



EURACOAL Market Report 2022 no.2

October 2022

WORLD COAL MARKET DEVELOPMENTS

Global Coal Trade

Coal industry developments in the first half of 2022 were dominated by the ongoing war in Ukraine. The effects of Russia's unwarranted aggression, felt most acutely in Ukraine since 24 February, have spread across Europe and the world. As Ukraine defends its sovereignty, others must learn to live without Russian coal, oil and gas. The destruction of the Nord Stream gas pipelines on 26 September brought this new reality sharply into focus for all.

Tables 2 and 3 show that international seaborne coal trade – steam and coking coal – fell to an estimated 537.3 million tonnes (Mt) in H1 2022, a 7.1% decrease compared with the same period of 2021. It should be noted that Russian export data is not available since March 2022 so can only be estimated from import data reported by other countries. Steam coal accounted for 76% of trade. South Africa enjoyed a resurgence, adding 3.6 Mt in H1 2022, an 11.2% increase on the first half of 2021. Indonesia saw a modest 0.6% growth in exports to 170.7 Mt while Australian steam coal exports fell back 2.1 Mt or 2.2% to 92.6 Mt as renewed mine flooding in May and June again affected coal output. Despite strong demand on the Atlantic market, Colombia struggled to respond, and exports fell by 4.5% to 26.0 Mt. At 130.4 Mt, coking coal trade in H1 2022 was below H1 2021 – a 3.7 Mt or 2.8% fall. Australian exports of coking coal which dominate the market fell by 4.6 Mt (–5.4%) to 79.9 Mt, while the US and Canada enjoyed growth of 6.8% and 5.7% respectively. Russian coking coal exports likely fell by 10%.

Coal supply

In its *Coal Market Update* of July 2022, the International Energy Agency expects global coal demand in 2022 to increase by 0.7% from 2021 to about 8 billion tonnes (Gt) to match the all-time peak reached in 2013. Steam coal demand for power generation is expected to increase by 1% in 2022 given higher coal-fired power generation in India and Europe. GlobalData makes a similar forecast for coal production, increasing by a marginal 0.9% to 8.126 Gt in 2022, with India, China and South Africa growing strongly by an aggregate 7.8% to 5.5 Gt. Looking out to 2026, GlobalData forecasts global coal production to grow each year by 1.3% to reach 8.6 Gt.

China – accounting for half of global coal production – increased output in H1 2022 by 10% year-on-year. However, as with Russia, reliable statistics are becoming scarce. President Xi Jinping ordered domestic coal producers to boost production and the government has approved large domestic mining investments to fuel the new coal power plants that are under construction. At the same time, China will stop investing in coal plants abroad. Similarly, the Indian government has granted mines the right to expand production by up to 50% without new permits.

Following the imposition of EU sanctions shortly after the conflict in Ukraine began, the Russian rouble fell sharply (Table 1 and chart below), but recovered when it became apparent that energy exports would continue to provide significant income. Russian coal exports to the EU continued under pre-existing contracts, at least until a formal ban on Russian coal came into effect on 10 August. Efforts by Russia to shift its exports elsewhere face infrastructure constraints, especially rail capacity limits

to its far-away eastern ports. Russian exporters will need to find a market for some 50 Mtpa of coal previously supplied to the EU, as well as around 16 Mtpa that Japan also intends to stop importing. Potential buyers for this coal lie in China, India and other Asia-Pacific countries.

Russian coal exports to China peaked in July 2022 at a record 7.4 Mt or +14% compared with July 2021. Similarly in India where discounted Russian coal imports grew to 2.4 Mt in July 2022. However, India's coal imports from Russia are likely to become tighter in the coming months as vessels serve the needs of other countries looking to restock in time for winter. Overall, Russian coal exports are expected to decline. According to the Russian Ministry of Energy, Russian coal production may decline by 6% in 2022, *i.e.* by approximately 26 Mt. It should be noted here that the rerouting of Russian coal has effectively put a cap on surging global coal prices.

Australia is well placed to benefit from the changes taking place as it can supply coal of a similar quality to Russian coal. Smaller exports are also expected to benefit, notably Colombia, South Africa, the US and Canada. However, all suffer from constraints, often linked to underinvestment, weather conditions, corporate ESG policies, and government policy. Canada, for example, pledged in November 2021 at the UNFCCC COP26 in Glasgow to end steam coal exports by 2030. In the US, rail transport has not kept pace with the demand to ship coal for export. In Australia, BHP – the largest ASX-listed company – plans to exit steam coal mining by 2030 and, after failing to find a buyer, will close its Mount Arthur mine – the largest in New South Wales. By contrast, in December 2021, the Indian conglomerate Adani Group shipped the first coal from its new Carmichael mine in Queensland and plans to raise exports to over 10 Mt in 2023, with potential for 15 Mtpa or more. Indonesia, the world's largest exporter with lower quality but competitive steam coal, will perhaps be the biggest winner as the coal market reshapes. In general, for those with coal to sell, 2022 has been a uniquely profitable year.

Steam coal trade

The steam coal market has seen high and volatile prices in 2022 as global supply was disrupted by weather events, ongoing COVID-19 restrictions in China, and the impact of Russia's invasion of Ukraine. Steam coal trade peaked at 97.8 Mt in July 2022, up 11.4% on the same month of 2021 and a record monthly figure. Competing with China, India's steam coal import demand is growing alongside its electricity demand. Overall, steam coal imports and prices will remain dependent on non-market factors, including policy support for the energy transition.

Trade patterns have shifted following firstly China's informal ban on Australian coal imports in October 2020 and, secondly, trade sanctions imposed on Russia. The latter are expected to have an even greater impact in 2023. Improved supplies from Indonesia, Australia, Colombia and South Africa are expected to provide some relief to global markets in H2 2022 and into 2023. However, greater shipping distances – and thus higher freight costs – mean a less efficient market, making coal a less competitive fuel for power generation.

