

# **Fossil Fuels in Europe**

**past, present and future**

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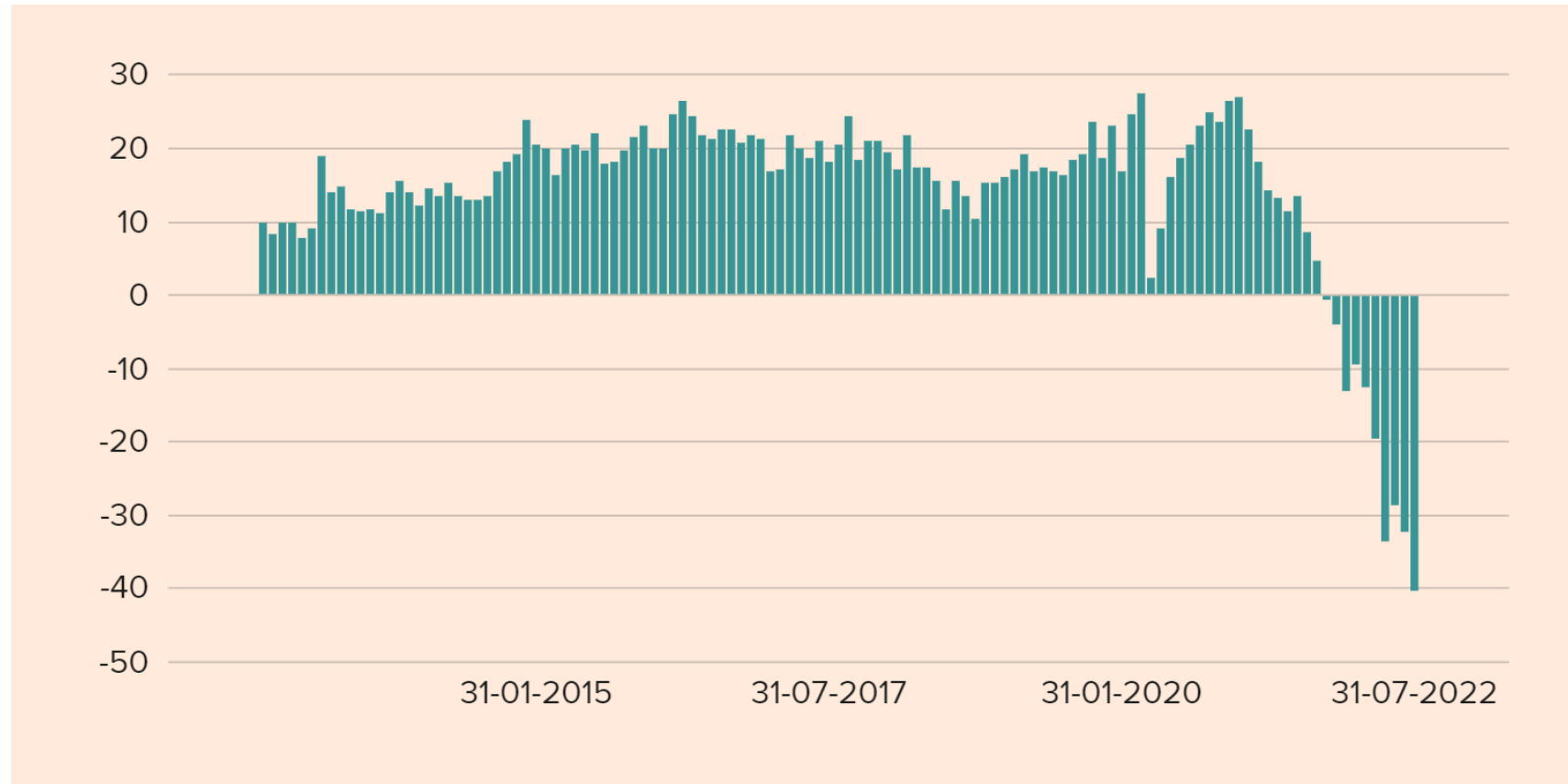
TU/e Eires Energy Day, March 2023



