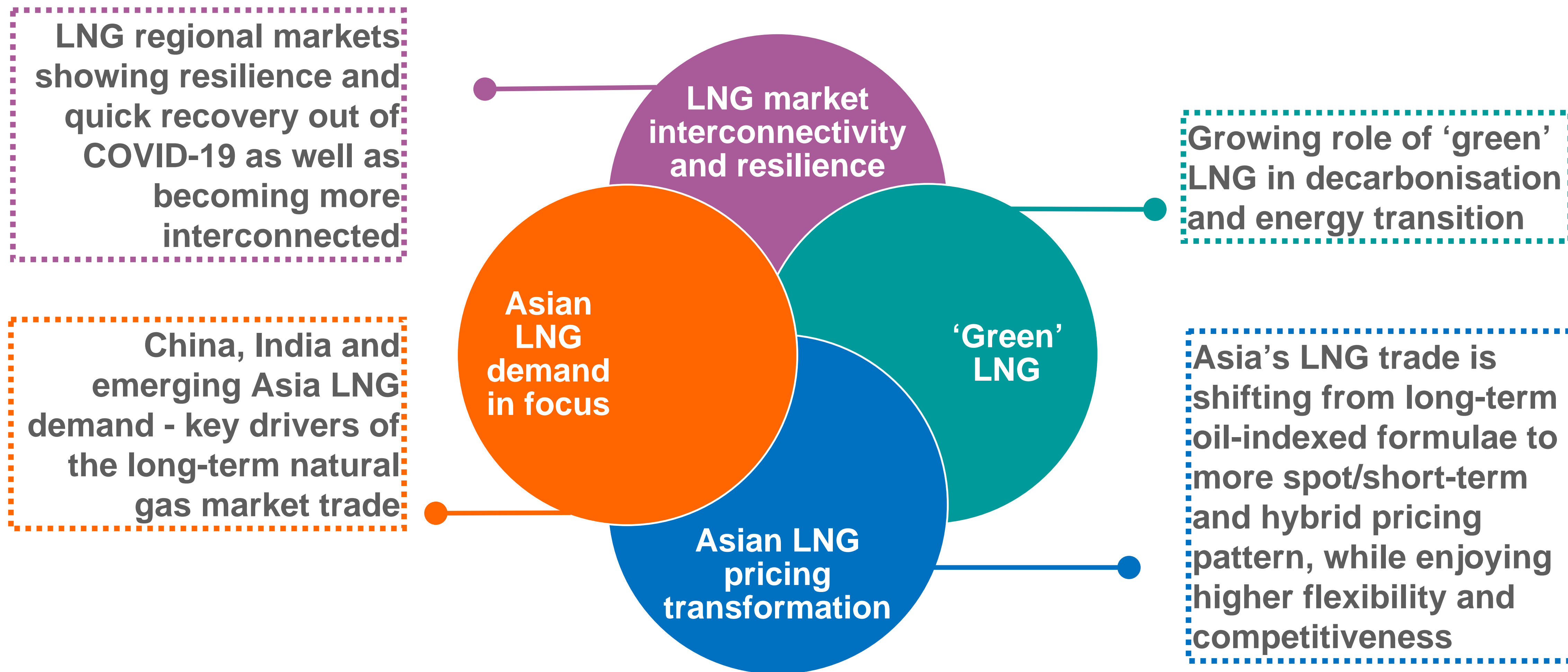


EVs are promoted as part of the clean solutions and post COVID-19 stimulus packages



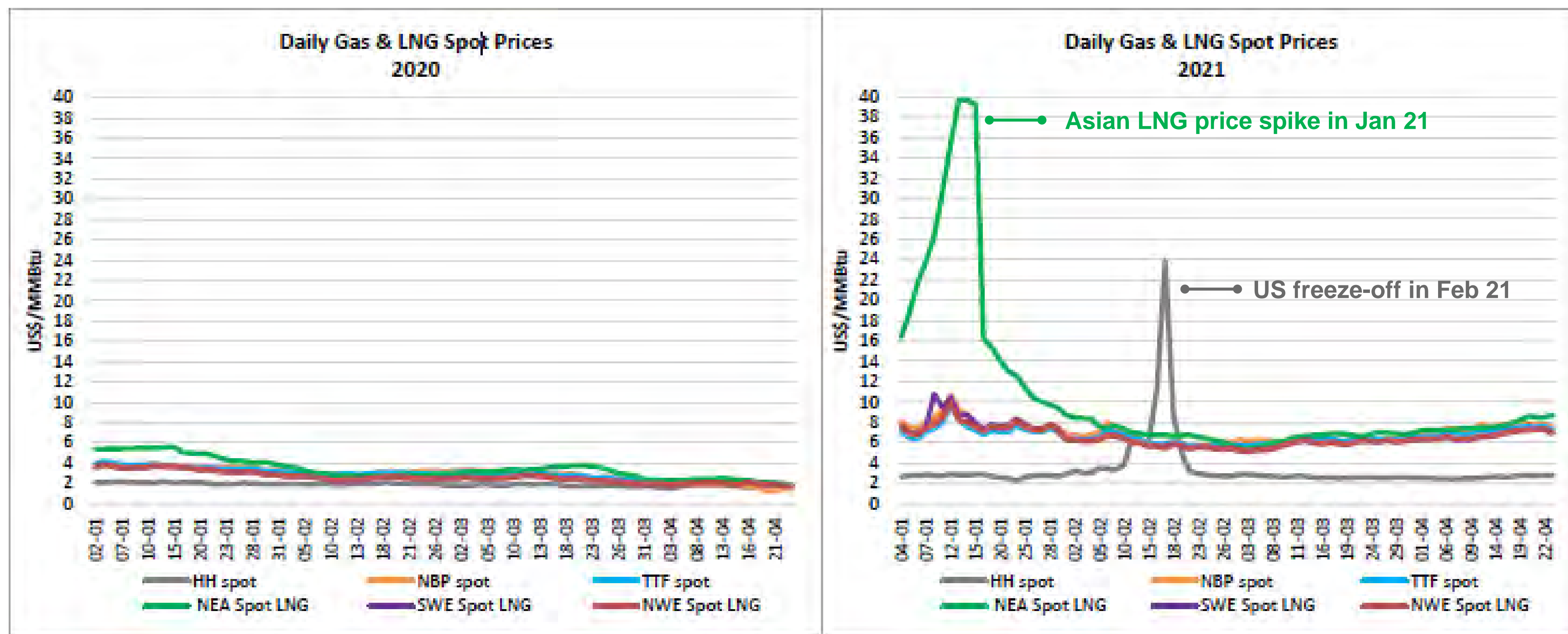
Several announcements and released strategies to support hydrogen economies

