IV International Conference
Risk Management in Energy – 2021

Global Energy after Covid-19: New risks and opportunities for development

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GECF

Gas Exporting Countries Forum

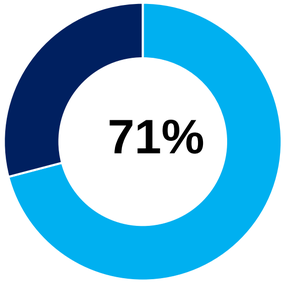
- 2001, Tehran – Establishment of the GECF as a collaborative platform
- 2008, Moscow – Signing of the Intergovernmental Agreement and Statute, transformation of the GECF into a full-fledged international organisation

MEMBERS

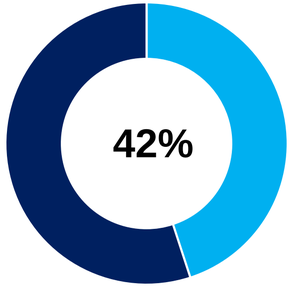
11

- Algeria
- Bolivia
- Egypt
- Equatorial Guinea
- Iran
- Libya
- Nigeria
- Qatar
- Russia
- Trinidad and Tobago
- Venezuela

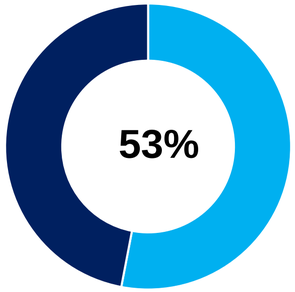
Proven Natural Gas Reserves



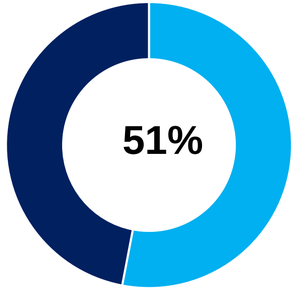
Marketed Gas Production



Pipeline Gas Exports



LNG Exports



OBSERVERS

8

- Angola
- Azerbaijan
- Iraq
- Kazakhstan
- Malaysia
- Norway
- Peru
- United Arab Emirates

Source of data: GECF Annual Statistical Bulletin 2020

Action program

- Sustainable maximization of the added value of gas for Member Countries
- Climate change (NZPF)
- Decarbonization (UN's Sustainable Development Goals (SDGs) and Paris Agreement)
- Innovations and digitalization (including GECF GGM and ESP)
- Technology cooperation (GECF Gas research institute)
- Hydrogen and NGVs
- Post-Covid-19 recovery based on natural gas economy

GECF Long-Term Objectives

GECF Global Gas Outlook 2050 supports all LTOs

- **International positioning of the GECF**
  as a globally recognized intergovernmental organization, which is gas market expertise reference institution and benchmark for gas exporting countries positions
- **Maximizing gas value**
  to pursue opportunities that support the sustainable maximization of the added value of gas for Member Countries
- **Developing the GECF view on gas market developments**
  through medium- and long-term market analysis and forecasting
- **Co-operation**
  to develop effective ways and means for cooperation amongst GECF Member Countries in various areas of common interests
- **Promotion of natural gas**
  to contribute to meeting future world energy needs, ensuring global sustainable development and responding to environmental concerns, in particular with regard to climate change

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

- Post COVID-19 developments offer large opportunities for natural gas
- The deployment of gas decarbonization options reinforce the role of gas in the transition towards low carbon economies

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

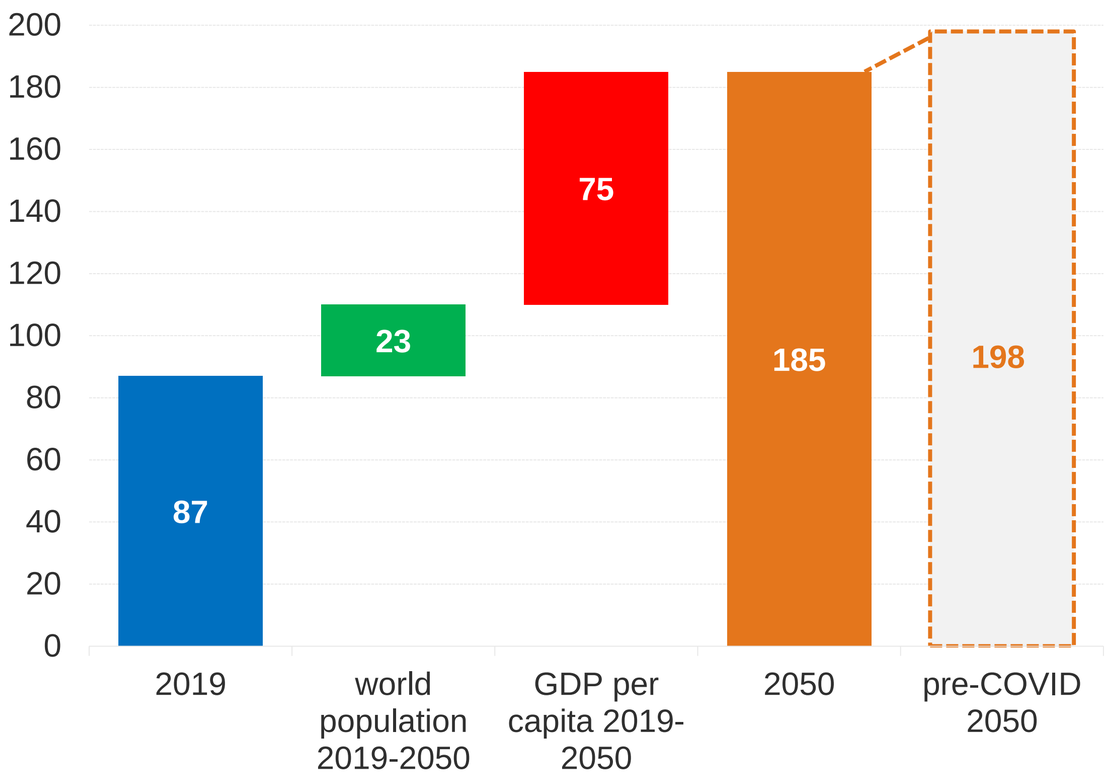
Several announcements and released strategies to support hydrogen economies

