

# WORLD ENERGY MARKETS OBSERVATORY

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# Oil, Gas and Electricity Markets

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# Oil, gas and electricity markets

## Oil markets

### 2019:

- Demand growth was lower than expected due to better efficiency in new vehicles.
- U.S. had driven up supply growth with shale.
- Upstream investment kept growing

### 2020:

- The COVID crisis had a drastic effect on oil demand, resulting in negative crude prices during the first wave.
- This historic shock caused severe cuts in upstream spending.
- U.S. shale was particularly impacted by the crisis.

### 2021:

- As economies recover post-COVID, demand for oil is expected to bounce back. The speed of recovery will depend largely on regional sanitation and economic perspective. Demand growth is also expected to be much slower in certain sectors, such as aviation fuel.
- Demand growth during the first half of 2021 has resulted in an increase in crude prices.
- In the Middle East, OPEC+ controls the market.
- Tensions between Saudi Arabia and the UAE resulted in the cancellation of OPEC+ in a meeting in early July. A compromise to increase production by 0.4mb/d per month was finally reached in mid-July 2021.

<sup>1</sup> IEA

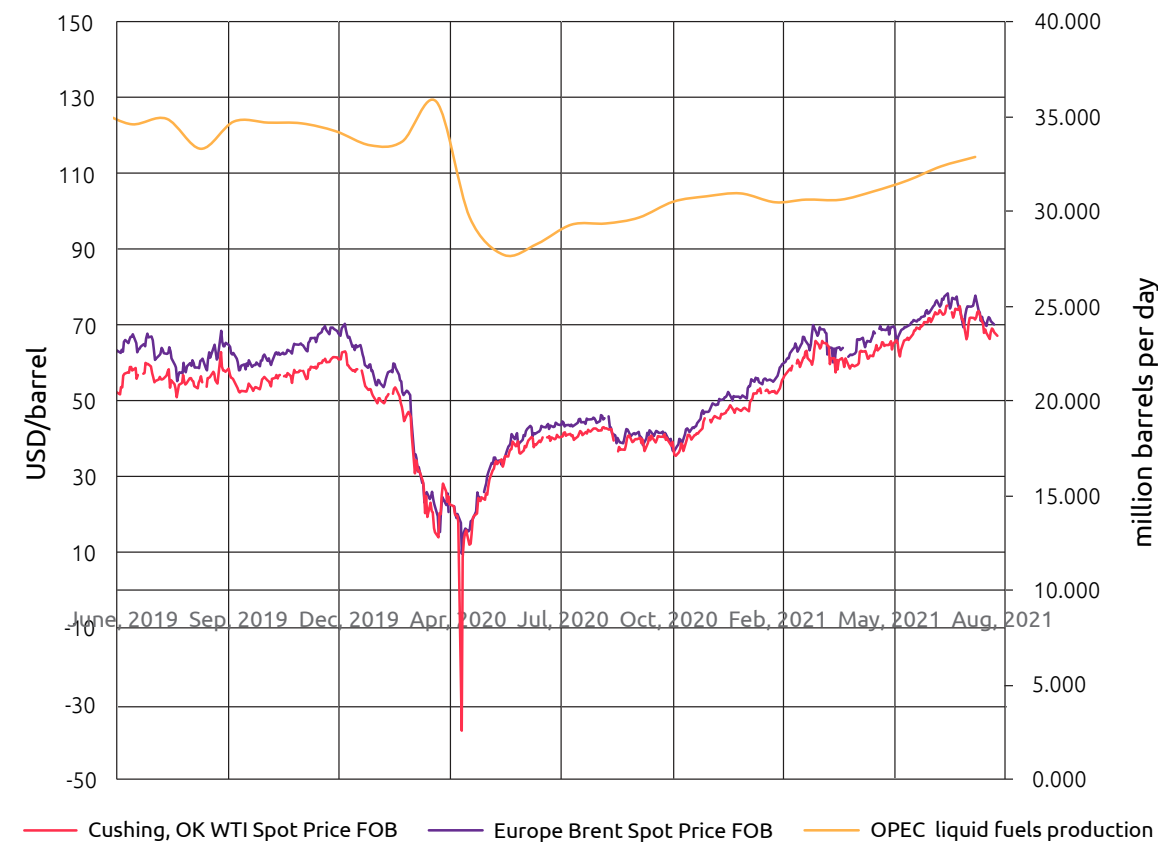
- The growth of production is limited due to spending cuts during the pandemic.