**The Hague Centre  
for Strategic Studies**

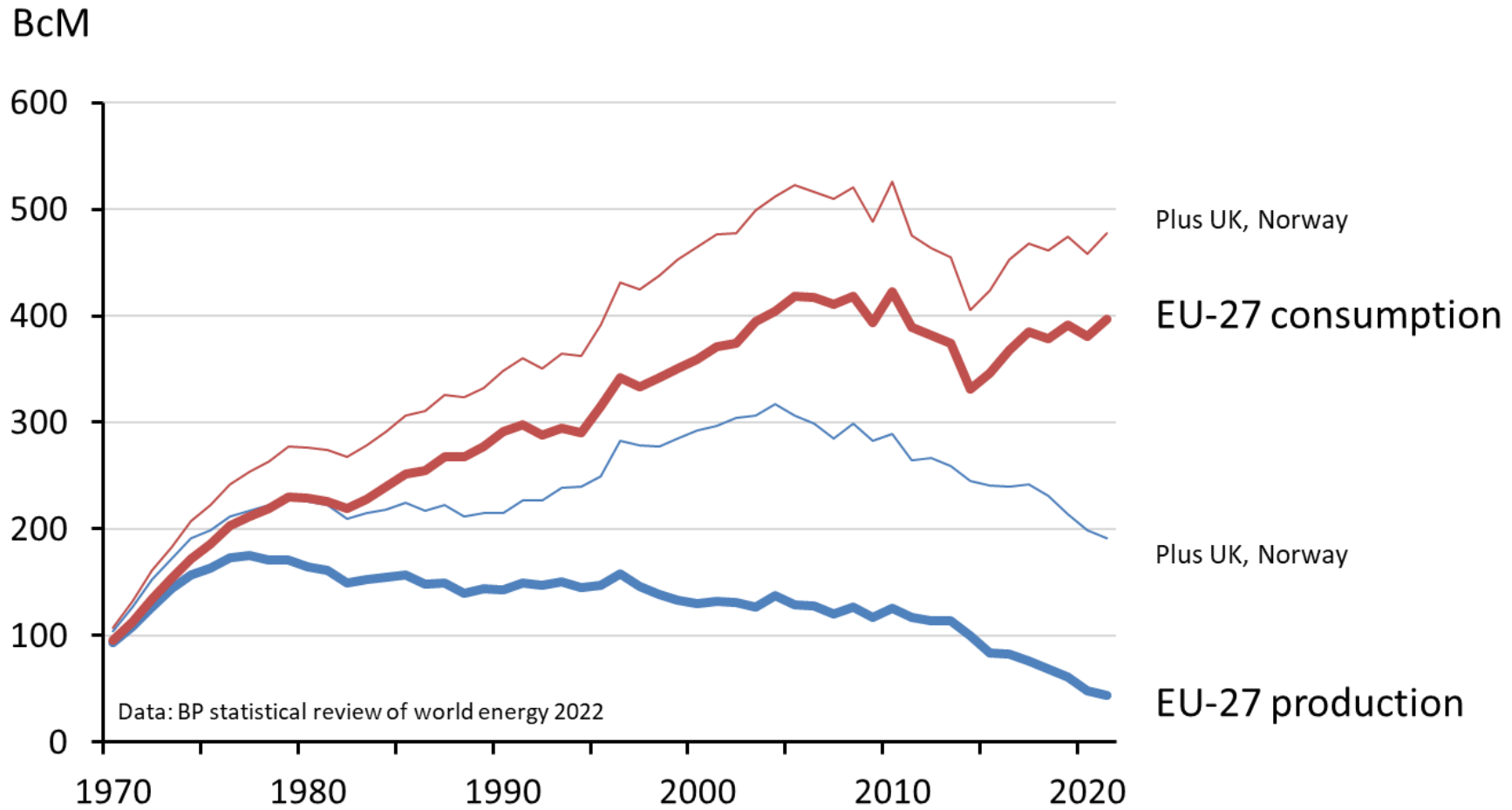
# Monthly EU trade balance

2022 EU trade balance