Focusing on operational excellence

SUEK is constantly adopting and implementing best-in-class technologies across all of its operations. These ensure optimum operational efficiency, a high level of industrial and environmental safety and help generate strong cash flow and stable EBITDA, enabling SUEK to constantly reinvest in its business and the communities in which it operates.

Enhancing washing efficiency in Kuzbass
See more on page 67.

Robotising drilling
See more on page 65.

Mobile heat inspector
See more on page 70.

24/7 environmental control at Murmansk Commercial Seaport
See more on page 73.
Procurement

>80% of export is high-CV coal

+72,000 heat customers

>80% self-sufficiency in railcars and ports
Coal

Strategic priorities

1. Safe and efficient production
2. Increase in high-CV coal production
3. Expanded presence in Asian markets

Products

- High-CV coal
  - Strategic priority: Increased production and exports with a focus on premium markets

- Metallurgical coal
  - Strategic priority: Increased production and presence in all key markets with a focus on Asia and Russia

- Sized coal
  - Strategic priority: Sales growth in traditional European and new markets

- Low-CV fines
  - Strategic priority: Increase processing

- $5,140m revenue
- 0.72 LTIFR
- $818m CAPEX

1. Calculated together with logistics.
With 7.6 billion tonnes of coal reserves, SUEK currently has over 30 years’ worth of high-quality raw materials for development.

Our coal is low in nitrogen and low in sulphur, and by washing it we significantly reduce the ash content and increase the calorific value and reduce the environmental impact of our products. This ensures they meet the most stringent requirements of our consumers, in particular from Japan, South Korea and Taiwan.

The close proximity of our hard coal assets in Kuzbass, Khakassia and Buryatia to the railways and also to ports in the west and east of Russia allows us to easily adjust our supply schedule depending on demand and maintain our position as Russia’s largest coal exporter.

Our hard coal assets in the Khabarovsk region and Primorye have a competitive advantage, due to their location close to ports that give them access to the Asian markets.

Our brown coal assets in the Krasnoyarsk region, Zabaikalye and Primorye, are located close to coal-consuming energy companies, including those that are part of the SUEK Group.

We also produce metallurgical coal at the Kirov WP in Kuzbass and the Apsatsky open-pit mine in Zabaikalye. Chernogorsky WP in Khakassia produces sized coal, used in households in Poland, Turkey and other countries.

By using our own logistics channels, including our own railcars and ports, we can ensure we deliver our products to consumers efficiently and on-time.

Our largest service facilities Sib-Damel in Kuzbass, Borodinsky repair and mechanical plant in Krasnoyarsk and Chernogorsky repair and mechanical plant in Khakassia provide a full range of services for the repair and production of mechanisms for mining equipment, reducing our dependence on third-party suppliers.

Through our well-developed distribution network, we supply coal to consumers in 48 countries.

In the Russian market, the Group delivers coal to large industrial and energy companies, as well as medium-sized consumers, through its sales unit.

SUEK AG sells coal in the international markets via a network of representative offices and subsidiaries in countries of strategic importance for the Group, including Poland, China, Taiwan, South Korea, Indonesia, Lithuania, Vietnam, Japan, Switzerland, the UK and the USA. This way SUEK can take payment for its products in local currencies and offer additional services to local customers.

### Operational highlights

<table>
<thead>
<tr>
<th></th>
<th>2019</th>
<th>2018</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mining</td>
<td>106.2</td>
<td>110.4</td>
<td>(4%)</td>
</tr>
<tr>
<td>By product type</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>hard coal</td>
<td>66.7</td>
<td>72.1</td>
<td>(7%)</td>
</tr>
<tr>
<td>brown coal</td>
<td>39.5</td>
<td>38.3</td>
<td>3%</td>
</tr>
<tr>
<td>By mining method</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>open-pit</td>
<td>81.1</td>
<td>77.9</td>
<td>4%</td>
</tr>
<tr>
<td>underground</td>
<td>25.1</td>
<td>32.5</td>
<td>(23%)</td>
</tr>
<tr>
<td>Washing</td>
<td>41.3</td>
<td>42.2</td>
<td>(2%)</td>
</tr>
<tr>
<td>Sales</td>
<td>115.1</td>
<td>115.6</td>
<td>0%</td>
</tr>
<tr>
<td>International sales</td>
<td>55.2</td>
<td>57.2</td>
<td>(3%)</td>
</tr>
<tr>
<td>Asia-Pacific market</td>
<td>34.3</td>
<td>33.1</td>
<td>4%</td>
</tr>
<tr>
<td>Atlantic market</td>
<td>20.9</td>
<td>24.1</td>
<td>(13%)</td>
</tr>
<tr>
<td>Including:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>third-party coal</td>
<td>14.5</td>
<td>11.5</td>
<td>44%</td>
</tr>
<tr>
<td>petroleum coke and other sales</td>
<td>1.4</td>
<td>1.8</td>
<td>(24%)</td>
</tr>
<tr>
<td>Domestic sales</td>
<td>59.9</td>
<td>58.4</td>
<td>3%</td>
</tr>
<tr>
<td>To own generating facilities</td>
<td>33.7</td>
<td>30.2</td>
<td>12%</td>
</tr>
<tr>
<td>To other consumers</td>
<td>26.2</td>
<td>28.2</td>
<td>(7%)</td>
</tr>
</tbody>
</table>