Source: GECF Secretariat

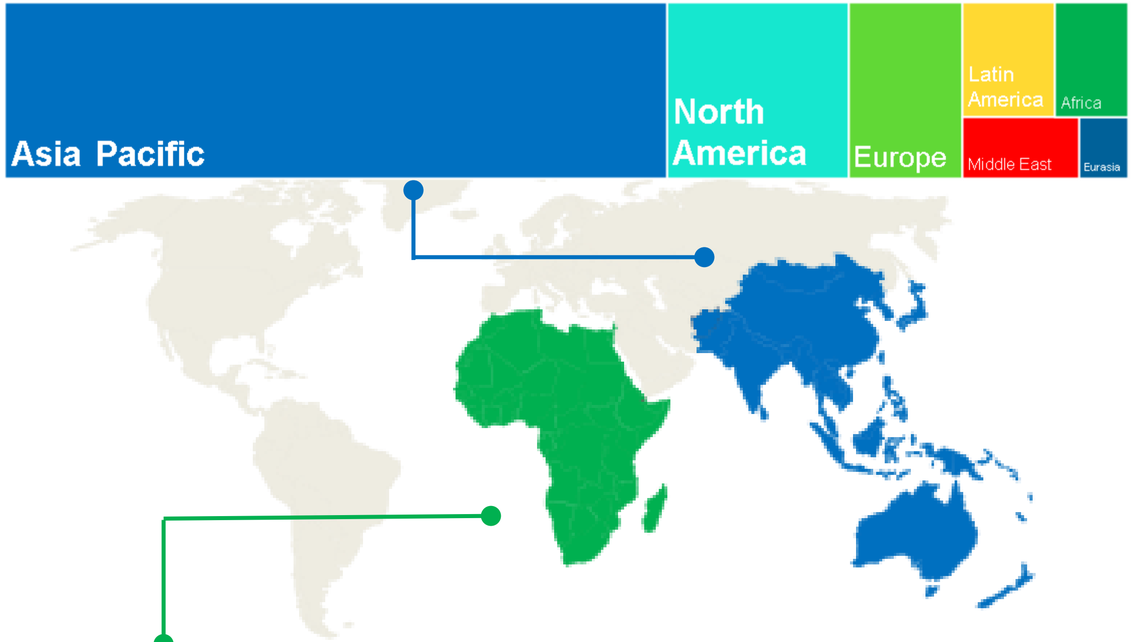
Global economic prospects

- 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 real GDP 2019 - 2050
(trillion USD 2019)



Global GDP CAAGR 2.6% by Region 2019 - 2050



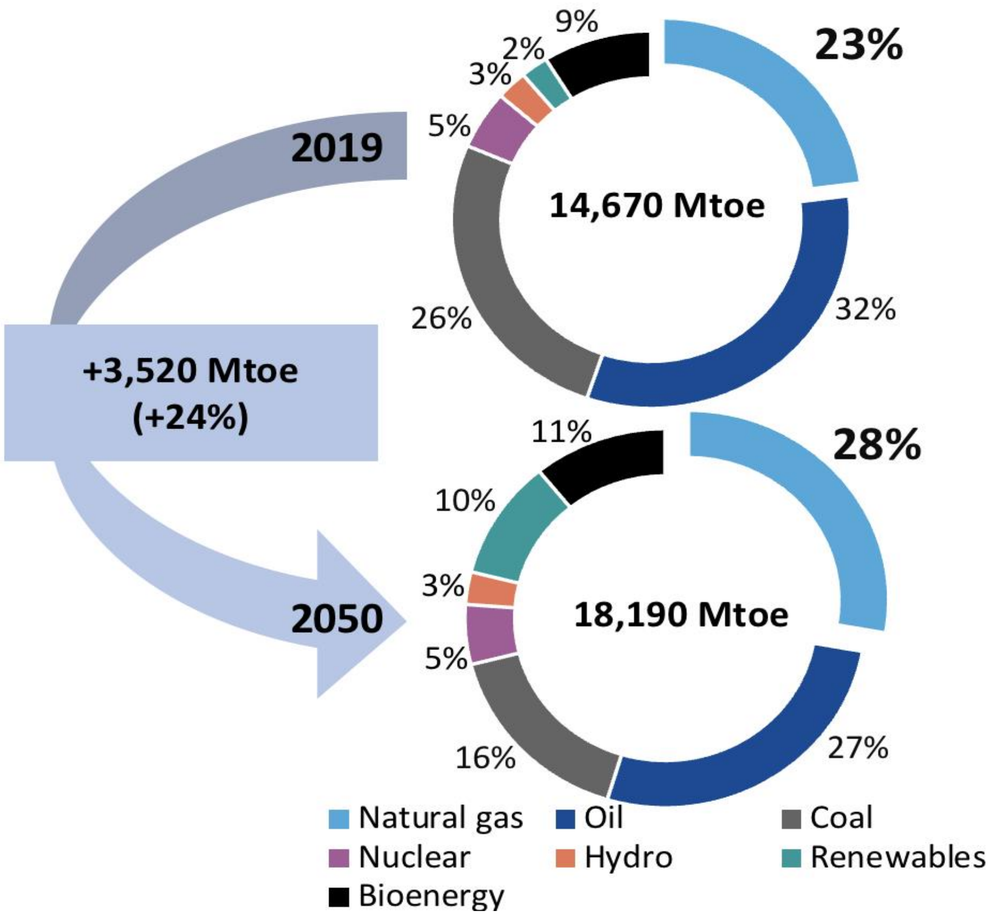
The World's Population CAAGR 0.7% by Region 2019 - 2050