deficit: 300 billion €

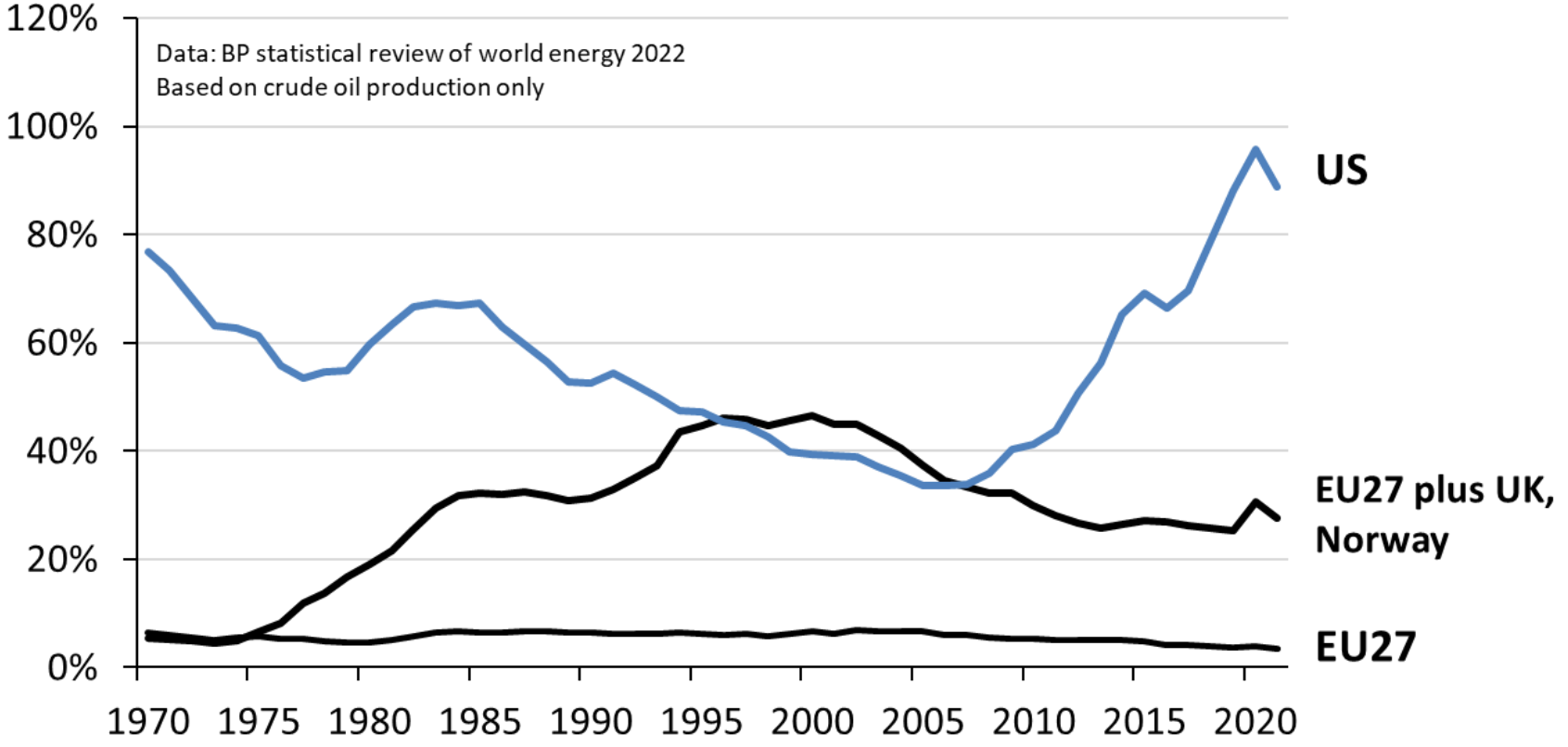


Source: FD, Bloomberg

# Europe gas production/consumption