106,2 Mt coal mined

113,7 Mt coal sold
Sales

In 2019 our sales volumes were 115.1 Mt, remaining almost unchanged compared to 2018.

Our international sales volumes decreased by 3% to 55.2 Mt (including 1.4 Mt of petroleum coke and other products sales) due to lower supplies. At the Atlantic region, the effect of which was partially offset by an increase in shipments to Asian markets. Our main international sales destinations in 2019 were China, South Korea, Japan, the Netherlands, Germany, Vietnam, Morocco, Taiwan, Poland and India.

SUEK’s supplies to the Asia-Pacific region accounted for 60% of the company’s international sales and grew by 1.2 Mt to 34.3 Mt due to increased exports to Vietnam, China, India and Hong Kong. Deliveries to the Atlantic region decreased by 3.2 Mt to 20.9 Mt, reflecting more significant decreases in supplies to the UK, Spain and Turkey. At the same time, we increased our supplies to Germany, Morocco, Croatia and the Netherlands.

Sized coal sales, including through our own distribution networks in Russia, Poland, the Baltic states and Turkey, contracted by 13% to 4 Mt due to weather conditions, which resulted in lower coal consumption in the public utilities sector, and a difficult economic situation in Turkey. Metallurgical coal sales fell to 3 Mt, mainly reflecting a decrease in deliveries due to excess supply of highly volatile semi-coking coal in the Russian market.

SUEK’s coal deliveries to our own power plants grew by 12% to 33.7 Mt as we replaced coal from third-party producers with our own coal. Sales to other Russian consumers decreased slightly, as we increased supplies to our own power plants.

Our sales of petroleum coke and other non-coal products in 2019 fell by 24%, to 1.4 Mt, amidst a general decline in the production of petroleum coke in Russia.

Export revenue from coal sales decreased by 11% to $4.295m, primarily due to a lower average selling price amidst a general decline in coal market prices in Europe and Asia, and weaker coal sales.

The average annual coal price index in the Atlantic region in 2019 was 34% lower year-on-year and reached $61 per tonne. A drop in gas prices at the beginning of the year, along with a warmer winter, put significant pressure on the coal price. Prices rose slightly in the second half of the year but did not reach the level of 2018. Restrictions on the purchase of Australian coal in China

**International sales structure in 2019 by markets, Mt**

<table>
<thead>
<tr>
<th>Market</th>
<th>Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlantic</td>
<td>20.9 Mt</td>
</tr>
<tr>
<td>Pacific</td>
<td>34.3 Mt</td>
</tr>
</tbody>
</table>

**Domestic coal sales structure in 2019**

<table>
<thead>
<tr>
<th>Sector</th>
<th>Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>SGC</td>
<td>56%</td>
</tr>
<tr>
<td>Public utility companies</td>
<td>26%</td>
</tr>
<tr>
<td>Other power plants</td>
<td>12%</td>
</tr>
<tr>
<td>Other</td>
<td>6%</td>
</tr>
</tbody>
</table>

**Coal sales revenue by market**

<table>
<thead>
<tr>
<th>Market</th>
<th>Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asia-Pacific market</td>
<td>47%</td>
</tr>
<tr>
<td>Atlantic market</td>
<td>22%</td>
</tr>
<tr>
<td>Russian market</td>
<td>31%</td>
</tr>
</tbody>
</table>
Autonomous drilling rig

In 2019, we began the process of automating blast hole drilling. The first autonomous robot-assisted drilling rig was tested at the Tugnisky open-pit mine.

It is equipped with onboard independent control equipment enabling key operations to be performed without operator assistance or via remote control:

- Moving between holes in accordance with the drilling design
- Levelling the machine platform
- Drilling boreholes in accordance with the design
- Measuring parameters of drilled wells
- Ceasing movement when encountering obstacles.

Process automation will replace human involvement in potentially hazardous areas and will improve the speed and accuracy of work. The review of the results of the pilot project and further decisions are scheduled for summer 2020.
Mining

SUEK produced 106.2 Mt of coal in 2019, representing a 4% decline on the previous year and leading to a decline in productivity of mining personnel. We increased our open-pit coal production by 4% to 81.1 Mt driven by Nikolsky, Pravoberezhny, Chernogorsky, Zarechny, Borodinsky, and Abakansky expansion. Our underground mining decreased by 23% to 25.1 Mt due to large-scale scheduled upgrades in Kuzbass, at the Kirov, Yalevsky and Polysaevskaya mines, and partly in Urgal, at the Severnaya mine.