Source: GECF Secretariat based on the GECF Global Gas Model

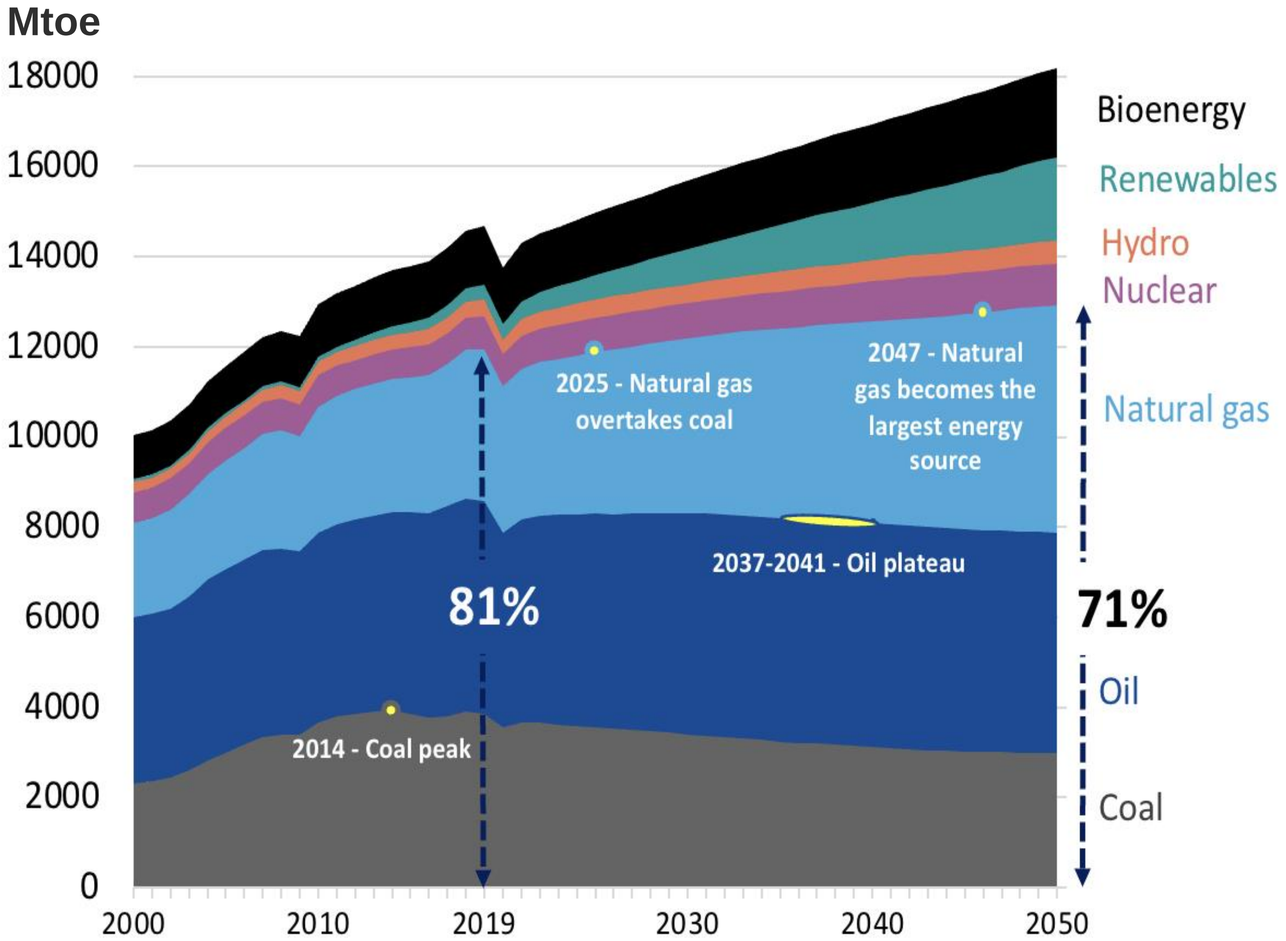
Global energy mix

- 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 