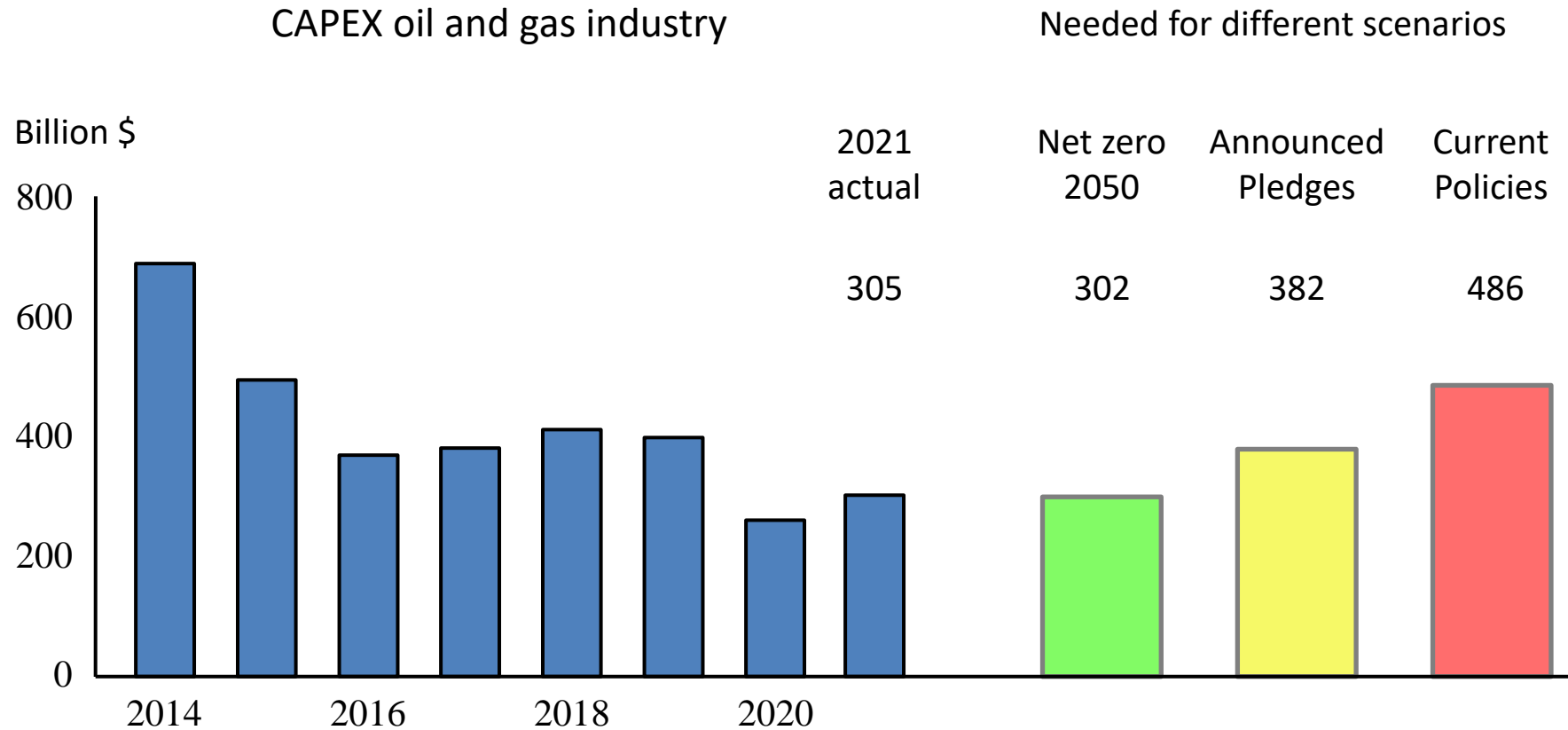
# Oil: self-sufficiency



# Oil and gas investments not sufficient to meet demand

ESG pressure, Concerns