

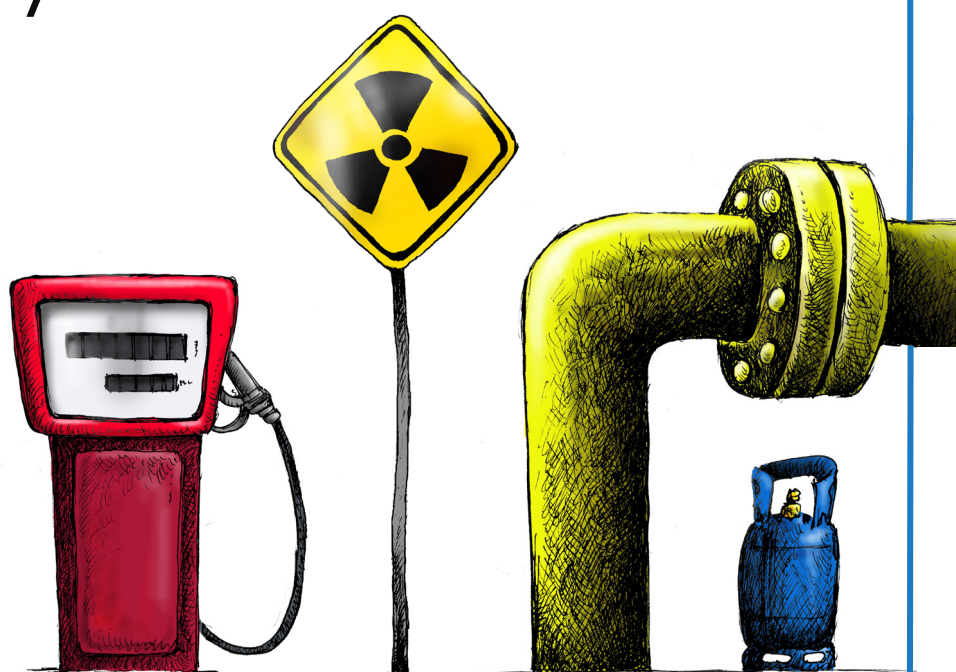


Geopolitical Intelligence  
Services Dossier

# Europe's energy

Shock to the system

The pursuit  
of energy  
transition  
and security



1 The natural gas conundrum

2 Oil sector in stormy waters

3 New life for old ideas

# Key facts

➡ 07

## €18.5 billion

is the amount invested in the Nord Stream 1 and 2 pipelines

➡ 08

## €321/MWh

is the record benchmark European gas price set on August 26, 2022. It was €27/MWh a year earlier

➡ 08

Drop in total Russian gas exports to the EU from 2021 to 2022

155 bcm



2021

75 bcm

2022

➡ 22

➡ 06



## 70%

of Russia's gas exports to the EU were to go by the Nord Stream pipelines

➡ 11

### Nord Stream financial investors

ENGIE



uni  
per

OMV

wintershall

## 5-10 years

is the time needed to build new transport facilities for Russia's gas exports to Asia

➡ 18

➡ 10

## ▼ 10-12%

was the estimated decline in the EU's consumption of natural gas 2022

## **05 Foreword**

## **06 Nord Stream – controversial from the start**

- No commercial logic
- Russian gas no longer cheap
- Europe divided
- German unilateralism

## **12 Ticking time bomb**

- Russian interests
- EU countermeasures
- Transatlantic tensions
- The shale specter

## **18 Tug of war continued**

- The war upends Europe's gas game
- Germany-Russia rift deepens
- Germany's struggle to adjust

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## **22 Europe and natural gas Q&A**

# Experts



## Prince Michael of Liechtenstein

Prince Michael of Liechtenstein graduated from the Vienna University of Economics and Business with a master's degree in business administration. During his studies, he worked with banks and manufacturing companies in Canada, the United States and Belgium.



## Stefan Hedlund

Professor Stefan Hedlund is research director at the Centre for Russian and Eurasian Studies at Uppsala University. An economist by training, he has specialized in Russian affairs since the final days of Leonid Brezhnev in the early 1980s.



## Carole Nakhle

Dr. Carole Nakhle is the founder and CEO of Crystol Energy, a London-based advisory, research and training firm. An energy economist, she specializes in energy policy, security and investment, and world oil and gas market developments.



## Frank Umbach

Dr. Frank Umbach is an academic, researcher, consultant, European government advisor and author with expertise in energy security and cybersecurity. Since 2012, he has been a NATO consultant on energy security.