**The pandemic has shifted the balance of power in oil production from the U.S. back to the OPEC+ countries, amidst tension between Saudi Arabia and the UAE. As economies recover, demand in oil will be slower in certain sectors.**



FIGURE 1

# Crude oil spot prices



Source: EIA (2021)



## Gas markets

### 2019:

- The growth of LNG created competition with piped gas in Europe, resulting in a decrease in gas prices.

### 2020:

- There was a historic drop in demand.
- U.S. power plants moved from coal to gas, allowing gas to remain more resilient than other commodities.
- During COVID lockdowns, prices decreased and regional prices converged.

### 2021:

- An overall consumption growth of 3.2% is expected to make up for 2020 losses, as driven by recovery in Asia.
- Extremely high prices were observed in January due to exceptionally low winter temperatures, increasing gas demand particularly in East Asia and North America.
- Post-COVID lockdowns caused prices to diverge once more, as economies took different recovery paths.
- Russian gas remains a cheaper option as compared to LNG.
- Gas production decreases in Europe, with reduced output from the North Sea (like the Groningen gas field), are reinforcing Russian gas exports to Europe.

- As the new U.S. administration lifts sanctions imposed by the previous administration, Nordstream 2 is finally getting closer to operation.

**In 2020 there was a drop in demand for natural gas, induced by the pandemic.**

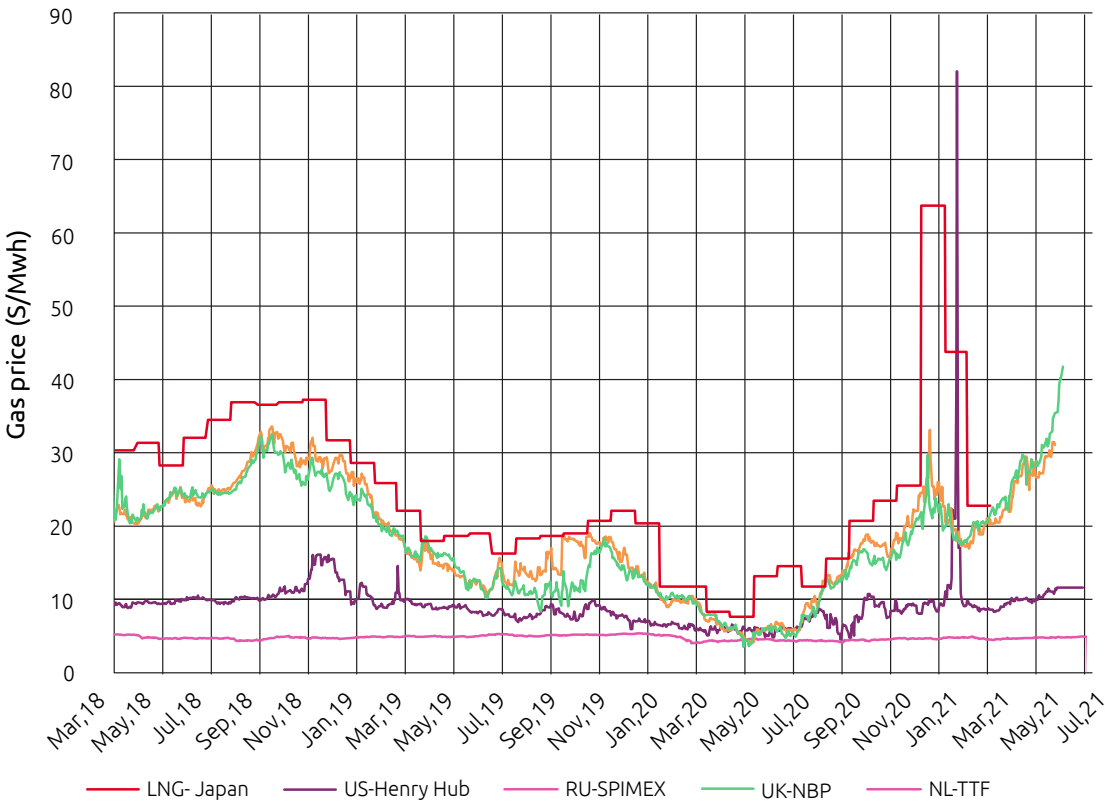
**A cold winter in 2021 increased demand in Asia and Europe, resulting in high prices.**



<sup>1</sup> IEA

FIGURE 2

# Gas spot prices\*



\*SPIMEX are day ahead TTF are OTC day off

Source: Refinitiv 2021, Spimex 2021

## Coal markets

### 2019:

- Demand grew for non-steam coal.
- Coal lost its place to gas as the cheapest fuel for power generation.

