

SUSTAINABLE APPROACH AND INNOVATIVE TECHNOLOGIES





SUEK’s strategic priorities in environmental protection are closely linked to the UN SDGs, focused on the sustainable use of resources and preserving aquatic and terrestrial ecosystems.

2020 PRIORITIES

Ensuring the environmental safety of our facilities

Improving the environmental management system through organisational and internal regulatory changes, introduction of best available technologies

Reducing of negative impact on the environment

Introducing corporate policies and best practices at new assets

2020 RESULTS¹

0
MAJOR ENVIRONMENTAL ACCIDENTS

-13%
WATER CONSUMPTION PER UNIT OF ELECTRICITY

OUR REGULATORY FRAMEWORK

Russian environmental protection laws

SUEK’s Environmental Policy

SUEK’s Energy Policy

SUEK’s Compliance Policy

SUEK’s Coal Quality Policy

ISO 14001 standards

ISO 50001 standards

Bettercoal Code

UN Global Compact

UN SDGs



GRI SEE DETAILED ENVIRONMENTAL INDICATORS IN THE GRI TABLES IN THE ONLINE VERSION OF THE REPORT

ALL OF OUR POLICIES CAN BE FOUND ON THE COMPANY’S WEBSITE [HTTP://WWW.SUEK.COM](http://www.suek.com)

¹ The environmental and social performance includes the results of acquired Krasnoyarskaya GRES-2 from October 2020, Primorskaya GRES from August 2020, Reftinskaya GRES from July 2020. Murmansk and Tuapse Bulk Terminals are not included.

OUR APPROACH

We strive to minimise the impact of our operations by employing the most responsible production techniques.

Our approach to environmental safety is enshrined in SUEK's Environmental Policy developed in accordance with Russian and international environmental laws, the ISO 14001 international standards and the precautionary principle. Furthermore, our environmental management strategy is set out in the company's Compliance Regulation of Licensed Activities and Environmental Management and Compliance Policy.

Our corporate environmental control system covers all stages of SUEK's operational cycle: from mine development, mining and processing to product transportation and transshipment and the generation of electricity and heat.

SEE SUEK'S ENVIRONMENTAL MEASURES THROUGH OPERATIONAL CYCLE ON OUR WEBSITE [HTTP://WWW.SUEK.COM](http://www.suek.com)

Environmental risk management is integrated into our corporate risk management system.

FOR MORE DETAILS ON RISK MANAGEMENT, SEE PP. 62-69

KEY PRINCIPLES OF SUEK'S ENVIRONMENT APPROACH:

- Continuous improvement of our environmental management system to enhance environmental safety
- Involvement of all employees in activities to reduce environmental risks and refine SUEK's environmental management system
- Pursuing a transparent environmental policy, engaging the public and local authorities in the preparation, adoption and implementation of decisions related to environmental protection

Our assets pass regular certification to ensure that their environmental management systems comply with the ISO 14001 international standards as well as undergo audits by other Russian and international independent organisations such as Bettercoal (coal assets), Nomura Research Institute (Vanino Bulk Terminal). In 2020, AFNOR audited SUEK's facilities in the Krasnoyarsk region and Khakassia and confirmed the high level of our environmental management practices including risk management. The Murmansk Commercial Seaport received the Platinum Certificate of Compliance with the Clean Port environmental standard¹.

In the reporting year, we invested \$41m in new environmental technologies and protection measures. Thanks to the ongoing work of our environmental services and employees, there were no major² environmental accidents or incidents resulting from SUEK's activities in the reporting year.

ENVIRONMENTAL ASSESSMENT OF CONTRACTORS

SUEK includes compliance with environmental requirements as a prerequisite in its agreements with contracting organisations. Compliance with SUEK's environmental policies and requirements is mandatory for all the contractors and subcontractors working at our production sites. We monitor compliance and conduct inspections throughout the entire period of their engagement, and non-compliance leads to contract termination.

STAKEHOLDER ENGAGEMENT

When planning a construction or expanding production and logistics facilities or introducing new technologies that are subject to state environmental impact assessment, we hold public consultations for environmental impact assessment. We inform our stakeholders about planned projects and their possible impact on the environment. We analyse suggestions received during public hearings and, if appropriate, adjust the relevant project documents accordingly.