## Michael Wohlgemuth

Dr. Wohlgemuth is a research director at the Foundation for Economic Governance and Public in Liechtenstein. His major fields of research are in new institutional economics, economic theories of politics (Public Choice Theory) and theories of economic systems.

# Key facts

## -\$37.63

➡ 04

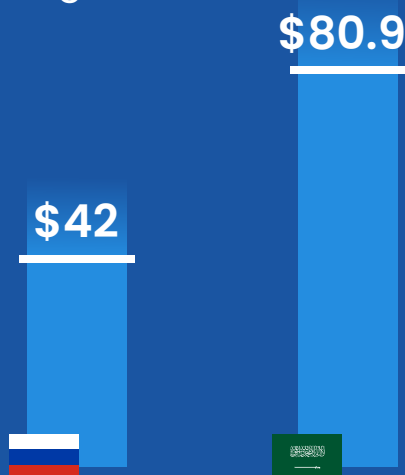
was briefly the price of WTI crude on April 20, 2020, meaning some operators were willing to pay for oil to be taken off their hands

## ▼ 9.7 mb/d over two years

was the size of OPEC+'s record April 2020 production cut

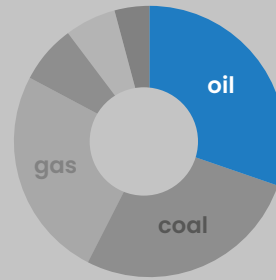
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Oil price levels that Russia and Saudi Arabia need to balance their respective state budgets



➡ 09

➡ 23

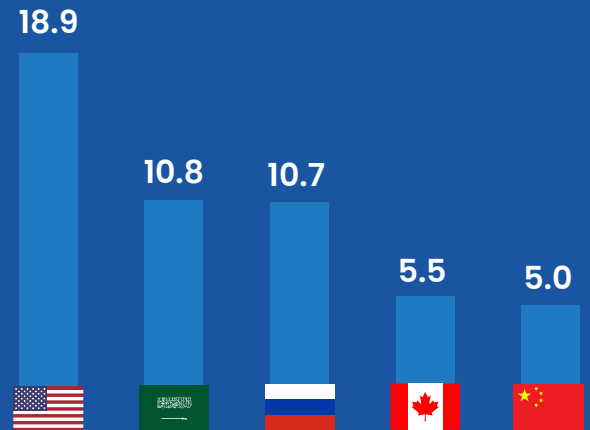


## 30%

was oil's share in the global energy mix in 2020.

Top oil producers (2022, mb/d)

➡ 06



## \$133 a barrel

was the price of Brent crude on March 8, 2022

➡ 18

## \$30 a barrel

less than the price of Brent is the discount Russia offered buyers of its Urals crude

➡ 21

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## Expert



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## Key facts



**40.6%**

of uranium needed in the EU comes from Russia and Niger

➡ 07



### Russia's Rosatom

➡ 09

holds 38% of the global uranium enrichment market, 16 percent of the nuclear fuel market and 14 percent of the uranium mining market

**75%**

is the share of global GDP of economies that seek hydrogen-driven solutions in their climate change mitigation efforts

➡ 20



**10 GW**

of installed electrolysis capacity by 2030

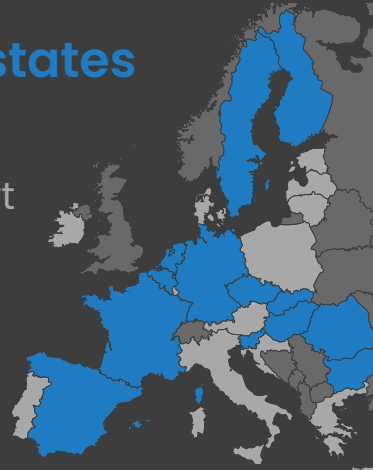
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### 13 EU member states

use nuclear power;  
some of them export  
nuclear-generated  
electricity to  
neighbors

➡ 07



**\$30 billion**

➡ 18

is the expected cost of the UK's Hinkley C nuclear power station, due to open in 2026



The U.S., China, France, Russia and South Korea generate

**71%** of world  
nuclear energy

➡ 14

The EU aims to scale up clean hydrogen production to

**1 million  
tons per year**

➡ 22



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# Experts



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## Helmuth Boeck

Helmuth Boeck is a professor at the Atomic Institute of the Vienna University of Technology and an expert at the International Atomic Energy Agency. He was the manager of the research reactor of the Vienna University of Technology for 40 years and carried out 80 missions to research reactors.



## Frank Umbach

Dr. Frank Umbach is an academic, researcher, consultant, European government advisor and author with expertise in energy security and cybersecurity. Since 2012, he has been a NATO consultant on energy security.