mix evolution 2019-2050



Global energy demand trends by fuel type



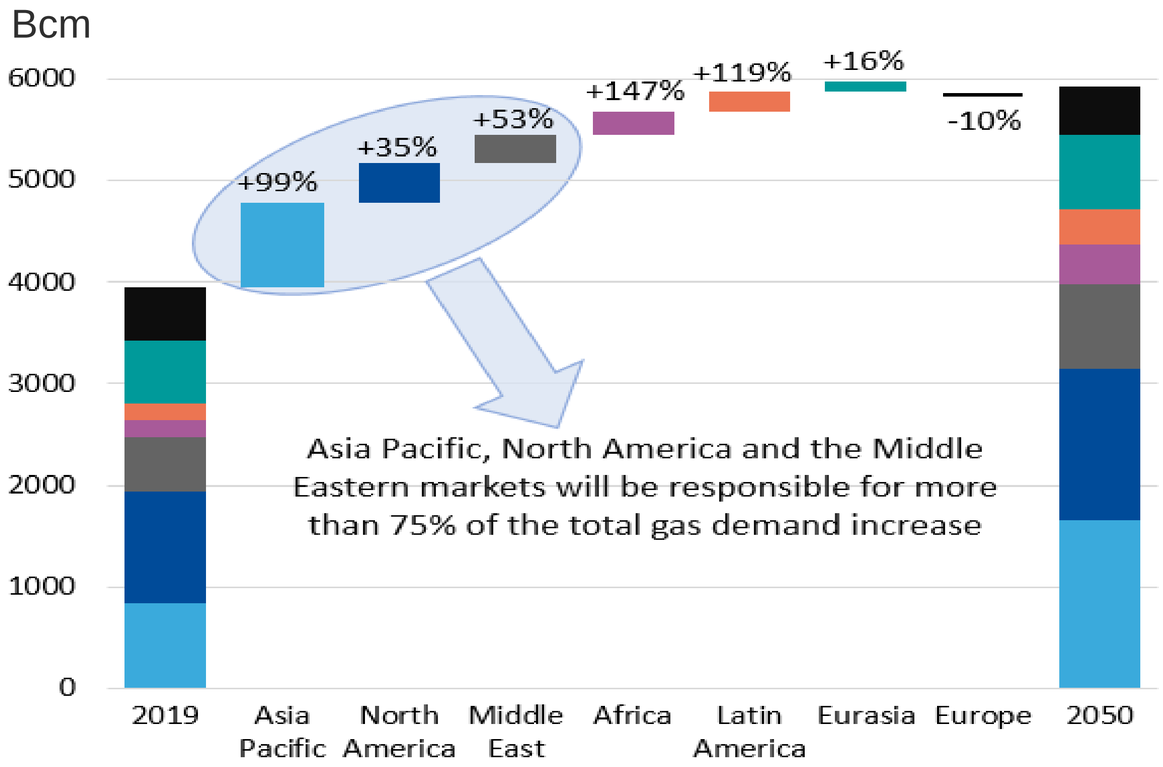
Source: GECF Secretariat based on the GECF Global Gas Model

