

# The Geopolitics of Energy, the EU, the US - Russia Relations, and Energy Transition



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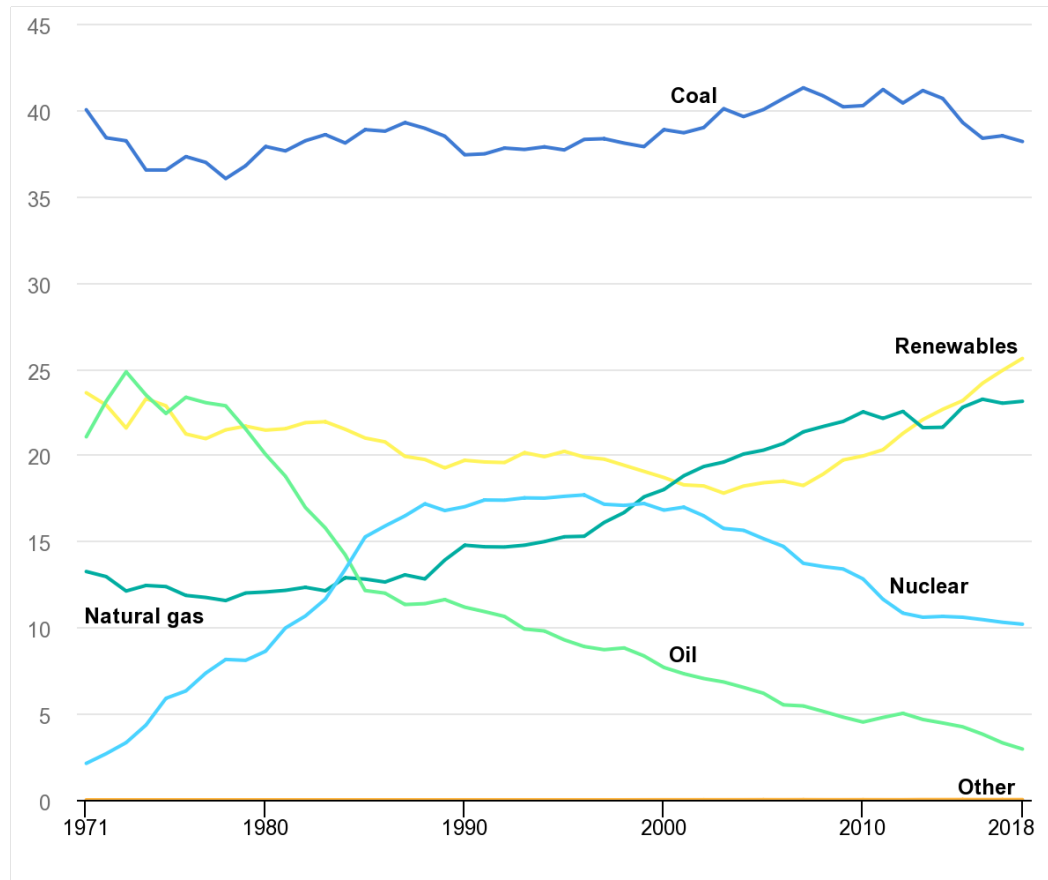
Rice University's Baker Institute for Public Policy, Center for Energy Studies

April 6, 2022

## European TTF Gas Spot Prices Reached Record Levels



## World Electricity Generation by Fuel (IEA)



# DEVELOPED VS. DEVELOPING WORLD

## Developed countries:

- Reducing CO<sub>2</sub> emissions, particularly in electricity sector thanks to increased use of renewables and cleaner fossil fuels