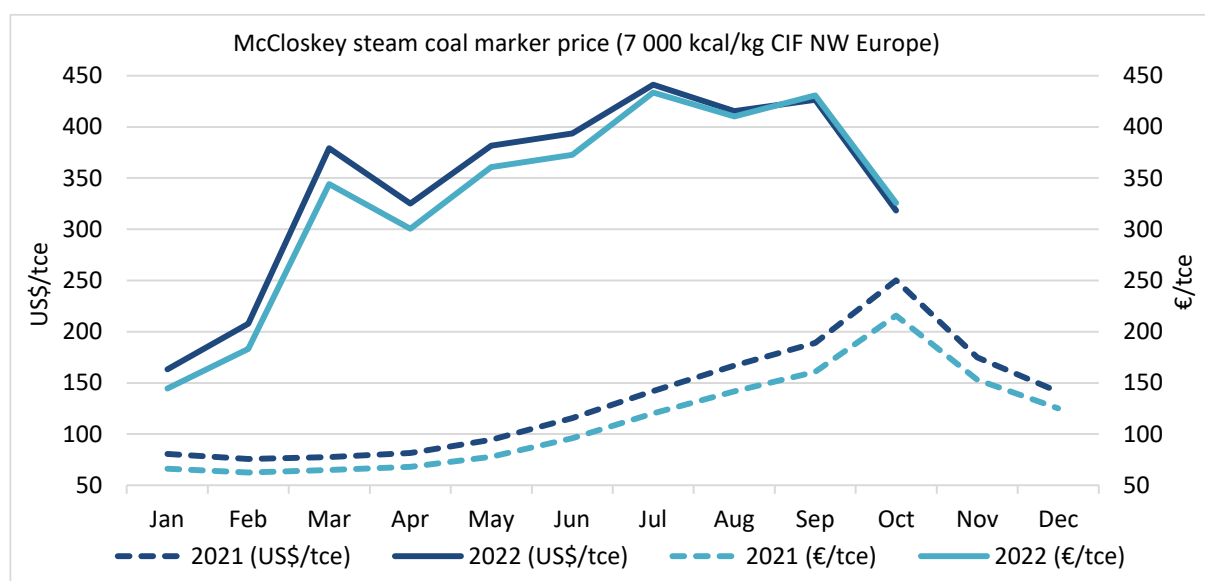
Coking coal trade

Disruptions in the auto industry linked to component shortages are expected to cut steel demand in Europe and steel production in China, leading to further falls in coking coal demand in H2 2022 – Chinese steel production declined 3% in 2021. However, growth is expected to return in 2023. After falling dramatically in 2021, Chinese coking coal imports fell back further in H1 2022 as construction activity declined with the collapsing property market and the country's zero COVID-19 policy led to an economic slowdown. New rail links from Mongolia to China opening in 2022 allow the easier shipment of coking coal that has previously been trucked across the border. In contrast to China, Indian steel production has grown strongly with domestic coking coal producers responding positively and greater volumes of Russian coal imported. Although the full 22 Mt of Russian coking coal exported to the EU and Japan is unlikely to find new customers, it is clear that India and China are benefitting from favourable prices, below global indices. Finally, exports of coking coal from Canada are expected to hold steady in 2022 as production at the Grand Cache mine resumes.

Coal Prices

In the first half of 2022, the average price of steam coal imported into NW European ports (ARA) was USD 284.49/t CIF, some 3.6× the level of H1 2021 – a 262% increase. Compare this also to the average price in 2020 which was a relatively low USD 50.28/t due to the COVID-19 pandemic. Export coal prices in China flipped in 2022 to become significantly lower than ARA prices, averaging USD 205.77/t in the first half year as the Chinese government intervened to manage the domestic market. For example, the National Development and Reform Commission set price caps on steam coal, removed coal import duties, proposed adding 300 Mtpa production capacity and ordered Chinese power companies to build stocks as a buffer against price volatility.

The outbreak of hostilities in Ukraine on 24 February 2022 saw already high steam coal prices skyrocket, to reach an all-time historic high of USD 417.57/t at ARA ports on 9 March, a record that was broken again later in the year when prices reached USD 425.75/t on 23 June, reflecting the loss of Russian supply from the EU market. Under the EU's fifth sanctions package, the import of Russian coal was banned from 10 August 2022.

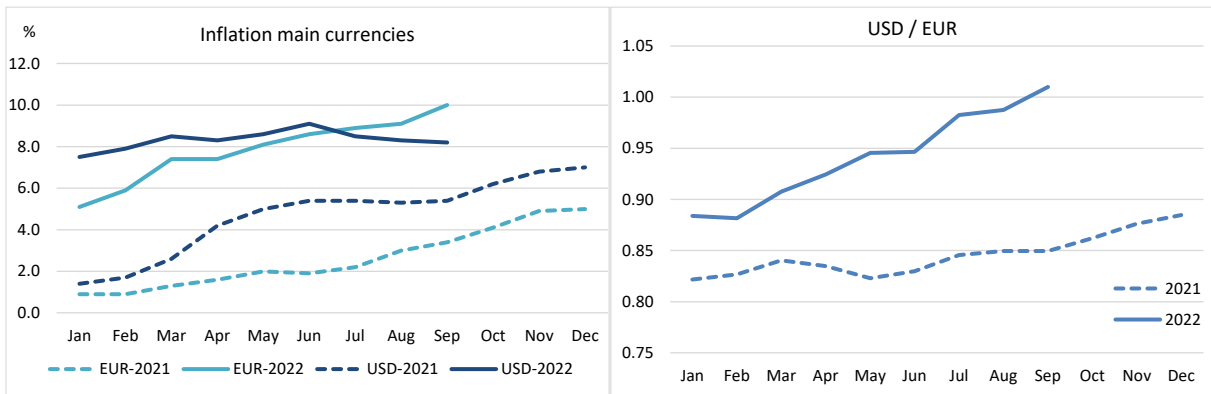


Source: IHS Markit (McCloskey first week quotation of the month, basis 6 000 kcal/kg converted to 7 000 kcal/kg)