Hard coal production, almost half of which was mined in Kuzbass, decreased by 7% for the following reasons:

- Difficult geological conditions for preparing reserves and mining coal at the Kuzbass and Urgal mines
- Unfavourable market environment and limited
- Limited capacity of the Krasnoyarsk and West Siberian railways
- Lower demand for coal from Kamyshansky due to unfavourable market conditions

Brown coal production, the bulk of which is mined at open-pit mines in the Krasnoyarsk region, grew by 3% to meet robust coal demand from SUEK’s own generating plants.

Coal washing and product quality

The main way to improve the quality of coal is to increase the volume and depth of its processing. In line with our strategic priority to expand the production of high-quality coal, the following projects were delivered in 2019:

- Commissioning a new washing plant at Tugnuisky for washing 0–25 mm coal, with an output of 6 Mt a year
- Completing the reconstruction of the Chernogorsky WP with an increase in its production capacity up to 9 Mt a year

In 2019, washed coal as a share of hard coal produced, rose by 3 p. p., despite the 2% decrease in the volume of coal washed to 41.3 Mt due to lower volumes of hard coal mined.

As a reliable supplier, we strive to meet the requirements of consumers for the quality of our products and ensure strict compliance with contractual obligations. We constantly improve our quality control system and introduce new methods to determine the ash content in coal, the moisture content in our extracted, produced and shipped products, and improved mechanised methods of selecting and preparing product samples.


<table>
<thead>
<tr>
<th>Production by mining method, Mt</th>
<th>Production by type of coal, Mt</th>
<th>Washed coal, Mt, and washed coal share</th>
</tr>
</thead>
<tbody>
<tr>
<td>'19</td>
<td>'19</td>
<td>'19</td>
</tr>
<tr>
<td>81.1</td>
<td>66.7</td>
<td>41.3</td>
</tr>
<tr>
<td>77.9</td>
<td>72.1</td>
<td>42.2</td>
</tr>
<tr>
<td>73.3</td>
<td>72.2</td>
<td>41.5</td>
</tr>
<tr>
<td>Open-pit</td>
<td>Hard coal</td>
<td>Coal washed</td>
</tr>
<tr>
<td>Underground</td>
<td>Brown coal</td>
<td>Washed coal share of hard coal production</td>
</tr>
<tr>
<td>25.1</td>
<td>39.5</td>
<td>62%</td>
</tr>
<tr>
<td>32.5</td>
<td>39.3</td>
<td>59%</td>
</tr>
<tr>
<td>34.5</td>
<td>35.0</td>
<td>58%</td>
</tr>
<tr>
<td>'18</td>
<td>'18</td>
<td>'18</td>
</tr>
<tr>
<td>110.4</td>
<td>110.4</td>
<td>41.3</td>
</tr>
<tr>
<td>'17</td>
<td>'17</td>
<td>'17</td>
</tr>
<tr>
<td>107.8</td>
<td>107.8</td>
<td>41.5</td>
</tr>
</tbody>
</table>

Productivity of mining unit production personnel, tonnes per man-month

| '19 | 508 |
| '18 | 540 |
| '17 | 535 |
Investment projects

In 2019, due to a decrease in international coal prices, we focused our coal capacity development programme on improving competitiveness and operational efficiency, while postponing a number of expansion projects that were not critical to the company. The rest of the investment programme was aimed at maintenance and environmental and safety projects.

Building a second washing plant at Tugnuisky

In mid-2019, six months ahead of schedule, SUEK put into pilot operation a new fine-size coal washing plant at Tugnuisky with a capacity of 6 Mt per year. The washed volume in 2019 exceeded 1 Mt.

Completing a flotation unit at the Kirov WP and a filter press unit at the Polysaevskaya WP

In 2019, we completed the construction of a flotation unit at the Kirov WP and a filter press unit at the Polysaevskaya WP. The flotation unit will increase the concentrate yield by 2–3% due to deeper 0–0.35 mm slimes processing, while the filter press unit at the Polysaevskaya WP will close the process water circuit, thereby reducing the environmental load after eliminating slurry discharge into external sumps.

Capacity increase at Pravoberezchny

In 2016, we began the development of the Pravoberezchny open-pit mine with a design capacity of 3 Mt by 2021. The key advantages of this asset are high-CV, low-nitrogen and low-sulphur coal, its close proximity to the Vanino Bulk Terminal (less than 1,000 km) and a relatively low overburden ratio. In 2019, a decision was made to further expand the mine capacity to 6 Mt by 2024 with a simultaneous increase in the capacity of Chegdomyn WP up to 9–10 Mt. Actual production in 2019 amounted to 2 Mt.

