

# Delivering our strategy, focusing on safety

The sustainability and continued success of our business is underpinned by our continuous work to enhance employee safety.

**Q:**

In 2018, there were several employee injuries relating to moving machinery. What measures have you taken to ensure similar incidents are prevented in the future?

**A:**

If any injuries happen at our operations, our first response is to double-check process safety and further enhance our employee training. We are constantly bringing in new technology to further reduce 'human risk' factors.

For example, at Murmansk Commercial Seaport we have equipped loaders with thermographic cameras to monitor any blind spots behind the loaders, in any weather or light conditions. A processor unit processes the video stream and displays the image on the screen, framing any human figure and giving a sound alert.

The unit is currently operating in test mode on Volvo and Liebherr loaders. In 2020, two more Liebherr loaders will be equipped with this recognition system.

**Sergey Boyko,**  
Head of the Health and Safety Directorate, Logistics



## Our priorities

- Continually improve equipment and production management to ensure workplace safety
- Ensure our production sites have the latest safety systems and monitoring
- Address safety issues related to air quality
- Introduce remote monitoring systems for industrial safety parameters
- Guarantee the safety of all power plants equipment from fire and explosion
- Improve the skills and capabilities of safety professionals
- Reduce the negative impacts of coal dust on employee health
- Develop a single health and safety information system
- Implement preventative medical programmes

## Our regulatory framework

- Our occupational and Industrial Safety policy
- OHSAS 18001 standards
- ISO 45001 standards
- Bettercoal Code
- UN Global Compact
- UN SDG's



## Our approach

At SUEK, our goal is to create a completely safe production environment and reduce injuries to zero. The company strives to promote a safety culture among all its employees. The LTIFR KPI, as well as the target of zero fatal group accidents, are bonus modifiers for top managers and other employees.

SUEK's system for managing health and safety across the company is regulated by our Occupational Health and Safety Policy, is aligned with OHSAS 18001 and conforms to the best international standards. In 2019, SUEK began certification according to the new ISO 45001 standard. Our coal-producing and washing facilities in Kuzbass, Krasnoyarsk and Khakassia undergo regular external audits to confirm their compliance with the requirements of OHSAS 18001.

In 2018, our coal facilities were evaluated for compliance with the requirements of the Code Bettercoal. In 2019, we continued to adhere to best practices noted by BetterCoal experts on our assets, we continued to equip our assets with modern security systems and continued to implement comprehensive programs aimed at reducing injuries.

In our efforts to ensure production safety, we adhere to the following main principles:

- **Zero tolerance to injuries and accidents**  
We treat any injury and accident as an emergency and make sure we get to the bottom of any underlying problems.
- **Safety priority**  
If the production task compromises safety, it should be reviewed or cancelled.
- **Professionalism and competence**  
We do not ask employees to carry out any tasks for which they do not have the necessary knowledge and skills.
- **Zero tolerance to dishonesty and concealment**  
Concealment of any information relating to occupational health and safety is unacceptable.

## Health and safety management structure



- Overall control of strategic health and safety goals



- Monitoring progress against the safety programmes
- Coordinating safety activities
- Studying the causes of accidents and evaluating reactive and preventive measures



- Coordination and management of safety programmes



- Compliance with standards and procedures in industrial safety and labour protection

## Health and safety management, risk management and reporting system



*A distinctive feature of SUEK is the rapid adoption of managerial decisions: all of our recommendations regarding additional security measures began to be implemented literally the next day. I believe that the main goal of protecting the labor rights of workers and improving the conditions in SUEK has been achieved.*

**Ivan Mokhnachuk**

Chairman of the Russian independent coal industry workers union 'Rosugleprof'

Risks associated with personnel, processes, working conditions and equipment are regularly assessed at all levels of management. This assessment is the basis for further strategic and operational steps to improve industrial and labour safety.

SUEK Integrated Report 2019

SUEK has a comprehensive industrial safety management system, which ensures the methodology, and control at all levels of Group management is centralised. SUEK's Industrial Safety Committee, chaired by the CEO, is the major body responsible for monitoring the implementation of the Group's health and safety policy. The Committee's ability to successfully address safety issues relies on setting strategic objectives, goals and areas of focus, and addressing material issues in industrial safety, labour safety and the environment. Each meeting of SUEK's Management Board and its Nomination and Compensation Committee begins with a discussion on production safety issues.