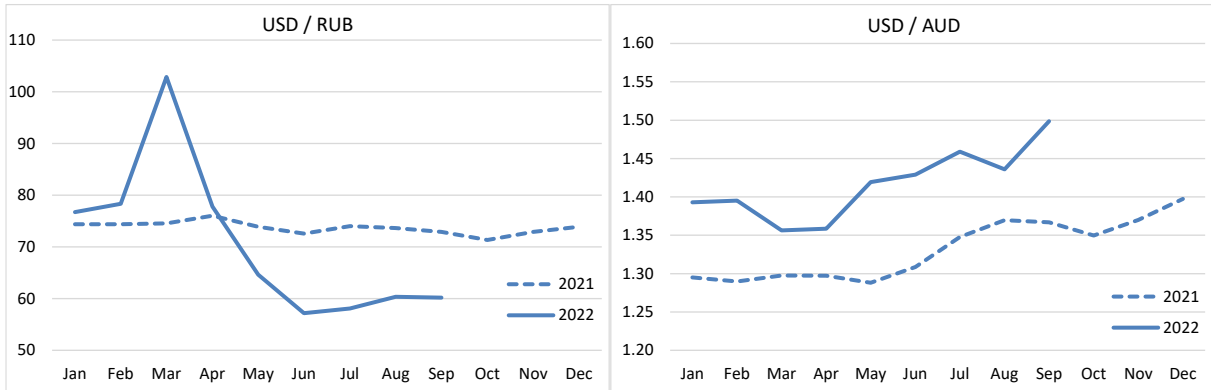
The dramatic rise in coal prices began in late 2020 when China effectively banned imports of Australian coal as political relations between the two nations soured over the origins of COVID-19. A combination of events has boosted coal demand: the economic rebound following the COVID-19 pandemic, unfavourable weather conditions for renewables (and coal production in Australia), restricted flows of pipeline gas resulting from the war in Ukraine, and a tight LNG market.

On the coking coal market, prices at the start of 2022 were already high at USD 346.00/t for high-quality Australian low-vol coking coal – the result of rising short-term demand and ongoing supply issues. Prices rose to a record high of USD 654.20/t in mid-March as sanctions on Russian coal exports and bad weather in Australia reduced supply, as well as ongoing COVID-19 restrictions which affected production. Since then, coking coal prices have cooled to USD 310.40/t at the end of June and fell below USD 200/t in August as demand from the steel industry collapsed.

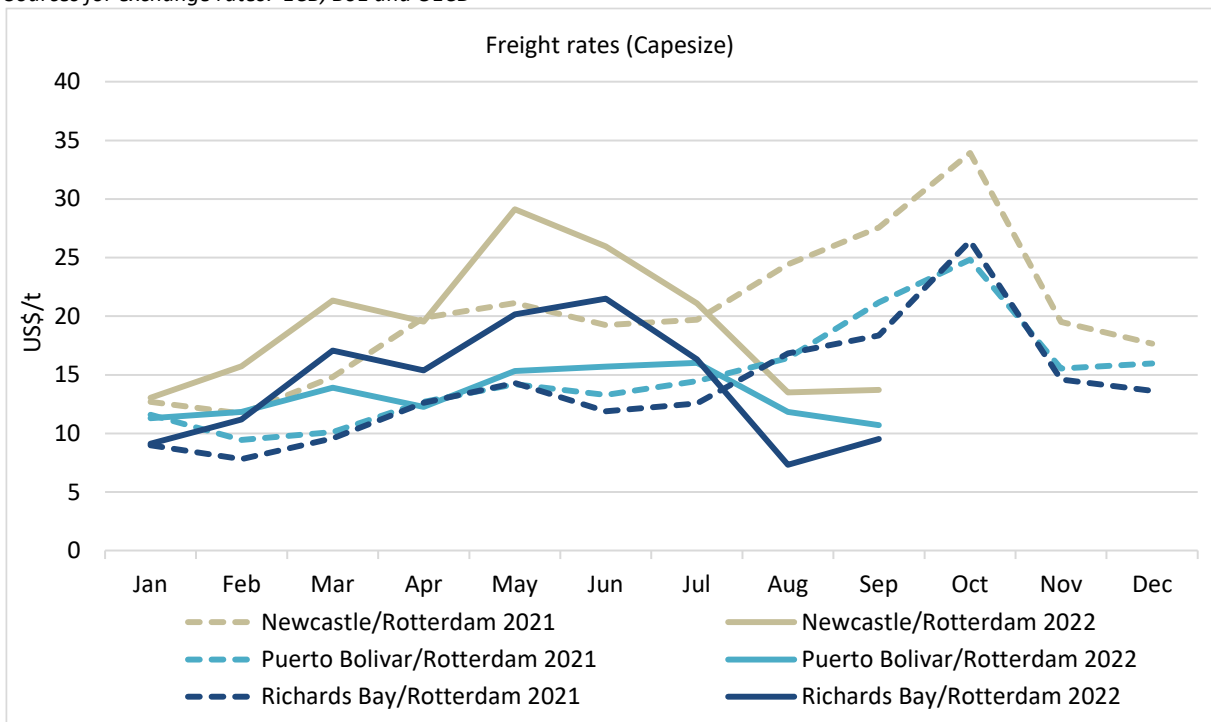
Coal prices are expected to ease as coal supply adapts to the changing patterns of coal trade. The Australian government in its *Resources and Energy Quarterly* outlook forecasts that steam coal prices will fall to USD 118/t in 2024 and coking coal prices to USD 219/t, both FOB spot prices. The outcome will depend partly on inflation rates: the US consumer prices index (CPI) eased in Q3 2022, but the annual inflation rate in the EU rose to 10% in September 2022 (Table 1 and chart below). Prior to the last twelve months, euro zone inflation had never been above 4%.



Sources for inflation: ECB; US Bureau of Labor Statistics



Sources for exchange rates: ECB, BoE and OECD



Source: Clarksons

Freight Rates

Less than 15% of seaborne coal trade finds its way to European or Mediterranean countries where Germany was once again the biggest importer in H1 2022 with a 23.3% increase in coal imports compared with H1 2021, followed by Turkey which saw imports fall by 20.9%.

Freight rates, although volatile, have not experienced the same exponential growth as coal prices and moderated at around USD 10/t in September for both the Bolivar-Rotterdam and Richards Bay-

Rotterdam routes of interest to European buyers. Handysize vessels (<35 000 dwt) saw strong coal shipments in H1 2022, accounting for 8.8% of total, with coal loadings in Russia for delivery to the EU and Japan. The changing dynamics of the freight market mean Handysize shipments are expected to reduce as most Russian coal exports to India and China rely on larger Capesize vessels.

