OUR ASSETS

A SOLID ASSET BASE

SUEK’s operations in Russia extend from West to East across eight regions and seven time zones. Our efficient production assets, port facilities and rail infrastructure are widely spread across the country, enabling strong connections with our customers in all key markets. As one of the largest companies and employers in Russia, we are also deeply committed to sustainable business development, providing social, environmental and economic support to the regions where we operate.

In the Kemerovo region, SUEK mines high-quality hard coal from underground mines and open pits located in the Kuznetsk basin (Kuzbass). To refine the mined coal and achieve the quality required by our customers, we treat it at four washing plants.

Products with calorific values of 5,800–6,100 kcal/kg are principally supplied to energy companies in Europe and Asia. Meanwhile, coal with a calorific value of 5,000–5,700 kcal/kg is mainly required by Russian power-generation companies. High-quality concentrate from the Kirova mine is supplied to metallurgical coal markets in Asia and Russia.

Finished products are transported by the United Production and Transport Department of Kuzbass to four connecting stations: Terentyevskaya, Leninsk-Kuznetsky 1 and 2, and Baikaim.

Production in 2017:

38.2 Mt
Hard coal

In 2017, we rolled out capacity development projects aimed at increasing the efficiency of export-quality coal production. These included:

• Launching new and highly productive mining equipment at the Yalevskogo and Taldinskaya-Zapadnaya 2 mines;
• Commissioning a new site – Magistralny – at the Rubana mine;
• Improving loading capacities of the Taldinskaya-Zapadnaya 1 mine and plant, Taldinskaya-Zapadnaya 2 mine and Zarechny open pit;
• Continued upgrading of Kirova and Polysaevskaya plants;
• The increase in the capacity of the Zarechny open pit section up to 6 million tonnes per year, and the purchase of seven heavy-duty dump trucks with a payload capacity of 220 tonnes, which allowed us to increase the efficiency of freight transportation and to terminate contracts with third-party suppliers.

The company has also developed service companies for the repair of power hydraulics and power support sections, which enabled us to partly terminate contracts with third-party suppliers.

In 2017, investments in the capacity development of SUEK Kuzbass assets totalled $314m.
1. The November 7th mine was closed in 2017 because of resource depletion.
2. In 2016, Kotinskaya and Yalevskogo mine were merged to make a single mine with two longwall faces.
3. In 2017, the coal-sizing facility at the November 7th mine was closed following the closure of the mine.

New opportunities at Rubana mine

In December 2017, we commissioned a new surface site and underground area – Magistralny – at the Rubana mine. The commercial reserves of the developed seam are 19.3 million tonnes. The mining equipment includes TAGOR 24/50 power support sections on a 300 metres long face, an Eickhoff SL-500 shearer and a DBT SH-PF 4/1132 face conveyor.
Increasing capacity at Vostochno-Beisky

In 2017, we began work on the development of the Vostochno-Beisky open pit, with a view to increasing annual capacity from 3.5 to 5 million tonnes. The project also includes the construction of a new washing plant with a capacity of about 4 million tonnes per year, including production of premium sized coal. The designed output is planned to be achieved in 4Q 2021.

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Production in 2017: 13.0 Mt
Hard coal

1. The Khakasskaya mine was closed in 2017 because of the depletion of commercial efficient resources.
Our production units in Krasnoyarsk region extract brown coal from three open pits in the Kansk-Achinsk basin. This coal is supplied mostly to the Russian market, principally to heat and power stations and public utilities within the region. High efficiency mining is provided by one of the lowest overburden thickness ratios among all SUEK production facilities. This means the units here have the lowest stripping ratio among SUEK’s production units. Operational efficiency is also boosted by the fact that coal loading is performed directly into railcars or onto conveyor belts.

In 2017, we carried out major development projects aimed at ensuring production safety:

• Upgrading the electrical centralisation at Ugolnaya station at the Borodinsky open pit;
• Upgrading electric excavating equipment;
• Equipping excavators, tractors and bulldozers with automatic fire extinguishing systems.

Total investment in capacity development in Krasnoyarsk region in 2017 amounted to $18m.

Due to our extensive presence in the region, we have a large responsibility to develop the region and support its inhabitants. One of our key social investments during the year was our Chess for Children project, which was opened by the world chess champion Anatoly Karpov. We try to make ‘chess art’ accessible to all children, even in the most remote regions of Russia.
We extract high-quality hard coal at the Tugnuisky open pit and the Nikolsky open pit, located in Buryatia and Zabaikalye. At these pits we use modern equipment and employ sophisticated planning, operational and management systems. Coal from the open pits is washed at the Tugnuisky washing plant, which has an annual capacity of 10.3 million tonnes. Washing reduces ash content from 28% to 14% and increases calorific value from 4,600 kcal/kg to 5,650 kcal/kg. Most of this coal is exported to the Asia-Pacific market. The low-nitrogen hard coal extracted at Tugnuisky and Nikolsky open pits meets the requirements of Japanese power utilities. Some coal is delivered directly to China by rail across the Russian-Chinese border. Washed products are transported to the connecting station Chelutay by the Tugnuisky Production and Transport Department. The remaining coal is sold to Russian power plants and utilities.