Enhancing work safety

In 2019, at SUEK’s Kuzbass assets acquired a multifunctional slant drilling rig PRAKLA RB-T135 able to drill wells with an initial diameter of up to 2 metres, as well as equipment to support early degassing of coal seams.

Raising mine development efficiency

In 2019, we further raised the efficiency of mine development by the introduction of bolter miner machines to replace old-style roadheaders in order to ensure the timely preparation of longwall faces at our mines.

Construction of the November 7th Novaya mine

In 2019, SUEK continued its active investment phase related to the construction of the November 7th Novaya mine at the Sychevsky site to boost underground mining from thick seams). In 2019, we purchased the Aleksievsky site reserves (the deeper seams of the Sychevsky site) with an estimated extractable volume of 190 Mt (in addition to the extractable reserves of the previously licensed upper seams exceeding 50 Mt). The acquisition of these reserves in underlying seams will prolong the life of the infrastructure currently under construction. The decision to slow down the construction of the mine was made in 2020 due to the deteriorating market conditions, the launch of the mine will be postponed until a later date, when the market conditions recover.

Our priorities for 2020

We intend to increase sales of high-CV thermal coal with a calorific value of more than 5,800 kcal/kg. Increasing coal washing at the Chegdomyn and Chernogorsky WPs and further developing our coal quality management systems at Tugnuisky and Kuzbass will help us achieve the product quality required by our demanding customers.

We aim to keep our level of domestic deliveries stable.

Improving production safety will remain our priority. We will continue our absolute focus on eliminating accidents and fatalities and reducing occupational injuries. We will continue the deployment of the geolocation system for workers in our mines.

We plan to continue the development of our mining assets, including Pravoberezchny and Nekkovy in the Russian Far East, and the Magistralny site at Ruban mine in Kuzbass. At Tugnuisky we plan to further to optimise blasting technology that will increase the efficiency of the blasting process as well as decrease its environmental impact.

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1. Project to replace an old mine that was closed.
Energy

Strategic priorities

**ELECTRICITY**
- Expanding our presence, improving the efficiency and safety of power plants, increasing co-generation volumes

**HEAT**
- Expanding our geography, improving the state of heat pipelines, reducing losses, increasing co-generation volumes

---

Kemerovo
- Novokuznetsk
  - Belovo
  - Myski
- Novosibirsk
  - Kuibyshev
- Barnaul
- Biysk
- Rubtsovsk

Yekaterinburg

Krasnoyarsk
- Kansk
- Nazarovo

Abakan
- Minusinsk

Kyzyl

---

$2,189 m

Revenue

0.24

LTIFR

$107 m

CAPEX¹

---

¹ Excluding the purchase of Refinskaya GRES.
SUEK is one of the largest producers of electricity and heat in Siberia, with a share of 25% of the electricity market. The company supplies heat and electricity to more than 5 million people in the Altai, Krasnoyarsk, Kemerovo, Novosibirsk and Sverdlovsk regions, Khakassia and Tyva.

The group includes five TPPs, one GTPP and 19 CHPPs. In 2019, SUEK acquired the Reftinskaya GRES located in the Sverdlovsk region, which is temporarily operated by Enel Russia during the transitional period. Including this new plant, the company’s total electrical capacity is 14.7 GW and its heat capacity is 24.9 thousand Gcal/h.

At the end 2019, SUEK also agreed on the purchase of the Krasnoyarskaya GRES-2 from Gazpromenergoholding in 2020, to be operated by the seller for the transition period.

Most of the company’s plants are co-generation, i.e. generating heat and electricity at the same time, and they consume coal mined from nearby deposits.

Our own ELSIB plant produces a full cycle of work on the development, manufacture, commissioning of generators, electric motors for power plants.

Other operational elements at the company’s assets include various advanced solutions such as dispatch control of CHPP operations, digitised requests for connecting new facilities to the heat supply system, mobile and web applications for heat inspectors from heat supply companies and heat consumers, and video monitoring of employees dealing with high voltage. Heat networks are monitored using drones.

Sales

SGC’s total electricity sales in 2019 amounted to 55.2 TWh, representing a 10% increase on the prior year. Capacity sales totalled 10 GW, which is 9% higher than in 2018. This growth mainly reflected new sales to the Ural region. Heat sales decreased by 5% to 35.3 million Gcal because of higher outdoor temperatures in the winter and spring, the early end of the heating season in May and the late start of the heating season in September. In 2019, the company expanded its activities in Khakassia, Novosibirsk and Barnaul, where new consumers were connected after outdated and polluting boiler houses were replaced by heat produced at our combined heat and power plants from Novosibirsk and Barnaul. This partially compensated for the decrease in heat sales due to weather conditions.