PROMOTING ENVIRONMENTAL AWARENESS

SUEK promotes environmental awareness among its employees and local residents. We organise annual environmental safety conferences within the company and invite external experts to participate. Every year, we hold clean-up and tree-planting days involving local residents and actively promote corporate volunteering under various ecological projects. Environmental experts at our assets receive regular newsletters which include international and Russian environmental issues, legal and arbitration practices and information on the best environmental practices of the Russian Federation. SUEK's training programmes for production staff include an environmental focus and are aimed at studying new environmental protection measures, reporting forms and certification conditions, the current requirements of regulatory and supervisory authorities.

MANAGEMENT SYSTEM

SUEK's Board of Directors and CEO closely monitor the progress of our environmental protection strategy and activities. Each division of the company has a dedicated department in charge of improving environmental management. In order to increase the level of governance and focus of environmental issues, in February 2021, SUEK's Board of Directors created a dedicated Health, Safety and Environment Committee and approved the establishment of the role of the Group's Health, Safety and Environment Officer reporting to the CEO.

Environmental KPIs for management and employees at our assets include the provision of environmental permits, impact reduction per unit of products and increased waste reuse.

69%

OF SUEK'S ASSETS HAVE PASSED EXTERNAL ENVIRONMENTAL AUDITS

¹ The standard is a set of environmental safety rules for seaports that transship bulk cargo. The certification is voluntary.

² Under a major environmental accident, we mean an incident impact on the environment exceeded RUB 10bn (~\$140m).

COMPREHENSIVE UPGRADE OF KRASNOYARSKAYA CHPP-1

The ecological modernisation of Krasnoyarskaya CHPP-1 started in 2018. In addition to the replacement of stacks, the programme includes the construction of electrostatic precipitators with an efficiency of 99%, which will complement the existing battery cyclone installations for collecting particulate emissions.

SUEK plans to commission 14 electrostatic precipitators at the plant until the end of 2024. Their input will be carried out one by one. In the reporting year, the first filter was launched, which will reduce the plant's pollutant emissions by 6% annually.



We carefully monitor our compliance with Russian laws and ensure we hold the relevant permits to operate. At the end of 2020, SUEK had ~95% of these permits, with the rest in the process of being prepared.

AIR PROTECTION

At all of our assets, we monitor the air in the sanitary protection zone involving both our laboratories or third-party accredited laboratories.

In line with our strategy, in 2020 we began the installation of a 24/7 emission monitoring system at our power plants, with the pilot project in Krasnoyarsk. We expect to receive its results in mid-2021.

MINIMISING POLLUTANT EMISSIONS

In coal-fired power generation, the main emissions are NO_x, SO₂ and particulate matters that affect air quality. To minimise these and improve the environmental situation in the cities where we operate, we:

- Use advanced dust-collecting equipment (electrostatic precipitators, cyclone collectors), which catches up to 99.7% fly ash and other solids
- Replace old boiler houses with the heat supplied from our CHPPs equipped with ash filters
- Introduce advanced low-emission coal burning technologies
- Build high stacks above the smog level

In 2020, we started to expand the capacity of the Krasnoyarsk CHPP-3 as part of the project to replace ineffective and non-environmentally friendly boiler houses. At the Krasnoyarsk CHPP-1, a new 275-metre stack was put into operation, eliminating emissions below the smog level, and the first of the planned electrostatic precipitators was launched.

At our coal and logistics operations, CO, NO_x and SO₂ emissions are insignificant and well below the limits established by Russian laws.

In 2020, specific emissions of pollutants remained at the same level in the Energy Segment and slightly decreased in the Coal Segment.

SUPPRESSING DUST

We seek to minimise coal dust at all stages of our operating cycle, from mining to power generation and transshipment at ports, in order to ensure safe working conditions for employees and protect nearby areas from dust.

At all of our production sites, we use the best available techniques:

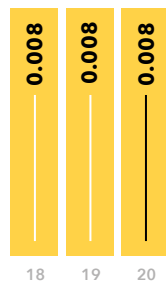
- Sprinkling equipment and fog-generating units at our open-pit mines and ports; protected telescopic conveyors for coal loading at washing plants, ports and power plants
- Dust vacuum cleaning machines and vehicles

In the reporting year, we began to re-evaluate our dust suppression equipment in use to select the most efficient and appropriate ones.