about stranded assets

Rising NOC share in investments



Data from Rystad, Bloomberg

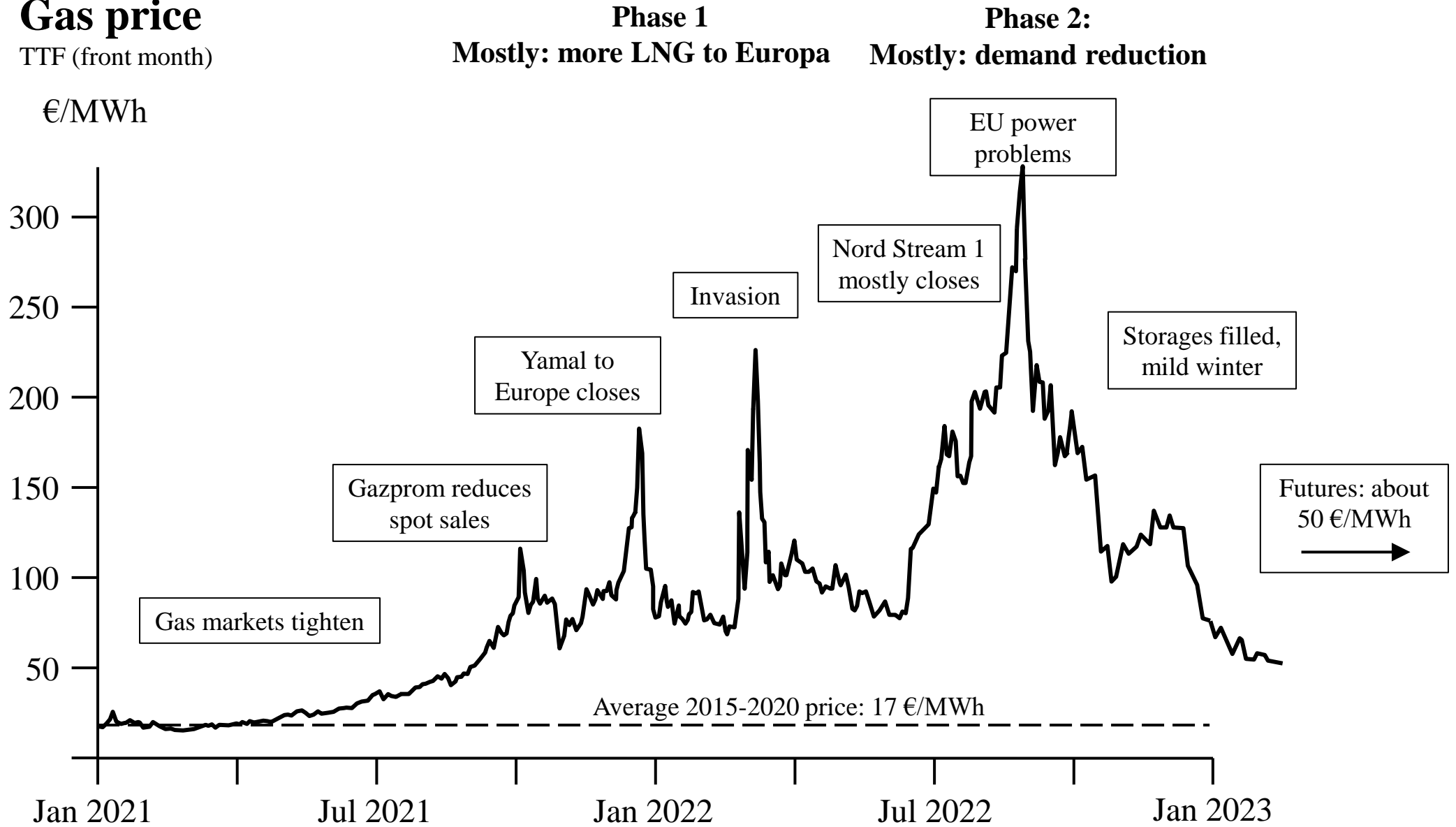