In response, European coal buyers are seeking coal from remote mines in Tanzania, Botswana and even potentially Madagascar. Tanzania traditionally exported steam coal only to neighbouring countries in east Africa, but now exports coal from Mtwara, the nearest Indian Ocean port, but 600 km from its mines and will increase production by 50% to 1.4 Mt and double exports to around 0.7 Mt including to the Netherlands, France and India.

EU COAL MARKET¹

	2022 (1-6) Mt	2021 (1-6) Mt
Hard coal imports	59.2	47.8
Hard coal production	28.6	29.1
Lignite production	145.5	126.1

Hard coal imports into the EU, at 59.2 Mt in H1 2022, were up 23.9% on H1 2021 but below the 68.8 Mt imported by the EU in H1 2019 (a figure which excludes the UK following the country's exit from the EU). Italy and Spain both increased their coal imports by 66% in the first half year, but on a tonnage basis, it was Germany that saw the biggest increase, adding 4.0 Mt or 23.3% in H1 2022 compared with H1 2021. EU coal buyers increased purchases from the US, Australia, Colombia, South Africa and Indonesia. In the whole of 2021, 44 Mt came to the EU from these five countries – a level that was almost matched in only the first half of 2022 with 41 Mt.

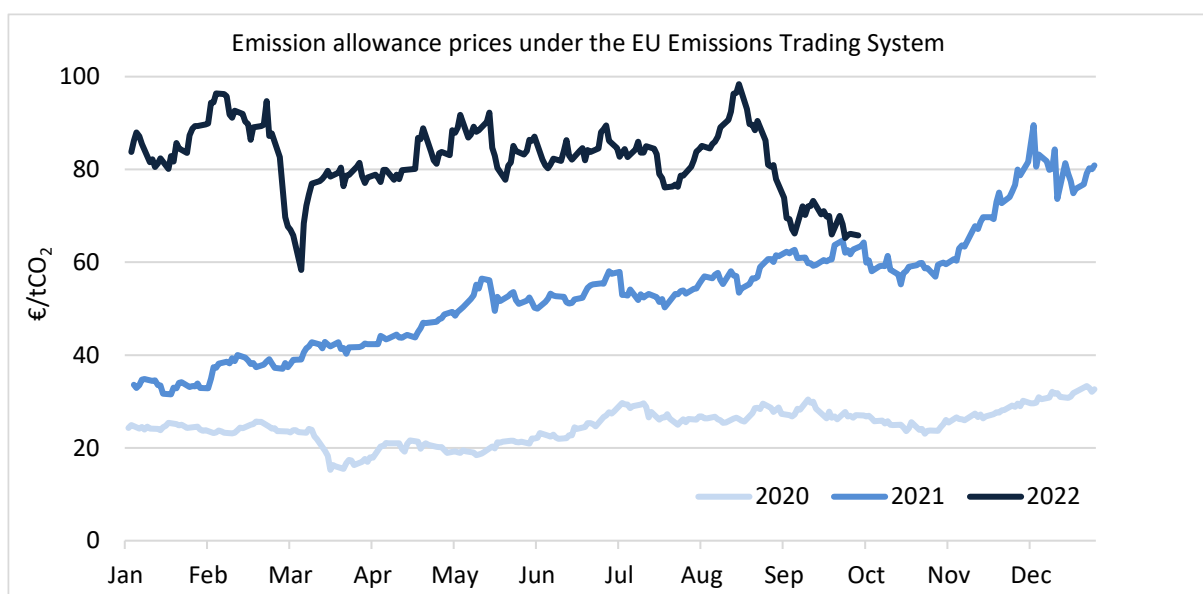
EU hard coal production fell by 1.7% in H1 2022 to 28.6 Mt compared with the same period of 2021, above the production level of H1 2020 but falling well short of the 32.4 Mt produced in H1 2019. Lignite production in the EU rose 15.3% to 145.5 Mt in H1 2022 compared with H1 2021. However, this was not a return to pre-pandemic levels as output in the first half of 2022 was 8.6% below the H1 2019 production of 159.2 Mt.

In response to the energy crisis, Austria, Germany, Italy and the Netherlands moved to allow greater power generation from coal and lignite. France may restart one of its coal power plants this winter. At the same time, Germany, Poland, Italy, Greece, the Czech Republic, Romania and the UK have delayed coal power plant closures. In its REPowerEU plan, the European Commission now expects the EU will use 41% more coal for power generation in 2030 than previously expected in its Fit-for-55 scenario, generating an additional 105 TWh from coal.

Carbon Prices

The price of EU emission trading system allowances (EUAs) averaged 83.57 €/tCO₂ in the first half of 2022 – almost double the average carbon price of 43.87 €/tCO₂ in H1 2021 – and ranging from a high of 96.43 €/tCO₂ on 4 February down to a low of 58.36 €/tCO₂ on 7 March, perhaps because EUAs offered liquidity to those who needed cash to pay for fuel purchases or margin calls on their positions in the energy market. Carbon prices quickly recovered later in March and held steady at 80-90 €/tCO₂ before peaking at close to 100 €/tCO₂ in mid-August as the market anticipated higher coal burn for power generation. Since then, carbon prices have slipped back to around 65 €/tCO₂ at the beginning of October as shown in the chart below.

¹ All European coal production and trade data come from EURACOAL members or government sources.



Source: Intercontinental Exchange

Hard Coal

Producer	2022 (1-6) Mt	2021 (1-6) Mt
Czechia	0.7	1.4
Poland	27.9	27.7
Total	28.6	29.1

Czech Republic

Czech hard coal production decreased by 48.8% in H1 2022 to 0.71 Mt (of which 0.57 Mt coking coal) compared with the same period of 2021. This decline reflected the planned phase-out of hard coal mining. Hard coal imports in H1 2022 amounted to 2.3 Mt – an 11.4% increase on H1 2021 – with Poland the largest supplier but also now Australia. Exports shrank 15% to 0.52 Mt of mostly coking coal to Poland and Slovakia. 0.46 Mt (–11%) of hard coal was used for power generation in H1 2022.

