The Role of the Middle East as a Key Energy Supplier to Europe in the Aftermath of the War in Ukraine

VIIMES Workshop

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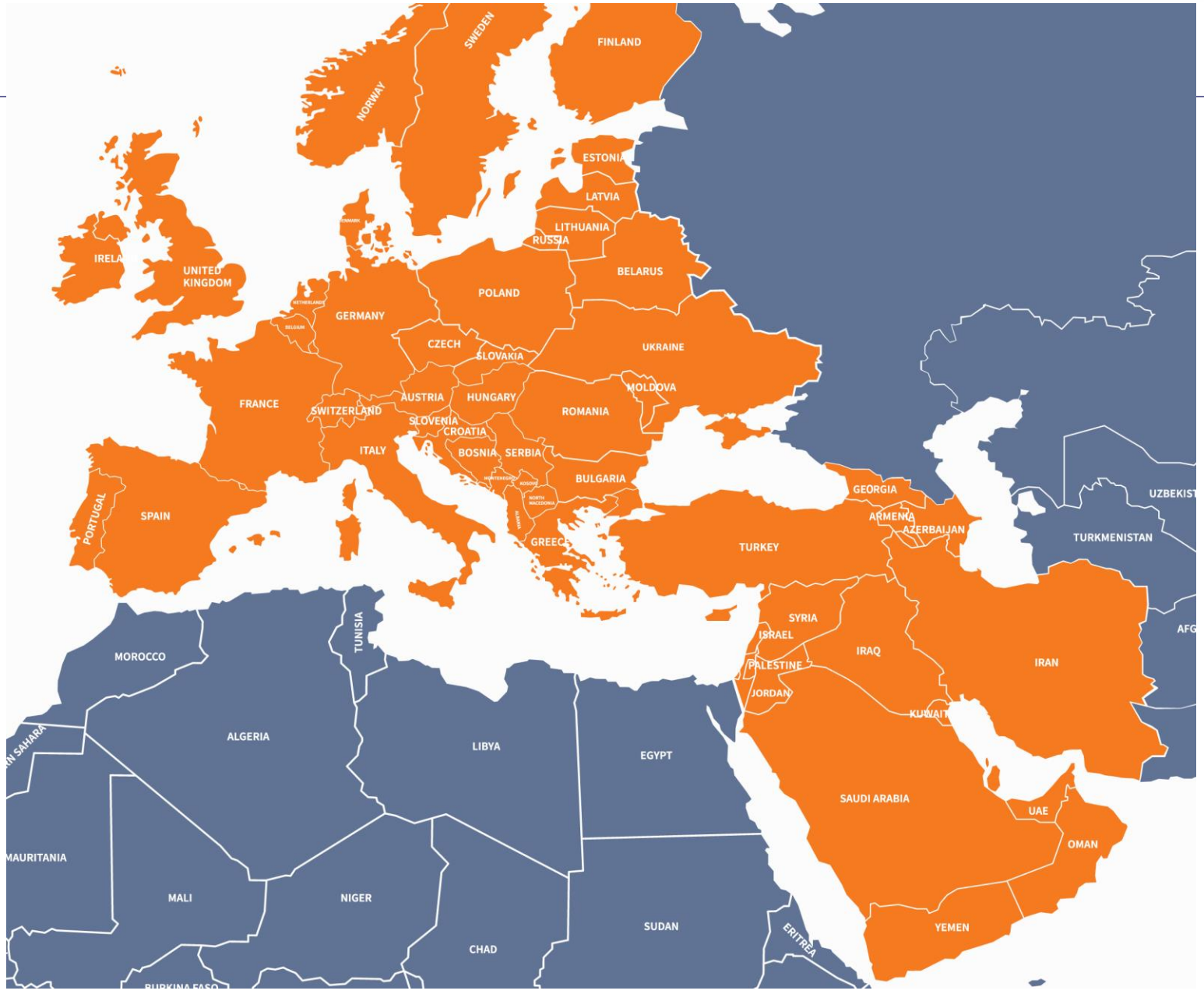
INSTITUTE OF ENERGY
FOR SOUTH EAST EUROPE

Introduction

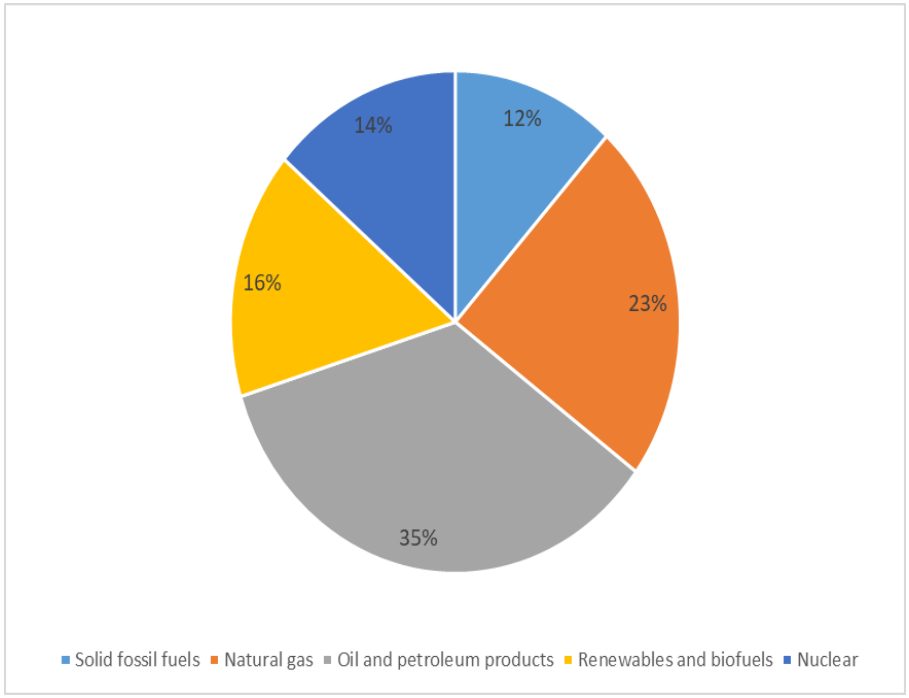
- In a fast changing geopolitical and geoeconomic environment, accelerated by the war in Ukraine, the role of the Middle East, vis-a-vis Europe, is becoming more central.
- Cut off willingly from Russian oil and gas supplies, European countries are now seeking elsewhere the vital energy flows which will allow their economies to function.
- Middle East countries already cover a substantial part of oil and gas needs of many European nations. Now, they will have to supply even more. This sets the stage for new broader economic and energy cooperation between the EU and individual countries in the Gulf and North Africa.
- The economic weight of several Middle East countries can provide useful leverage in setting the stage of the overall economic/energy cooperation on a new footing.
- Hence, the present European energy crisis provides an opportunity for renewed cooperation between the Middle East and Europe.
- Defining the exact areas of such economic/energy cooperation between the Middle East and Europe will prove challenging, as third party interests (i.e. USA, China) will have to be taken under consideration.
- Middle East gas exports to European countries present a most promising area of cooperation and offer serious investment opportunities.
- Competitively priced Middle East electricity exports to Europe is a new parameter.