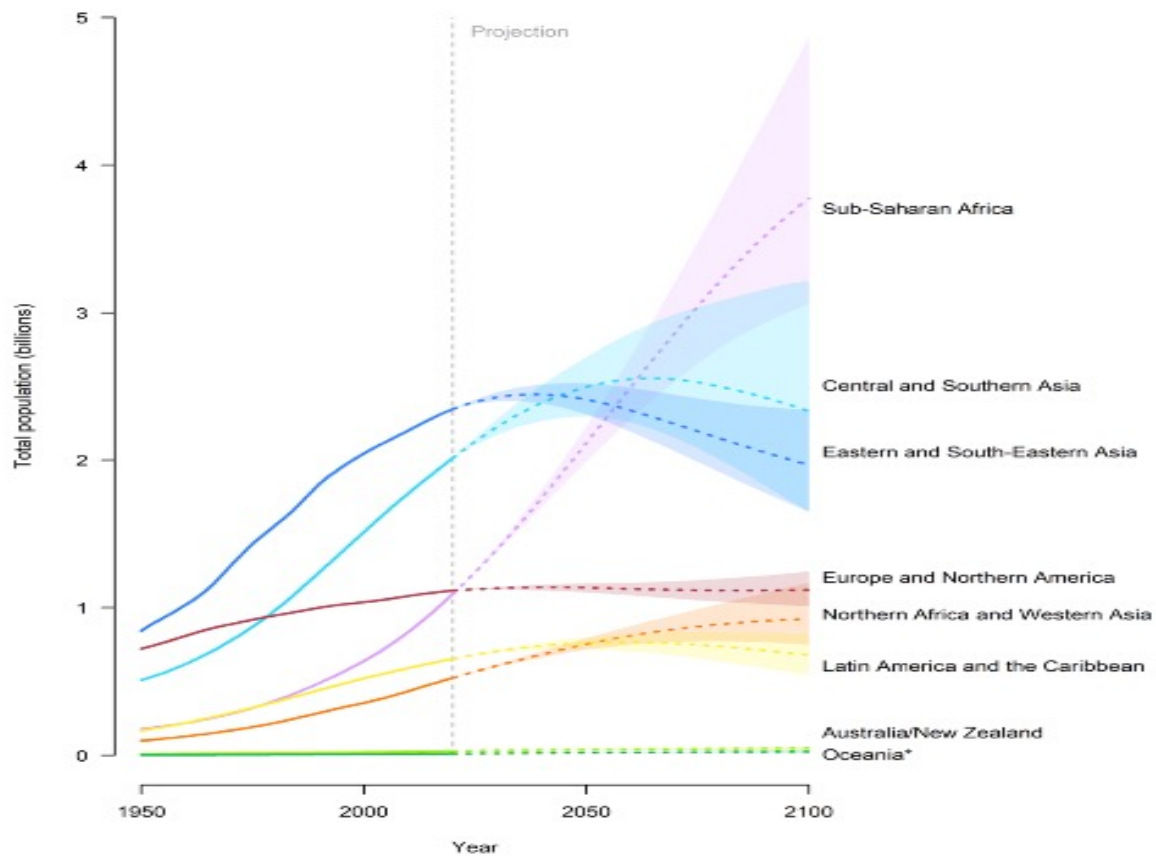
## The U.S.

- “Shale revolution.” **Top O&G producer; exporter**
- Cheap ample natural gas = emission reductions

## Developing World:

- Shapes energy demand and emissions into foreseeable future

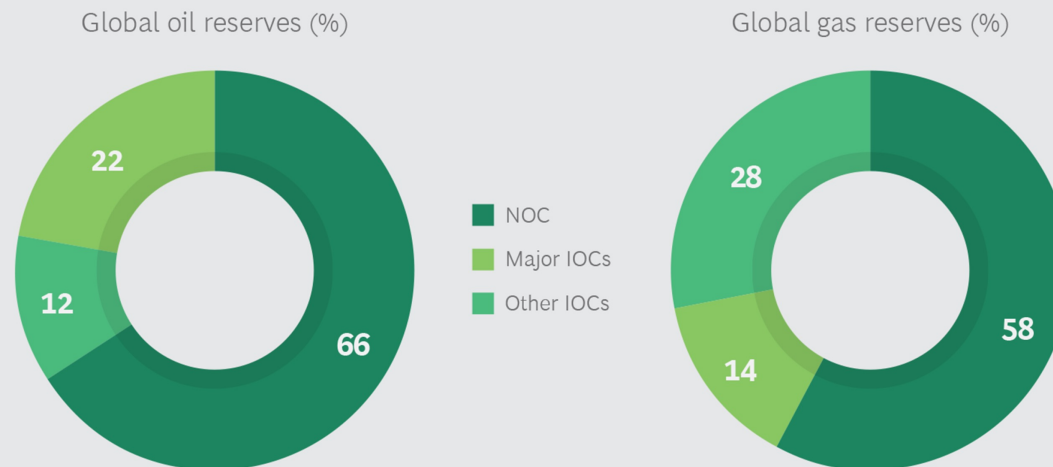
Population estimates, 1950-2020, and projections, 2020-2100 (Source: UN)