Upward pressure on prices

# The 2022 European gas crisis

## Gas price

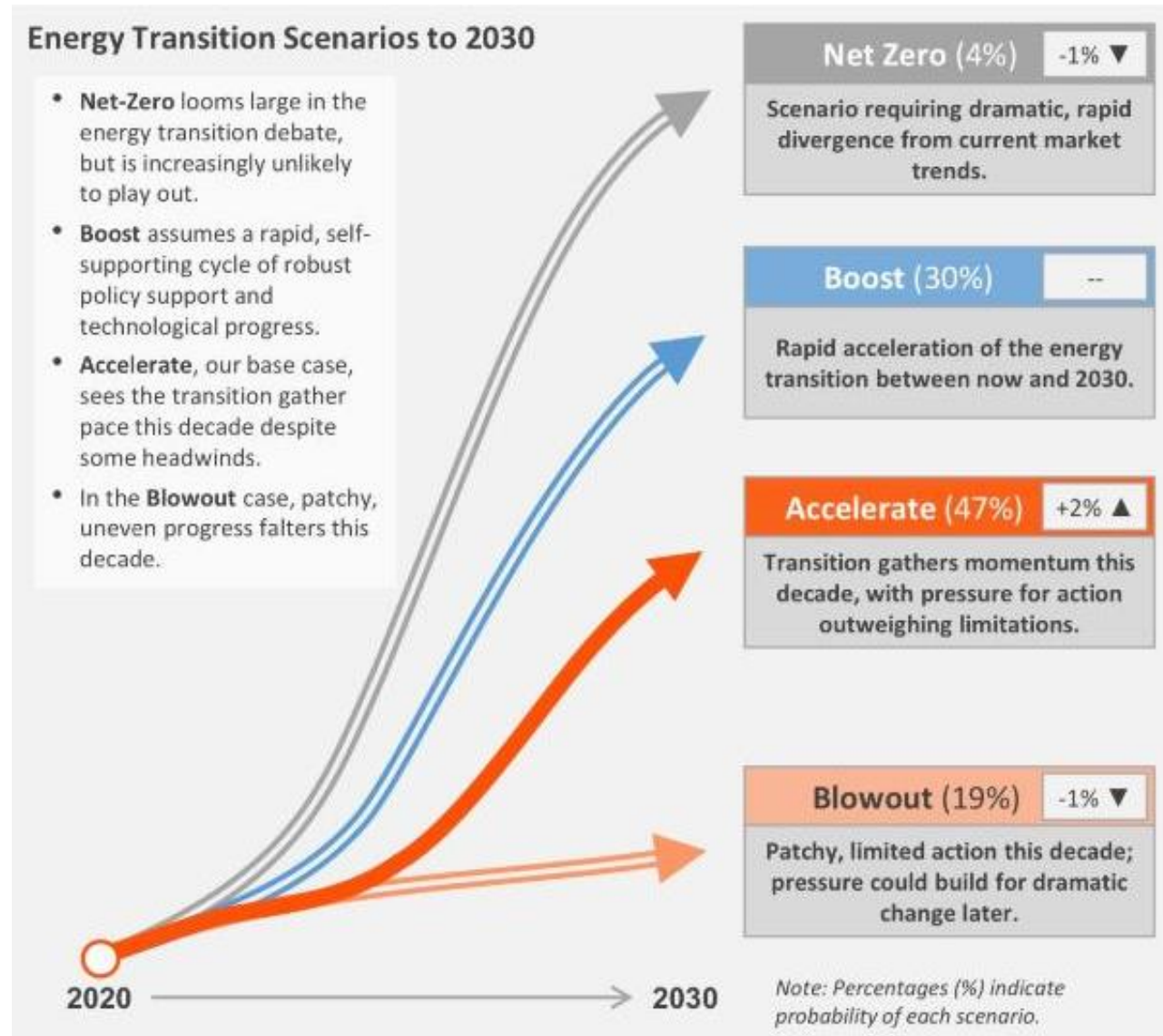
TTF (front month)