Note: Bioenergy includes traditional and modern biomass

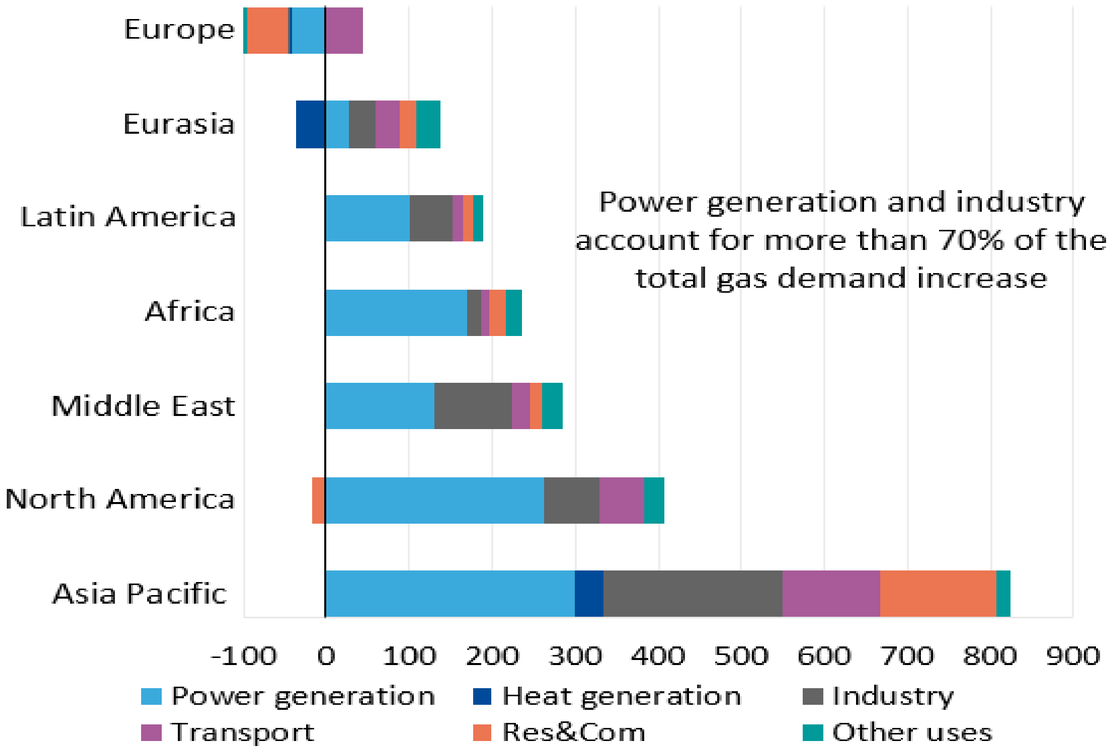
Key drivers of natural gas demand

- 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



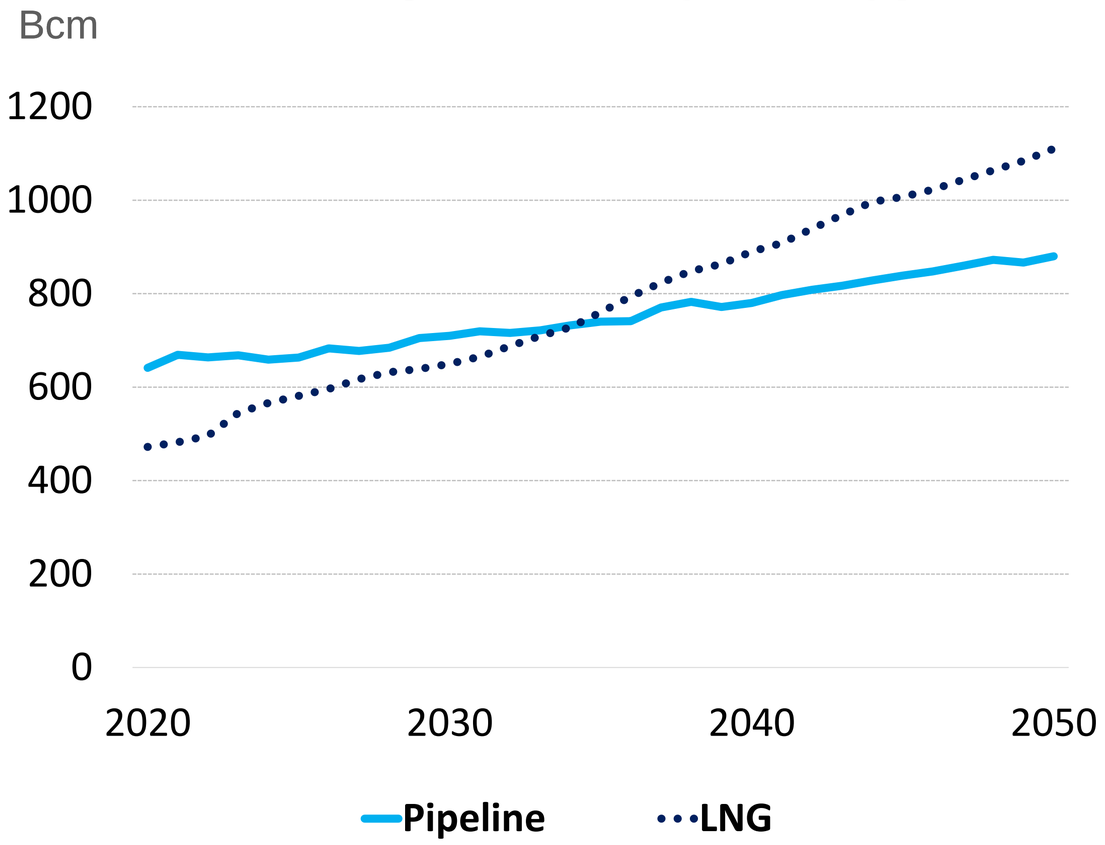
Source: GECF Secretariat based on the GECF Global Gas Model

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.