Data source: United Nations, Department of Economic and Social Affairs, Population Division (2019). *World Population Prospects 2019*.  
\* excluding Australia and New Zealand

# National Oil Companies vs. International Oil Companies

EXHIBIT 1 | NOCs Control Most of the Global Hydrocarbon Reserves



Sources: IEA; BCG.

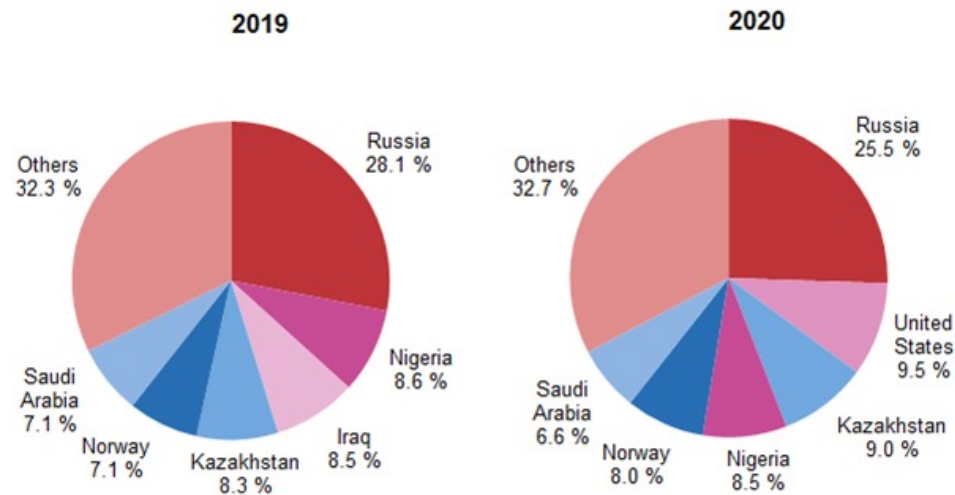
Note: IOC = international oil company; NOC = national oil company.

# EU Energy Policy Before Russian Invasion

- Network Integration, Diversification, & Expansion
  - Pipelines, interconnectors, LNG terminals, storage, return flows
  - Engage with Caspian, Middle East, i.e. TANAP
  - Support Ukraine's energy reform
  - Nord Stream 1 & 2
- Market integration with neighboring states, i.e. Ukraine, Turkey
- External dimension
  - Bilateral agreements in full compliance with EU legislation
  - Information exchange on agreements between member states and third parties to be created
  - EU legal support to member states negotiating agreements
- West vs. Central & Easter Europe