### 2020:

- Coal was hit harder by the pandemic than other commodities, as lower carbon fuels were prioritised.
- Coal consumption fell in most countries, excluding China and Malaysia.

### 2021:

- After a demand decrease due to the pandemic, many countries should return to higher coal consumption.
- China's unofficial ban on Australian coal imports has shifted the balance between Asia-Pacific trade relationships.
- China has set up a target of net zero emissions by 2060. However, the country's fourteenth five year plan is vague about the use of coal, resulting in China's five major coal utilities not setting up plans to decommission their plants.

- The decrease of coal consumption in Europe is structural, with planned closures of coal power plants in many countries (at least half of them by 2030).<sup>3</sup>

**Despite the expected rebound in demand around the world in 2021, the decline of coal is structural in many advanced economies. It remains an essential source of energy in China and many other developing countries.**



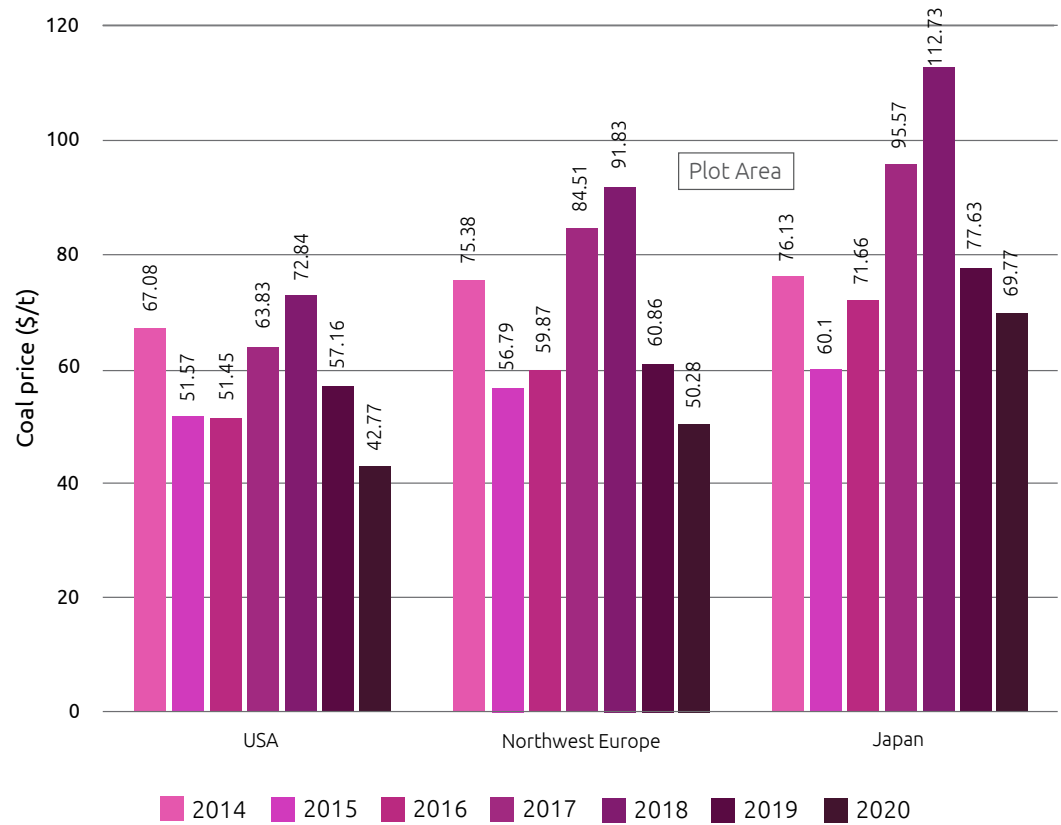
<sup>1</sup> IEA

<sup>2</sup> <https://www.reuters.com/business/energy/asia-coal-prices-surge-china-australia-dispute-means-rally-is-uneven-russell-2021-06-08/>