Europe and Middle East Countries

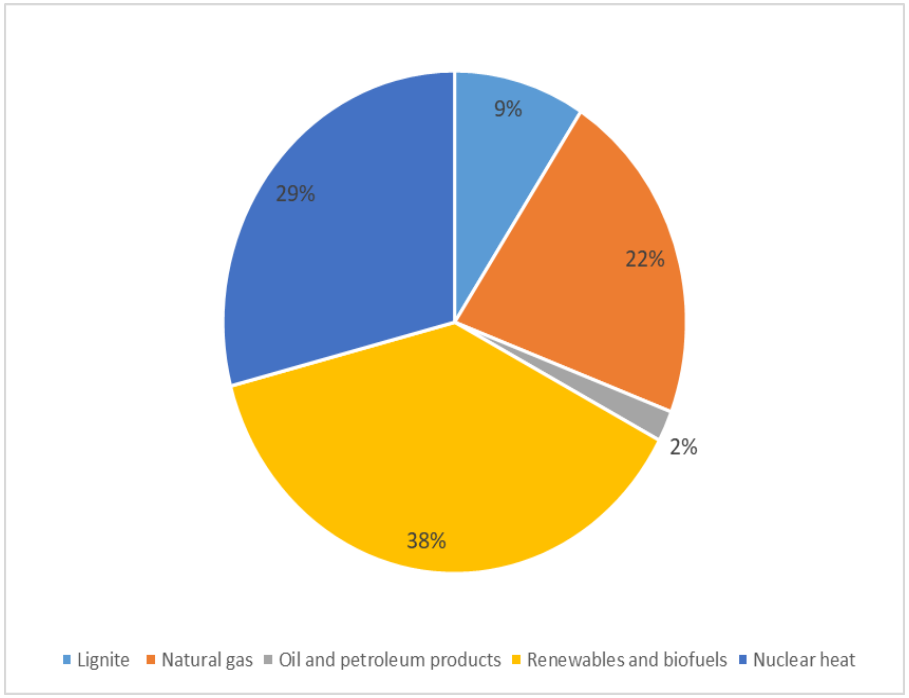


Energy and Electricity Mix in EU-27, 2019

Energy Mix in EU-27

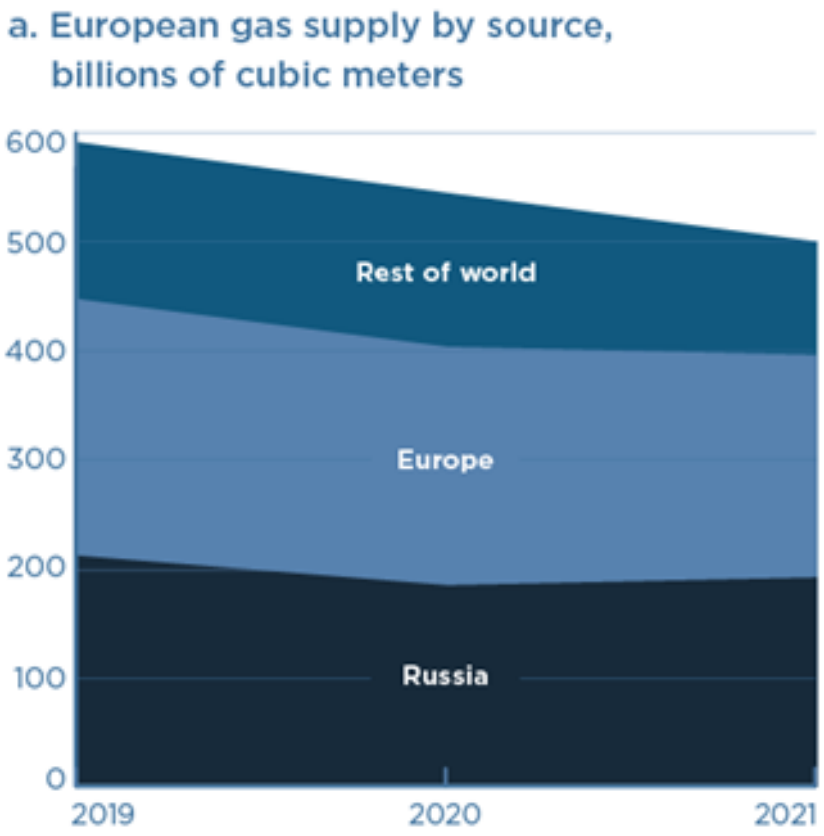


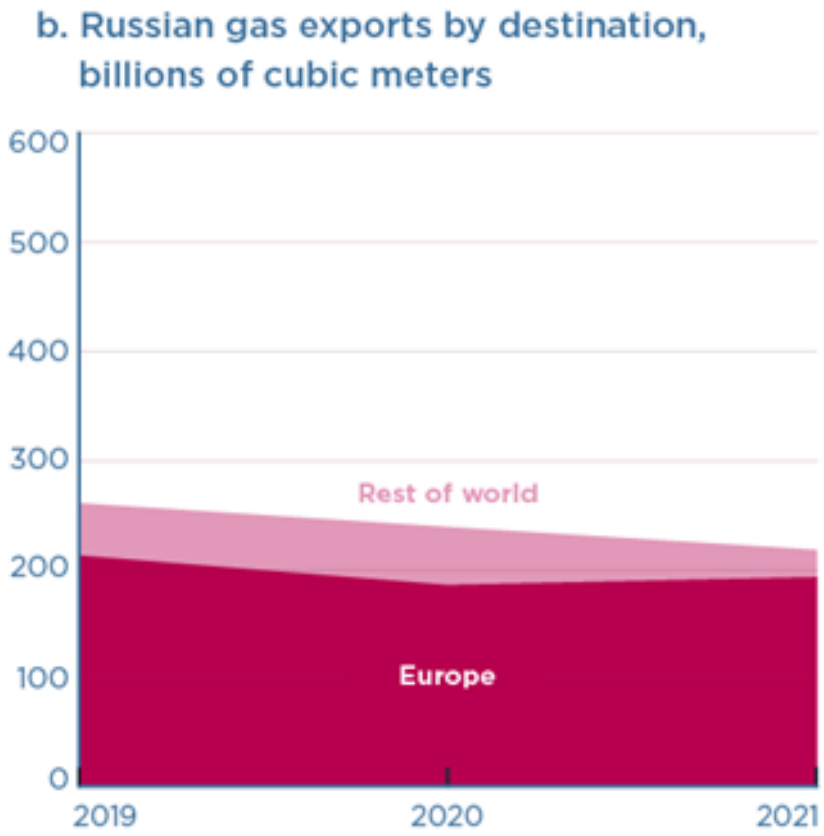
Electricity Mix in EU-27



Source: Eurostat

European Gas Markets Rely on Russian Supply



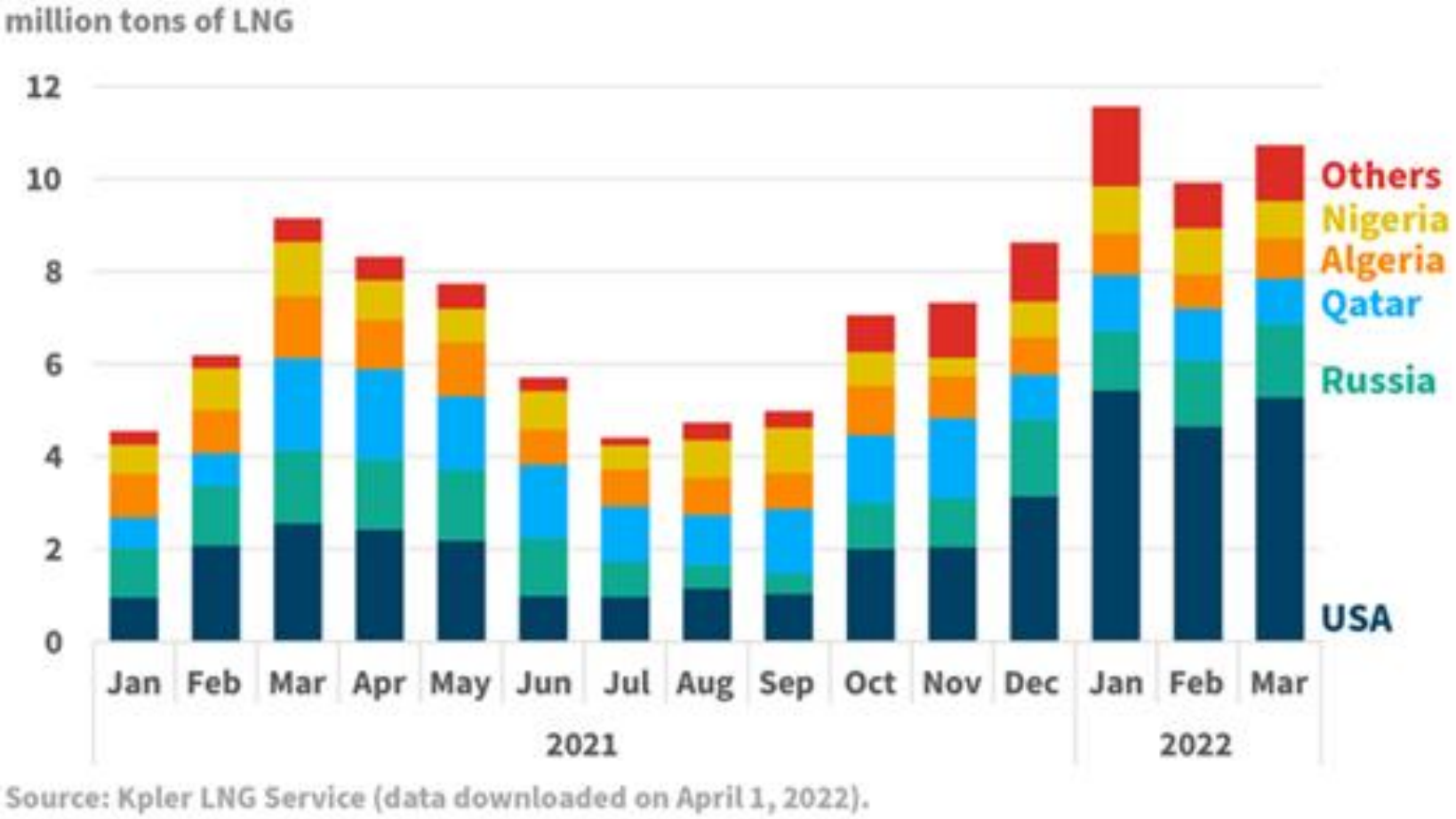


Sources: BP Statistical Review of World Energy 2020 and 2021, Bloomberg, ENTSOG, European Commission, Eurostat, Gazprom, IEA

Russian Pipeline Gas Exports to the EU

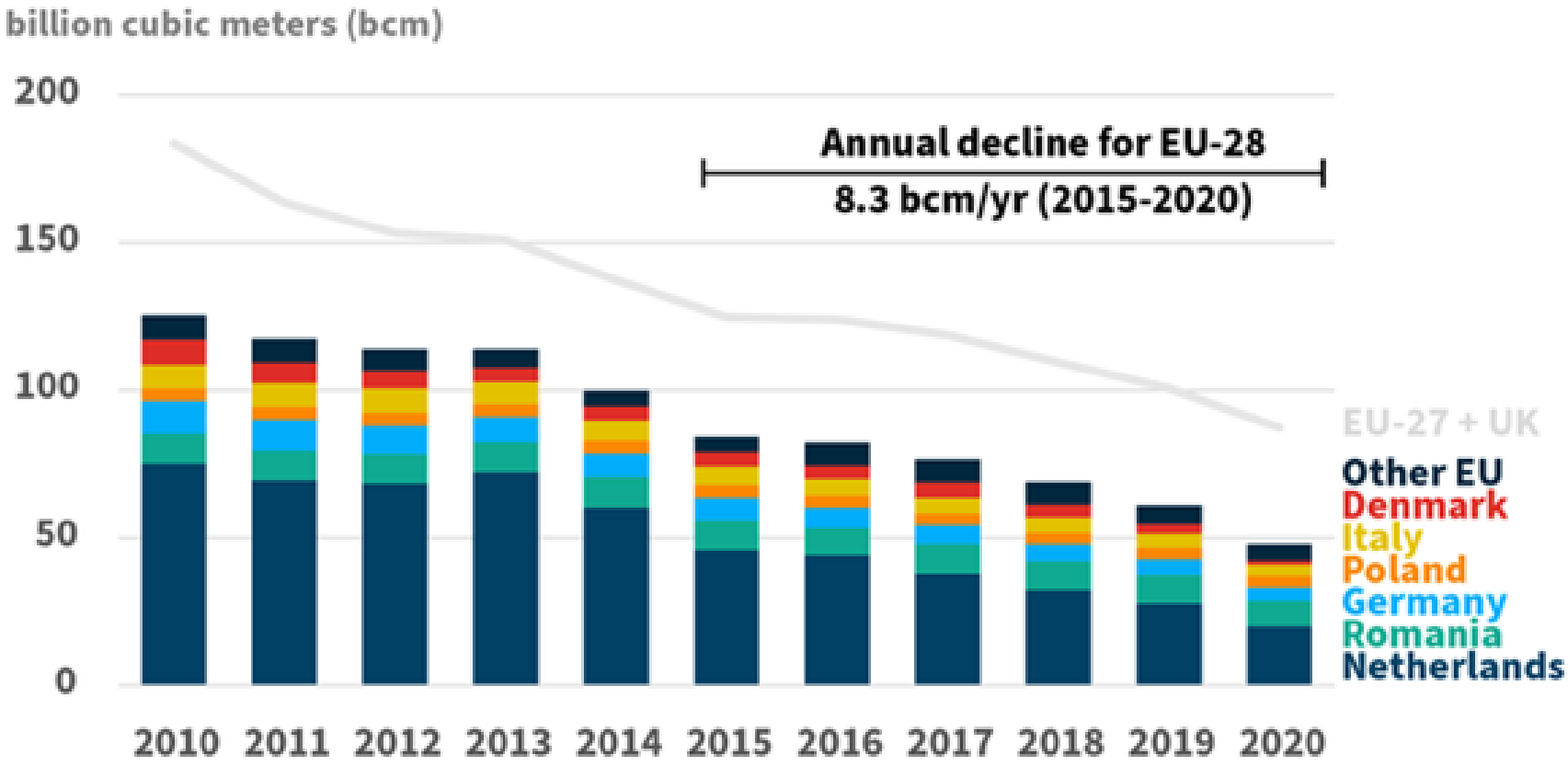
Source: Gazprom, Actual Supplies to the European Union.

European LNG Imports by Source



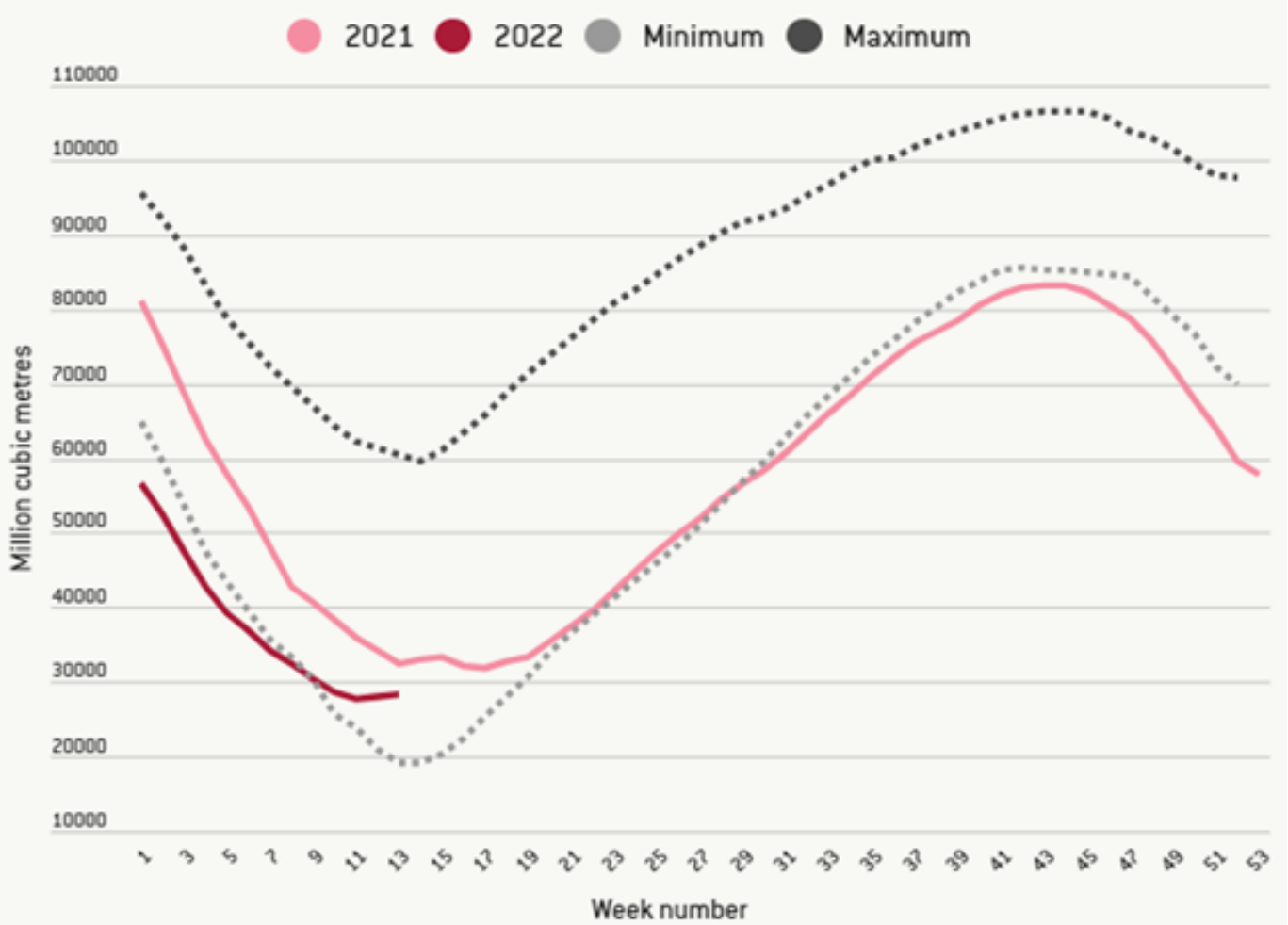
Source: Kpler LNG Service (data downloaded on April 1, 2022).