# Natural gas trade key trends: Asia's LNG demand in focus



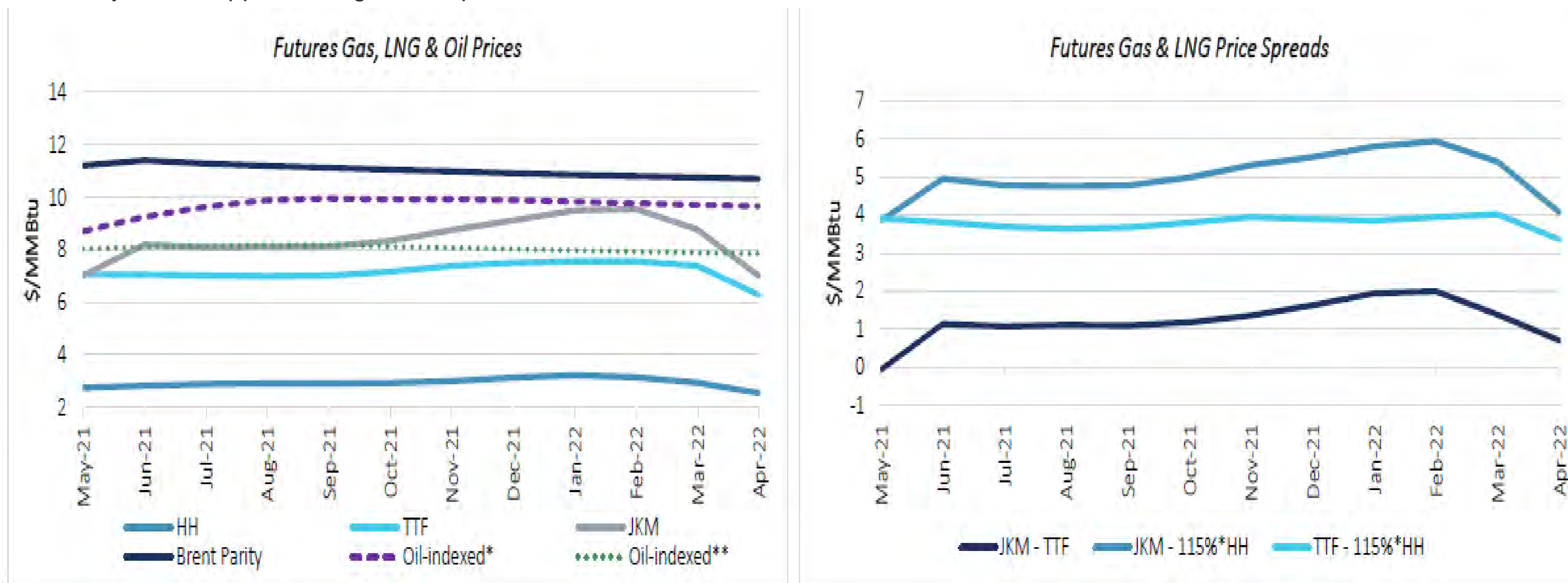


- LNG spot prices demonstrated very high volatility in the beginning of 2021
- COVID-19 resilient Asian liquefied natural gas (LNG) prices have rocketed to record highs in January 2021 due to low stocks, a colder winter, global production outages and shipping delays, charter rates increase
- Henry Hub natural gas spot prices approached their record in February amid significantly colder-than-normal weather that affected most of the Lower US 48 states. Natural gas production declined because of freeze-offs amid high demand for heating and power. At the benchmark Henry Hub, natural gas prices reached \$24 per MMBtu on February 17



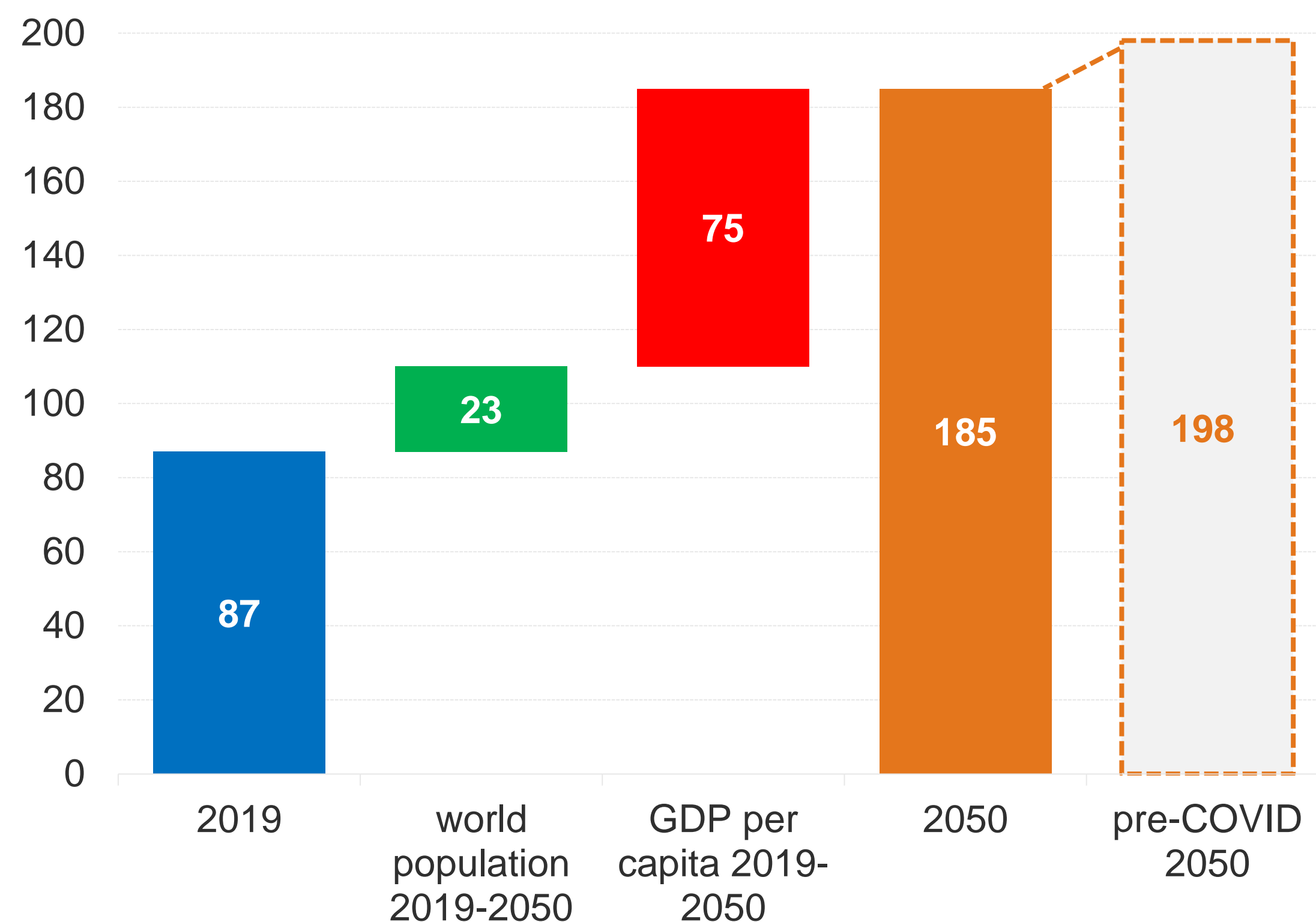
# Oil, Gas and LNG Futures

- Oil-indexed LNG prices are forecasted to average between \$7.5-9/MMBtu in 2021. Although this is an improvement from 2020, prices are expected to be lower than 2019, which results in lower revenues for gas exporting countries.
- Strong LNG demand in Asia and Europe, particularly for replenishing gas/LNG storage, and some planned maintenance activity could support strong futures prices.