€/MWh



# We are not following a path towards 1.5 degrees

## Climate change will get ugly in the 2030's



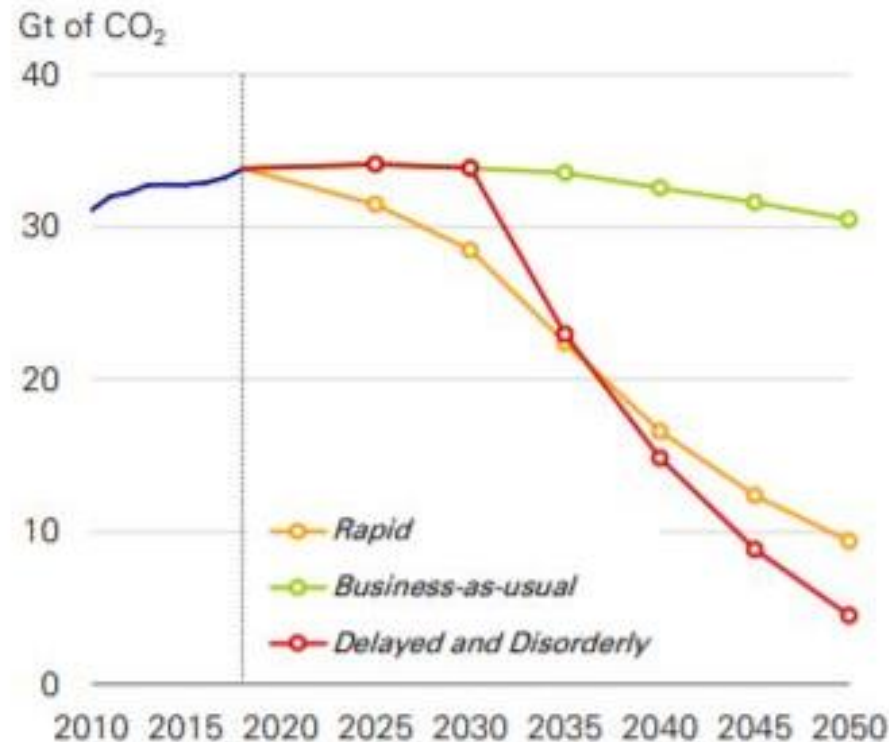
# The Energy Transition: delayed and disorderly

We focus on 1.5 degrees scenario's or Business as Usual scenario's

We are lining up for other scenario's, such as BP's Delayed and Disorderly scenario:

- Action needed, on a global basis, only after climate change gets really ugly
- Geopolitics is back as a driving factor for oil/gas markets
- Volatile markets for fossil fuels? On average, high instead of low prices for fossil fuels?
- Geoengineering as an emergency exit?

## Carbon emissions





# European IOC's are vulnerable

IOC: International Oil Company (Shell, BP, Total)

Will they keep their license to operate?

Will they be subject to litigation (damages caused by climate change)?

Can fossil fuels and zero carbon flourish under one roof?

Low valuations (market cap / profit below 5) makes them vulnerable

- Fossil assets are more valuable for US fossil competitors
- Zero carbon assets are more valuable for EU zero carbon competitors