Gas Production in the EU



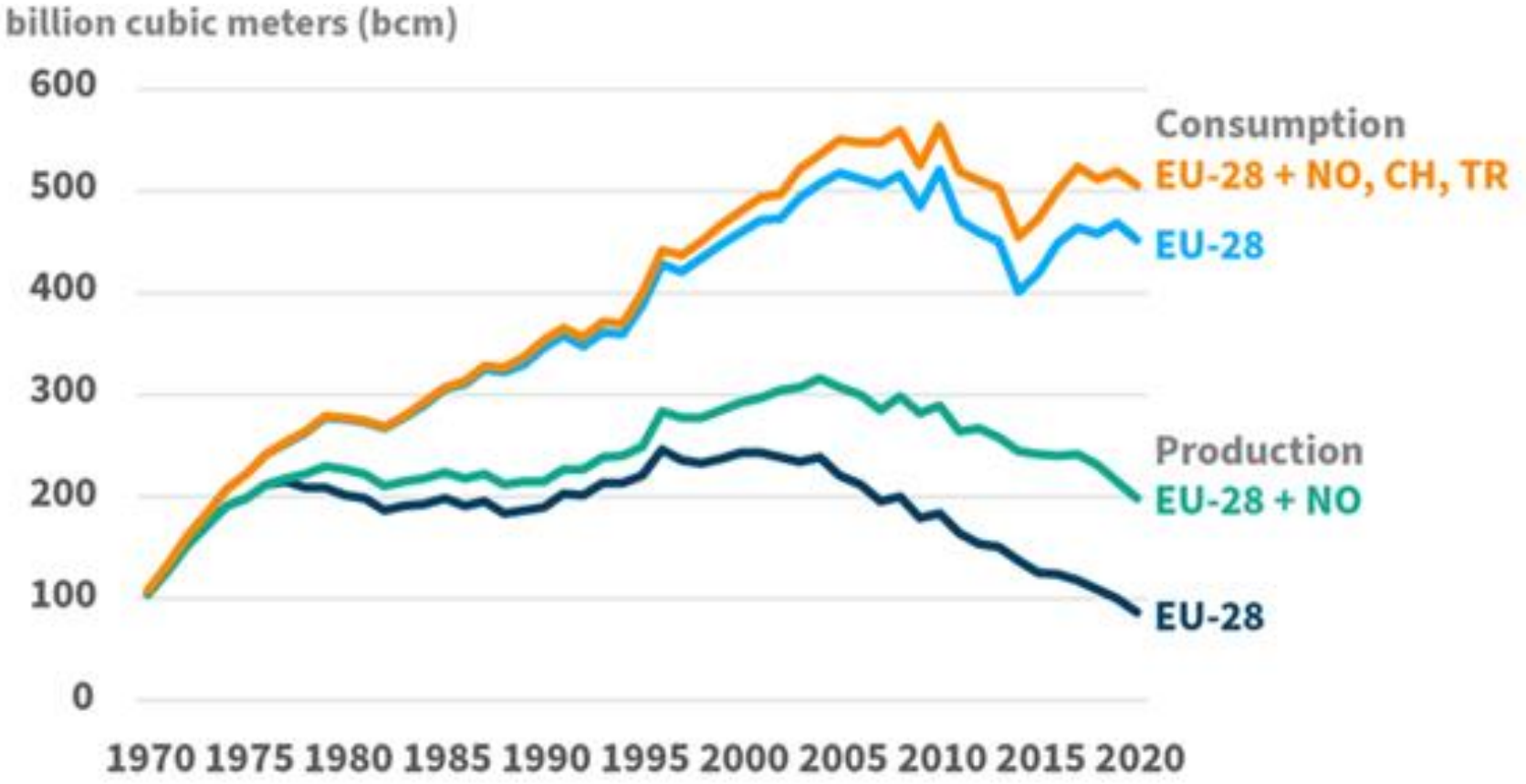
Source: BP Statistical Review of World Energy, July 2021.

EU Gas Storage



Source: ENTSOg

Europe's Gas Supply and Demand Balance (I)



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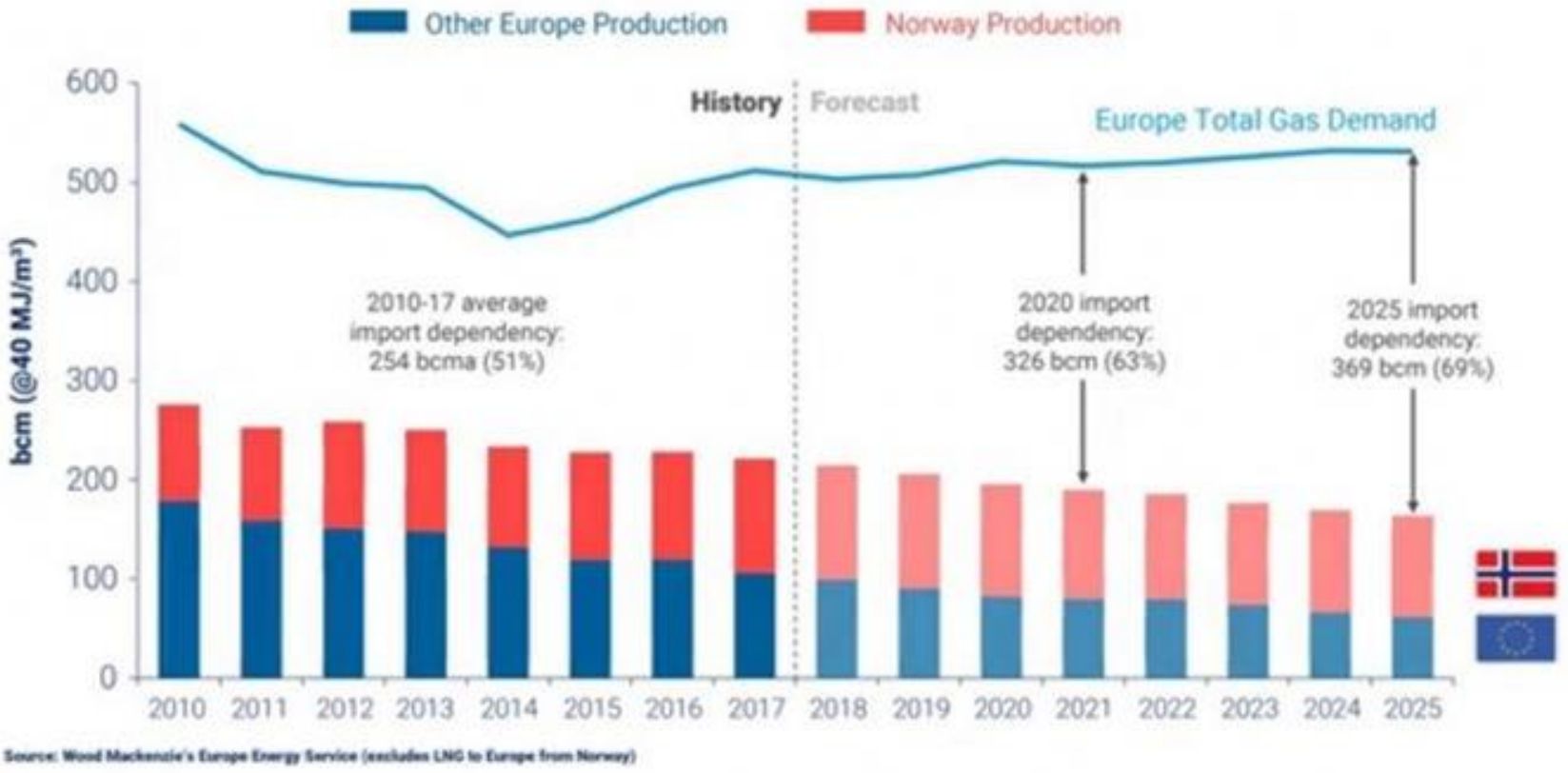
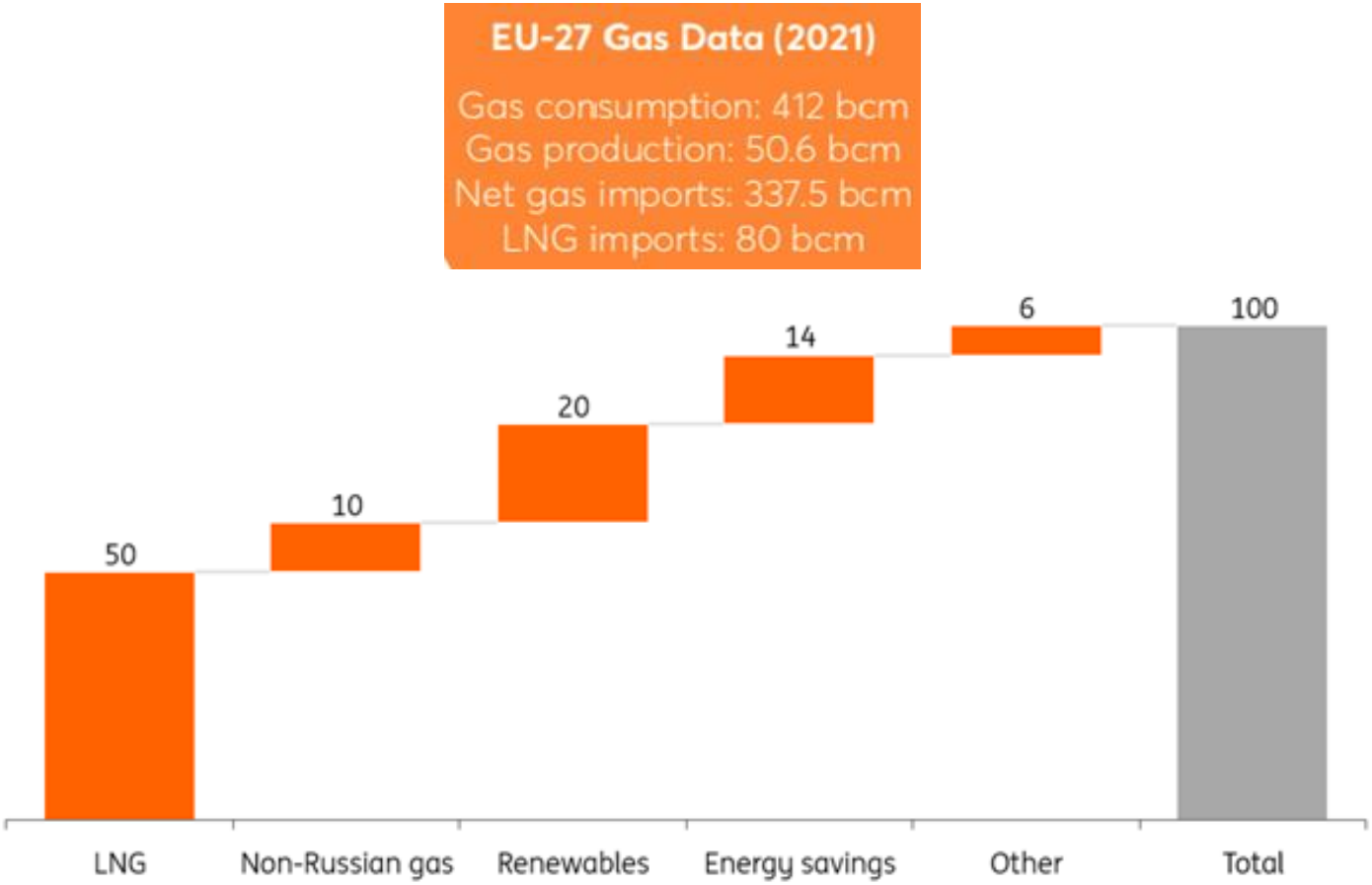
Europe's Gas Supply and Demand Balance (II)



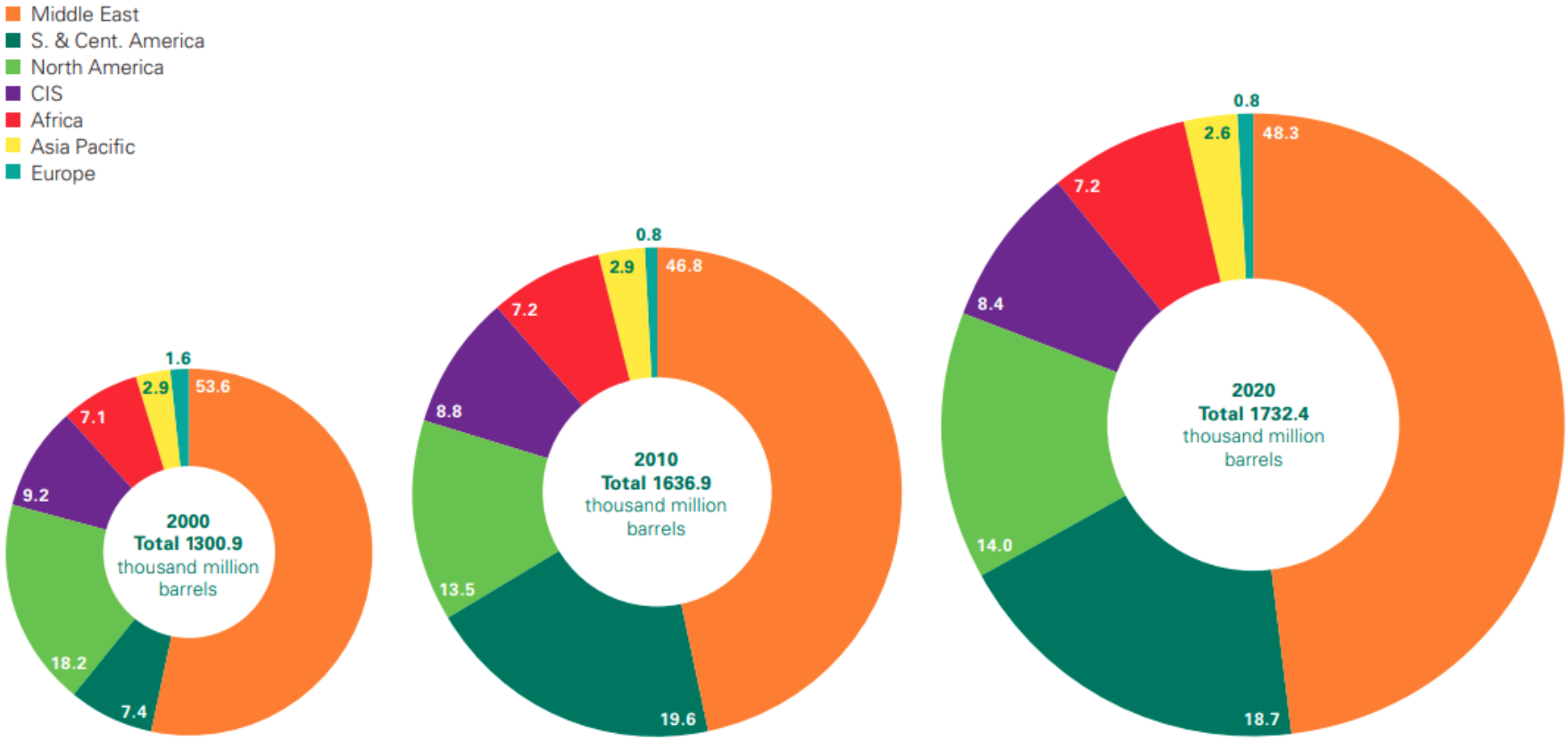
REPowerEU's Targets Aiming to Reduce Gas Consumption by 100 bcm by 2022