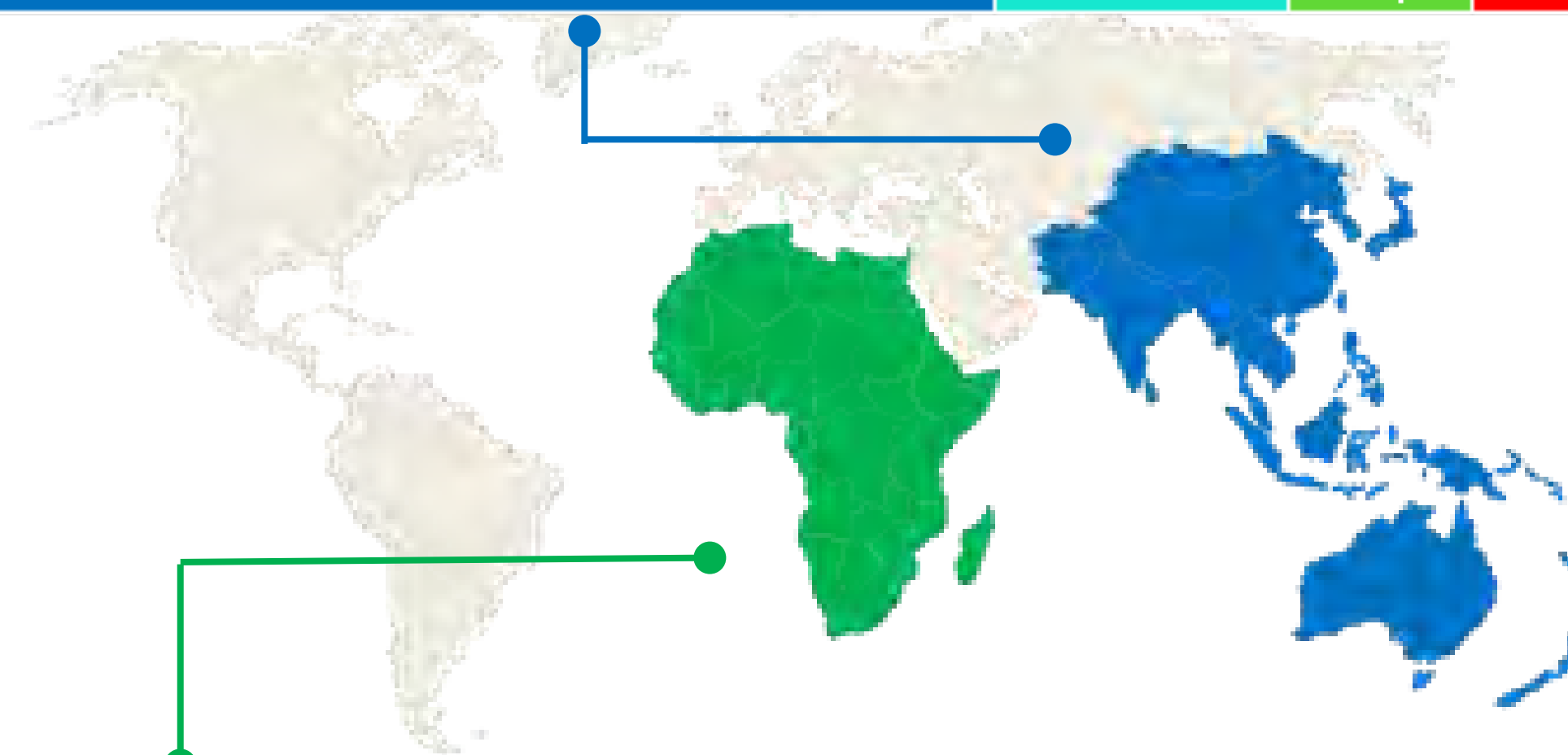
# Global economic prospects

## Global real GDP 2019 - 2050 (trillion USD 2019)



- Global GDP will be 7% or USD 13 trillion lower in 2050 than the previous 2019 forecast (size of China's current economy in absolute terms) because of COVID-19
- Incremental population growth, mainly driven by Africa
- Asia Pacific – economic growth 'champion' contributing 60% of global real GDP growth over 2019 - 2050

### Global GDP CAAGR 2.6% by Region 2019 - 2050



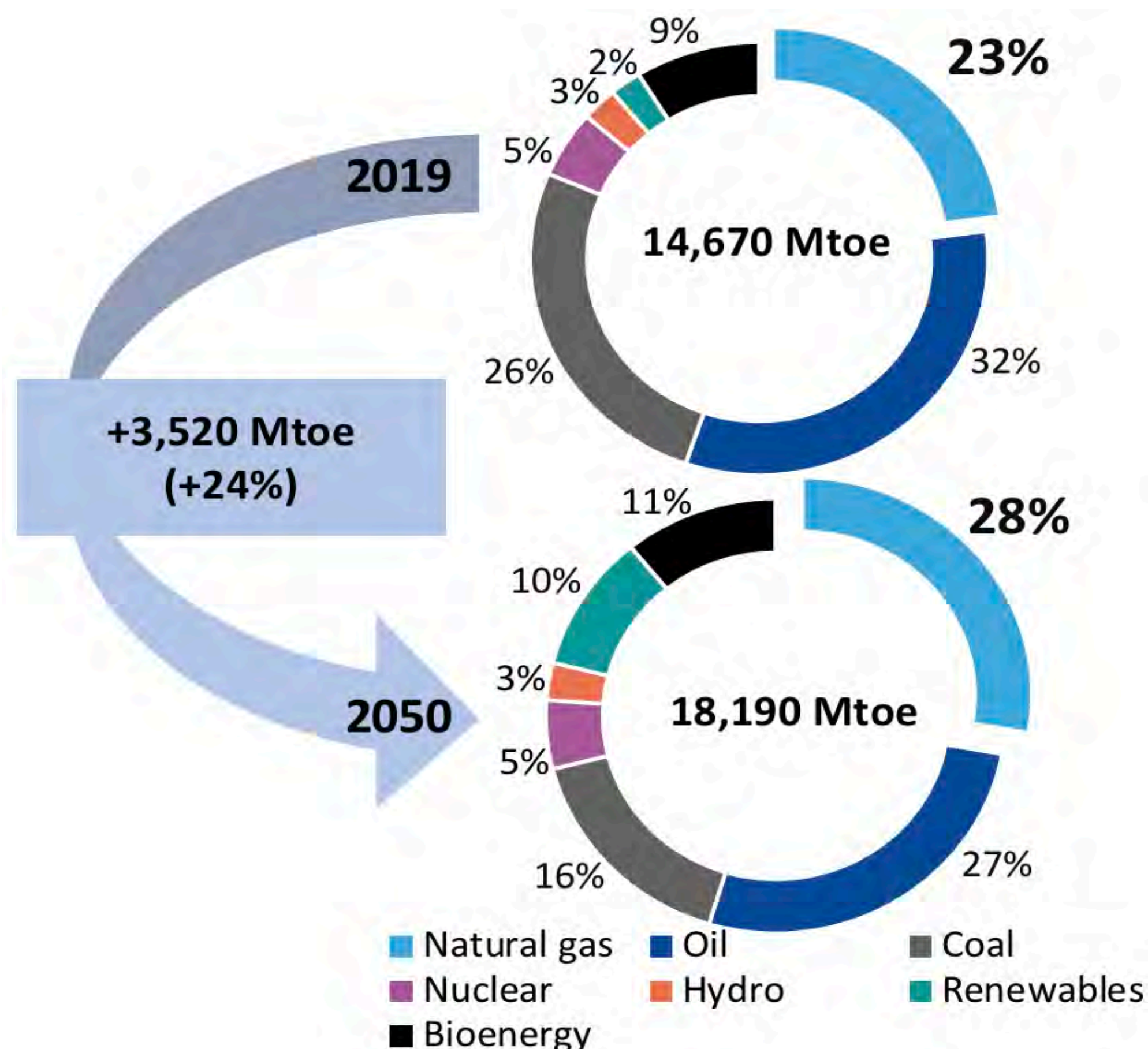
### The World's Population CAAGR 0.7% by Region 2019 - 2050





