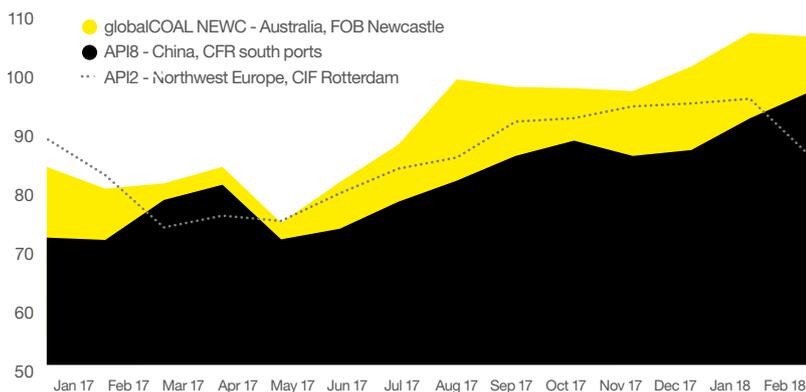


# COAL MARKET RESILIENCE

## INTERNATIONAL MARKET

**By the end of 2017, the volume of international thermal coal trade (seaborne and landborne) amounted to 982 million tonnes, which is 40 million tonnes or 4.3% more than in 2016. The market volume has shown positive dynamics for the last two years and is approaching the historic maximum (993 million tonnes achieved in 2014). In particular, seaborne trade reached 921 million tonnes. The key growth drivers were elevated demand from South Korea, Taiwan, Philippines and Malaysia due to increased power consumption, and from Spain due to low level of hydrogeneration.**

### Thermal coal price indices (\$ per tonne)



Source: Argus McCloskey Index, globalCOAL.

### Pacific market

In 2017, demand from the Pacific market amounted to 738 million tonnes, a 4% rise on 2016. A number of factors contributed to this strong performance.

China was again the main driver of imports and prices. As in 2016, in 2017 the Chinese domestic market was widely impacted by policy regulations. The 276 working days imposed at mines in 2016, which boosted prices, was increased to 330 days in 2017, followed by a price corridor – the Chinese government promised to intervene should prices go below RMB 470/t (in order to push prices up) or above RMB 600/t (in order to push prices down). Nevertheless, domestic prices traded above the upper limit during most of 2017, as imposed safety regulations prevented coal output from increasing and no government intervention followed. Still analysts expect government action when the lower threshold is reached for spot prices.

As the year ended, the Chinese government implemented anti-pollution regulation, intended to cause steel and aluminium outputs to fall during the winter period by 50% and 30% respectively. With regards to heating, the government ordered a switch from coal to gas in northern regions. However, increasing gas prices and gas shortages forced the government to allow the use of coal for heating in certain areas. This measure coincided with utilities re-stocking, which meant the year ended on a high note, with total seaborne and landborne imports for 2017 increasing by 1% and amounting to 187 million tonnes.

Indian imports fell by 7% to 141 million tonnes. Domestic coal production, meanwhile, increased by 3.5%. However, further production growth in India is restricted by the fact that most economic deposits have already been developed, meaning that further gains will be more difficult and expensive to achieve. Moreover, local coals have ash content too high for modern power plants. In addition, supply chain logistics are far from swift, which is a problem for lean supply management. As a result, in 2017 power plant stocks sank to 7 million tonnes by October, an historic low. This could mean that buyers may look to include imported coal within their portfolios.

On the other hand, the Indian subcontinent has also seen a rising star in Pakistan, which witnessed a solid import increment of 57% to 11 million tonnes due to the recent commissioning of a coal-fired power plant (with a capacity of 1.3 GW) and expanding cement production.

Aggregate demand from South Korea, Japan and Taiwan increased by 5% to 290 million tonnes. The increment was led by South Korea, where demand from new power plants and carry-over tonnage from plants commissioning in the previous year started to kick in. Moreover, several nuclear units were shut down during the summer as a result of seismic activity, which drove higher coal demand during that period.

In Taiwan, two coal-fired power plants were commissioned in 2017, and current coal-generation capacity is being fully utilised as a result of the government's firm anti-nuclear stance.

In Japan, meanwhile, import demand was flat year-on-year during 2017. For 2018, demand will depend widely on nuclear re-starts.

In South-East Asia, demand continues to increase, albeit at a slower pace than in the previous year (+3%). The region imported 80 million tonnes in 2017, with Malaysia taking the lead on import growth. In 2018, Vietnam and the Philippines should join the coal-import growth engine as new power plants are expected to be commissioned.