The Energy Segment expanded its geographic footprint with the acquisition of Reftinskaya GRES, giving it access to the more attractive Price Zone 1 (European Russia and the Urals).

<table>
<thead>
<tr>
<th>Capacity sales revenue</th>
<th>rose by $12m following the consolidation of Reftinskaya GRES.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity sales revenue</td>
<td>increased by 18% as the expansion of assets led to higher sales, the effect of which was partially offset by the weaker rouble.</td>
</tr>
<tr>
<td>Heat sales revenue</td>
<td>fell by 4% compared to 2018, as warmer weather in the regions of operations led to lower heat sales.</td>
</tr>
<tr>
<td>Cash cost of energy sold</td>
<td>totalled $1,462m, in line with 2018.</td>
</tr>
</tbody>
</table>

Generation

Electricity generation in 2019 amounted to 51.5 TWh, an 11% year-on-year increase, following the acquisition of the Reftinskaya GRES in October 2019.

Heat supply from all plants and boiler houses in 2019 decreased by 5% to 43.5 million Gcal.

We maintained the same level of co-generation, which enables us to optimise fuel consumption and emissions per unit of energy. Today, 96% of heat and 38% of electricity are generated in a combined cycle.

We continued to expand our operations, with 246,000 Gcal added due to new customers in Chernogorsk, Podsinne, Barnaul, and through co-generation (the replacement of boiler houses in Barnaul, Novosibirsk, and Krasnoyarsk) allowing us to reduce fuel consumption and emissions per unit of energy.

Service quality

In 2019, we increased investments in the upgrade and repair of heat networks by 56% year-on-year to reduce heat losses and improve the reliability of heat supply. In Novosibirsk, investments in the upgrade and repair of heat networks rose by 2.1 times. We introduced mobile applications for heat consumers in order to remotely transmit meter readings, obtain information on verification deadlines, register consumer complaints and view bills.

In 2019, the Russian Government decided to transfer Barnaul to the ‘alternative boiler’ heat tariff starting from 2020, which enables SUEK to make long-term investments in the modernisation and development of the city’s heat supply systems.

Revenue

<table>
<thead>
<tr>
<th>$m</th>
<th>2019</th>
<th>2018</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity sales</td>
<td>732</td>
<td>720</td>
<td>2%</td>
</tr>
<tr>
<td>Heat sales</td>
<td>707</td>
<td>734</td>
<td>(4%)</td>
</tr>
<tr>
<td>Electricity sales</td>
<td>693</td>
<td>588</td>
<td>18%</td>
</tr>
<tr>
<td>Other</td>
<td>57</td>
<td>88</td>
<td>(35%)</td>
</tr>
</tbody>
</table>
**Investment projects**

In 2019, the company delivered the following main investment projects aimed at increasing the share of co-generation and improving its environmental performance:

- Replacing outdated standalone boiler houses in Kemerovo and Krasnoyarsk with heat produced at our CHPPs, including the upgrade and construction of heat pipelines
- The construction of a new stack at the Krasnoyarskaya CHPP-1
- Upgrading power unit No. 7 of the Tom-Usinskaya GRES (under the DPM-2 programme)
- Technical re-equipping of the boiler plant at the Nazarovskaya GRES
- Completing the reconstruction of the Southern Thermal Plant in Rubtsovsk to increase the installed heat capacity by 50–70 Gcal/h.

**Our priorities for 2020**

The Energy Segment will focus on the following targets and projects:

- Uninterrupted and high-quality power supply to consumers of electricity and heat in the company’s area of responsibility
- Decreasing pollutant emissions by upgrading the equipment, and further increasing the share of combined electricity and heat generation, as the most climate-friendly method to supply our customers with electricity and heat
- Expanding presence in heat markets: replacing outdated and polluting boiler houses in Krasnoyarsk, Novosibirsk and taking technical and organisational actions to enter the Chernogorsk and Belovo heat markets
- Coordination with authorities and implementation of large-scale modernisation programmes for heat supply in the cities of SUEK’s presence, using long-term investment mechanisms provided for by the ‘alternative boiler’ pricing method

**Mobile heat inspector**

In 2019, SUEK introduced electronic tablets to replace paper reports, and this has helped the company’s inspectors to make heat supply adjustments more quickly.

An eight-inch tablet with an impressive range of functions is connected to the internet and the server, which hosts all the information that inspectors enter into their devices.

After inspectors register testing results with special devices, the software automatically analyses these figures, compares them with the standards set out in the heat supplier contracts and generates a report in the form of an electronic certificate. All relevant consumer data is stored on the server where it can be used at any time.

The innovation has brought the following improvements:

- Optimisation of travel routes for inspectors
- Increasing the rate of inspections
- Better control of heat consumption
- Timely adjustment of heat supply

As a result of the 2019 pilot, our ‘Mobile heat inspector’ project was awarded at the ‘New Idea’ competition organised by the Russian Ministry of Energy.