# Global energy mix

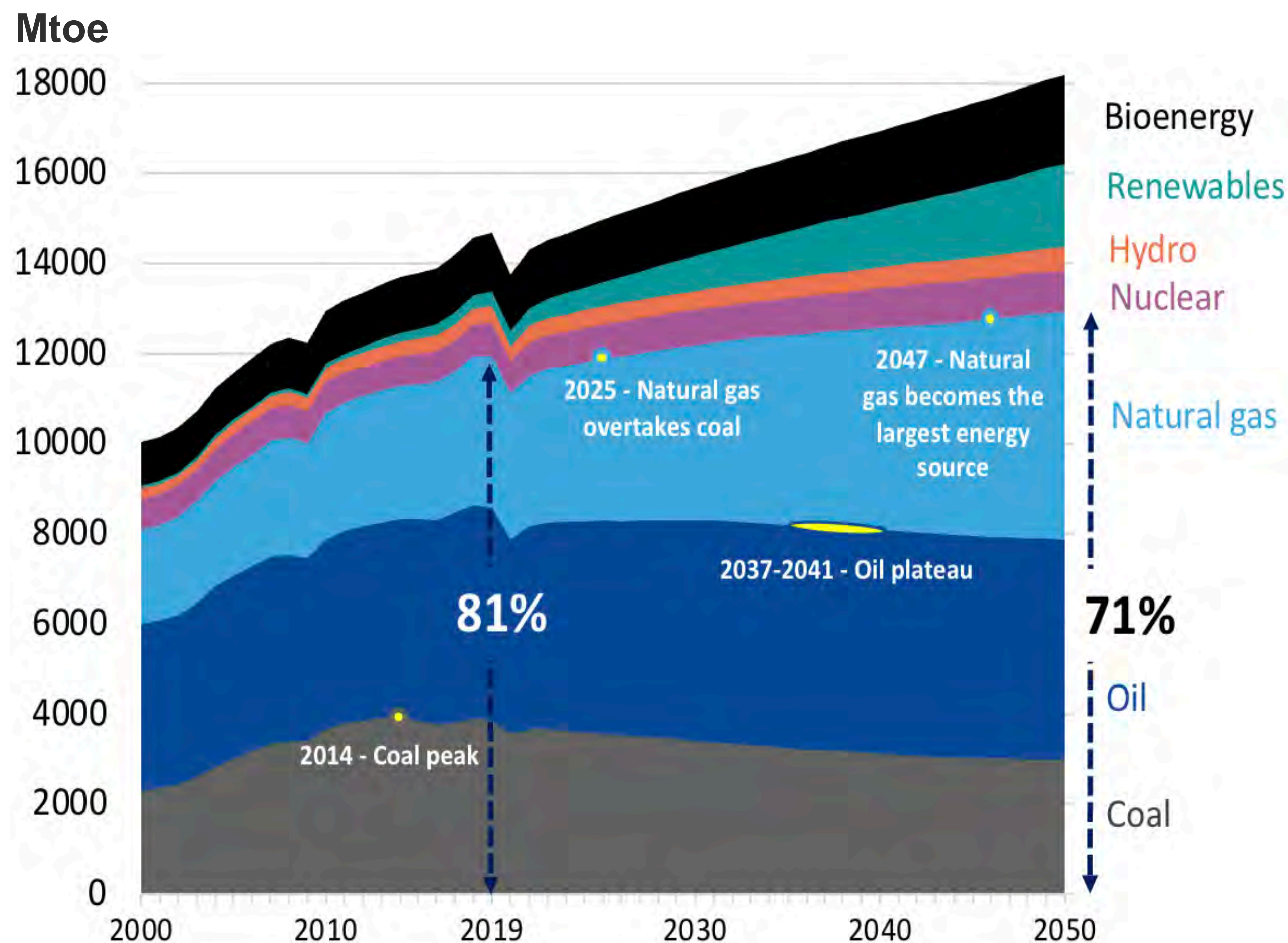
## Global energy mix evolution 2019-2050



Source: GECF Secretariat based on the GECF Global Gas Model

- Natural gas is a destination fuel, indispensable in the long-run and complementing energy transition targets to a low-carbon economy
- Natural gas is #1 in global energy mix by 2050, its share increases from 23% today to 28% in 2050

## Global energy demand trends by fuel type



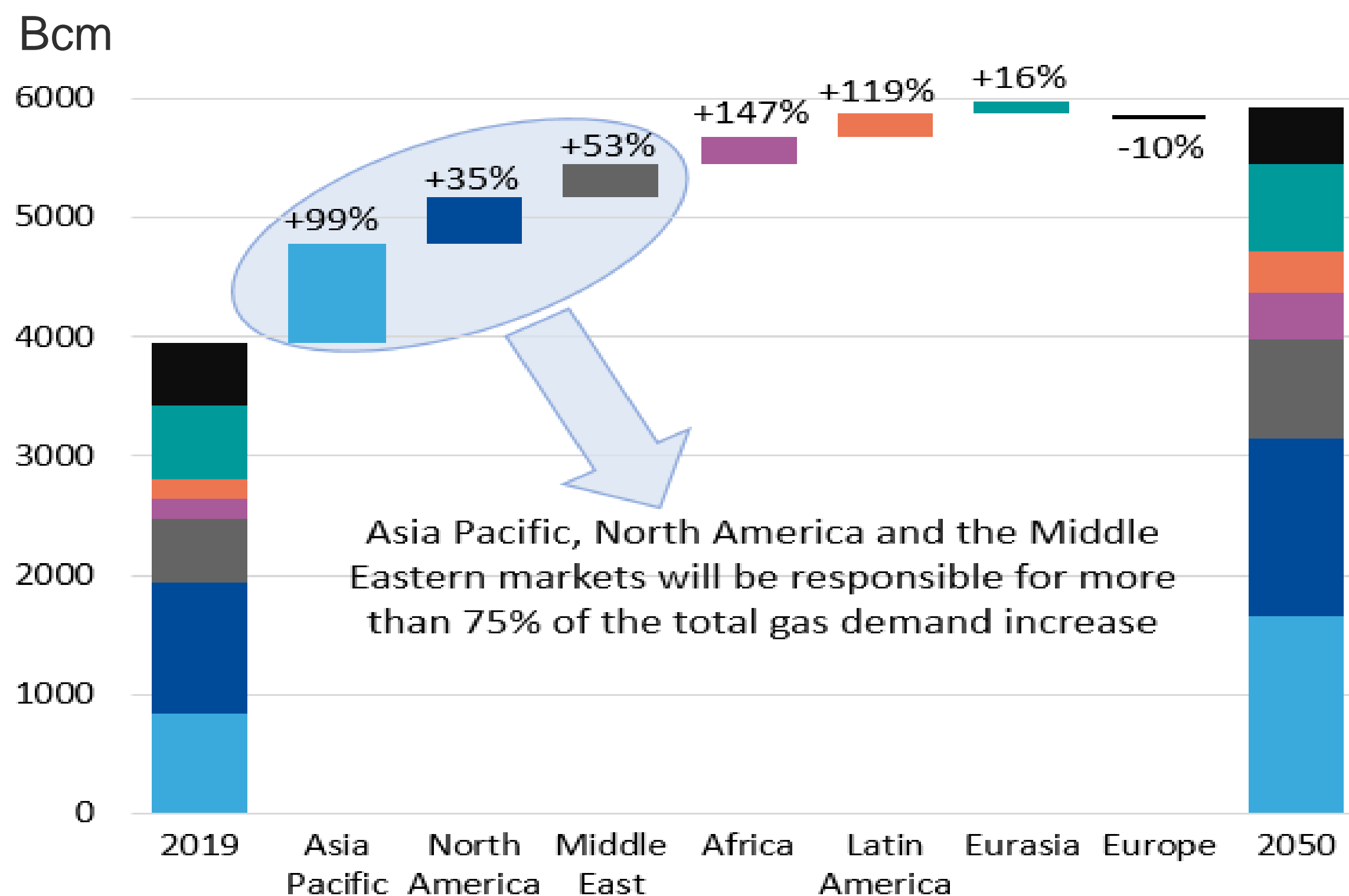
Note: Bioenergy includes traditional and modern biomass