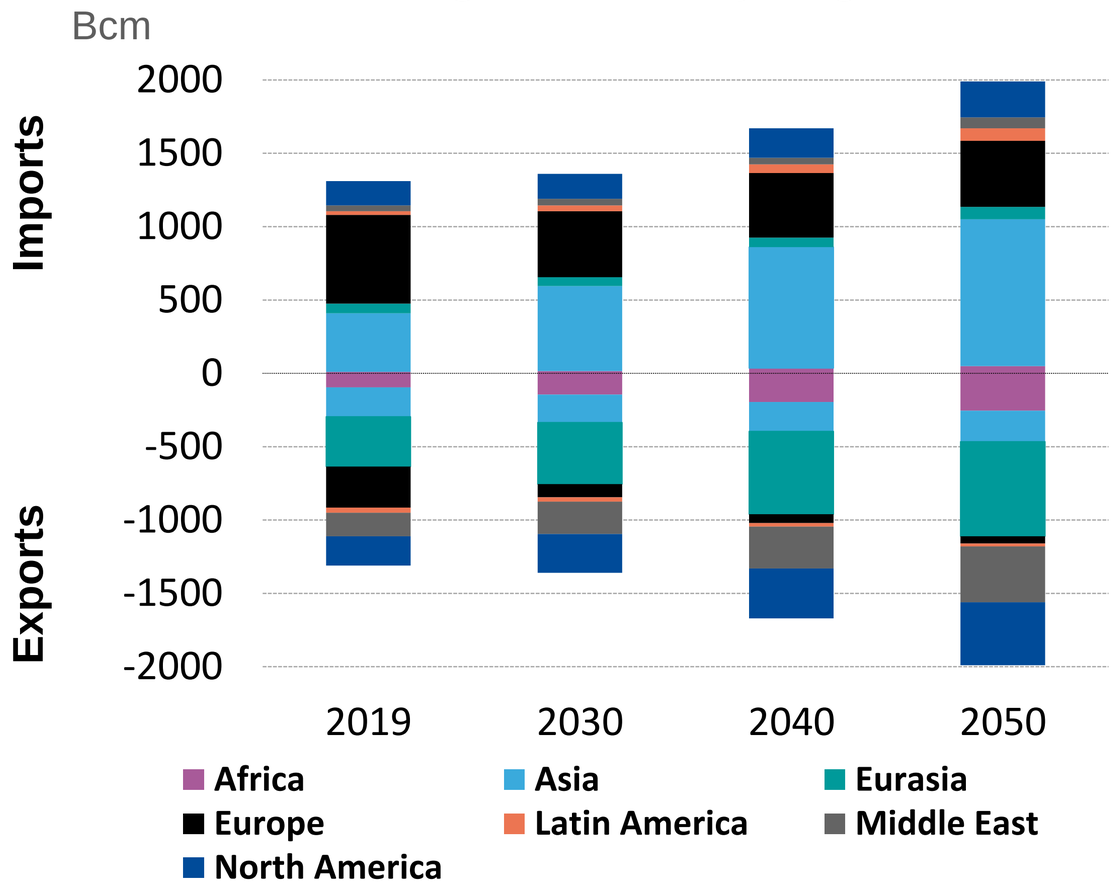
Global natural gas trade

- Global 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 flow type



Global natural gas trade by region

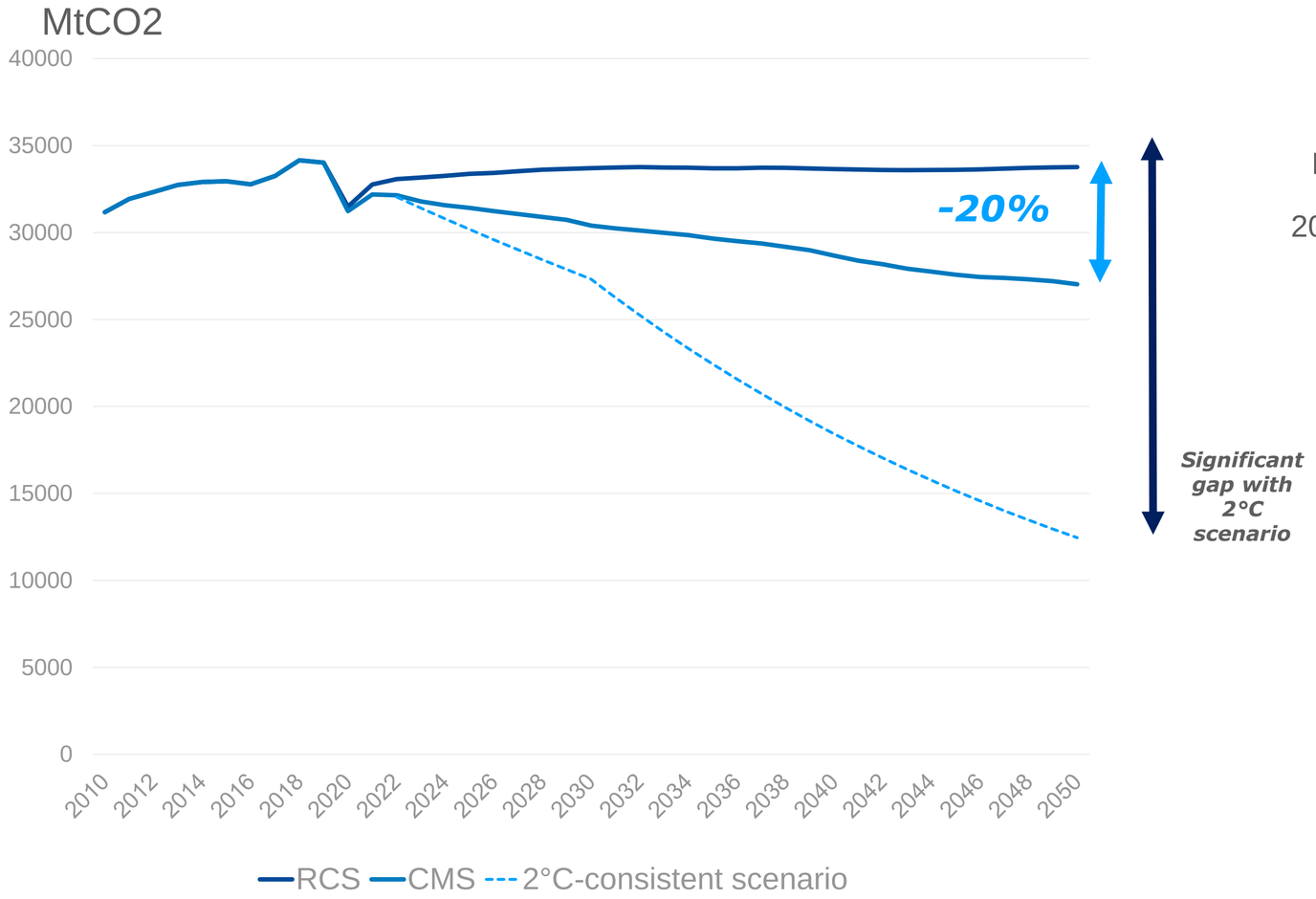


Source: GECF Secretariat based on data from the GECF Global Gas Model 2020