On the supply side, thermal exports from Australia have been hovering at around 200 million tonnes since 2014, making a significant export ramp-up difficult. During 2017, Australia was impacted by prolonged industrial action in the Hunter Valley mines and railways. Other impacts included unfavourable loading conditions during certain months, poor weather, heavy port maintenance requirements and Chinese import restrictions during the last quarter.

Indonesian supply similarly struggled due to rainy weather throughout the year. Its growth opportunities are restricted by increasing demand from expanding domestic power generation.

Russian seaborne and landborne exports via the Far East increased only marginally during 2017 as a lack of available capacity on railways and at ports led to lower exports than expected, particularly during the third quarter.

Colombian coal continued to flow into Asia in 2017 despite constraints due to poor weather, but at a slightly decreased pace, with 6 million tonnes in 2017 compared to 8 million tonnes the previous year. Some Colombian coal deliveries to Asia, and particularly South Korea, are expected to continue during 2018 due to the fact that Korean buyers have contracts of affreightment until 2018. However, for buyers in Asian countries (other than South Korean) continued flow of Colombian coal will depend on the price differential and freight rates.

During the year, the US exports towards the Pacific market more than doubled to 19.6 million tonnes, targeting India for high-sulphur coal shipped from East Coast terminals, while western coal terminals focused on North-East Asian countries, particularly South Korea and Japan.

### Atlantic market

In 2017, demand for imported thermal coal in the Atlantic market increased by 4% year-on-year to 244 million tonnes.

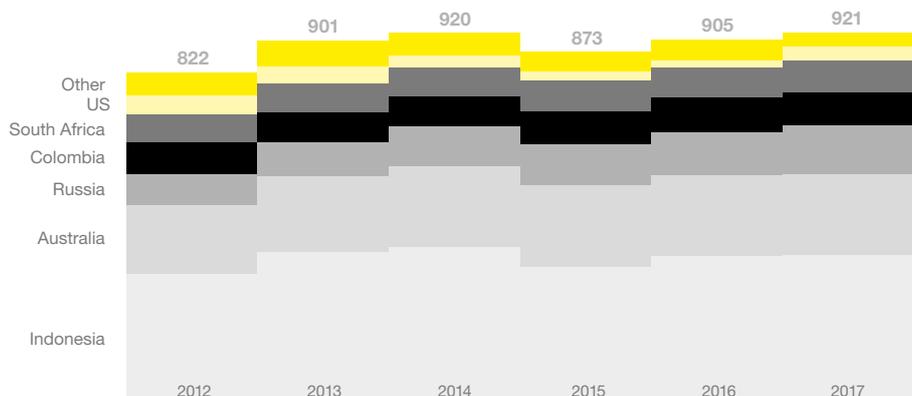
In Europe, coal demand increased in Spain and Portugal as severe dry weather throughout the year limited hydro-generation capacity. In France, the capacity of the nuclear fleet was significantly diminished due to maintenance and repairs, leading to increased coal imports by 27% year-on-year to 4.6 million tonnes. Poland also saw an increase in imports due to a shortage of domestic production. These coal import increments in continental Europe were complemented by demand from Mediterranean countries, particularly Turkey and to some extent Morocco; both countries launched new coal-fired power plants or are preparing to do so in 2018.

On the other hand, 2017 also saw a decrease in coal demand in countries such as Germany, where 2.4 GWs were decommissioned while another 1.4 GWs were put into reserve. High level of wind generation also hit coal demand in Germany during the year, although coal still accounted for 37% of the country's total electricity generation<sup>1</sup>. The Scandinavian region experienced a decrease in demand, particularly in Denmark, due to high levels of hydro generation. Meanwhile in the US, demand diminished slightly as natural gas continued to gain the leading market share, with coal accounting for 30% of electricity generation compared to 33% by gas.

On the supply side, Colombian exports to the Atlantic market decreased by 8.4% to 4 million tonnes year-on-year. This was due principally to heavy rains impacting production, plus a lack of investment in equipment affecting availability due to frequent maintenance. The US told a very different story, with an export increment of 87% to 16 million tonnes shipped to European and Mediterranean countries. Most of this tonnage was high-sulphur coal, which is blended with low-sulphur qualities. Russian coal also witnessed a growth story towards the west, with a massive increment of seaborne and landborne supplies by 20 million tonnes year-on-year, part of which was fresh tonnage transit from Kazakhstan. On the other hand, South African exports to the Atlantic market fell by 4 million tonnes year-on-year, due to the economic advantage of focusing on Asian countries (linked to the Newcastle index) rather than the Atlantic region.

FOR DETAILS ON SUEK'S SALES TO THE INTERNATIONAL MARKET, SEE PAGE 66.