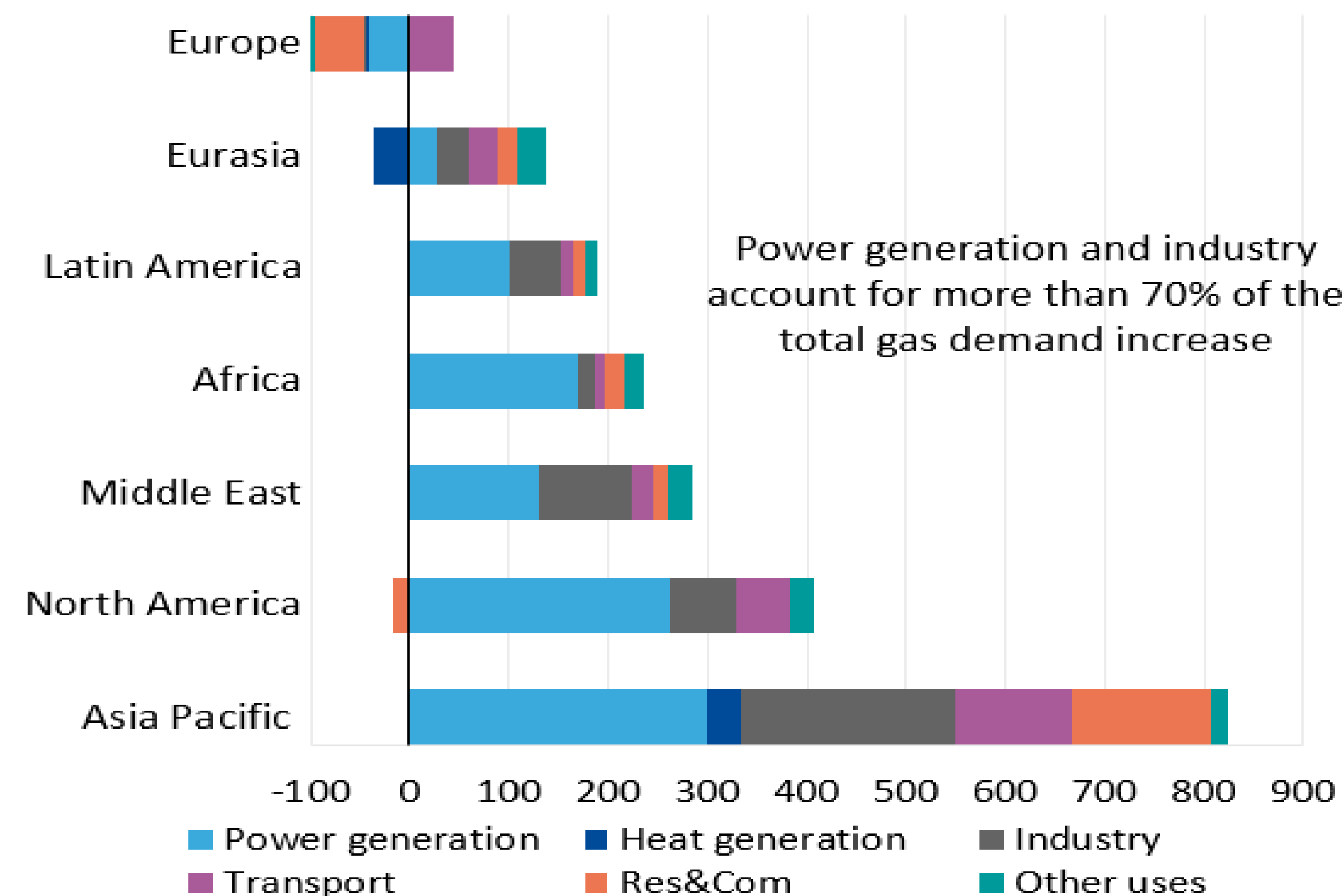
# Key drivers of natural gas demand

- Post-COVID-19 recovery electrification of end-use sectors based on gas-fired generation
- A key fuel suited for medium and high-heat industrial processes as well as a feedstock for manufacturing petrochemicals and chemicals
- The rise of gas usage in land and maritime transport

## Global natural gas demand by region



## Sectoral contribution to regional growth 2019-2050



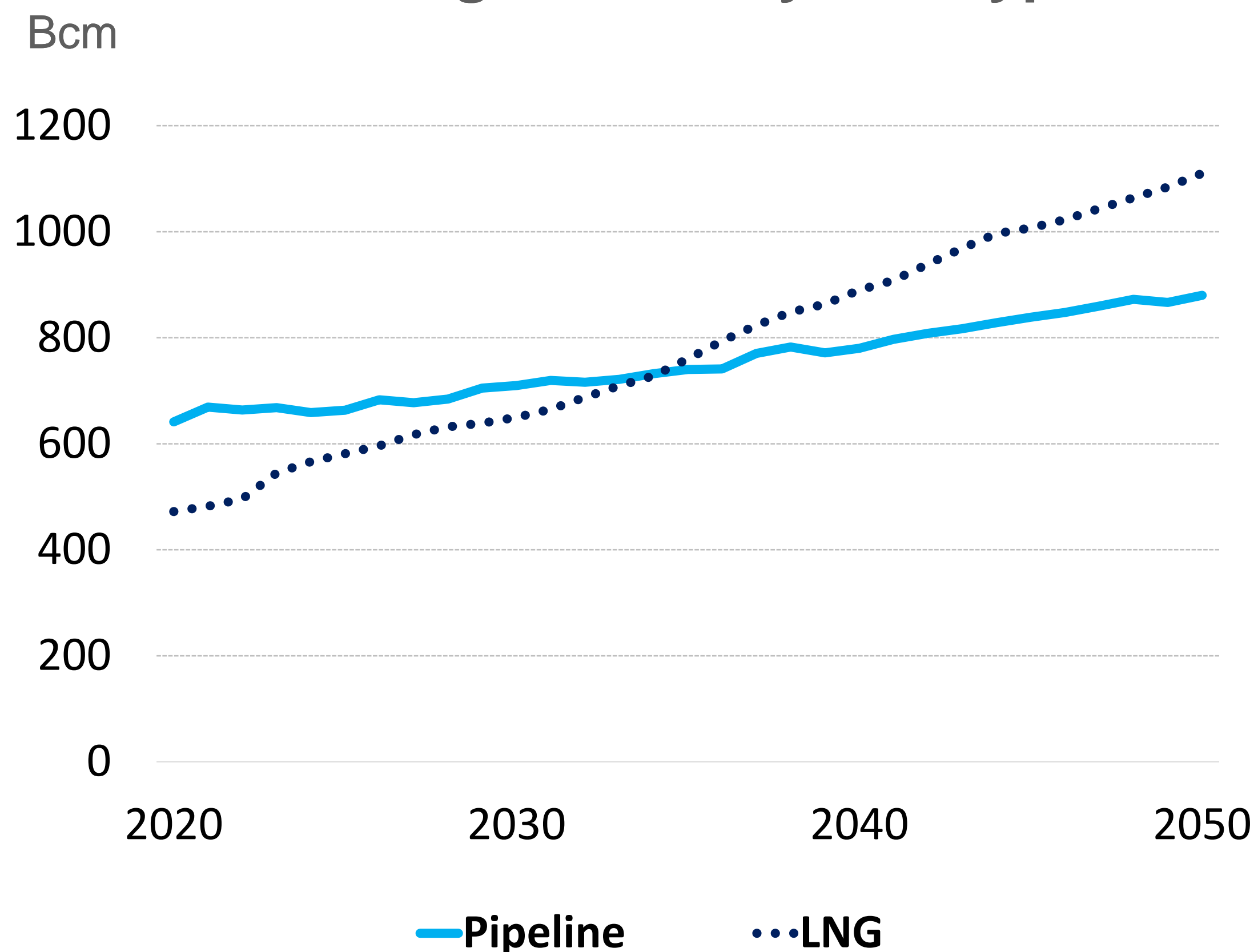
Source: GECF Secretariat based on the GECF Global Gas Model

