



# Sustainable Development Report

2022-2023

The 2022-2023 sustainable development report of Viru Keemia Group focuses on corporate responsibility, environmental protection, and employee well-being, emphasizing long-term sustainability and innovation to ensure a safe and evolving work environment.

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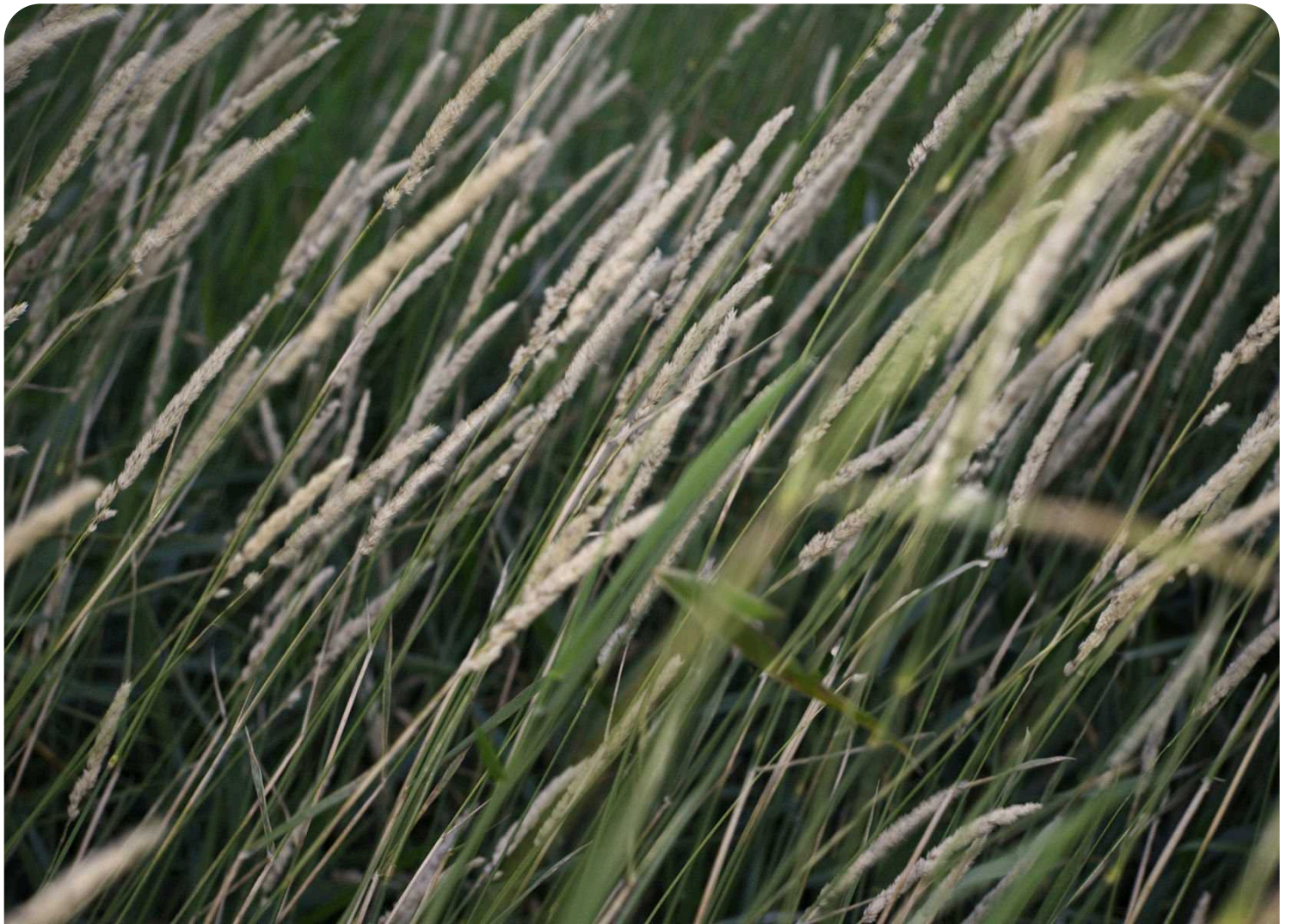
VKG's priority is creating an accident-free work environment and systematically improving work safety.



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## CONTACTS AND FEEDBACK





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# About the Report

The consolidated report discloses the Group's viewpoints and activities in solving the tasks related to responsible business and sustainable development in 2022 and 2023.

VKG has been preparing and publishing the Social Responsibility and Sustainable Development Report since 2008. The report is a public document which is available electronically on the Group's homepage in Estonian, English and Russian. The consolidated report discloses the Group's viewpoints and activities in solving the tasks related to responsible business and sustainable development in 2022 and 2023. The target audience of the report is a wide circle of stakeholders of Viru Keemia Grupp, including specialists, shareholders, investors, residents of Virumaa, social organisations, clients and partners.

The report covers Viru Keemia Grupp AS and its subsidiaries (hereinafter also referred to as VKG or the Group) in the calendar years of 2022 and 2023. The data reflecting the financial standing and production activities of the Group are derived from the consolidated data of Viru Keemia Grupp AS. The report contains information on the following topics: management, economic efficiency activities and results, ensuring production and environmental safety, supporting and developing the employees, facilitating socioeconomic development, and adhering to human rights in the Group.