Workers unions are also involved in the process of assessing labour protection and industrial safety conditions; on a regular basis, trade union representatives visit SUEK assets and assess working conditions in the field of labor protection and industrial safety. The elimination of any violations discovered during these inspections is mandatory.

In 2019, SUEK's assets in Krasnoyarsk region underwent an unscheduled audit of compliance

with the rules of occupational safety and health with the participation of the regional technical inspector of labor from Rosugleprof. During the audit, experts checked the documentation and equipment and interviewed all groups of employees, from workers to management personnel. Representatives of Rosugleprof commended the work of SUEK in creating conditions for the safe work of collectives.

In 2018, the decision was made to consolidate SUEK's energy units into the Group's overall health and safety management system. In 2019, SGC's CEO became a member of the Group's Industrial Safety Committee. An advisory body, the Production Safety Committee, was created at our energy facilities to set up an efficient production safety management system, address significant issues, and coordinate and control activities in this area.

**Identifying employees who are prone to excessive risk-taking**

We test all candidates applying for job vacancies and engineering positions on their risk appetite and their ability to learn and follow rules. We do not hire those who prove prone to excessive risk-taking.

**Contractors health and safety assessment**

SUEK's internal industrial and labour safety standards also apply to employees of contracting organisations working at the Group's assets. All contractors must meet our internal corporate requirements:

- Contractors are required to have permits to perform the work assigned to them
- Contractors must be staffed with the required number of qualified and trained personnel
- Contractors must have the necessary management structures and employees dealing with industrial safety
- Contractor personnel must be provided with the certified personal protective equipment, work clothing and safety shoes in accordance with SUEK's corporate requirements
- Contractor personnel must be equipped with a sufficient number of fault-free, certified, verified/ tested tools and accessories

**\$87.1m**

invested in occupational health and safety in 2019

## Our safety performance

In 2019, the Group's LTIFR decreased from 0.55 to 0.50 year-on-year, while the Coal Segment's LTIFR fell from 0.75 to 0.72, and from 0.29 to 0.24 in the Energy Segment.

Occupational injuries remained at the same level as last year. Of 57 accidents, 45 occurred at the coal production, processing, service and logistics operations, while 12 employees were injured at our energy facilities.

No collective group accidents with our employee were registered at SUEK's facilities in 2019<sup>1</sup>. However, despite all our efforts, eight individuals suffered fatal accidents across the Group. Four of these happened at our energy facilities: in Kemerovo (two), Novosibirsk and Kyzyl. Four fatalities occurred in the Coal Segment: two in Kuzbass and one each at a Khabarovsk underground mine, and in a Primorye open-pit mine.

Dedicated panels thoroughly investigated all of the accidents, which were also analysed by the Industrial Safety Committee, overseen by SUEK's Management Board. The root causes of these accidents were found to be related to employee training and discipline, the organisation of work processes, and the adequacy of the protective equipment and interlocks. The company has since developed comprehensive measures to address these causes and prevent similar incidents in the future.

In 2019, \$87.1m was spent on occupational health and safety (9% of SUEK's total CAPEX), \$60.6m of which was committed to the Coal and Logistics Segments and \$26.5m to the Energy Segment.

### GRI

See detailed health and safety indicators in our **Sustainable Development Report for 2018-2019** and in the GRI tables on pages 158-168.

## Maintaining atmospheric safety at coal mines

The nature of the coal industry carries with it the risk of accidents and emergencies, due to natural factors and mining processes, which involve the regular movement of working and development faces in underground and open-pit mines.

The main risks in underground coal mining are from potentially explosive concentrations of methane, and the accumulation of fine, explosive coal dust deposits in working areas. Coal processing and washing, transportation and transshipment of coal in ports are also potentially dangerous and require close attention to ensure safety. The company is therefore particularly focused on management, monitoring and safe extraction of methane gas and preventing the possibility of dust-explosions, by stone-dusting using inert dust.