Energy-related CO2 emissions prospects

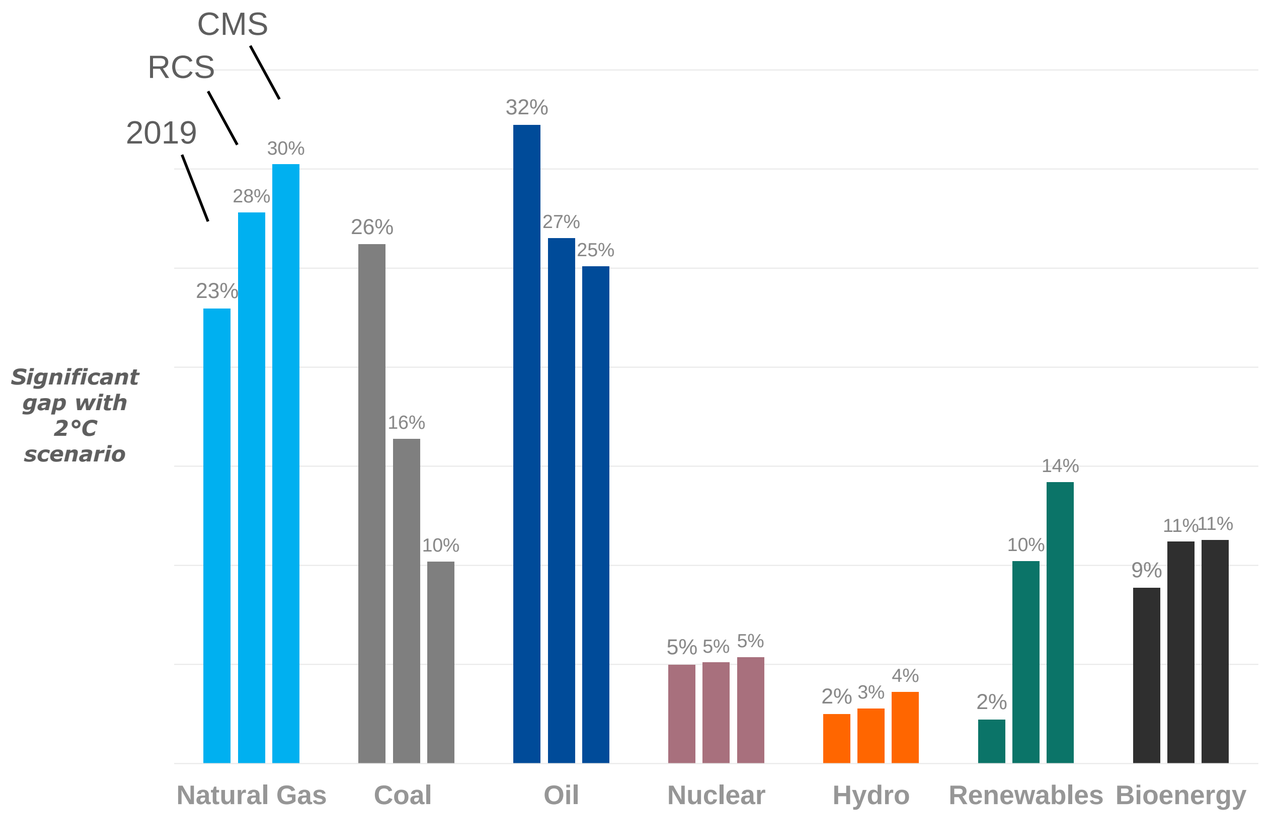
- There is potential to reduce emissions with larger gas penetration.
- Further decarbonization of gas (e.g. through CCUS, hydrogen…) enables to bridge the gap with 2°C scenario