**Operational highlights**

<table>
<thead>
<tr>
<th></th>
<th>2019</th>
<th>2018</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Generation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electricity, TWh</td>
<td>51.5</td>
<td>46.2</td>
<td>11%</td>
</tr>
<tr>
<td>Heat, million Gcal</td>
<td>43.5</td>
<td>46.0</td>
<td>(5%)</td>
</tr>
<tr>
<td><strong>Sales</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electricity, TWh</td>
<td>55.2</td>
<td>50.0</td>
<td>10%</td>
</tr>
<tr>
<td>Competitive market</td>
<td>45.2</td>
<td>40.9</td>
<td>11%</td>
</tr>
<tr>
<td>Regulated market</td>
<td>10.0</td>
<td>9.1</td>
<td>10%</td>
</tr>
<tr>
<td>Capacity, GW</td>
<td>10.0</td>
<td>9.2</td>
<td>9%</td>
</tr>
<tr>
<td>Competitive market</td>
<td>8.0</td>
<td>7.5</td>
<td>7%</td>
</tr>
<tr>
<td>Regulated market</td>
<td>2.0</td>
<td>1.7</td>
<td>18%</td>
</tr>
<tr>
<td>Heat, million Gcal</td>
<td>35.3</td>
<td>37.2</td>
<td>(5%)</td>
</tr>
</tbody>
</table>
Thanks to access to key transport infrastructure, SUEK is able to make coal deliveries to the largest international markets, to our power plants and Russian customers, efficiently and on-time, while also utilising the logistic assets for third-party bulk commodity transport, including back-haul where possible.

SUEK is the fourth largest operator of gondola cars in Russia in terms of fleet size (53,350) units as of the end of 2019. This fleet covers over 80% of the company’s transportation needs. Given the uneven traffic and demand for railcars in specific parts of the rail network and during specific times of the year, maintaining agreements with railcar operators, and also with third-party railcar consumers, is essential. This makes it possible to optimise empty mileage and smooth out fluctuations in our ability to supply the required railcars for SUEK’s coal.

65% of our railcar fleet were designed to meet SUEK’s specifications: higher-capacity cars with 75- and 77-tonne capacity and a useful life of up to 32 years. In 2019, SUEK enhanced its fleet with the acquisition of a further 16,025 high-capacity railcars.

1 Including transhipment of third-party coals and non-coal products (1.3 Mt in 2019 and 0.8 Mt in 2018).
These high-capacity railcars decrease— all else being equal—the specific transport cost and also the specific diesel consumption per tonne, thus generating economic benefit and reducing environmental footprint.

SUEK’s own railway infrastructure gives us one of the best loading and unloading speeds in Russia. This infrastructure includes 746 km of railway track, 16 internal loading stations and approximately 190 locomotives, providing access to the national railway network. We continue to work on increasing the throughput of our loading stations and tracks in order to support our developing mining units in Kuzbass, Khakassia and Buryatia.

SUEK supplies coal to the international market through its own, modern Vanino Bulk Terminal in the east and Murmansk Commercial Seaport in the west, in addition to Maly Port, in which the company is one of the main shareholders.

Operational highlights

<table>
<thead>
<tr>
<th>Mt</th>
<th>2019</th>
<th>2018</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rail shipments on public tracks</td>
<td>85.7</td>
<td>87.3</td>
<td>(2%)</td>
</tr>
<tr>
<td>Shipment by sea</td>
<td>49.1</td>
<td>48.1</td>
<td>2%</td>
</tr>
<tr>
<td>Vanino Bulk Terminal</td>
<td>20.5</td>
<td>20.0</td>
<td>3%</td>
</tr>
<tr>
<td>Murmansk Commercial Seaport¹</td>
<td>17.6</td>
<td>16.2</td>
<td>9%</td>
</tr>
<tr>
<td>Maly Port</td>
<td>2.8</td>
<td>2.5</td>
<td>12%</td>
</tr>
<tr>
<td>Other ports</td>
<td>8.2</td>
<td>9.4</td>
<td>(13%)</td>
</tr>
</tbody>
</table>

Rail costs (Russian market)

<table>
<thead>
<tr>
<th>$ per tonne</th>
<th>RUB per tonne</th>
</tr>
</thead>
<tbody>
<tr>
<td>’19</td>
<td>’19 501</td>
</tr>
<tr>
<td>’18</td>
<td>’18 492</td>
</tr>
</tbody>
</table>

Rail costs (international market)

<table>
<thead>
<tr>
<th>$ per tonne</th>
<th>RUB per tonne</th>
</tr>
</thead>
<tbody>
<tr>
<td>’19</td>
<td>’19 1,574</td>
</tr>
<tr>
<td>’18</td>
<td>’18 1,404</td>
</tr>
</tbody>
</table>

¹ Including transhipment of third-party coals and non-coal products (1.3 Mt in 2019 and 0.8 Mt in 2018).