In 2017, key capacity-development projects included:

- Further developing the Nikolsky open pit, including the purchase of additional excavating equipment and dump trucks;
- Increasing the efficiency of drilling and blasting operations;
- Commissioning the upgraded ESh 20/90 dragline with innovative and energy-efficient control systems;
- Beginning construction of a new washing module at the Tugnuisky washing plant.

Total investment in capacity development in Buryatia in 2017 amounted to $78m.

On the social development side, SUEK encourages social entrepreneurship in the region. We have set up a resource centre in Buryatia to support small businesses and NGOs by providing targeted education for their future leaders. Buryatia also participates in a company programme aimed at promoting social entrepreneurship among young people called ‘Future of the region – future of SUEK’.

Production units
Tugnuisky open pit
Nikolsky open pit

Processing facilities
Tugnuisky WP

Transport facilities
Tugnuisky Production and Transport Department

Production in 2017:
13.6 Mt
Hard coal

1. Including 8.4 Mt washing and 1.9 Mt processing capacities.
In Zabaikalye, Kharanorsky and Vostochny open pits produce brown coal, which is supplied predominantly to local Russian power stations. Apsatsky coking coal deposit, located 40 km from the Baikal-Amur Mainline railway, extracts high-quality, mid-volatile coking coal, which is in high demand in Asian coking coal markets and in Russian metallurgical markets.

In 2017, our main project objectives in Zabaikalye were to increase the efficiency of mining equipment. We switched to higher capacity excavators and dump trucks, and optimised machinery maintenance and repair processes in order to increase productivity.

Investment in capacity development in Zabaikalye in 2017 totalled $11m.

SUEK also continued to focus on improving the living conditions in the Apsatsky open-pit camp, where employees work on a rotational basis.

**Production in 2017:**

- **0.7 Mt**
  - Coking coal
- **4.5 Mt**
  - Brown coal
The company’s key mining operations in Khabarovsk are located at the Urgal deposit in the Bureinsky basin. The proximity of Khabarovsk’s assets to our Vanino Bulk Terminal represents a significant strategic advantage. The Bureinsky open pit and the Severnaya underground mine both produce hard coal. This coal is washed at the Chegdomyn washing plant and a second processing facility at the Bureinsky open pit, which increases its calorific value from 4,300 kcal/kg to 5,850 kcal/kg. Coal from this region is mainly transported to our nearby Vanino Bulk Terminal and the Asia-Pacific market, and to Russian power-generation customers located in the Khabarovsk and Primorye regions. Due to its strategic location, and the high calorific value of its hard coal, the company invests significantly in the mining, washing and transshipment capacity of the region. It also invests in its environmental safety.

During the year we paid particular attention to environmental issues at the Urgal deposit and began construction on a number of new water treatment facilities.

The Vanino Bulk Terminal is a crucial export gateway from Russia to the Asia-Pacific market. It provides the shortest route from our production facilities (with direct access to the Trans-Siberian Railway and Baikal-Amur Mainline) to customers in China, South Korea, Japan and Taiwan. In 2017, SUEK shipped 19.5 million tonnes through this terminal.

Total investment in capacity development in the Khabarovsk region in 2017 amounted to $95m.

**Production in 2017:**

**6.6 Mt**

**Hard coal**

**Expanding mining capacity at Urgal**

In November 2017, we started production at a new open pit at the Urgal deposit called Pravoberezhny, which has a design capacity of 3 million tonnes of coal per year. Coal from the new open pit is also washed at the Chegdomyn washing plant.

**Enhancing capacity and quality at Vanino Bulk Terminal**

In 2017, SUEK completed the development of the external railway infrastructure at the Vanino Bulk Terminal, which has increased annual transshipment capacity to 24 million tonnes. We also completed the first stage of cleaning and sorting equipment upgrades to improve the quality of coal cleaning and sizing. In addition, to enhance
Our assets in the Primorye region are located in the Pavlovsky brown-coal basin and the Lipovetsky hard-coal deposit. SUEK’s Primorye mines are situated near Russia’s eastern coast, which generates significant savings on transportation costs when supplying coal to Asia-Pacific markets.

In 2017, the company began the development of the Nekkovy open pit, which will produce hard coal with a calorific value of 4100 kcal/kg. In December 2017 we started production and produced 22 thousand tonnes by the end of the year. This coal will be processed at a dry washing facility.

In Primorye, SUEK ships coal through Maly Port, where the Group is a major shareholder, with a 49.9% share. In 2017, we shipped 2.9 million tonnes through Maly Port to Asia-Pacific customers, mainly in Japan, South Korea, China, Taiwan and Vietnam. Since 2014, we have been implementing a port development programme with a view to increasing its capacity to 4 million tonnes by 2019. This programme includes purchasing key equipment for unloading, loading and coal sorting, and expanding the warehouse area. In 2017, our design documentation for the reconstruction of berths and port dredging passed the necessary environmental impact assessments and were approved by the relevant state authorities. As part of our environmental activities at the port, we installed protective covers on telescopic conveyors, purchased mobile dust suppression units and used protective canopies for transhipment operations.