Source: European Commission

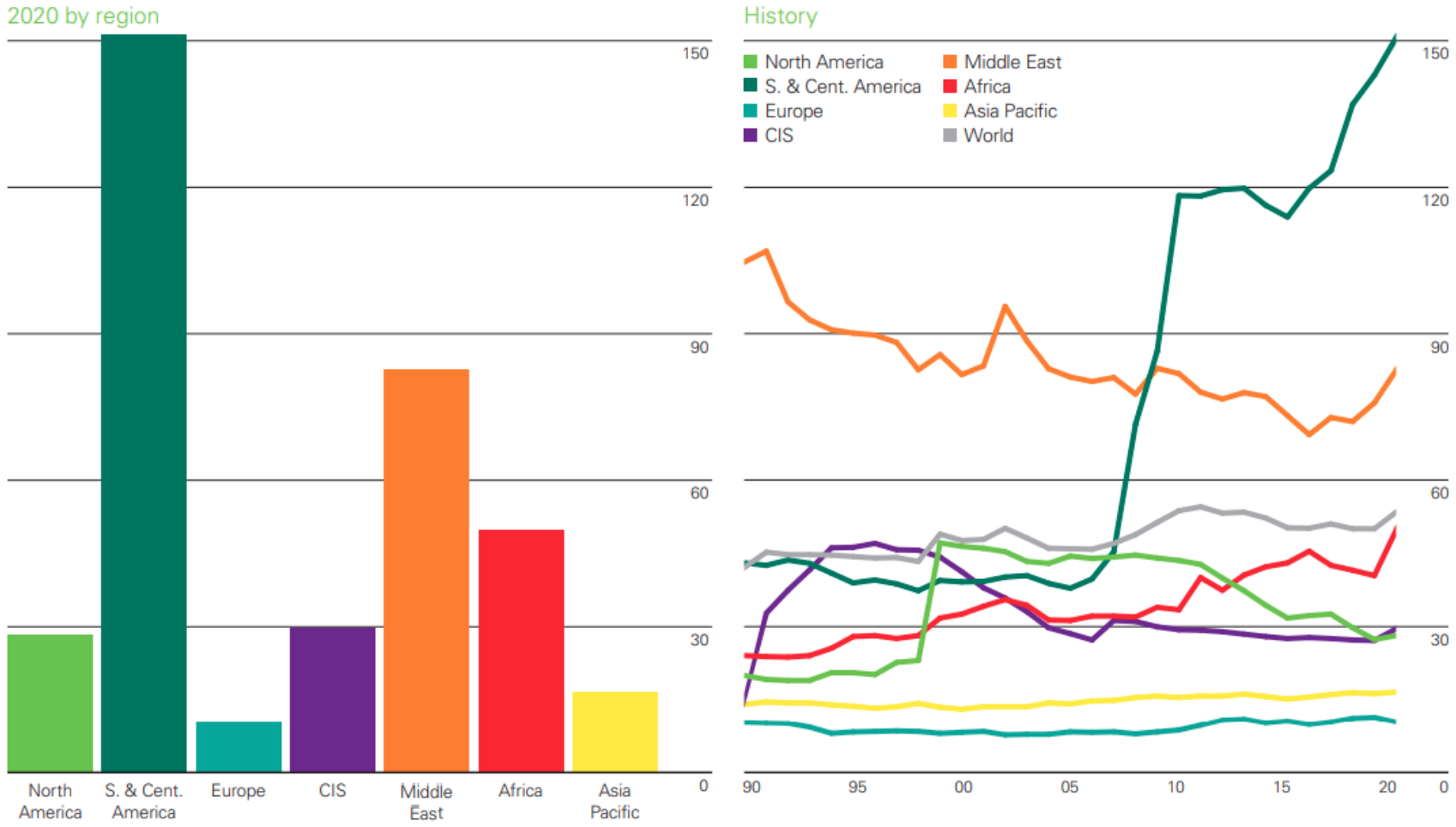
Distribution (%) of Proved Oil Reserves in 2000, 2010 and 2020

Middle East has the largest proven oil reserves in the world.



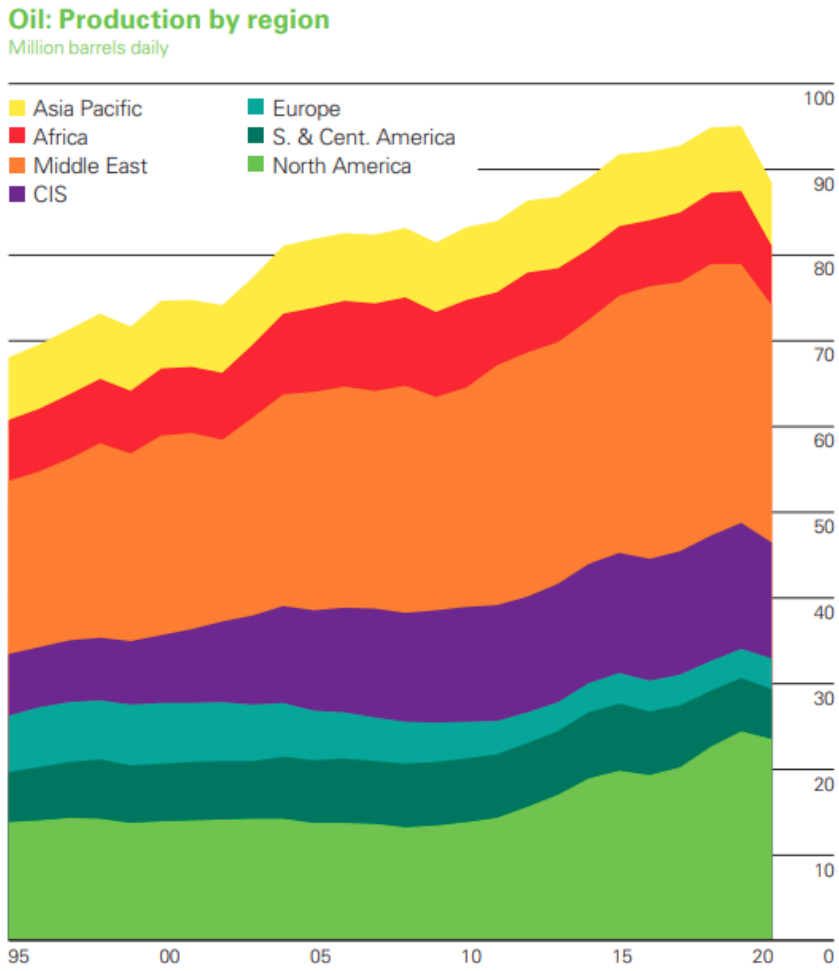
Source: BP Statistical Review of World Energy 2021

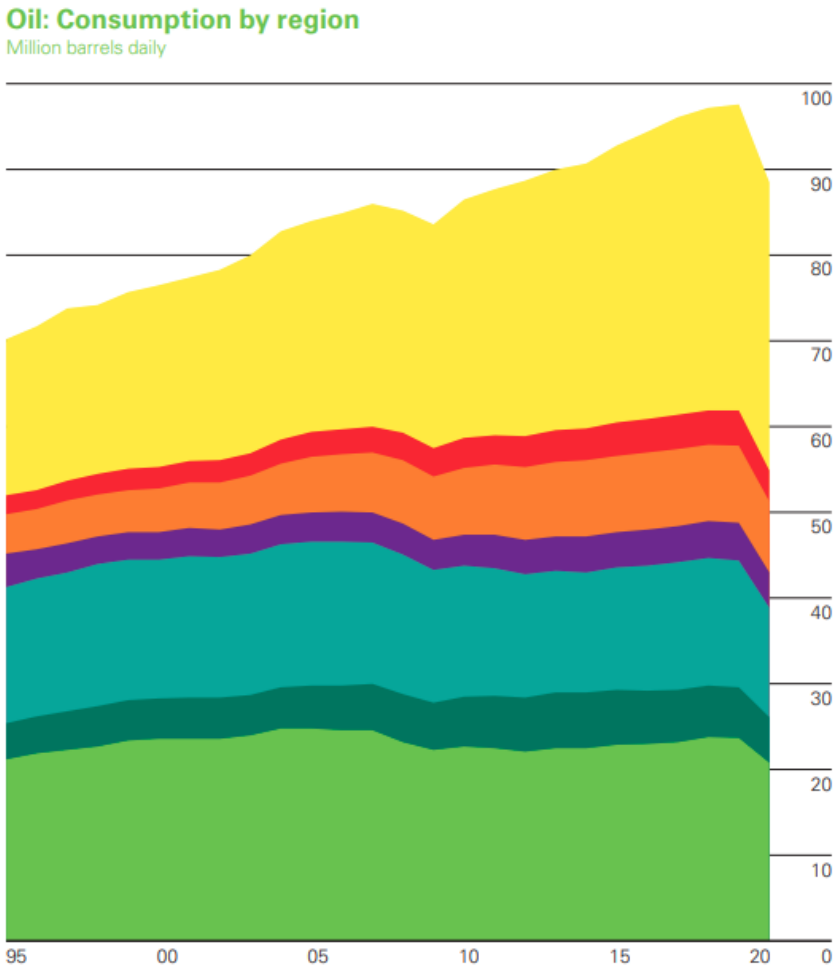
Oil Reserves-to-production (R/P) Ratios (Years)