Note: 1) Industry includes gas used as an energy fuel and feedstock as well as for hydrogen generation and the production of liquid fuels;  
2) Other uses include gas demand for energy industry own use and for pipeline transport.



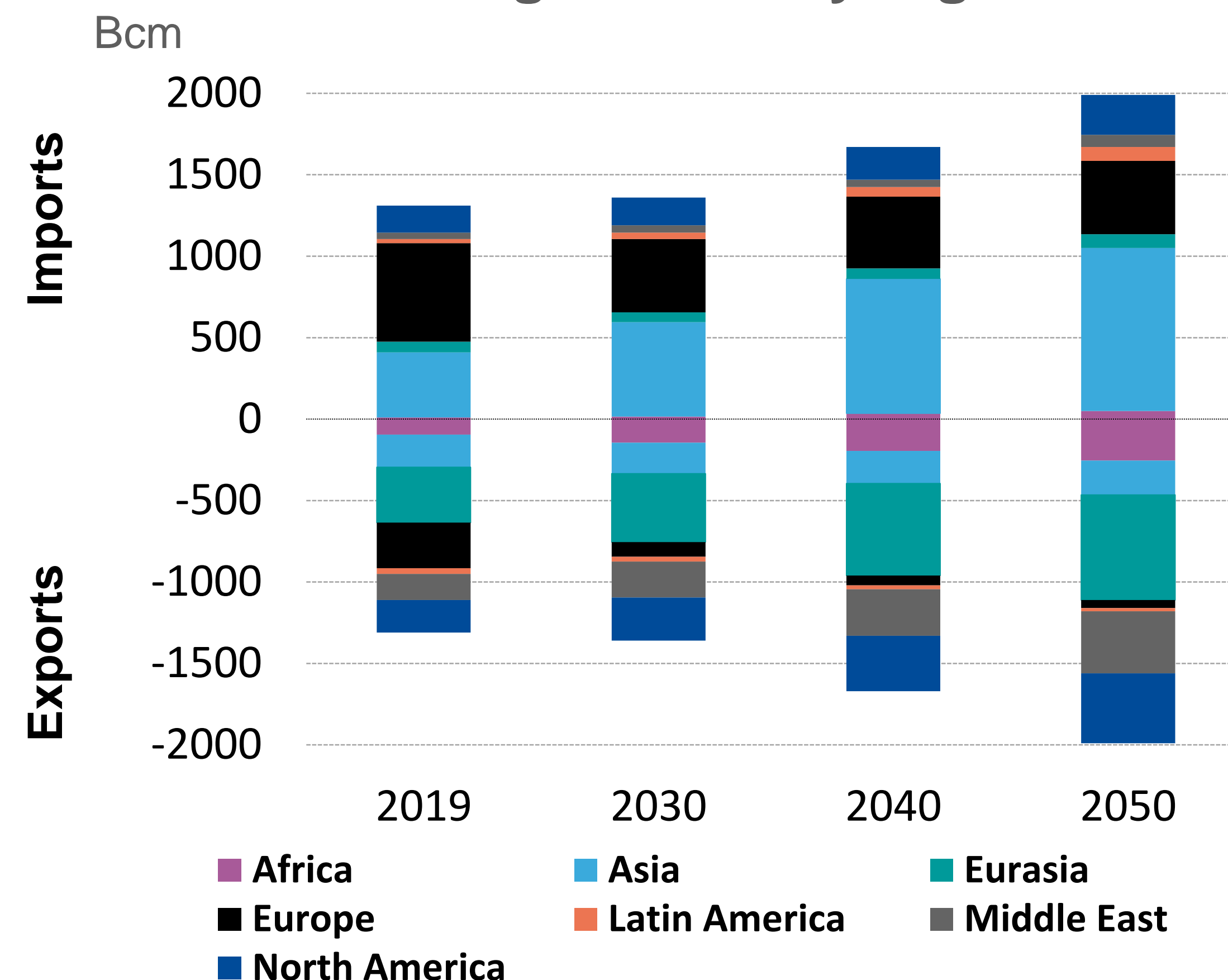
# Global natural gas trade

## Global natural gas trade by flow type



- Global gas trade will reach 1,990 bcm by 2050
- Global LNG trade by 2050 is 820 mt (1,110 bcm)
- LNG trade will overtake pipeline trade in mid 2030s with Asia-Pacific – key LNG importing region
- Introduction of green LNG