Rail transportation

In 2019, SUEK transported 85.7 Mt of its coal via the Russian Railways network, which represented 17.4% of total coal tonnage transported on the network during the year.

As part of our programme to optimise empty mileage, SUEK also transported 21.1 Mt of third-party loads during the year.

We are running joint projects with Russian Railways to increase the capacity and efficiency of the railways and railcars. Of particular importance to the company is the completion of the first stage of the Eastern Polygon by 2020 and the start of the design and construction of the second stage, which is scheduled for completion by 2025. The key activities of the second stage include electrifying the Volochaevka-Komsomol’sk-Vanino section, laying the second continuous track and constructing new junctions with the BAM. These programmes will increase the volume of coal that is transported towards Far Eastern ports to 195 Mt.

By eliminating infrastructural constraints along our cargo transportation routes, we will be able to increase our coal export shipments, including those that pass through Vanino Bulk Terminal, to 40 Mt.

Specific coal transportation costs in roubles rose amidst the continued growth in operator rates, which was due to a shortage of railcars caused by operational issues in the Russian railway system and railway restrictions towards the east.
Port transhipment

In 2019, we transhipped 49.1 Mt of coal and other loads, with our own ports covering over 80% of our exported coal transhipment needs.

We increased our coal transhipments to Asia-Pacific customers via Vanino Bulk Terminal by 2.6%, to a record 20.5 Mt, as we benefited from completed upgrades to the port. We shipped 2.8 Mt through Maly Port, located in the Russian Far East, primarily to Japan and South Korea.

In 2019, Murmansk Commercial Seaport transhipped 16.3 Mt of coal and 1.3 Mt of other goods, representing a 9% year-on-year increase.

By increasing the capacity of our own ports we were able to reduce our transhipment volumes through third-party ports by 13%.

Port costs include the maintenance costs of our own ports and stevedore costs at third-party ports. Compared to 2018, our port costs did not change.

<table>
<thead>
<tr>
<th>Ports costs (international market), $ per tonne</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘19</td>
</tr>
<tr>
<td>‘18</td>
</tr>
</tbody>
</table>

24/7 comprehensive environmental control at Murmansk Commercial Seaport

In 2019, SUEK opened an advanced environmental dispatcher office at the Murmansk Commercial Seaport. The dispatcher room includes an integrated hardware and software complex for monitoring the environmental situation in the port’s territory and the boundaries of its sanitary protection zone.

The system enables a single dispatcher to carry out comprehensive and continuous monitoring of the environmental situation, in real time, in order to manage environmental risks and improve the efficiency of environmental activities. Using the spatial structure of the information and measuring system, all data is automatically displayed on the interactive port map. The dispersion area of pollutants is broadcast online.

The system records the following parameters:
- Dust concentration
- Concentration of gaseous pollutants
- Air temperature and humidity
- Surface humidity of bulk cargo piles
- Noise level
- Wind speed and direction

Depending on the wind and dust conditions the dispatcher can activate the necessary dust suppression equipment, such as stationary and mobile fog-generating units, vacuum cleaners, road spraying, and organisational and technical activities.

With the dispatcher’s office up and running, the port is now able to predict meteorological conditions three days ahead.

Overall, the port is investing about $50m in a large-scale environmental programme. At the end of 2019, the Murmansk Port passed an inspection for compliance with the requirements of the international environmental standard and confirmed its compliance with international environmental certificate ISO 14001:2015. Following an audit by experts from the ‘Clean Seas’ International Environmental Foundation, the port received the Platinum Certificate of Compliance with the ‘Clean Port’ environmental standard.
Investment projects

Railway infrastructure development and capacity increase at Vanino Bulk Terminal

In August 2018, the Commission on the Fuel and Energy Sector Development Strategy and Environmental Safety, chaired by the President of Russia Vladimir Putin, approved the outline of the second project stage up until 2025 (ensuring the transportation of 195 Mt of coal a year towards Far Eastern ports, including 85 Mt a year at Vanino) and confirmed the importance of maintaining a long-term tariff system according to the ‘inflation less than 0.1%’ principle.

Following these decisions, in March 2019 the Russian government adopted the Long-Term Russian Railways Development Programme to 2025, which involves increasing the target throughput of the infrastructure at the Komsomolsk-Vanino section from 43–44 Mt in 20211 to at least 85 Mt with complete electrification of the Volochaevka-Vanino section by 2025. This creates an opportunity for SUEK to increase its long-term target of raising transhipment volumes through Vanino from 24 to 40 Mt or more.