Source: BP Statistical Review of World Energy 2021

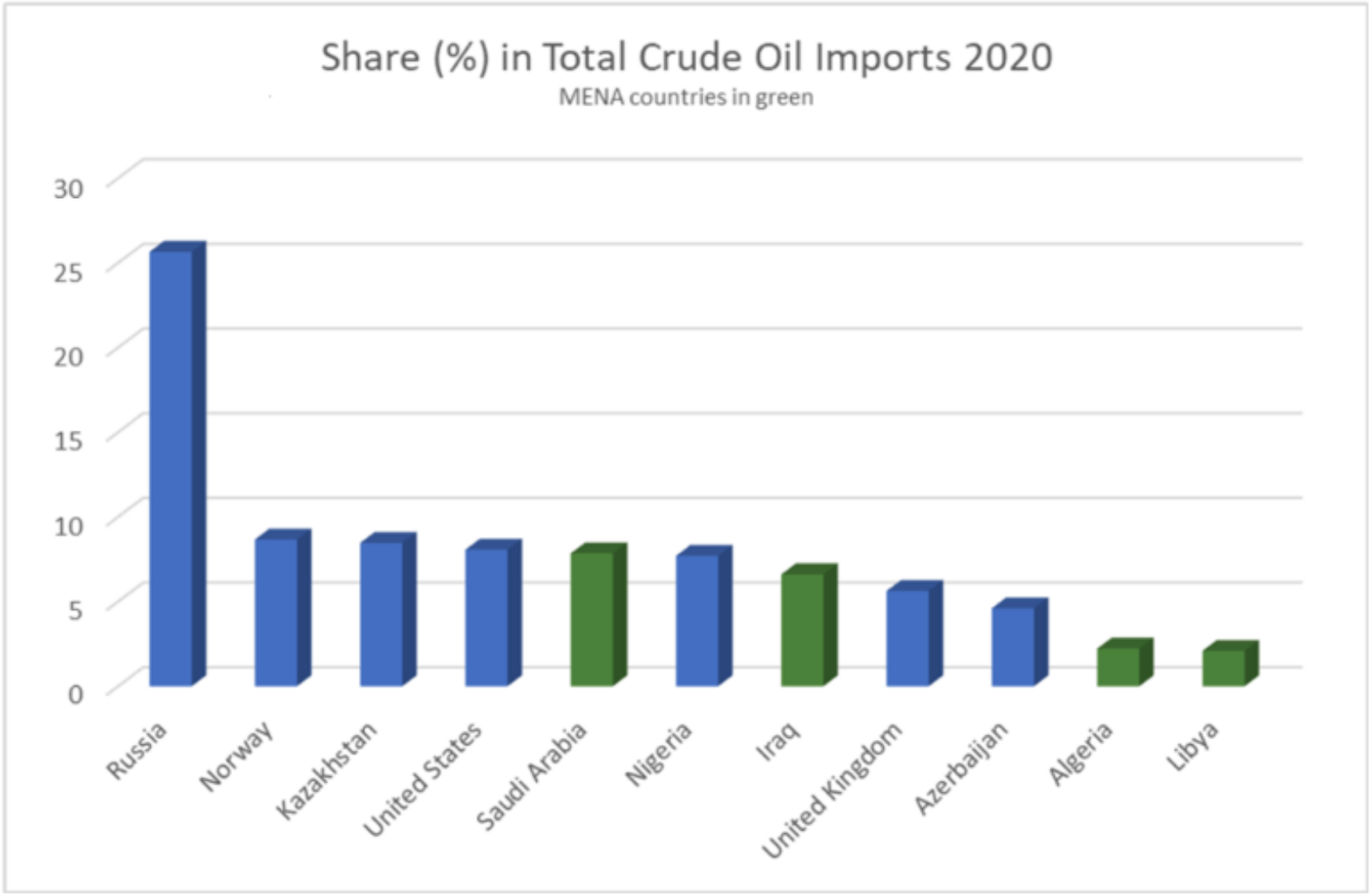
Oil Production and Consumption by Region (million barrels per day)





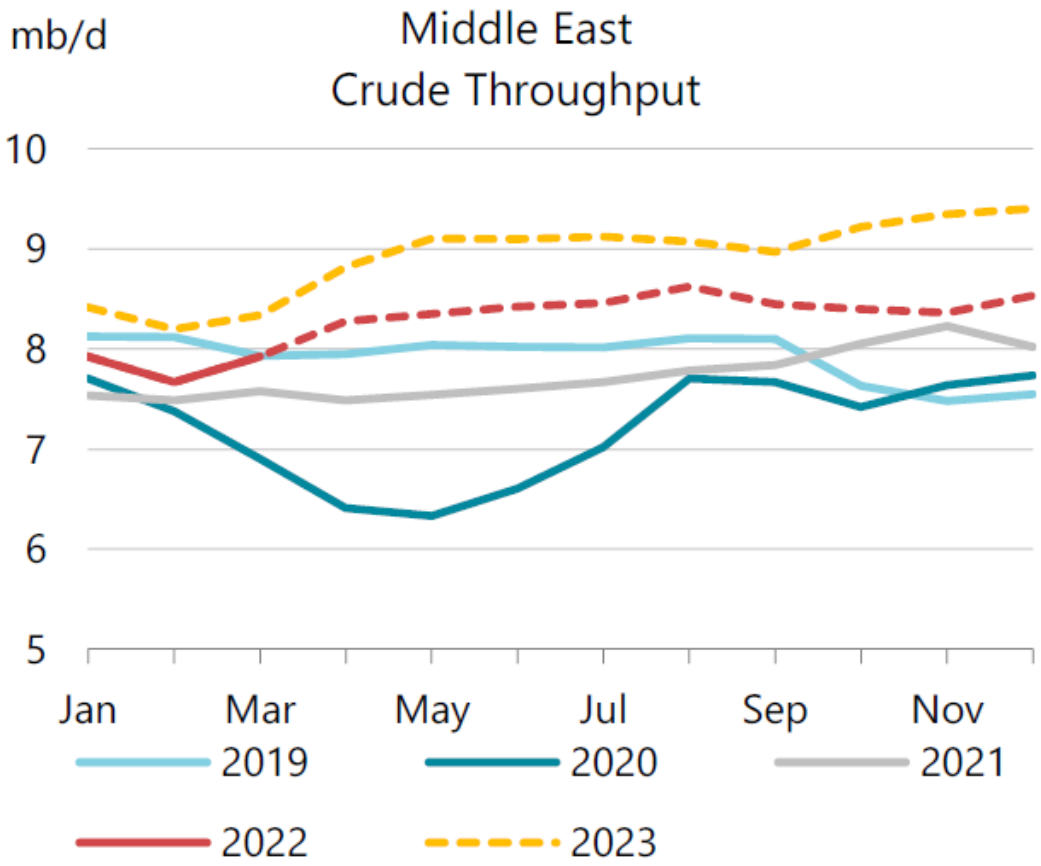
Source: BP Statistical Review of World Energy 2021

EU Share (%) in Total Crude Oil Imports, 2020



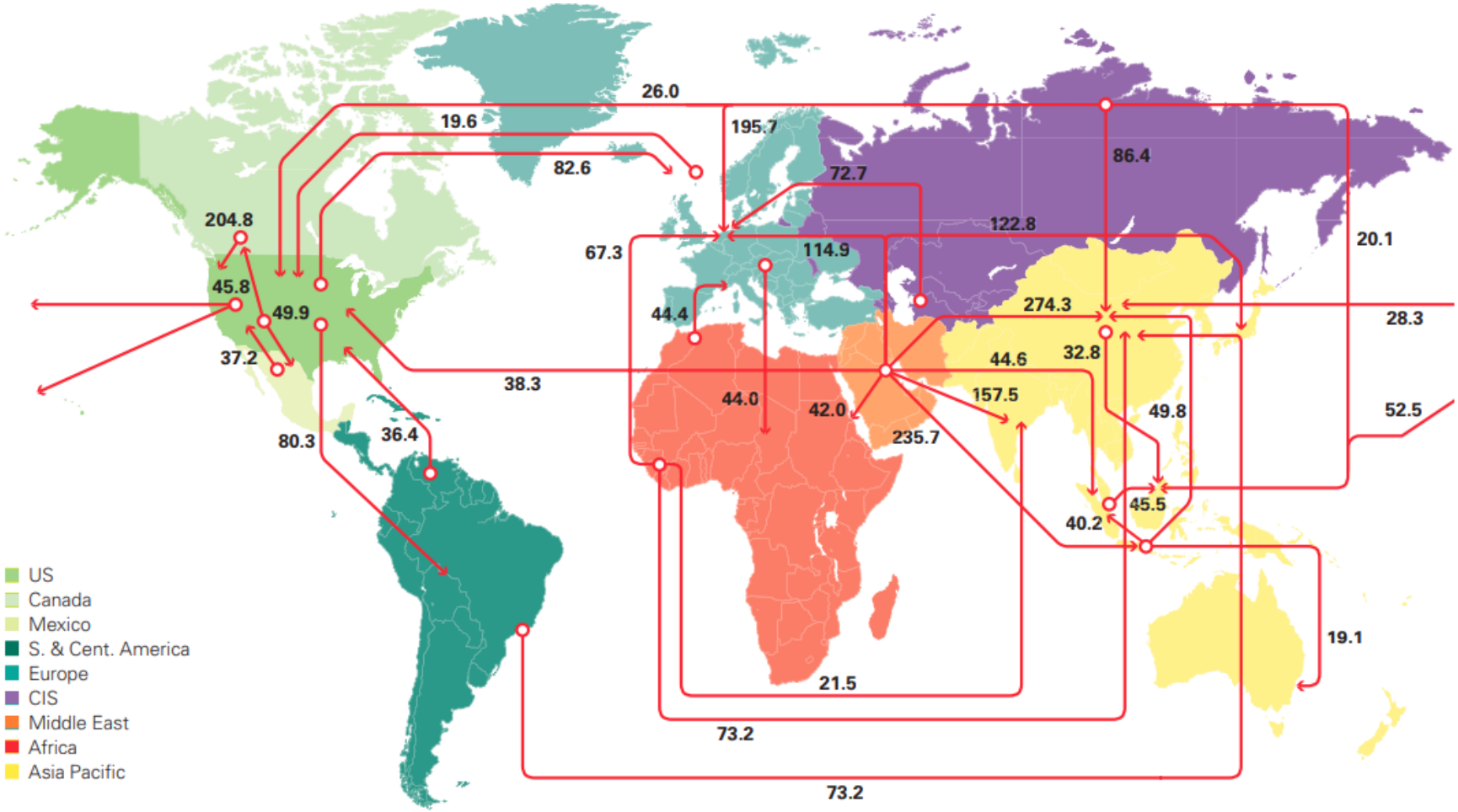
Source: Eurostat

Middle East Crude Throughput, 2019-2023



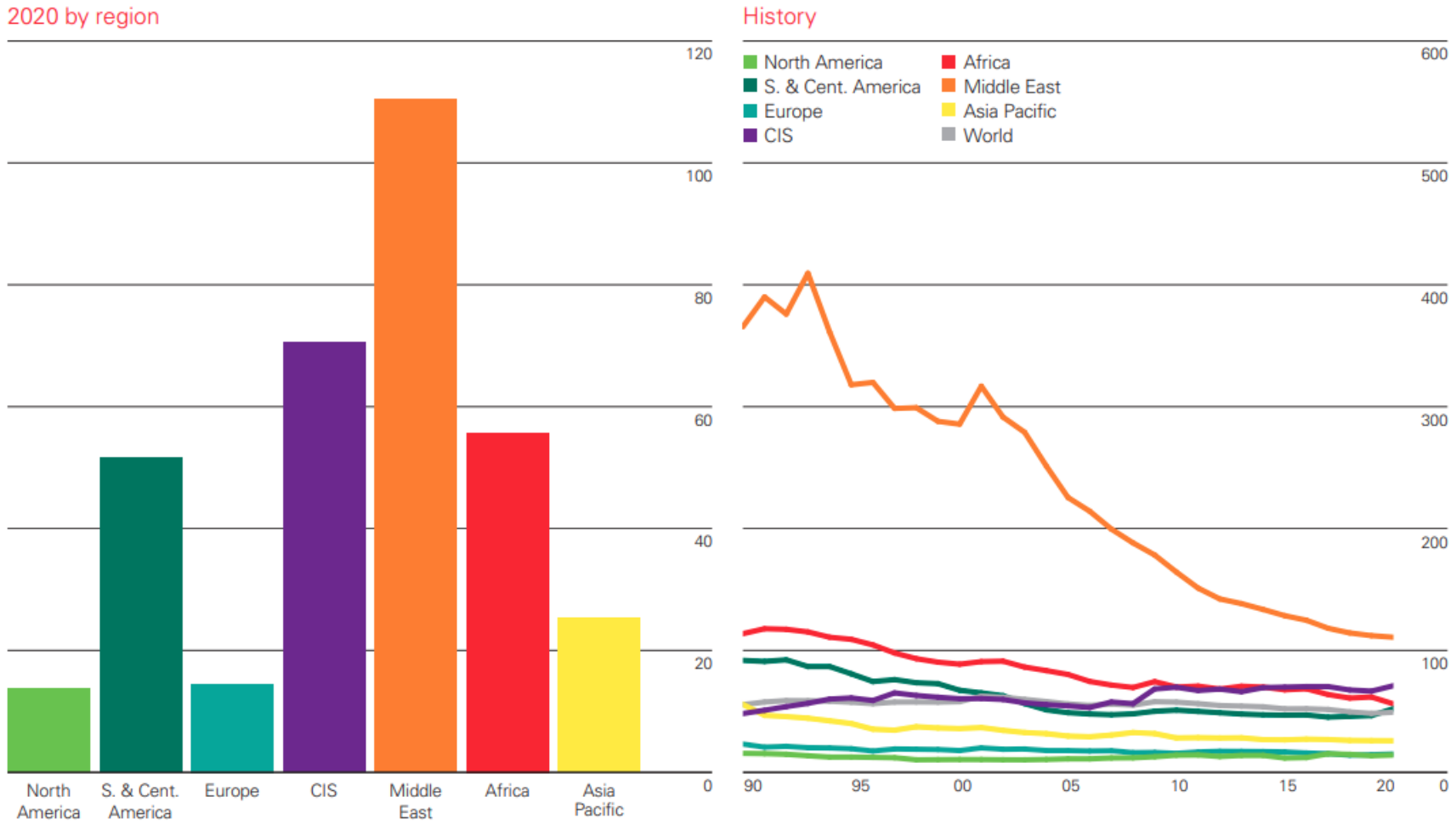
Source: IEA's Oil Market Report (June 2022)

Major Oil Trade Movements 2020 - Trade Flows Worldwide (Million Tonnes)



Source: BP Statistical Review of World Energy 2021

Gas Reserves-to-production (R/P) Ratios (Years)