## Global natural gas trade by region

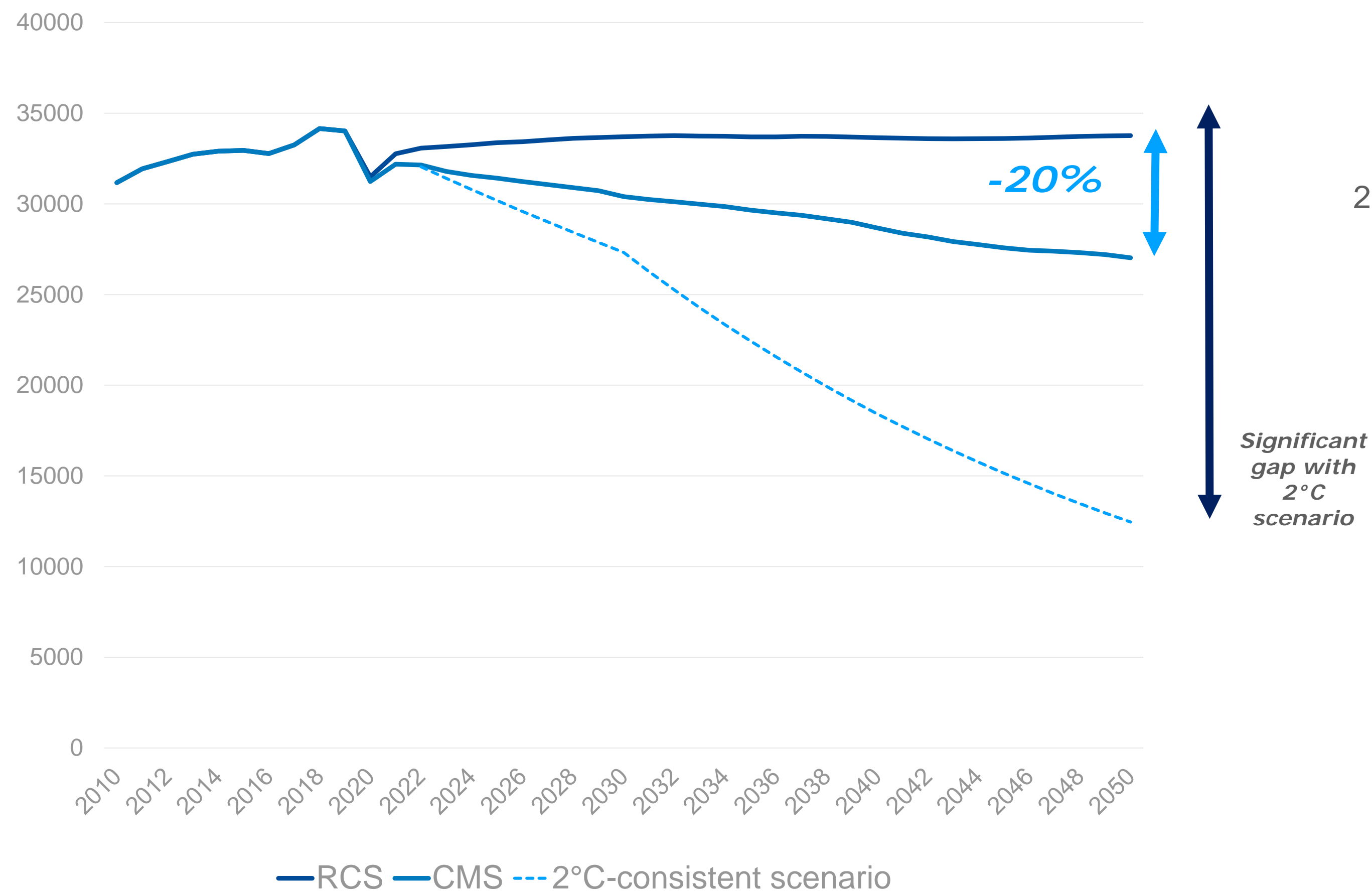




# Energy-related CO<sub>2</sub> emissions prospects

## Emissions forecasts in the GECF Reference Case (RCS) and the Carbon Mitigation Scenario (CMS)

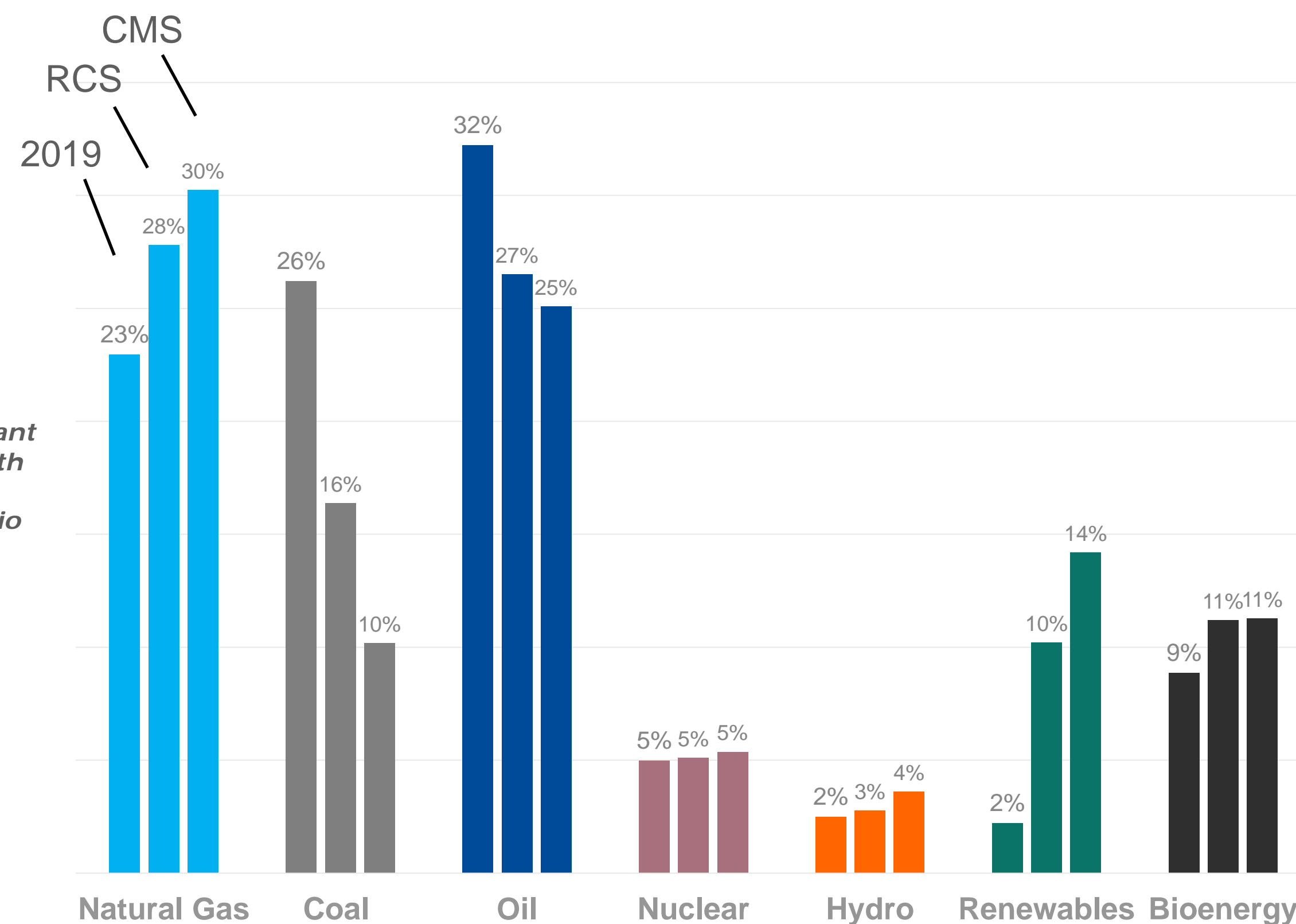
MtCO<sub>2</sub>



The CMS considers more penetration of gas and renewables, basing on larger dissemination of existing and well proven technologies

- There is potential to reduce emissions with larger gas penetration.
- Further decarbonization of gas (e.g. through CCUS, hydrogen...) enables to bridge the gap with 2°C scenario