### Thermal coal seaborne exports (million tonnes)



Source: Public filings, SUEK estimates.

1. Source: AG Energiebilanzen 2017.

## RUSSIAN COAL MARKET

**Russian coal companies achieved record levels of thermal coal production and supply in 2017 due to higher exports combined with stable domestic demand. High-quality Russian coal is in demand in key international markets and boasts good potential for further supply growth, so long as domestic rail and port infrastructure continue to develop.**

In 2017, the production of thermal coal in Russia increased by 8% year-on-year to 324 million tonnes<sup>1</sup>. Brown coal extraction totalled 75 million tonnes (an increase of 5% year-on-year). Brown coal is chiefly supplied to Russian power plants and public utilities. While brown coal export deliveries are rather low, in recent years they have been showing a steady upward trend.

Hard coal production in 2017 grew by 8% compared to 2016 and reached 249 million tonnes. Along with power generation, hard coal is used in the production of cement and metals and in many other industries. Moreover, a large share of high-quality coal mined in Russia is supplied to the international market. In 2017, total supplies of Russian thermal coal increased by 10% year-on-year to 305 million tonnes<sup>1</sup>, including a 17% increase in international supplies.

Such significant export growth can be explained by the high level of prices and demand for Russian coal in the international market. Given the favourable market conditions, in 2017 Russian producers sought to redirect their supplies to higher-margin export destinations, which in turn led to lower domestic coal supply.

### Russian market supplies

Thermal coal supplies from Russian producers to the domestic market amounted to 130 million tonnes in 2017, an increase of 1% compared to 2016.

The power generating companies received 88 million tonnes of coal, including 52 million tonnes of brown and 38 million tonnes of hard coal. According to data from the Unified Energy System grid operator, power generation in Russia in 2017 remained virtually unchanged from the previous year at 1037.6 TWh. The structure of power generation by type did not show noticeable changes. At the same time, in the power systems of Siberia and the Far East, hydroelectric power stations reduced generation by 6% to 106.2 TWh due to low water reserves in the second half of 2017, which provided better capacity utilisation rates at coal-fired power stations and stimulated demand for coal. Coal supplies to public utilities remained stable at 20 million tonnes year-on-year. This growth was mainly due to the weather, with lower air temperature than in 2016.

Russian thermal coal imports in 2017 increased by 17% to 24 million tonnes. Kazakhstan was the main supplier of thermal coal to Russia.

### Export supplies

At year-end, Russian thermal coal exports reached a record high level and surged by 17% year-on-year to 175 million tonnes.

The West accounted for the largest increase in exports, while supplies to the East also rose, but less significantly due to transportation problems. Shipments to ports and border crossings in European Russia increased by 26% compared to 2016, totalling 98 million tonnes. Supplies to the East grew by 8% to 77 million tonnes.

Shipments to the Far-Eastern ports of Russia were hampered by the upgrade programme of the Baikal-Amur Mainline (BAM) and Trans-Siberian Railway Network, which was very intensive in 2017. In addition, in August 2017 heavy showers and river flooding resulted in damage to the railways and highways of Primorye, leading to additional restrictions on coal transportation to Far-Eastern ports.

Another logistical problem for coal companies in 2017 was the deficit of railcars, caused by noticeable depreciation of the old rolling stock and increasing loading volumes.

Despite these limitations, Russian coal companies managed to strengthen their positions in key export markets in 2017. In the Atlantic region, deliveries increased significantly to Mediterranean countries – Spain, Italy, Turkey, Morocco, Israel and others. In the Asia-Pacific region, shipments to Japan, South Korea, Taiwan and Malaysia also showed positive dynamics.

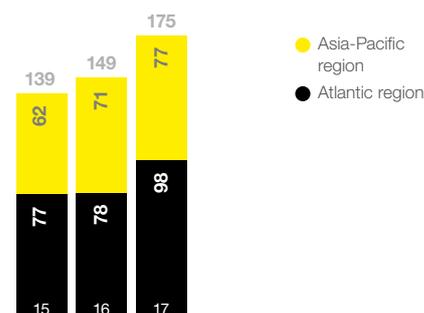
In general, the largest international markets for Russian thermal coal in 2017 were South Korea, the Netherlands, Turkey, Japan and China.

### Thermal coal supplies to the Russian market by customer (million tonnes)



Sources: Statistical data on railway coal transport, SUEK estimates.

### Russian thermal coal supplies to the international market (million tonnes)



Sources: Statistical data from Russian government agencies, SUEK estimates.

1. Statistical data from Russian government agencies, SUEK estimates.