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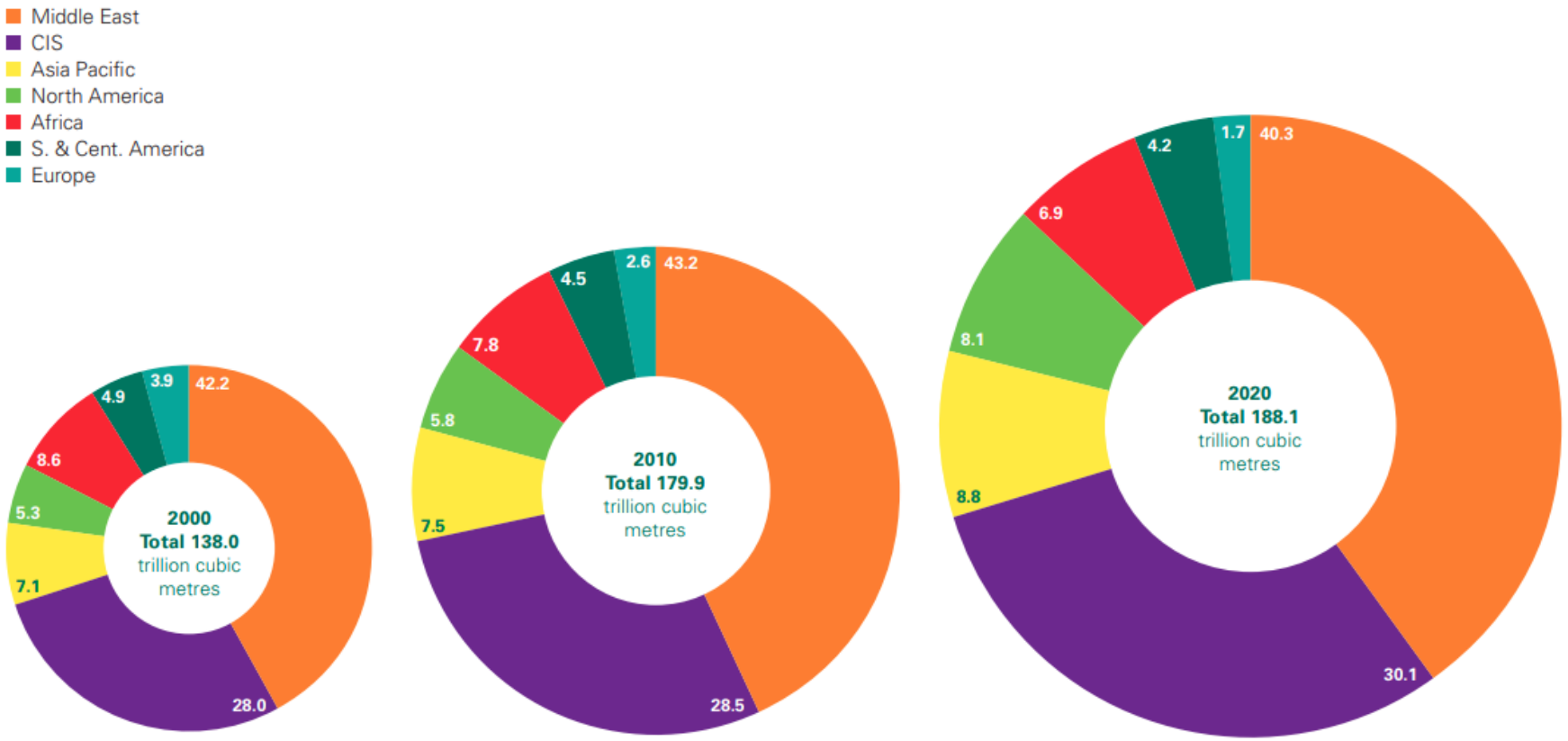
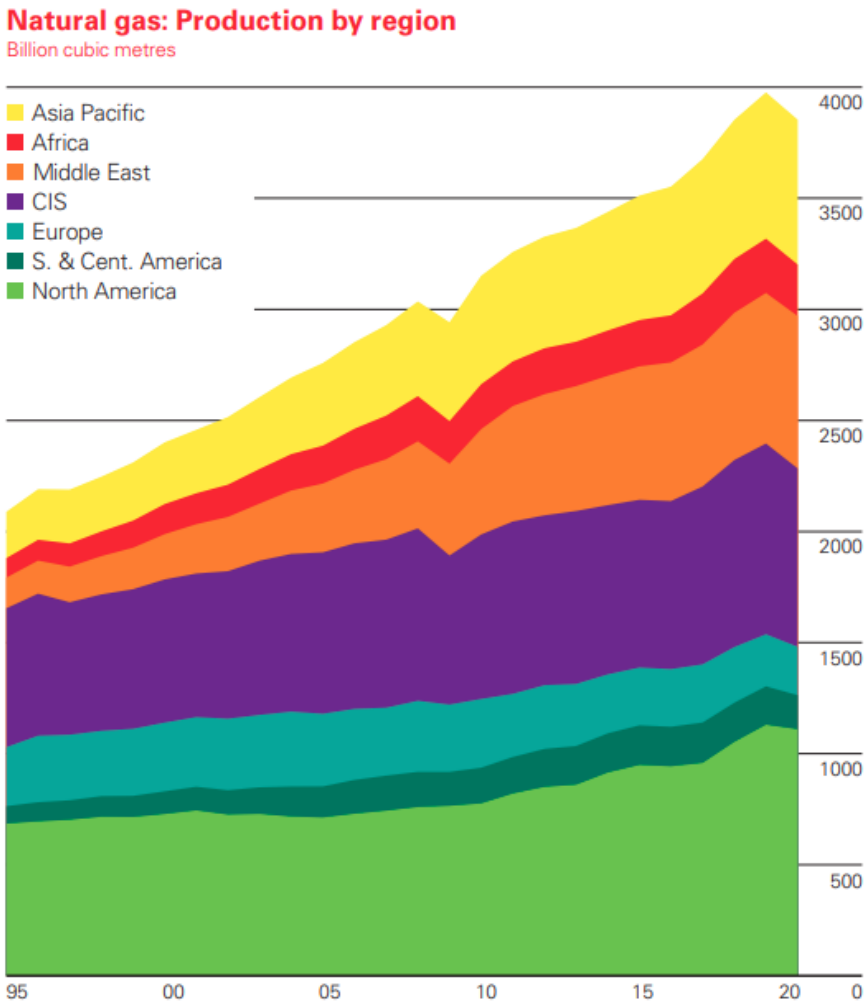
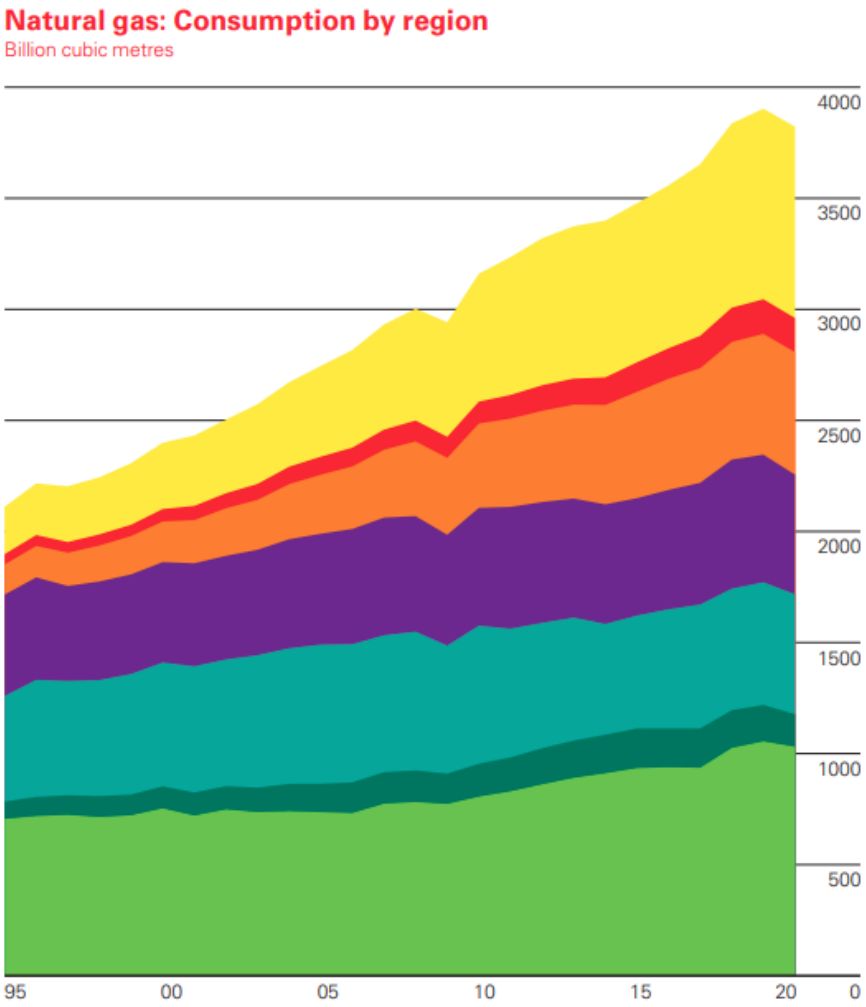


Source: BP Statistical Review of World Energy 2021

Gas Production and Consumption by Region (bcm)





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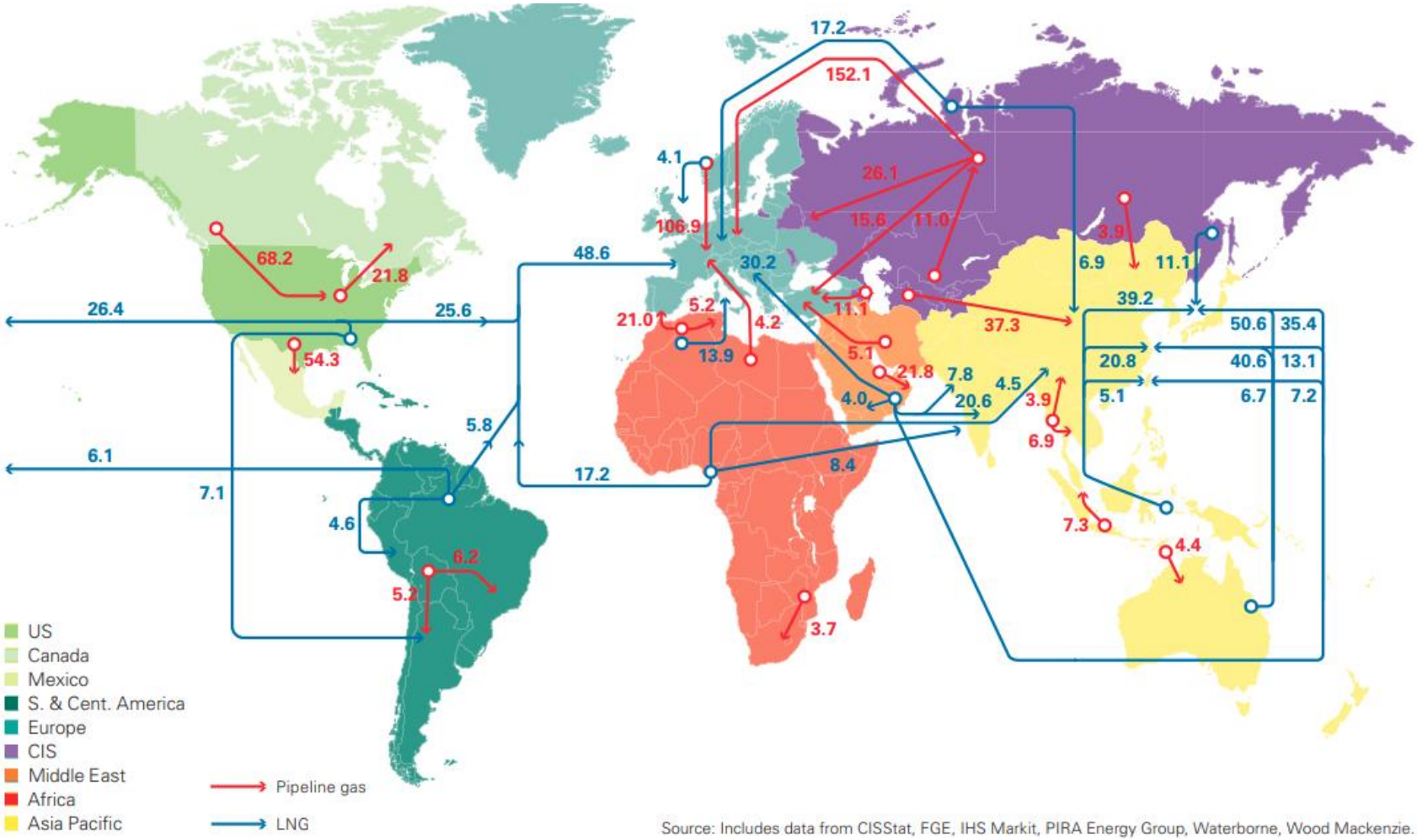