OKD will continue operating ČSM – the only Czech hard coal mine – until the end of 2023 but is looking to extend the mine's life to 2025 and is recruiting. A study on reopening the ČSA and Dakrov mines by the state-owned DIAMO company, which also owns OKD, should be completed by the end of October in response to coal demand from steelworks and CHP plants.

Germany

In H1 2022, Germany imported an estimated 21.1 Mt of hard coal, a 23.3% increase on H1 2021 and comprising 15.4 Mt of steam coal and 5.7 Mt of coking coal. The main challenge for coal importers since March has been to diversify away from Russian coal which accounted for the majority of imports in recent years.

Primary energy consumption in Germany dropped 3.5% during H1 2022, driven by mild weather and a weakening economy. Lignite consumption increased by 10.6% and coal by 9.2%. Despite low wind power output in Q2, renewables grew (+4.7%) while the planned decline of nuclear power (–50.6%) was coupled with less gas consumption (–14.7%). Hard coal use in power plants increased by 26%, but steel industry demand fell by 5%.

Italy

To decrease the use of Russian fossil gas in its power generation mix by 5 bcm, Italy has increased the running hours of its coal-fired power stations. In H1 2022, Italy imported 5.9 Mt of hard coal, an increase of 65.5% compared with H1 2021. The six remaining operational coal-fired power plants produced 13.1 TWh in 2021 but could easily produce around 30 TWh by running at higher load factors. The Italian government has asked coal plant operators to replenish coal stocks and maximise the use of their plants, but has excluded reopening any decommissioned coal power plants.

The Netherlands

In H1 2022, the Netherlands imported 4.1 Mt of coal for use within the country at power plants (2.1 Mt) and steelworks or coke ovens (2.0 Mt). Imports were 13.5% higher than in the first half of 2021, partly compensating for the 25% lower fossil gas consumption in H1 2022. In the second quarter of 2022, coal-fired power generation grew by 40% compared with Q2 2021. The Netherlands became a net exporter of electricity again in 2022, partly in response to less nuclear power production in Belgium, France and Germany.

Poland

Hard coal production in Poland increased to 27.9 Mt or +0.6% in H1 2022 compared with H1 2021, of which 21.5 Mt (+0.1 Mt) was steam coal and 6.3 Mt coking coal, the latter being classified as a critical raw material in the EU.

In March 2022, Polish Prime Minister Morawiecki announced Poland would phase out Russian coal imports by May and Russian oil and gas imports by year end. Coal imports from Russia in H1 2022 therefore fell markedly, replaced with imports from Kazakhstan, Colombia, the Czech Republic, South Africa, Mozambique and elsewhere. In total, 6.5 Mt were imported in the first six months of 2022 – 4.8 Mt of steam coal and 1.7 Mt of coking coal – an overall increase of 4.8% compared with H1 2021. Coal imports peaked in 2018 at 19.7 Mt, including 16.2 Mt of steam coal. A large share of imports (41%) in H1 2022 was to meet demand from 3.8 million Polish households. In response to speculative pricing, the Polish government announced extra payments to households that use coal.

Coal demand exceeded supply, so coal stocks fell to a low level of just over one million tonnes. Attempts to increase production – against a backdrop of mines closures and the social agreement of 2020 to end coal mining in 2049 – have been difficult.

Lignite

Producer	2022 (1-6) Mt	2021 (1-6) Mt
Bulgaria	18.2	11.0
Czechia	16.4	13.6
Germany	64.1	58.2
Greece	6.7	5.7
Hungary	2.4	2.4
Poland	27.2	24.8
Romania	8.6	8.5
Slovakia	0.5	0.6
Slovenia	1.5	1.4
Total	145.5	126.1

Bulgaria

Lignite production in Bulgaria increased by 66.0% in H1 2022, compared with H1 2021, to 18.2 Mt. Mini Maritsa Iztok EAD (MMI), a subsidiary of the state-owned Bulgarian Energy Holdings EAD, is the country's largest lignite producer and has begun exporting lignite to Serbia. The company's coal mines in south-eastern Bulgaria sell their output mainly to three nearby thermal power plants: one owned by ContourGlobal, one by AES and the state-owned TPP Maritsa East 2. These and other coal power plants generate over 40% of Bulgaria's electricity.

Czech Republic

Czech brown coal production increased in H1 2022 by 20.6%, compared to the same period of 2021, to 16.4 Mt. In H1 2022, brown coal contributed more than any other energy source to the Czech electricity generation mix with 13.6 Mt delivered to power plants where 17.2 TWh (+17%) of electricity were generated. Together, hard coal and lignite accounted for 43% of total generation in the first six months of 2022. A January 2022 manifesto of the new government foresees the gradual phase-out of brown coal by 2030.

Germany

In H1 2022, German lignite production increased by 10.0% to 64.1 Mt, compared with the same period of 2021. However, the overall electricity production capacity of the sector decreased as several lignite power plants were closed in 2021. After nuclear power has been phased out in Germany, lignite and renewables will remain Germany's only domestic energy sources. As Germany is also looking for ways to decrease the share of gas in its electricity generation mix, the government has decided to bring back 10 GW of hard coal-, oil- and lignite-fired power plants, including 2 GW of lignite units: two owned by LEAG and three owned by RWE. These lignite units should run from 1 October for at least two winters and possibly also at other times of the year. This will require additional production of 8-9 Mt of lignite. At the same time, lignite companies are set on their plans to diversify and invest in renewable energy sources (RES).

In 2021, RES accounted for 41% of German electricity generation while coal and lignite together took second place with a 28% share. The transfer of lignite plants from strategic reserve to supply reserve will mean little change to the decommissioning schedule out to 2038, but leaves many unanswered questions about the coalition government's aim to phase out coal and lignite by 2030.

Greece

Greek lignite production, mostly by Public Power Corporation (PPC), increased by 17.6% to 6.7 Mt in H1 2022, having been 5.7 Mt in H1 2021. PPC operates seven thermal power plants totalling 2 225 MW fuelled with lignite from the West Macedonia and Megalopolis lignite centres. Following two mine closures in 2021, three mines remain in operation: two in West Macedonia and one in Megalopolis.