We are constructing dust and wind shields at our ports to prevent the wind blowing away the dust. At the Murmansk Commercial Seaport, we completed this project in 2020, with the wind shields now surrounding the whole border of the port on the land. At the Vanino Bulk Terminal in the reporting year we made progress on the necessary design and research work, while at Maly Port, we continued the installation of protective shields.

The Murmansk port has an Environmental Dispatching Office, carrying out environmental forecasting functions. We plan to introduce a similar system based on the existing local monitoring information system at Vanino.

Pollutant emissions per unit of electricity (kg/kWh)



WATER MANAGEMENT

SUEK operates in regions with large natural water reserves and does not place local communities or the environment at risk of water shortages. The company does not use water from vulnerable or state-protected sources, or from sources of particular importance to local communities or to biodiversity.

OPTIMISING WATER CONSUMPTION

We make efforts to minimise water intake from external sources and increase water reuse.

The main use of water resources in the SUEK's energy segment is related to the cooling of power plant equipment. No water used for turbine cooling comes into contact with the contaminated circuit. Collected storm water is treated at local treatment facilities. At 77% of our power plants, water after treatment goes to the circulating system of hydraulic ash removal, which excludes the discharge of industrial water from ash dumps into water bodies. In 2020, we developed a project of such system to implement it at Novosibirskaya CHPP-2 and CHPP-3.

During the production and transportation of coal, water is used for coal washing and dust suppression. Most of SUEK's washing plants and ports use circulating, closed water supply systems. At the Murmansk Commercial Seaport, storm water is collected, treated and used for spraying in dust suppression systems.

The majority of water consumed and discharged by the company's mining facilities is natural water (with characteristics typical of local groundwater) that is pumped out of mining areas to ensure safe operations. In 2020, we began the commissioning of equipment installed at Tugnuisky and Nikolsky open-pit mines, which will make it possible to use approximately 60% of the treated quarry water from these mines for dust suppression and production needs of the Tugnuisky WP.

WASTEWATER TREATMENT

The current Russian regulating system is very strict and requires the discharge of wastewater of a high quality that is much superior to groundwater and even superior to drinking water quality by some indicators. To meet these requirements our production sites use various methods for treating industrial and household wastewater. As part of SUEK's Environmental Strategy, the company builds or renovates wastewater treatment facilities for cleaning mine, quarry and storm water to meet those stringent regulatory requirements. More than half of the company's coal facilities are equipped with modern treatment facilities, and we continue to progress planned upgrades and the construction of additional facilities, as required, at all of our assets.

In 2020, we began to build treatment facilities at the Berezovsky and Yalovsky mines and continued similar projects at the Tugnuisky and Severnaya mines.

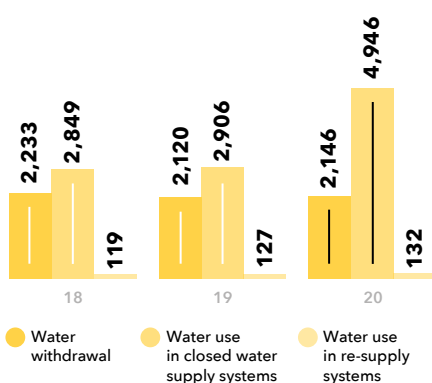
SUEK monitors discharged wastewater at all production units on a monthly basis, in compliance with its industrial environmental control plan. Water analysis is carried out by both our own laboratories and accredited third party laboratories. Sampling is also carried out during external audits.

WASTE RECYCLING

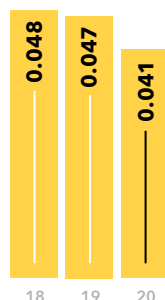
The majority of waste at the power plants is ash and slag. To reduce our ash and slag storage needs, we seek to use these waste products for economic purposes such as land reclamation, including mined-out open-pits, and road construction. Similar projects have already been delivered in Khakassia, Novokuznetsk, Belovo, Novosibirsk and Krasnoyarsk. We also plan to deliver three more similar ambitious land rehabilitation projects in Krasnoyarsk, Nazarovo and Kemerovo. There is a potential to utilise 3.2 Mt of ash and slag for these purposes every year (60% of total waste). In 2020, we continued utilising ash and slag, however, as at the year end, the total amount of waste generated and stored increased compared to 2019 due to inclusion in the calculation perimeter of Reftinskaya GRES, Krasnoyarskaya GRES-2 and Primorskaya GRES.