<sup>3</sup> <https://ember-climate.org/commentary/2021/03/23/half-way-there/>

FIGURE 3

# 2014-2020 coal prices evolution



Source: BP statistical review 2021



## Electricity markets

### 2020:

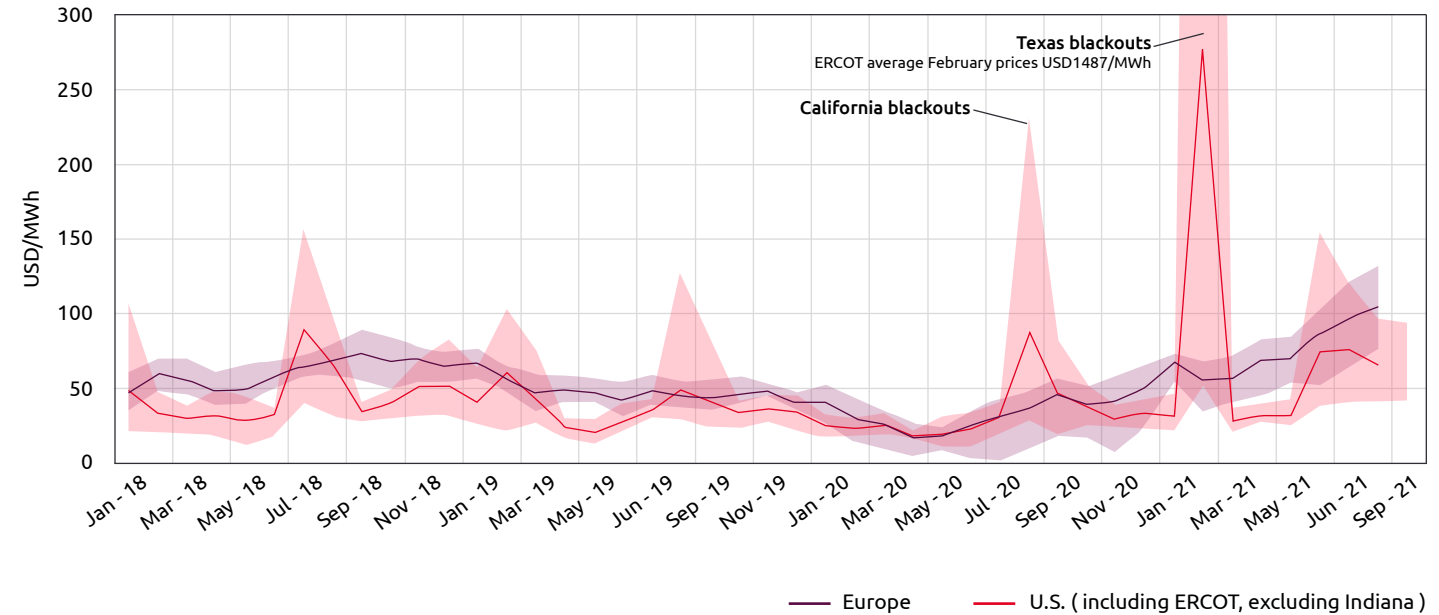
- Electricity prices dropped with demand in 2020H1 as economies entered lockdowns.
- In Europe, prices dipped below €5/MWh in April 2020 and sometimes reached negative levels.
- Prices began rising as soon as economies reopened.
- Extreme summer weather had drastic effects on wholesale electricity prices in the U.S. as California experienced blackouts.

### 2021:

- Wholesale electricity prices continued their hike in 2020H1.
- Peaks above €190/MWh were experienced in Europe in September 2021 due to demand growth, rising CO2 and natural gas prices, as well as poor wind conditions in the North Sea.
- Prices reached historic highs in the U.S. in February 2021 as the country experienced low winter temperatures. Due to lack of resilience of power generating infrastructure and low levels of interconnections, supply could not catch up to demand in the state of Texas, leading to blackouts.

FIGURE 4

Evolution of electricity day-ahead prices in Europe and the U.S.



Source: EIA, Power Exchange websites, Macrotrends, Capgemini Analysis

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