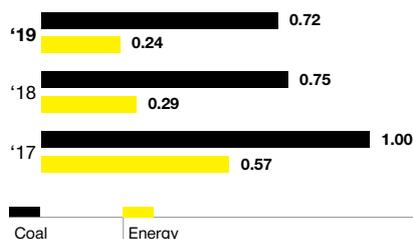
### Monitoring air and gas underground

All of our mines are equipped with a multifunctional safety system. Information flows from the mines are consolidated, monitored and analysed at all levels of company management:

- At SUEK's head office, our Control Centre monitors industrial safety parameters remotely, in real time
- Our centralised Control and Analysis Centre in Kuzbass receives information on the atmospheric conditions and gas levels and production process safety parameters in underground and open-pit mines.

In 2019, the company began to develop a similar centre for SUEK's open-pit mines in Khakassia.

### LTIFR, ratio



### Mine gas drainage and ventilation

To reduce the risk of explosive concentrations of methane forming in our mines, we carry out comprehensive gas drainage where methane content exceeds 10 m<sup>3</sup>/tonne of coal. We remove methane from these mining areas via a system of gas-drainage wells drilled from both underground and the surface. The total drilling of degassing wells in 2019 amounted to 432 km.

We started to replicate an effective technology first adopted at the Kirov mine, which is based on hydraulic fracturing of the coal seam. This will now be introduced at the Yalovsky mine in Kuzbass. This method reduces the gas content of the longwall panel in the fractured area by 30%.

We also drill gas-drainage wells and ensure surface vacuum pump units have the most advanced equipment, and provide drilling rigs manufactured by international producers. The latest Prakla RB-T 135 drilling rig (Germany) has been put into operation in Kuzbass. It is capable of drilling wells up to 600 metres deep and up to 0.8 metres in diameter. At the mining allotment of the Kirova mine in 2019, work began on drilling the first well with this machine. In the same place, a new main ventilation unit of the CFT production (Germany) was put into operation, which will allow for further development of mining operations in accordance with the requirements of air and gas control in coal mines.

All mines must be well-ventilated. In 2019, we commissioned a new main ventilation and drainage fan unit produced by CFT (Germany) at the Kirov mine to make more efficient drainage at the mine.

<sup>1</sup> In August 2019, during the reconstruction of Pumping Station No. 2 of the Novosibirsk Heat Network Company, as a result of the collapse of a wall section, three contractor workers were killed and one sustained minor injuries.

### Stone-dusting

To reduce the risk of coal dust explosion, we apply inert dust to the roof and sides of our underground roadways. In 2019 SUEK used over 350 mechanical stone-dusting units at its operations, a third of which were manufactured at our mechanical and repair plants.

### Ensuring air quality at above-ground operations

We also strive to reduce dust at open-pit mines, washing plants and ports to ensure favourable air conditions for our workers:

- We use aspiration and dust removal systems, vacuum collection, transportation and discharge of fine coal dust
- We equip production areas, warehouses, ports and adjacent territories adjacent with fog-generation units and foam generators

### Rollout of our remote safety analysis and warning programme

In our Komsomolets mine (Kuzbass), we completed the development and introduction of a pilot project for Remote Industrial Safety Control (RISC). This analytical programme, based on information from the multifunctional safety system, analyses and assesses risks and the likelihood of an incident, predicts the potential timing of an incident and sends the data to coordinators and site supervisors. Management decisions are made on the basis of this analysis and forecasting.

The system makes it possible to:

- Recognise hazardous situations early

- Assess current and forecast future risk levels
- Take preventive measures to avoid incidents and accidents

In 2020, this pilot project will be replicated across all of SUEK's mines. We also plan to develop RISC pilot projects for open-pit mining units and washing plants in Buryatia.

The Russian regulatory authorities have recognised our achievements and RISC performance. The approaches and technical solutions we have proposed as a result will become the basis of the state industrial safety monitoring system for the coal industry.

### Health and safety at power facilities

There are several key risks associated with producing and transmitting electric power and heat and with repairing and installing equipment at power facilities:

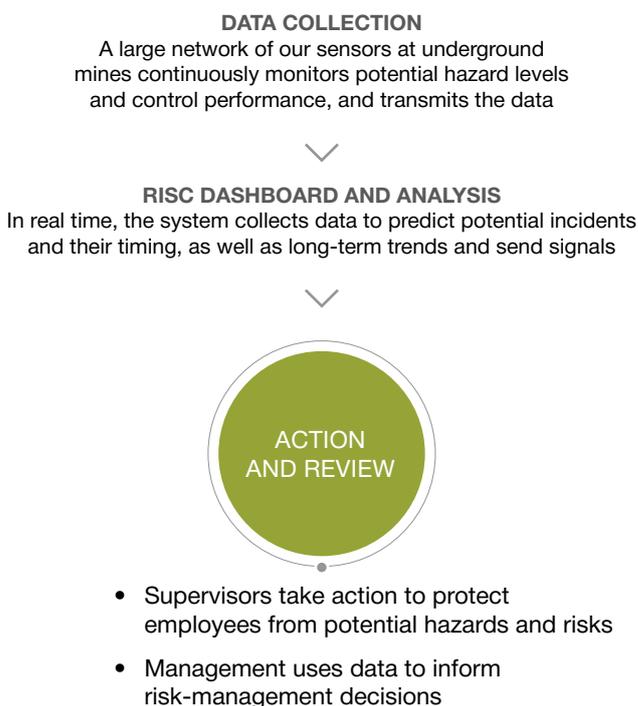
- The possibility of generating a potentially explosive pulverised coal mixture in CHPP units
- Depressurising of equipment operating under significant overpressure
- Electric shocks
- Falling from height during repairs

We focused on improving fire safety at our plants:

- Upgrading fire alarms and fire fighting systems
- Installing additional fire protection systems for personnel
- Applying fire-retardant coatings on electrical power cables
- Installing flame arrestors in boiler coal pulverisation units

We are careful to ensure the correct procedures are followed when carrying out power installations and attending to repairs (installation, commissioning) of equipment at power facilities.

### Process of safety analysis



## Health and safety training

We work hard to ensure all employees have the necessary knowledge to carry out their responsibilities safely and responsibly. The company has established personnel health and safety training from directors to workers.

At our coal mining and processing facilities before work begins, each employee's occupational and industrial safety knowledge is tested in a pre-shift examination via computer terminals.

In 2019, we opened a new training centre at Tugnuisky, with classrooms that include multimedia interactive simulators of our large operating machines, such as excavators, bulldozers or trucks.

At Murmansk port, Vanino Bulk Terminal, the Kuzbass transport department and energy facilities, managers received leadership training for health safety and behavioural safety auditing.

In addition to regular training, our energy facilities in 2019 ran special health and safety events:

- Regional 'Safety First' conferences for young professionals
- 'Safety Culture Basics' and 'Analysis and Causes of Injuries' training modules introduced into professional development courses for operating personnel at thermal power plants

- An 'Occupational Safety Culture' training course for chief engineers and directors, occupational safety and production control divisions and a number of line managers of plants and a service contractor

## Modern work clothes and personal protective equipment

The company has standard requirements for personal protective equipment that cover its protective properties, comfort, ease of use and durability. In 2019, the company's energy assets were added to the Group's ERP system in terms of accounting for, planning, standardisation and the distribution of personal protective equipment.

Based on the results of a successful pilot for the automatic distribution of PPE, implemented in 2018, in 2019, we rolled this technology out at other facilities, making it possible to move away from paper forms and instead keep a digital record of all personal protective equipment issued. In the next two years, we plan to purchase 60 vending machines for our production units.

## Healthcare

SUEK has a corporate 'Healthcare' programme focused on maintaining and improving production employees health, looking at overall production

and specific risks. It identifies early-stage symptoms of occupational diseases, prevents disease and provides medical services.

In 2019, we implemented the following occupational health projects:

- Launched 76 automated pre-shift medical check-up units
- Set up mobile aid posts at Vostochny and Vostochno-Beisky
- Upgraded equipment at medical facilities in Kuzbass and Krasnoyarsk region and recreation facilities for our employees in Khakassia
- Re-equipped the medical check-up department in Kuzbass
- Purchased a diagnostic and treatment unit for Kharanorsky and an ambulance car for Apsatsky in Zabaikalye
- Provided fitness equipment to corporate sports grounds
- Fitted canteens, office and amenity buildings with updated equipment to meet new recommendations from hygienists

From 2012 to 2019, SUEK's personnel health statistics improved more than two times. In 2019, time lost through sick leave across the company fell to 7.1 days per employee per year, while the share of people suffering from recurring or long-term illnesses was 4.32%.



# 71%

of SUEK employees were retrained in health in safety in 2019