Of the waste we produce in coal mining, 99% is non-hazardous (of low hazard classes IV and V). It is overburden and enclosing rock. This waste is for the most part also used for reclamation purposes related to mining operations and for external dumps which are subject to reclamation. In 2020, the share of overburden used for reclamation decreased by 14% due to less worked-out areas.

Usage of water for energy production (million m³)



Water consumption for electricity production (m³/kWh)



The remaining small part of waste requires special treatment and is transferred to dedicated organisations for neutralisation. In order to reduce waste sent for disposal, our Zabaikalye facilities use thermal recycling, processing organic waste, industrial rubber articles, polymers, rubbers, oil sludge, bitumen, roofing felt, waste oils, medical, wood and other carbon-containing waste.

In Khakassia, we operate an upcycling plant. Worn dump-truck tyres are converted into new products such as tiles for injury-free sports coatings and rubber granules for road surfacing.

At some assets in Khakassia and the Krasnoyarsk region, we arranged pilot sites for separate collection of waste, which we transfer to dedicated enterprises for processing.

ASH DUMP MANAGEMENT

SUEK maintains the safety of ash and slag waste dumps through continuous monitoring of their condition. The ash dumps are hydraulic structures and subject to Russian legislation that imposes strict requirements on their operation. At least once every five years, we carry out a comprehensive assessment of their safety levels to meet our regulatory requirement and to report to state bodies.

We regularly monitor the safety of these facilities, including the water level in ash dump beds and piezometric wells, through

regular depth measurements and other checks. At least once every five years, we engage specialised independent organisations to analyse the safety of SUEK’s hydraulic structures. In addition, the Russian state industrial safety watchdog Rostekhnadzor monitors the state of our ash dumps during scheduled and unscheduled inspections. Inspection-based corrective actions have top priority.

For each facility, financial and material reserves have been created to eliminate possible accidents, with civil liability insurance contracts covering our hydraulic structures.

BIODIVERSITY CONSERVATION

SUEK does not operate in any UNESCO World Heritage sites, in habitats of animals or plants of global or national significance or that are protected, or in natural reserve areas, including the territories protected by UNESCO and the Ramsar Convention.

We work with specialised organisations to assess the state of biodiversity during engineering and environmental surveys at pre-design and design stages. We include our assessment results in materials for public hearings and deposit development projects. They also undergo state environmental impact assessment.

SUEK runs projects to protect biodiversity in several areas: protecting the fauna in

water bodies, including installation of fish protection fences at plants and release of juvenile fish, carrying out reclamation activities to preserve plants on disturbed lands.

SUEK is a partner of the Land of the Leopard National Park in Primorye and the Barguzinsky Nature Reserve in Buryatia. In 2020, with the support of SUEK in Kuzbass, the Kokuyskoye Swamp nature reserve was created with the purpose to preserve the nature of the area where rare and endangered species of flora grow.

In 2020, we launched our biodiversity monitoring in the territories where we operate. Based on this monitoring, we will prepare action plans for our assets to address local biodiversity risks and regulatory requirements.

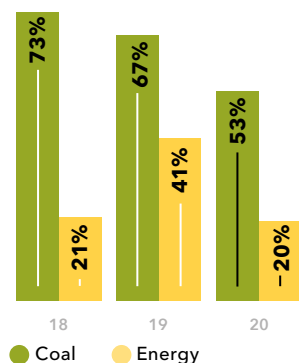
LAND REHABILITATION

We run extensive reclamation projects on land disturbed by SUEK’s mining projects.

As we start mining operations, we carefully remove the topsoil and store it. After the completion of mining operations, we backfill the holes, restore the landscape, and replace the fertile topsoil back, where we further plant grass, trees and bushes.

In 2020, the total of 84 hectares of disturbed lands were reclaimed.

Used and recycled waste



> 99%
OF WASTE AT SUEK’S ASSETS IS VIRTUALLY NON-HAZARDOUS