In 2019, following the decision by its Board of Directors, SUEK began the design, preparatory work and supplier selection for capital equipment. In 2020, we plan to complete the design work, obtain a permit and begin construction, the progress of which will be linked to the actual Baikal-Amur Mainline development progress.

Capacity increase at Murmansk Commercial Seaport

SUEK is running a large-scale environmental programme, constructing shields to minimise the negative impact of coal dust.

In 2018–2019:
• The introduction of an advanced stationary spraying system was completed. This spraying system consists of 14 spraying units in the first and second cargo districts.
• The company opened an environmental dispatcher’s office

The port has completed pre-design work for the development of railway infrastructure at the Murmansk station to construct a railcar unloading station. SUEK has proved the possibility of increasing the Murmansk station’s capacity to 16 Mt, subject to completing a set of reconstruction activities. Work is currently underway to obtain technical specifications from Russian Railways.

We also completed delivery of gantry cranes and started design a dedicated complex for coal transhipment in the second cargo district and for the reconstruction of berths.

Capacity increase at Maly Port

In 2019, the following main activities were carried out to increase transhipment capacity to 4 Mt a year:
• Dredging the operational waters and approach canal

After launching the facilities into operation in 2020, Maly Port will be able to accommodate vessels with a carrying capacity of up to 40,000 tonnes (it currently handles vessels up to 17,000–24,000 tonnes). In addition, the ongoing dredging operations (from 8.5 to 11.1 metres) will make it possible to receive Panamax ships with a deadweight of up to 80,000 tonnes, with their additional loading at Vostochny port. Further prospects for increasing the capacity of Maly Port to 6 Mt will depend on the initiatives by Russian Railways to expand infrastructure towards Nakhodka.

1. Today, only 34 Mt per year, reaching 43–44 Mt after finishing the construction work in the Trans-Siberian Railway – BAM project.
Our priorities for 2020

The main priority for 2020 is the first stage of the capacity increase at Vanino Bulk Terminal to 40 Mt (the development of railway infrastructure, a new triple car dumper with a defrosting station for gondola cars, a conveyor system, a fifth stacker reclaimer, etc.).

At the Murmansk and Maly Ports, we will continue the construction of dust shields, which will reduce coal dusting in nearby areas.

At Maly Port the company plans to remove railway infrastructure constraints as part of the final measures to reach capacity of 4 Mt per year.

We intend to maintain a railcar fleet under management of around 50,000 units and involve high-capacity cars in the regular turnover according to a cost-efficient scheme. One of our priorities continues to be the development of technology to accelerate the turnover of railcars along SUEK’s routes and a routing programme in all directions, together with Russian Railways.

Procurement

Inventory management

In 2019, the procurement unit accelerated inventory turnover against the backdrop of an overall increase in inventory due to higher purchase volumes and rising prices.

To achieve the acceleration of turnover, the company introduced material procurement planning in ERP and SRM systems, taking into account the actual need for materials, their stock balance and emergency (reserve) stock, delivery time, transit rate and seasonality.

In 2019, the amount of materials purchased through automatic planning was 72% of the total procurement volume. We accelerated the turnover thanks to more efficient inventory management. As a result, the need for third-party purchases decreased by 13.4%.

Together with automation, we developed and introduced a unified inventory management methodology. We also created a technique for calculating reserve stock. Besides, SUEK developed and introduced an incentivisation system for key employees of the company’s units based on the inventory turnover indicator. Currently, the customer services, the financial and economic unit and supply services are responsible for meeting the company’s turnover targets.

In 2019-2020, a similar inventory management project will be implemented at SUEK’s service companies. This will help us cover all structural divisions with a single inventory optimisation methodology to further increase the cumulative economic effect.

Consolidation of SUEK’s and SGC’s procurement functions

In March 2019, we developed a programme to consolidate the procurement processes at SUEK and SGC. The programme consists of a number of areas:

- SUEK and SGC jointly develop 27 categorical strategies for materials and services accounting for approximately 80% of the procurement volume
- SGC began the unification of the structure and functionality of its procurement service
- The companies created a single reference book of materials and services
- We updated regulatory documents on procurement activities in terms of bringing to the unified (SUEK’s) standards and rules governing procurement procedures

Automation of procurement processes is developing in two directions. For purchases at SGC’s units that are not subject to 223-FZ law “On Procurement of Goods, Works, Services by Certain Types of Legal Entities” dated 18 July 2011 (Law on Procurement), the processes are automated on the basis of a single SUEK’s SRM trading platform. For procurement activities at SUEK and SGC under 223-FZ, we developed a project that involves a new functionality and integration with external resources, with consideration for the regulatory framework requirements. This law applies to SGC, as it covers various activities in the field of electricity and heat supply.

In 2020, the company plans to continue all previous initiatives and reap the first economic benefits from the above innovations.