Due to the EU energy crisis, production is forecast to reach 14.0 Mt in 2022, compared with the planned 11.4 Mt, by delaying the Megalopolis mine closure by two years and recovering additional lignite from closed mines in West Macedonia. According to a pre-crisis prognosis, lignite-fired power generation should contribute 9% or 4.5 TWh to the Greek electricity mix in 2022, but given the new situation 6.8 TWh is now expected. All old lignite-fired power plants are planned to close by 2023, but the current energy security and price crisis might see those plans delayed. The new 660 MW Ptolemais V unit has received first fuel deliveries and will go into operation in November 2022.

As well as the forecast 6.8 TWh (13% of the interconnected system total) from lignite, fossil gas (18.5 TWh, 35%) and renewables (18.3 TWh, 35%) will take important shares of the estimated 52.6 TWh total electricity generation in 2022.

Hungary

Hungary saw lignite production fall by 0.2% in the first half of 2022 to 2.4 Mt. It is used mostly for power generation at the Mátrai Erömü power plant. For the future, several options are discussed, including conversion of the plant to use other fuels, but the current energy crisis has changed the policy priorities.

Poland

Polish lignite production, in decline since 2017, increased by 9.6% in H1 2022, to 27.2 Mt compared with H1 2021. Lignite-fired electricity generation has declined gradually since 2015 but rose again by 20% from 2020 to 2021, accounting for 26% of electricity production in 2021. In March 2022, an updated Polish energy policy seeks to prioritise the optimal use of domestic energy sources and also provides for the establishment of a National Energy Security Agency (NABE) tasked with the consolidation of all assets related to electricity generation at the coal- and lignite-fired power plants owned by the capital groups PGE, Enea, Energa and Tauron Polska Energia.

Romania

In the first half of 2022, lignite production increased by 1.6% to 8.6 Mt in Romania, almost all of which was delivered to power plants at the Oltenia Energy Complex (CEO) for electricity generation. Romania's recovery and resilience plan foresees the phasing out of coal and lignite-fired electricity production by 2032. In 2022, the European Commission approved State aid grants of up to €2.66 billion to CEO for a restructuring plan to diversify its energy mix with eight solar PV parks of 725 MW total capacity and two gas power plants: 475 MW at SE Turceni and 850 MW at SE Işalniţa.

The restructuring plan gives flexibility for CEO to increase lignite production by 6-8% in 2022 and by another 10-12% in 2023, potentially delaying some plant closures from 2022 to 2023. However, any increase in exploitation is limited by mine permits, so CEO is considering imported lignite but with few options for the 1 600-1 800 kcal/kg fuel required.

Slovakia

Production of lignite by Slovakia's only private coal mining company, Hornonitrianske Bane Prievidza (HBP), decreased by 13.4% to 475 kt in the first half of 2022 compared with the same period of 2021. Closure work at the company's two coal mines – Bane Handlová and Bane Nováky – is well advanced and will continue in 2022. Only Bane Nováky is producing and production for 2022 is forecast at less than 1.0 Mt. The underground Nováky mine is scheduled to close in October or November 2023.

Coking coal imports totalled 1.4 Mt and small quantities of lignite were also imported from Poland and the Czech Republic. In total, lignite accounts for around 5% of the country's electricity generation, including from the 200 MW Nováky coal power plant.

Slovenia

The only lignite production in Slovenia is from the underground Premogovnik Velenje mine which fuels the nearby Šoštanj (TEŠ) power plant accounting for around one quarter of the country's electricity production. Small quantities of brown coal (c.0.3 Mt per year) are imported for Termoelektrarna Toplarna Ljubljana (TE-TOL) which supplies the capital city's district heating.

Lignite production in H1 2022 was 1.5 Mt, almost the same level (+0.2%) as H1 2021. TEŠ and TE-TOL are importing small quantities of coal from Indonesia. At Šoštanj, this is mixed with local lignite for tests which will continue to mid-October. Further tests with coals from Bosnia and Herzegovina and the Czech Republic are also planned. If successful, more imports would follow, perhaps up to 600 ktpa.

An updated national energy strategy is planned for 2023/2024, with the possibility for coal mine extension beyond 2033 due to the current energy crisis and the fact that the power plant TEŠ is built

to operate till 2054. Premogovnik Velenje plans to increase production to 2.8 Mtpa. This is not currently possible as mining plans foresaw closure in 2033, so employee numbers and production were decreased. Reversing past decisions will mean recruiting miners and overcoming some difficult geological conditions.

NON-EU COAL MARKET

Ukraine

Russia's war on Ukraine has heavily impacted the country's coal market: several mines have now been occupied or destroyed, demand has shrunk dramatically and key ports have been rendered inaccessible. Ukrainian GDP has fallen by more than 35% and direct losses are said to be over USD 100 billion, including the loss of two hundred industrial plants. By mid-year, the energy sector suffered enormous damage with 650 000 consumers without electricity and 180 000 households without gas, with 5% of generation capacity destroyed and 35% lying now in occupied territories. More than 50% of thermal power plants, 30% of solar PV and 90% of wind power are unable to operate and gas production has fallen by 12-15%. Coal mines in Luhansk region are now occupied and sometimes destroyed, while production in Donetsk region has been sharply reduced. However, the Ukrainian coal sector has shown remarkable resilience, with support from European partners.

In the first six months of 2022, including four months of full-scale war, hard coal production declined by 47.4% to 6.1 Mt. Imports contracted even further, down to 4.3 Mt (-57.7%). However, only 6.4 Mt of coal were delivered to power plants due to demand contraction and growing coal stocks. Mine water pumping is proving increasingly difficult, and the frequent power outages now pose a significant environmental risk. For the immediate future, the planned closures of some coal mines have been delayed, but the country's overall decarbonisation plans remain in place.