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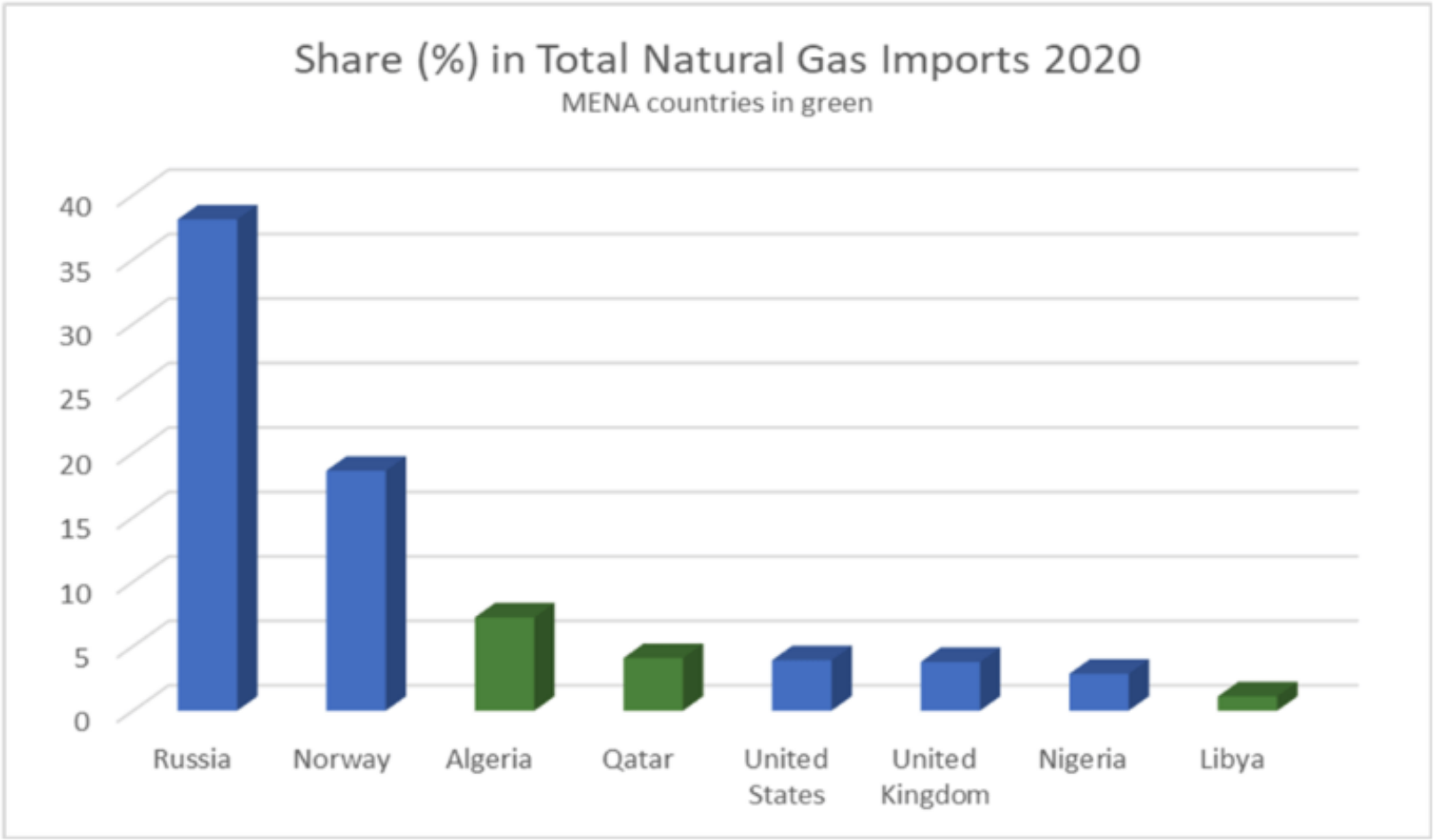


Source: Eurostat

For Further Discussion

- With Middle East's greater role in European energy supply, we have a rebalancing of geopolitical and geostrategic power. What are the challenges in this respect? What will be the role of China and USA?

- Will increased cooperation on energy between Middle East and Europe lead to closer economic cooperation?

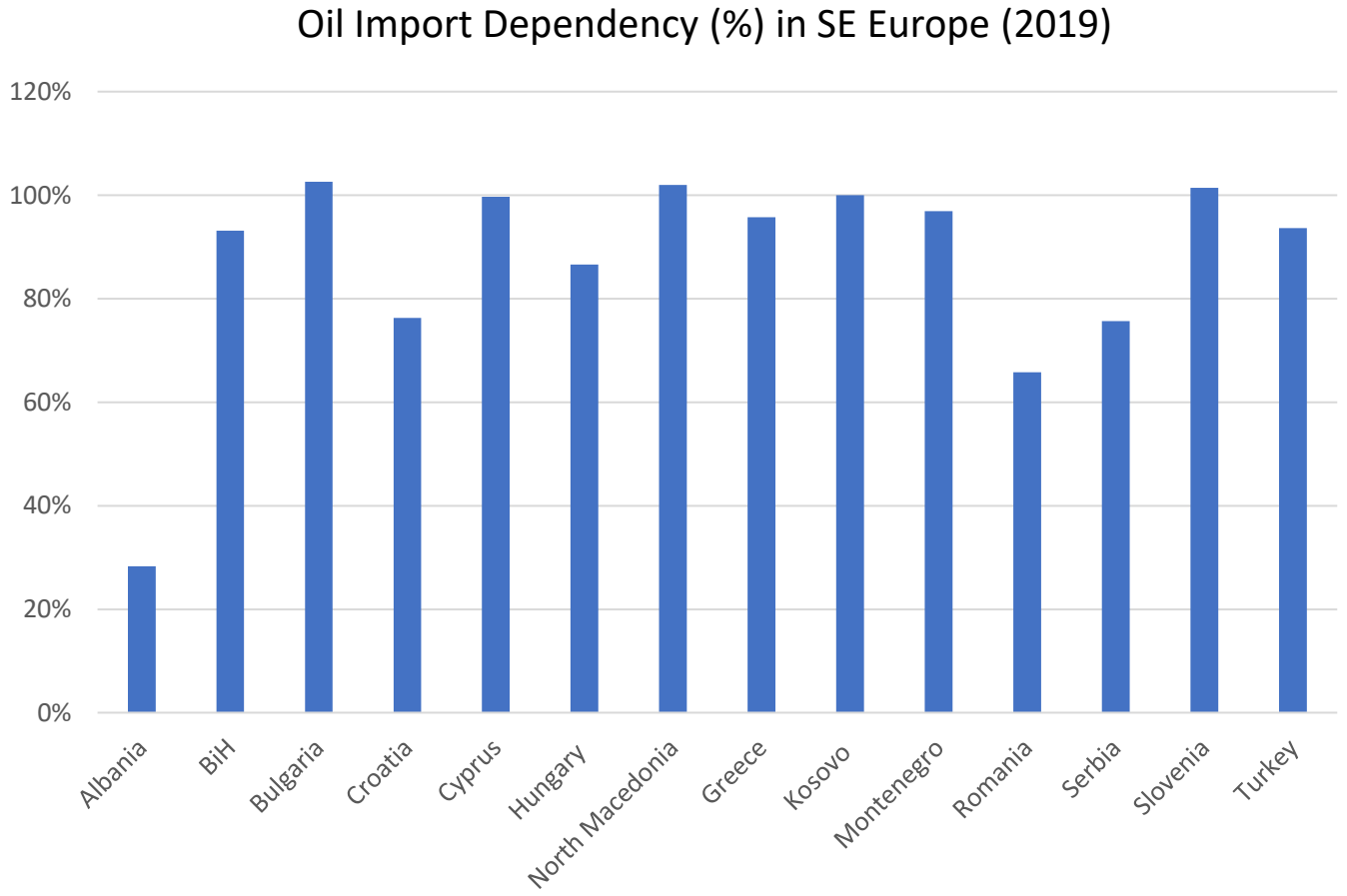
- New and advanced energy technologies are expected to play pivotal role in enhancing cooperation between Middle East and Europe (e.g. solar thermal, photovoltaics, hydrogen, energy storage and others).

- What are the implications in terms of technology options for Europe and the Middle East? Can Europe aspire to increased technology oriented exports? Or is too late since the Middle East is already a major technology importer from China, SE Asia and USA?

SE Europe Energy Balance is Dominated by Oil and Gas

- Seen as a whole, the SEE countries rely to a large extent on oil and gas for the functioning of their economies
- Oil and gas correspond to 55% of primary energy consumption
- Almost 88% of oil and gas consumed in SEE is imported and hence SEE has traditionally very high energy import reliance
- With Russian energy cut off, SEE countries will be looking primarily to the Middle East to make the shortfall in oil and gas supply
- As many countries in SEE are now actively seeking to exploit their own hydrocarbon resources, there is a role for experienced Middle East countries to participate as partners in the finding and exploitation of these resources.
- A new chapter of energy cooperation is now possible between SEE countries and Middle East ones. This new chapter to include RES, hydrogen and electricity as tradable resources
- There is an urgent need to study and analyse the opportunities and investment needs in order to develop such cooperation.

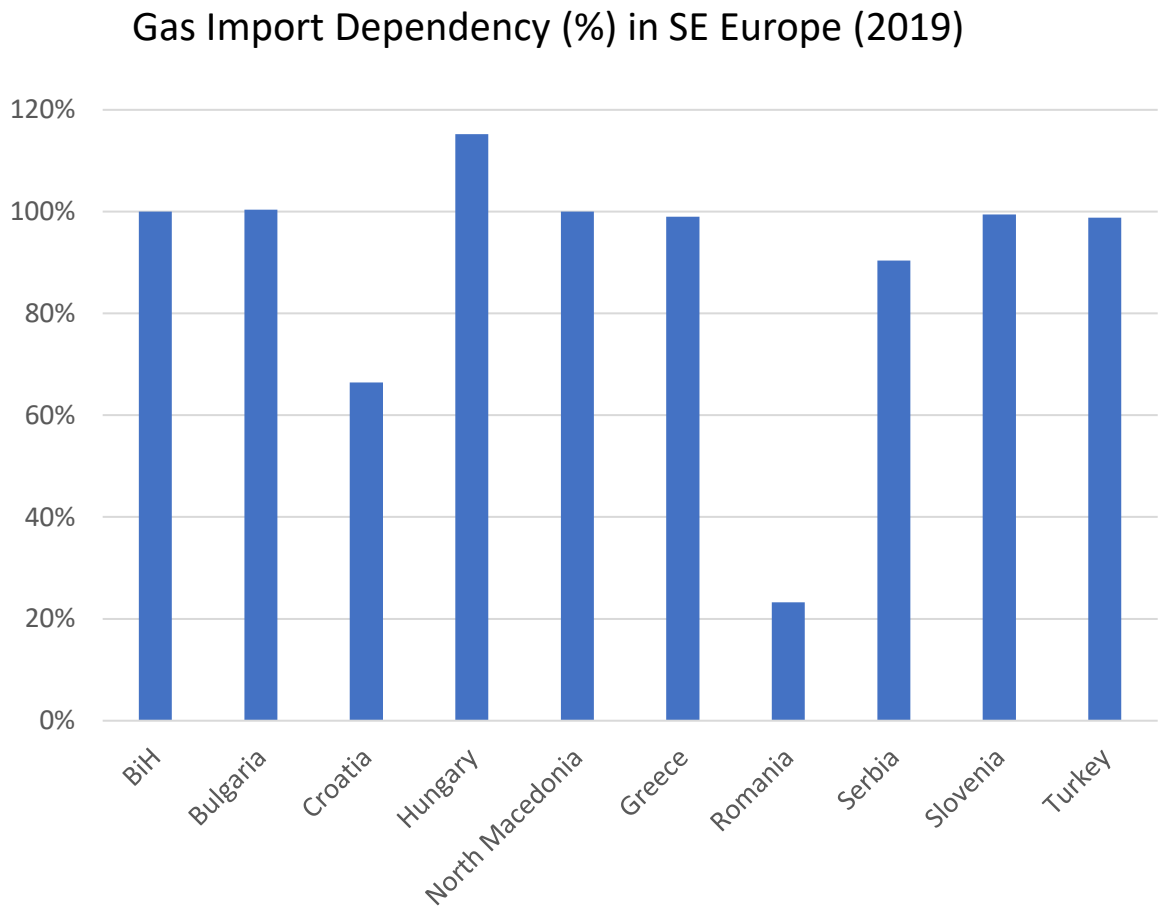
Key Regional Energy Issues – Oil Import Dependency



Note: A dependency rate in excess of 100% relates to the build-up of stocks.