# Who Supplies Europe's ...oil

**Extra-EU imports of petroleum oil by partner. 2019 and 2020**  
(share (%) of trade in value)

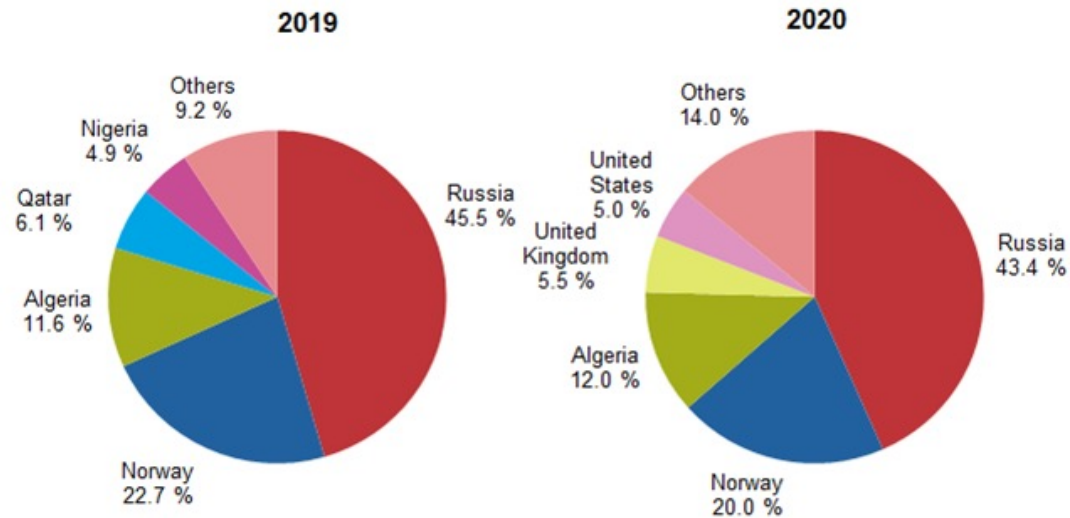


Source: Eurostat database (Comext) and Eurostat estimates



# Who Supplies Europe's natural gas.

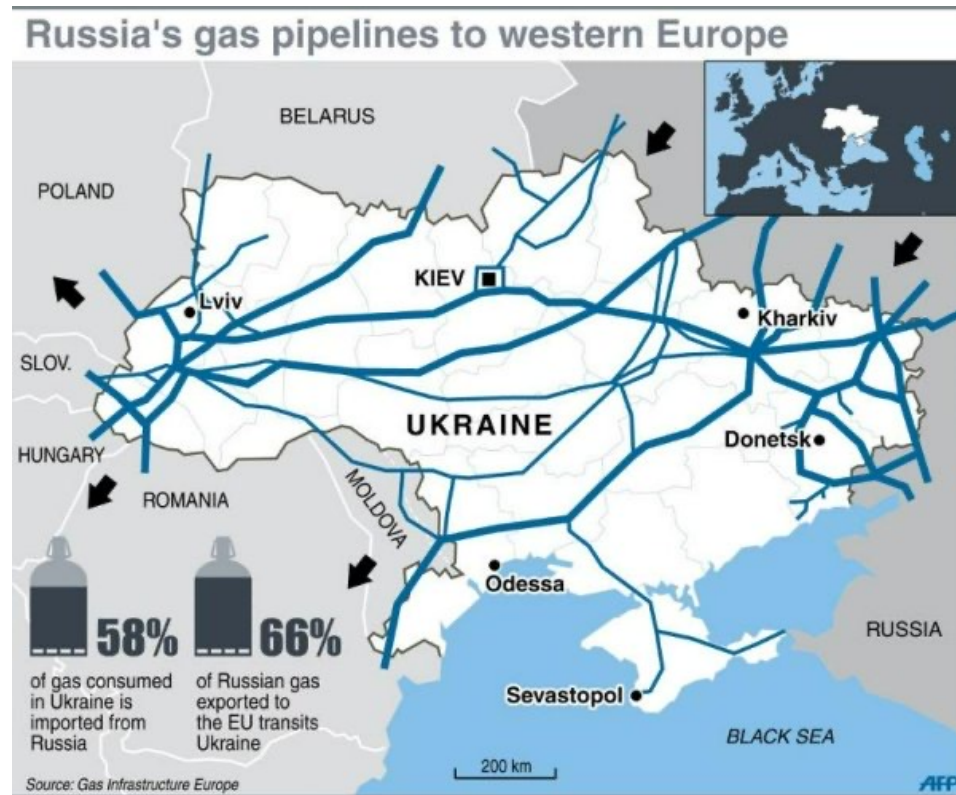
**Extra-EU imports of natural gas by partner, 2019 and 2020**  
(share (%) of trade in value)



Source: Eurostat database (Comext) and Eurostat estimates

## Why Is (Was?) Ukraine Important?

- (1) It used to be that 2/3 of Russian gas destined for Europe moves through Ukraine
- (2) This is a Soviet era legacy but presents strong “transit country risk”
- (3) Disruptions have occurred since 2000s
- (4) Matter of European energy security



# Russia's Pivot to China: Power of Siberia