Türkiye

Türkiye was Europe's second largest hard coal importer in H1 2022 as imports decreased 20.9% compared with H1 2021 to 14.5 Mt. Domestic production from the Zonguldak coal basin on the Black Sea coast remains relatively small, with only 0.7 Mt in the first six months of 2022, an increase of 23.1%. The terrible mining disaster at Amasra on 14 October 2022 reminds us all of the risks of coal mining and EURACOAL offers its sympathies to all those affected by this tragedy.

Compared with H1 2021, Turkish lignite production increased by 19.3% in H1 2022 to 40.2 Mt of which 33.6 Mt was delivered to power plants for power generation. The Turkish government's *Eleventh Development Plan 2019-2023* puts a strategic priority on expanding lignite production and lignite-fired power generation, as well as exploiting indigenous fossil gas reserves, constructing new nuclear power plants and deploying more renewable energy sources. The 1 320 MW Hunutlu coal power plant in Adana province, owned by the Turkish-Chinese joint venture EMBA Elektrik Üretim A.Ş., is now operational and is expected to consume around 3.5-4.0 Mt annually.

United Kingdom

UK coal imports increased to 3.0 Mt (+42.4%) in H1 2022. Indigenous production shrank to 0.4 Mt, significantly lower than H1 2021 (-37.9%). The decision on approving the proposed West Cumbria Mining coking coal mine has been delayed for a second time until November 2022, despite rising fossil gas prices and the country's plans for offshore wind energy which will require thousands of tonnes of steel. In South Wales, Energybuild Ltd. proposes to extract up to 40 Mt of additional anthracite over the next two decades from its Aberpergwm mine – subject to final planning approval and judicial review.

Evolution of world market prices for coal, freight and crude oil													
McCloskey steam coal marker price (7 000 kcal/kg)													
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
steam coal	2021	80.47	75.69	77.42	81.61	94.43	115.47	142.16	166.76	189.12	250.29	174.74	141.54
(US\$/tce CIF NW Europe)	2022	163.33	207.74	379.31	325.20	381.49	393.75	441.15	415.40	426.62	318.48		
steam coal	2021	66.12	62.57	65.07	68.12	77.72	95.81	120.22	141.67	160.67	215.75	153.11	125.22
(€/tce CIF NW Europe)	2022	144.37	183.16	344.26	300.64	360.66	372.72	433.43	410.21	430.88	325.65		
Source: McCloskey by OPIS (first week quotation of the month, basis 6 000 kcal/kg converted to 7 000 kcal/kg)													
Freight rates (US\$/t)													
Richards Bay/Rotterdam	2021	9.00	7.81	9.58	12.60	14.31	11.90	12.55	16.84	18.35	26.40	14.61	13.64
(Capesize)	2022	9.13	11.18	17.06	15.38	20.15	21.50	16.31	7.34	9.53			
Queensland/Rotterdam	2021	12.70	11.69	14.81	19.85	21.13	19.25	19.70	24.41	27.56	33.92	19.51	17.65
(Capesize)	2022	13.05	15.73	21.33	19.53	29.13	25.96	21.09	13.50	13.72			
Puerto Bolivar/Rotterdam	2021	11.60	9.44	10.13	12.70	14.19	13.28	14.46	16.44	21.18	24.82	15.55	15.97
(Capesize)	2022	11.31	11.84	13.90	12.27	15.31	15.69	16.02	11.83	10.70			
Source: Clarksons (monthly averages from weekly data)													
Currency rates													
USD / EUR	2021	0.822	0.827	0.841	0.835	0.823	0.830	0.846	0.850	0.850	0.862	0.876	0.885
	2022	0.884	0.882	0.908	0.925	0.945	0.947	0.983	0.988	1.010	1.023		
USD / RUB	2021	74.4	74.4	74.5	76.0	73.9	72.6	74.0	73.6	72.9	71.3	72.9	73.9
	2022	76.7	78.3	102.9	77.8	64.6	57.2	58.1	60.3	60.2			
USD / AUD	2021	1.30	1.29	1.30	1.30	1.29	1.31	1.35	1.37	1.37	1.35	1.37	1.40
	2022	1.39	1.40	1.36	1.36	1.42	1.43	1.46	1.44	1.50			
Sources: ECB Euro foreign exchange reference rates; Bank of England database; OECD.Stat Monthly Monetary and Financial Statistics (MEI) dataset													
Crude oil (US\$/barrel)													
crude oil	2021	54.38	61.05	64.56	63.24	66.91	71.89	73.53	70.33	73.88	82.11	80.37	74.38
	2022	85.24	93.95	113.48	105.64	113.87	117.72	108.55	101.90	95.32			
Source: OPEC Reference Basket (ORB) price													

International coal trade
TABLE 2

Steam coal				
exporting country	2022 (1-6) Mt	YoY change c.f. 2021		2021 (1-6) Mt
		Mt	%	
PACIFIC				
Australia	89.6	-3.4	-3.7%	93.0
Canada	4.2	2.1	107.5%	2.0
China	1.7	0.6	51.5%	1.1
Colombia	1.7	-3.3	-66.1%	5.0
Indonesia	169.0	-0.8	-0.4%	169.8
Russia	n.a.	:	:	52.2
South Africa	25.9	-4.2	-14.1%	30.2
USA (exc. to Canada)	7.9	-3.9	-33.0%	11.8
sub-total	300.0	-65.1	-17.8%	365.1
ATLANTIC				
Australia	3.0	1.4	84.9%	1.6
Canada	0.2	0.2	255.1%	0.1
Colombia	24.3	2.0	9.2%	22.3
Indonesia	1.7	1.3	389.3%	0.3
Russia	n.a.	:	:	40.9
South Africa	9.5	7.8	471.1%	1.7
USA (exc. to Canada)	9.4	2.7	40.6%	6.7
sub-total	45.1	-26.8	-37.3%	71.9
others	61.8			7.4
total	406.9	-37.5	-8.4%	444.4

 revised 2021 figures shown in **bold**

steam coal data includes anthracite

TABLE 3

Coking coal				
exporting country	2022 (1-6) Mt	YoY change c.f. 2021		2021 (1-6) Mt
		Mt	%	
Australia	79.9	-4.6	-5.4%	84.5
Canada	14.9	0.8	5.7%	14.1
China	0.3	0.2	173.6%	0.1
Russia	n.a.	:	:	13.8
USA (exc. to Canada)	21.4	1.4	6.8%	20.0
others	14.1			1.7
total	130.4	-3.7	-2.8%	134.1