Source: IENE study "SE Europe Energy Outlook 2021/2022", Athens, 2022

Key Regional Energy Issues – Gas Import Dependency



Note: Albania, Cyprus, Montenegro and Kosovo do not produce, import or consume natural gas

Source: IENE study "SE Europe Energy Outlook 2021/2022", Athens, 2022

The SE European Region Defined

Core countries

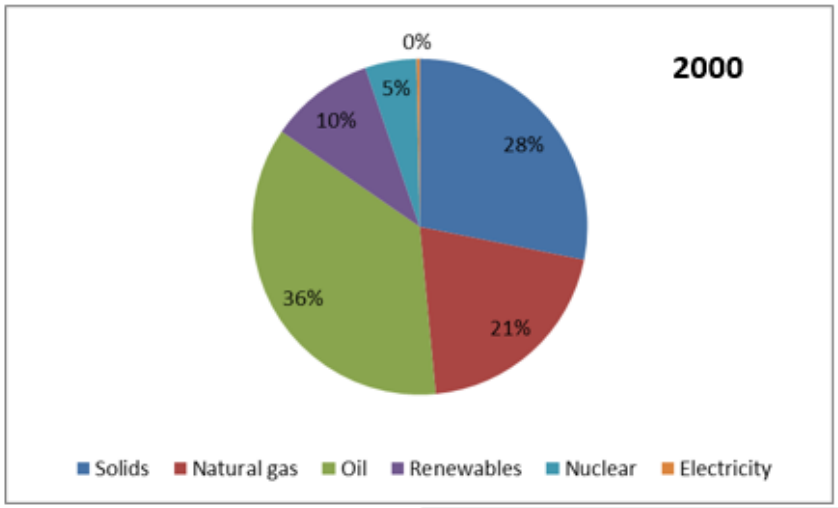
- Albania
- Bosnia and Herzegovina
- Bulgaria
- Croatia
- Cyprus
- Greece
- Hungary
- Israel
- Kosovo
- Montenegro
- North Macedonia
- Romania
- Serbia
- Slovenia
- Turkey

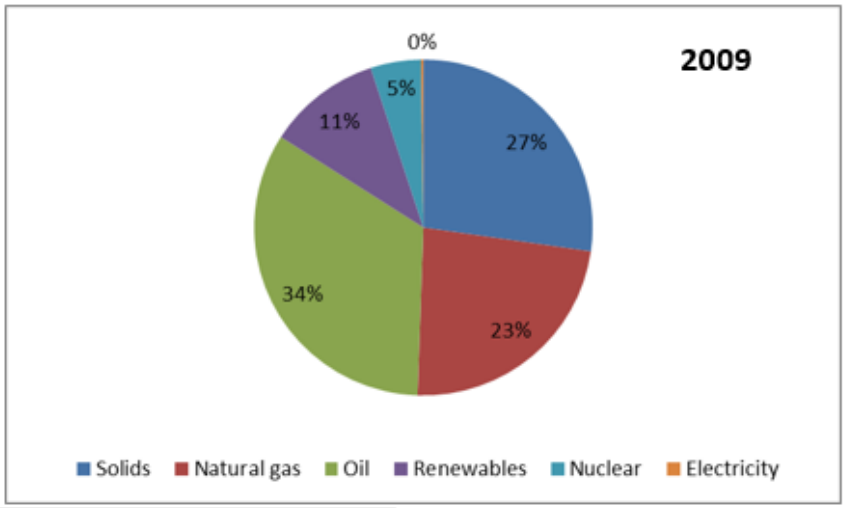
Peripheral countries

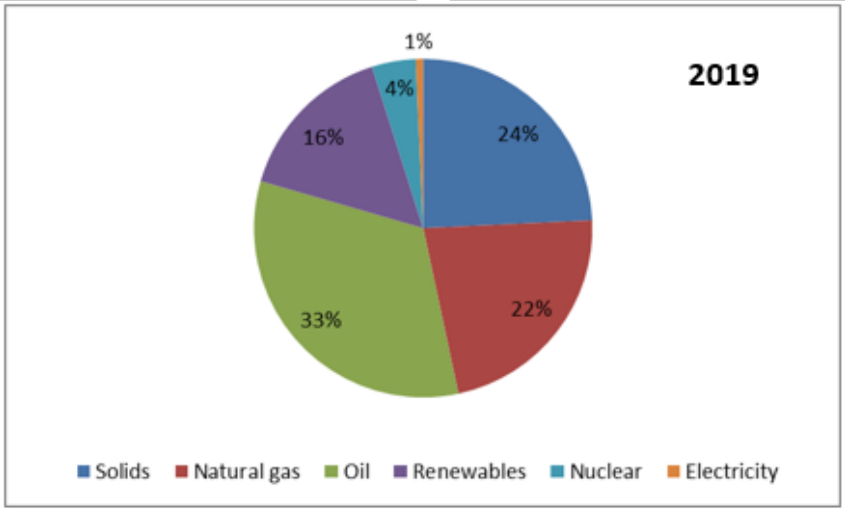
- Austria
- Egypt
- Italy
- Lebanon
- Moldova
- Slovakia
- Syria
- Ukraine

Source: IENE

SE Europe's Energy Mix, **Including Turkey**, 2000, 2009 and 2019

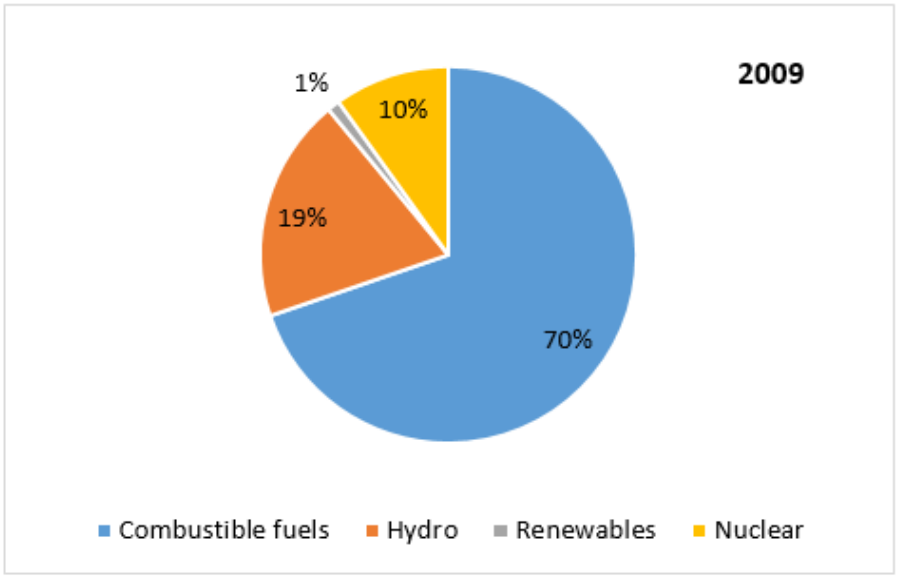


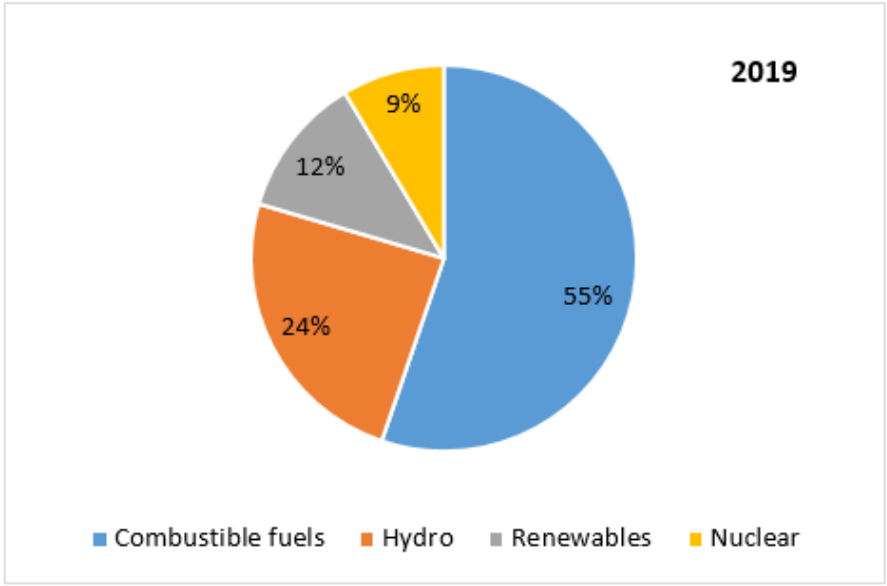




Source: Eurostat

SE Europe's Power Generation Mix, **Including Turkey**, 2009 and 2019





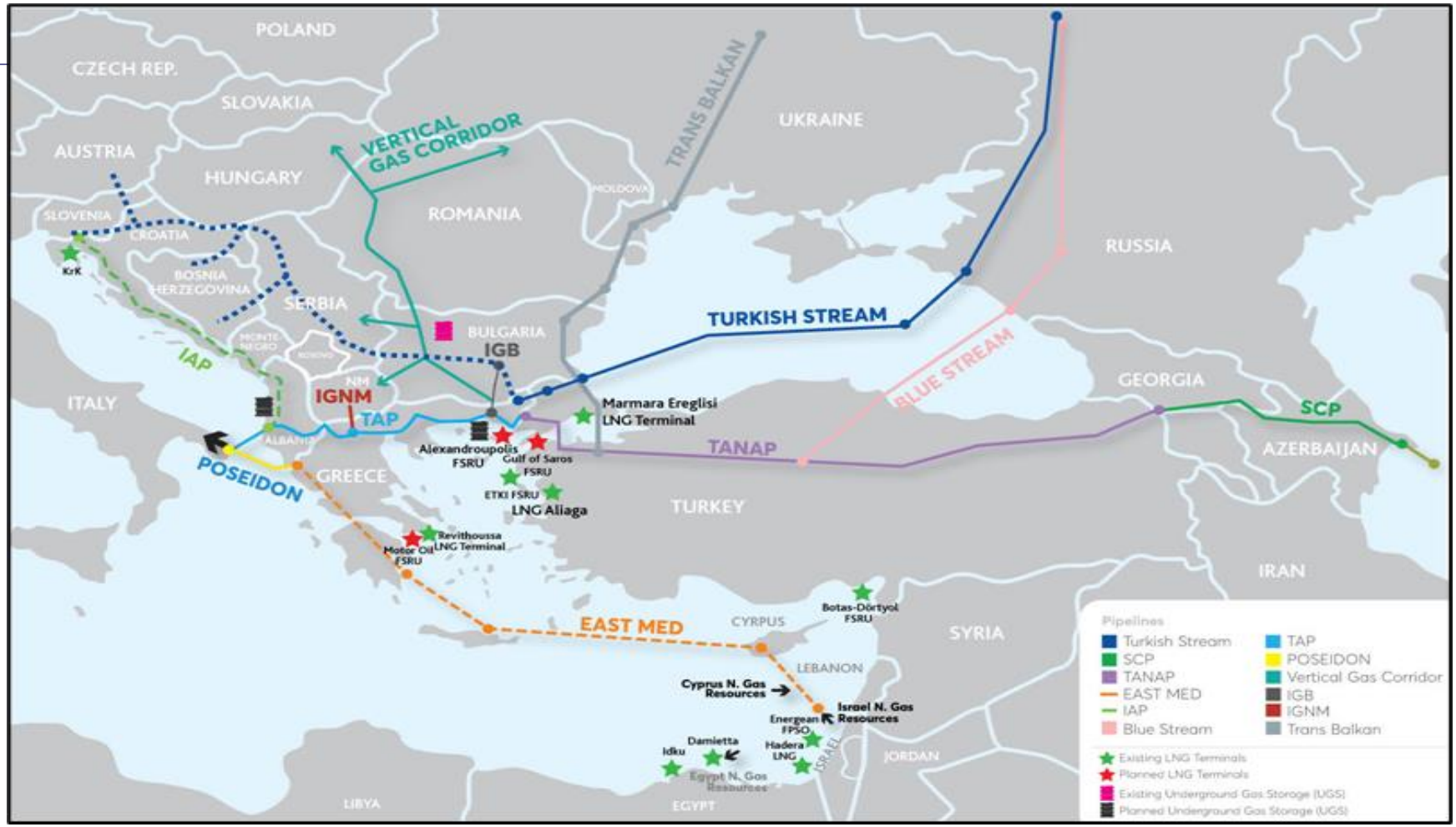
Sources: European Commission, IENE

SE Europe as a Gateway to European Gas Supply

- Because of its geography and existing or planned gas infrastructure, SEE can play a key role in European gas supply.

- A substantial part of this supply could originate from the Middle East and the North African region
  - Existing gas links (e.g. Spain-Algeria, Algeria-Tunisia-Italy) could be expanded and reinforced.
  - New gas links could be established between gas rich Egypt/Israel/Cyprus to Europe, via Greece (See East Med pipeline project).
  - New gas pipelines can be constructed to ship gas from major gas suppliers such as Iraq and Iran and could run through SE European countries.
  - Middle East LNG exports destined to European markets could also be enhanced and the region's extensive LNG terminal capacity (to be further expanded by 2024) could be utilised for maximum benefit.
  - The SEE expanded gas corridor is key in the effort to diversify gas supplies to Europe as it moves away from Russia.
  - Middle East gas producers could take full advantage of the SEE expanded gas corridor.

The Expanded South Corridor



Note: The TANAP, TAP and Turk Stream have been completed, while BRUA and IGB are still under construction. The IAP, the IGI Poseidon in connection with East Med pipeline and the Vertical Corridor and the IGF are still in the study phase. Blue Stream and Trans Balkan are existing pipelines.

Source: IENE

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Thank you
for your attention!

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