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



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

Fuel shares in the primary energy mix

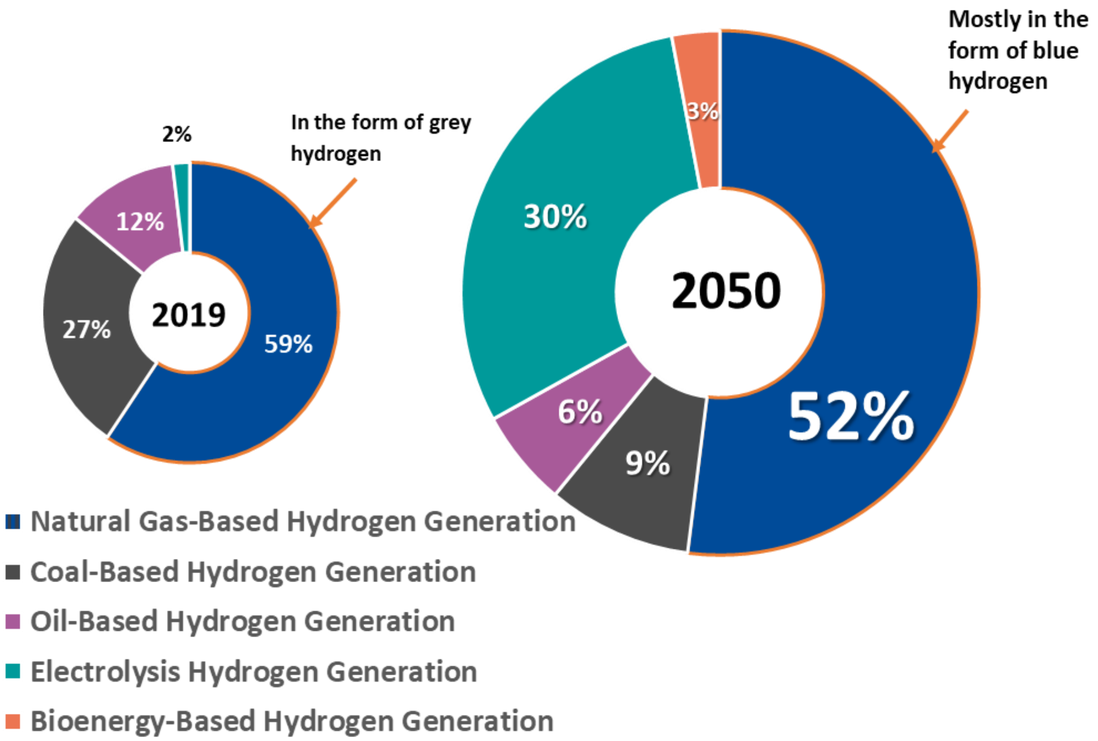


Hydrogen scenario

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

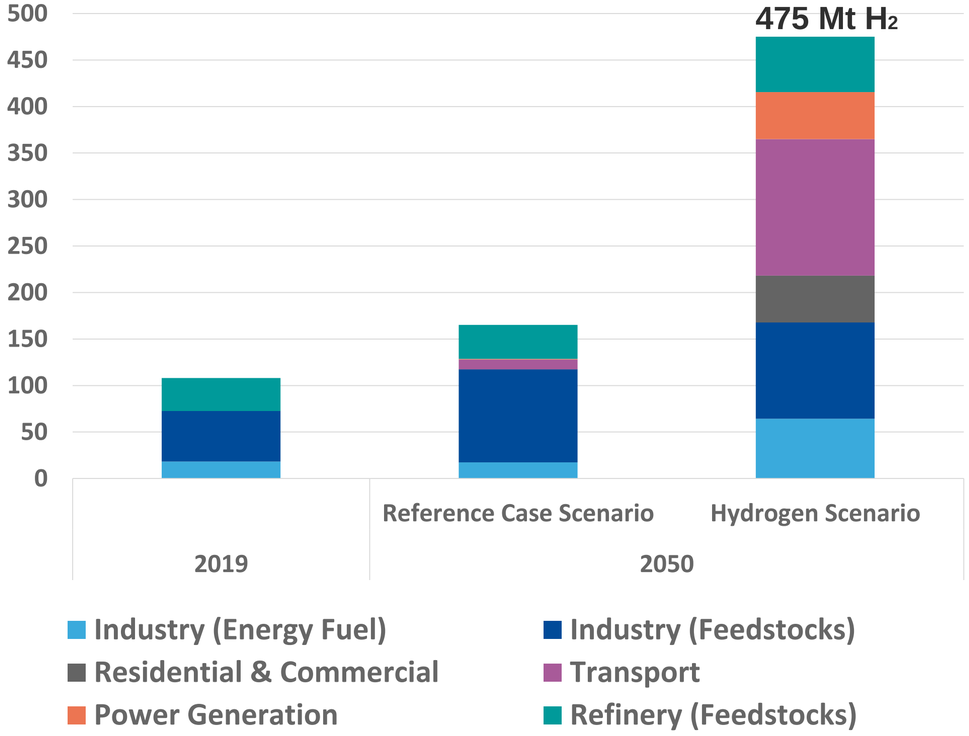
Hydrogen production share by source

%



Hydrogen demand outlook by sector

Mt of H2



Source: GECF Secretariat based on the GECF Global Gas Model

Upcoming high-level events with GECF participation

Natural gas: energy for sustainable development

SPIEF
ST. PETERSBURG INTERNATIONAL ECONOMIC FORUM

24th SPIEF

St. Petersburg, June 2021

United Nations

High-level Dialogue on Energy

New York, September 2021

GECF

6th GECF SUMMIT

Doha, November 2021

THANK YOU

GECF