 revised 2021 figures shown in **bold**

European crude steel production

COUNTRY	2022 (1-6) Mt	YoY change c.f. 2021	2021 (1-6) Mt
Austria	4.0	:	
Belgium	3.6	:	
Bulgaria	0.2	:	
Croatia	0.1	:	
Czechia	2.6	:	
Finland	1.9	:	
France	6.5	-10.0%	7.2
Germany	19.6	-5.5%	20.7
Greece	0.8	2.3%	0.8
Hungary	0.5	:	
Italy	10.9	:	
Luxembourg	1.1	:	
Netherlands	3.5	:	
Poland	4.4	2.3%	4.3
Portugal	0.8	:	
Romania	1.7	:	
Slovakia	2.0	:	
Slovenia	0.3	:	
Spain	5.9	-17.6%	7.2
Sweden	2.3	:	
unspecified	0.0	:	37.6
EU-27	72.7	-6.5%	77.8
Belarus		:	
Bosnia & Herzegovina		:	
Moldova		:	
North Macedonia		:	
Norway		:	
Serbia		:	
Switzerland	:	:	
Türkiye	19.0	-4.6%	19.9
Ukraine		:	
UK	3.5	:	

Sources: World Steel Association (stopped publishing monthly country data Feb 2021);
 Eurofer statistics - production of crude steel; and own estimates

revised 2021 figures shown in **bold**

Hard coal and lignite production and consumption

COUNTRY	Hard coal production			Hard coal deliveries for power generation	
	2022 (1-6) Mt	YoY change c.f. 2021	2021 (1-6) Mt	2022 (1-6) Mt	2021 (1-6) Mt
Czechia	0.7	-48.8%	1.4	0.5	0.5
Germany	0.0	:	0.0	11.7	7.7
Poland	27.9	0.6%	27.7	14.8	14.0
Spain	0.0	:	0.0	1.2	0.2
EU-27	28.6	-1.7%	29.1	28.1	22.5
Türkiye	0.7	23.1%	0.6	9.1	9.4
Ukraine	6.1	-47.4%	11.7	6.4	n.a.
UK	0.4	-37.9%	0.6	1.2	1.3

COUNTRY	Lignite production			Lignite deliveries for power generation	
	2022 (1-6) Mt	YoY change c.f. 2021	2021 (1-6) Mt	2022 (1-6) Mt	2021 (1-6) Mt
Bulgaria	18.2	66.0%	11.0	18.2	10.9
Czechia	16.4	20.6%	13.6	13.6	11.6
Germany	64.1	10.0%	58.2	57.4	51.5
Greece	6.7	17.6%	5.7	5.5	n.a.
Hungary	2.4	-0.2%	2.4	2.3	2.3
Poland	27.2	9.6%	24.8	27.2	24.8
Romania	8.6	1.6%	8.5	8.5	8.5
Slovakia	0.5	-13.4%	0.6	0.6	0.6
Slovenia	1.5	0.2%	1.4	1.6	1.3
EU-28	145.5	15.3%	126.1	135.0	111.7
Bosnia & Herzegovina	6.7	12.9%	5.9	5.8	5.5
Serbia	16.6	-8.1%	18.1	16.3	17.5
Türkiye*	40.2	19.3%	33.7	33.6	27.9

* Asphaltite is included within lignite.

revised H1 2021 figures shown in **bold**

Sources: EURACOAL members and Eurostat

Hard coal imports

	Coking coal imports		Steam coal imports		Total hard coal imports		
COUNTRY	2022 (1-6) Mt	2021 (1-6) Mt	2022 (1-6) Mt	2021 (1-6) Mt	2022 (1-6) Mt	YoY change c.f. 2021	2021 (1-6) Mt
Austria	0.5	0.5	0.8	0.9	1.3	-8.4%	1.4
Belgium	1.2	0.6	0.8	1.0	2.1	35.1%	1.5
Bulgaria	0.0	0.0	0.5	0.3	0.5	84.3%	0.3
Croatia	-	-	0.3	0.2	0.3	48.7%	0.2
Czechia	1.3	1.0	1.1	1.1	2.3	11.4%	2.1
Denmark	-	-	1.0	0.2	1.0	349.1%	0.2
Finland	0.4	0.4	0.8	0.6	1.2	30.9%	0.9
France	1.8	1.5	2.9	2.7	4.7	10.9%	4.2
Germany	5.7	6.0	15.4	11.1	21.1	23.3%	17.1
Greece	-	-	0.1	0.2	0.1	-47.1%	0.2
Hungary	0.4	0.5	0.0	0.1	0.5	-20.7%	0.6
Ireland	-	-	1.1	0.6	1.1	87.4%	0.6
Italy	1.4	0.9	4.5	2.7	5.9	65.5%	3.6
Netherlands	0.7	2.0	3.4	1.6	4.1	13.5%	3.6
Poland	1.7	1.5	4.8	4.7	6.5	4.8%	6.2
Portugal	-	-	0.0	0.0	0.0	-12.9%	0.0
Romania	-	-	0.5	0.4	0.5	17.6%	0.4
Slovakia	1.4	1.5	0.1	0.2	1.6	-5.5%	1.7
Slovenia	-	-	0.0	0.0	0.0	-40.3%	0.0
Spain	0.9	0.6	3.0	1.8	3.9	66.4%	2.3
Sweden	0.2	0.2	0.4	0.5	0.6	-12.2%	0.7
EU-27	17.7	17.0	41.5	30.8	59.2	23.9%	47.8
Bosnia & Herzegovina	0.6	0.7	-	-	0.6	-13.0%	0.7
Serbia	-	-	0.0	0.0	0.0	-67.8%	0.0
Türkiye	2.3	2.9	12.2	15.5	14.5	-20.9%	18.3
Ukraine	2.6	5.9	1.7	4.3	4.3	-57.7%	10.1
UK	1.1	1.2	1.9	0.9	3.0	42.4%	2.1

 revised H1 2021 figures shown in **bold**