They may be leaving Europe

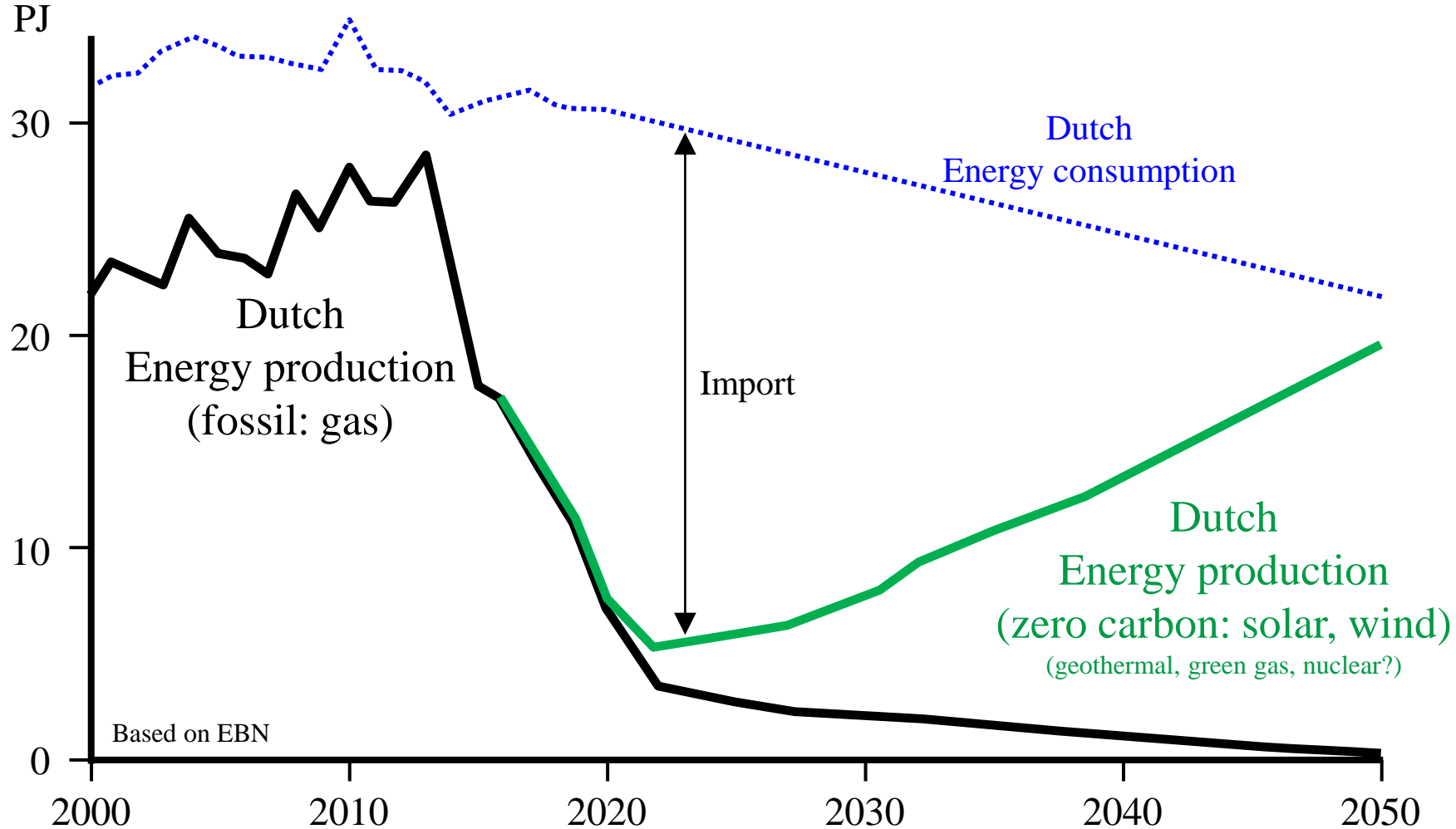
# Gas: EU parties reluctant to sign long term contracts



Source: Shell

# Two challenges: to rapidly build a new energy system and to manage the farewell to the old system

In a more uncertain world, with more volatile markets and a low European oil and gas production



# Europe is vulnerable

The energy transition: delayed and disorderly

The EU is still highly dependent of fossil fuels.

EU fossil fuel production has become very low

License to operate for fossil fuel production may disappear

The old adagium “the best remedy against a high oil price is a high oil price” is no longer (fully) valid.

Producer’s reluctance to invest is there to stay (ESG pressure, concern about stranded assets)

OPEC’s reputation as a long term reliable supplier is becoming less important.

Why should they – if the world wants to get rid of fossil fuels as quickly as possible.

Geopolitics is back as a factor driving the markets.

And may continue to surprise

Oil and gas markets may become more volatile

With, potentially, higher rather than lower prices