During the year, SUEK continued to support social and environmental projects in the region, including the ‘Land of the Leopard’ national park, which we have sponsored since 2015. Total investment in capacity development in Primorye in 2017 amounted to $22m.

Production in 2017:

<table>
<thead>
<tr>
<th>Product</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hard coal</td>
<td>0.07 Mt</td>
</tr>
<tr>
<td>Brown coal</td>
<td>3.5 Mt</td>
</tr>
</tbody>
</table>

1. The Vostochnoe mine was closed in 2017 because of resource depletion, and the adjacent plant was also closed.
In north-western Russia, SUEK ships coal through Murmansk Commercial Seaport in which SUEK holds 97.1%\(^1\) of voting shares. The port provides access to the Atlantic Ocean and the ports of western Europe, the Mediterranean and the East coast of the US. In 2017, SUEK shipped 14.6 million tonnes of coal through Murmansk Commercial Seaport to European countries, including Germany, the Netherlands, Morocco and Turkey.

In 2017, the port implemented a comprehensive environmental programme with a total cost of $20m. As part of our efforts to minimise the port’s environmental impact, we commissioned storm water and sewage treatment facilities, installed four additional anti-dust, fog-generating units suitable for winter use, constructed high walls to minimise the spread of dust from the surface of stockpiles, and designed dust shields. We also installed six new portal cranes that use higher-capacity bucket grabs which increase shipment capacity and reduce dust generation.

In 2017, port employees planted 200 lilac shrubs, over 60 coniferous and deciduous trees, and 150 young mountain ash, birch and dogrose plants around the site.

The company also provided support during the year to urban social and environmental projects that make the city a more colourful, beautiful, comfortable and convenient place to live. In September, at the Upper Secondary School No. 8, we held a specialised transport and logistics class with a view to imparting vital skills and knowledge and widening our external talent pool. We also presented a new advanced combined road cleaning machine to the city on the day of its anniversary. As part of the anniversary celebrations, we hosted a 130-metre graffiti on the port berth fencing and illuminated 13 giant gantry cranes, while a residential house near the port was painted in bright colours.

Total investment in capacity development in Murmansk region in 2017 amounted to $30m.

Rail assets
Railway transport is crucial to the coal production and distribution chain. In 2017, SUEK’s coal constituted 21% of the total coal cargo conveyed on Russian railways, which are operated by the state monopoly Russian Railways. SUEK operates one of the largest railcar fleets in Russia. We also run about 190 locomotives and have 16 dedicated loading stations. Our rail system provides efficient connections between the national rail network and the company’s mines and port facilities. In 2017, the company increased the fleet of innovative railcars under management by 2,536 units to 15,664 units. Investments in the expansion of the car fleet amounted to about $100m in 2017.

746 km – Length of our own railway lines connecting the company’s mines and port facilities with Russian Railways network
48,200 – Average number of railcars involved in the transportation of SUEK’s coal each month
15,664 – Number of higher-capacity 75- and 77-tonne railcars operated in 2017

Sales network in Russia
In the Russian market, SUEK sells coal to large industrial companies, key energy providers and smaller customers through our commercial network of local offices across different regions.

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1. As at 31 December 2017 SUEK’s share in Murmansk Commercial Seaport was 84.9%, in January 2018 SUEK increased its holding to 97.1% of the voting shares.
SUEK’s international operations mainly include financial, sales, trading and distribution activities.

SUEK is active in the international debt capital markets and coordinates its financing activities through SUEK Ltd (Cyprus).

International coal trading and sales are conducted by SUEK AG (based in Switzerland), whose main role is to maximise the efficiency of coal sales and secure the company’s position in the international market. We achieve sales goals through our own network of branch and representation offices and subsidiaries registered in jurisdictions of strategic importance, such as Poland, China, Japan, Taiwan, South Korea, Indonesia, Lithuania, Spain and the US.

In 2017, we continued to expand our presence in Poland and Lithuania through the development and improvement of existing networks of local distributors. In addition, SUEK opened a new office in Vietnam with the aim of establishing closer contact with our product consumers in this market.

This marketing structure allows SUEK AG to conduct its sales and resource procurement in local currency, arrange delivery directly to end users’ sites, and provide corresponding services to customers. SUEK AG continually analyses the international coal market and gathers information that influences the balance of supply and demand. In particular, it looks at information related to the deployment of new power-generating capacities, changes in coal production and export, and the dynamics of logistics capacity.

International trading and distribution network

- China
- Indonesia
- Japan
- Lithuania
- Poland
- South Korea
- Spain
- Switzerland
- Taiwan
- USA
- Vietnam

1,900 customers in 42 countries