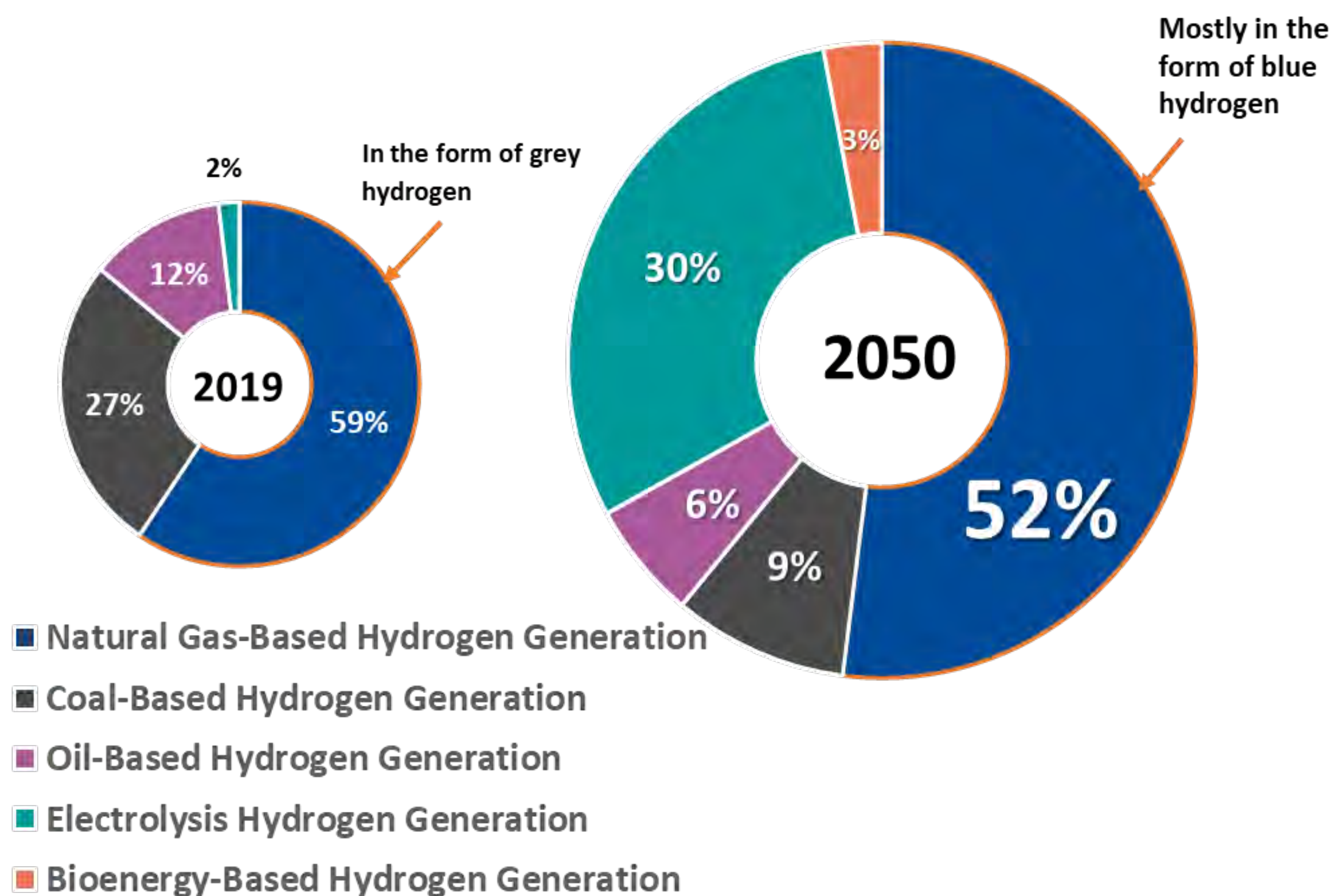
## Fuel shares in the primary energy mix





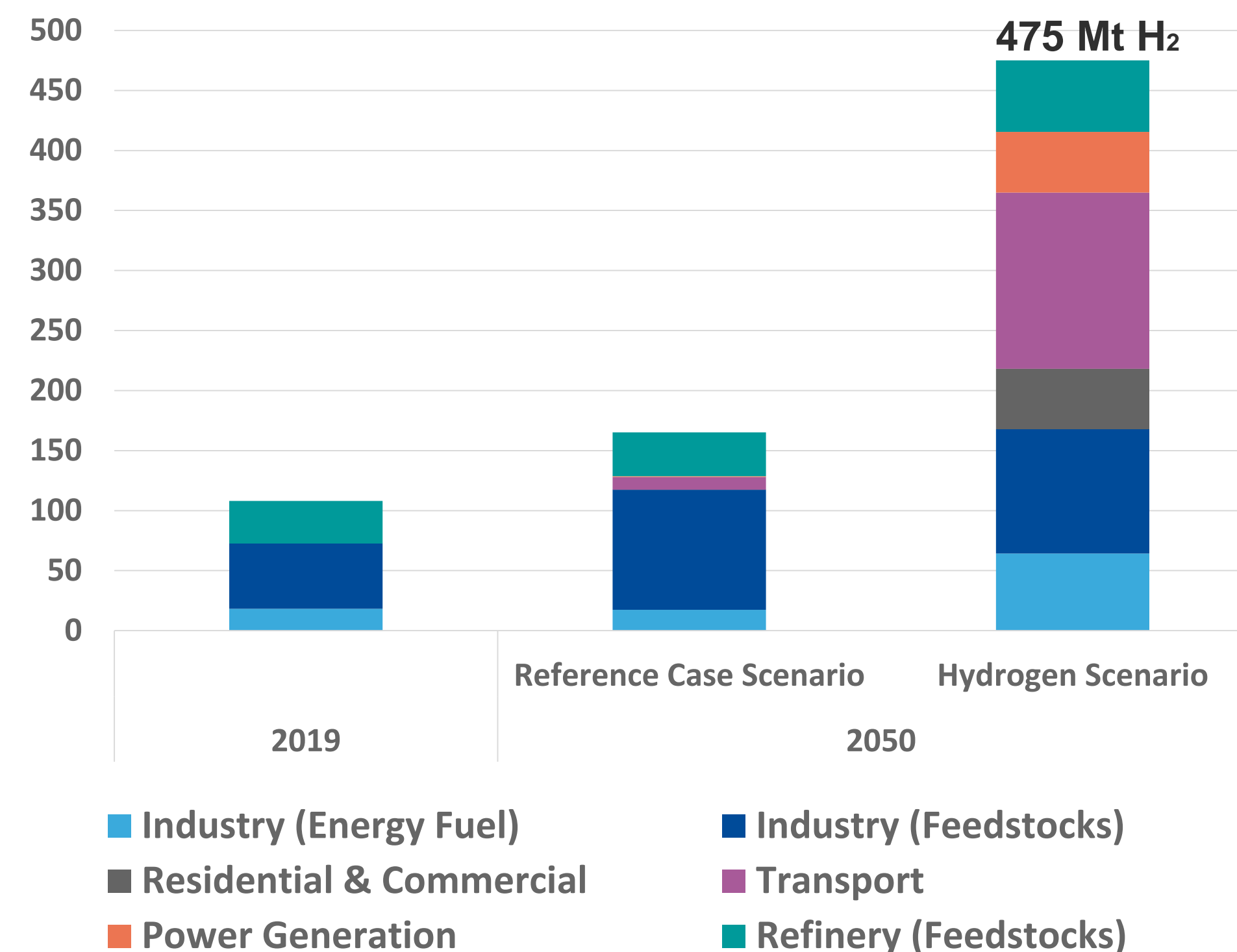
# Hydrogen scenario

## Hydrogen production share by source %



- Hydrogen acting as a game changer with blue hydrogen taking a significant role
- Hydrogen demand in 2050 will reach 475 Mt

## Hydrogen demand outlook by sector Mt of H<sub>2</sub>





# THANK YOU



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