## Additional reporting objectives

to make the activities of the organisation more transparent

to build trust between the company's stakeholders, local residents and VKG's employees

to inform all the interested parties of our work

## Standards of information disclosure

The report is prepared in accordance with the **Global Reporting Initiative** (GRI) guidelines and in line with the sustainable development reporting principles and the respective chapters of the GRI Oil and Gas Sector reporting standard. We also use ISO certification materials in preparing the report. The environmental and occupational safety data comply with the requirements established in the standards. More details concerning the conformity of this publication with disclosure requirements can be found on the last page of the report where the GRI table of contents is located. The previous reports were prepared in accordance with GRI levels G3 and G4.

In addition to the Social Responsibility and Sustainable Development Report, VKG will start preparing a Sustainability Report starting from 2025 in accordance with the EU directive. The first such report will be completed in 2026. As the process is work-intensive, preparations are already being made.

This report contains plans of medium-term and long-term perspective. This information is a forecast, as the implementation of the disclosed intentions also depends on (economic, social and legal) factors which are beyond the Group's control. The actual results may therefore differ from the plans.



**GRI** is a voluntary organisation that promotes reporting and brings together enterprises that value sustainable development all over the world. The organisation is considered the founder of the concept of sustainable development and has developed the recommended guidelines for sustainable development reporting.

More information about the organisation and the guidelines is available at [www.globalreporting.org](http://www.globalreporting.org)

# Main topics of the report

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## An effective corporate management system

Chapters of the report

**About the company**

**Management of sustainable development**

UN Sustainable Development Goals



Objectives and indicators

Reporting and publication of ESG reports

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## Economic sustainability and development

Chapters of the report

**Economic environment and main economic results**

UN Sustainable Development Goals



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## Ethical business management

Chapters of the report

**Management of sustainable development**

UN Sustainable Development Goals



Objectives and indicators

Zero human rights violations, corruption incidents, or thefts

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## Decarbonisation and climate change

Chapters of the report

**For a cleaner environment**

UN Sustainable Development Goals



Objectives and indicators

Reduction of greenhouse gases

## Ensuring environmental safety

Chapters of the report

**For a cleaner environment**

UN Sustainable Development Goals



Objectives and indicators

More efficient deposition of the waste generated in the production of shale oil.

Increasing reuse of ash

## Ensuring industrial and occupational safety

Chapters of the report

**Safety first and foremost**

UN Sustainable Development Goals



Objectives and indicators

Zero fatal accidents

To reduce work accidents by 25% compared to 2023

## Decent working conditions

Chapters of the report

**Our people**

UN Sustainable Development Goals



Objectives and indicators

The terms and conditions of the collective agreement extend to all the employees.

Training and development opportunities for every employee (training map).

## Supporting regional socioeconomic development

Chapters of the report

**Management of sustainable development**

UN Sustainable Development Goals



Objectives and indicators

Supporting local organisations.

Supporting educational projects and constant cooperation with educational institutions for the purpose of promoting the area of engineering.

Organising traditional events.



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# Chairman's Letter



## Dear reader!

Here in front of you is the twelfth Sustainable Development and Social Responsibility Report of Viru Keemia Grupp, highlighting the 2022 and 2023 results in this area. During the reporting period, we continued with the work of the preceding years in implementing sustainability, focusing on activities and processes where the impact is the greatest and where we can create the most value.

In our everyday activities, we rely not only on the interests of the company and its employees, but strive to work in a way that ensures that our activities create value for society on a broader scale. Efficient production, economic use of natural resources, and care for employees and the local community – these are equally important components of sustainable development. When planning our work, we always keep these priority areas in focus and balance.

Looking back to the reporting period, we can boldly admit that 2022 was a groundbreaking year that will not be forgotten anytime soon. On a broader scale, 2022 showed the importance of the energy resource more clearly than ever before, demonstrating that the world still needs the currently available energy of which hydrocarbons make up more than 80%. Challenges related to the security of supply and increasing energy prices have become as important as the urgent expectations to the reduction of the carbon emissions of energy.

The rapidly changing regulative and economic environment is VKG's everyday reality and the keywords of the reporting period were the war in Ukraine and unclear prospects with regard to the Green Transition. At the same time, our strengths include a stable financial standing, fast decision-making processes and the constant assessment and mitigation of risks – these properties also served us well both in 2022 and 2023. At the peak of the raw material and supply chain crisis, we were able to reconstruct the Petroter I shale oil plant, while also continuing with all the previously planned activities without changes. We also commenced the construction of the aboveground infrastructure of the Uus-Kiviõli Mine and essentially opened the new mine in 2023 by starting the construction of the tilted shaft and commencing explosion and excavation works. The biggest challenge in the coming years is to ensure the sufficient production capacity of the new mine by the time the Ojamaa Mine is exhausted and shut down. The Uus-Kiviõli Mine will ensure a supply of raw material for us until 2038 and provide secure jobs for local people.

For a large industrial enterprise like VKG, occupational safety is one of the foundations. There is always room for development in the area of safety. We can be satisfied with occupational safety only when no accidents happen with our employees and other people working in the production territory. During the reporting period, we made progress with regard to process safety and continued work on improving VKG's safety culture.

In 2023, we continued focusing on restructuring the Group with the aim to ensure the sustainability of the existing oil production as well as to create the best preconditions for implementing new development projects. The Group's new business verticals that create positive changes – the production of bioproducts, the recycling of plastic waste, renewable energy farms, on which we are working, support a climate-proof economic model, ensure the best added value for the wood resource, and support Estonia's ambitious goals in the area of circular economy.

During the reporting period, we continued to pay extensive attention to our region – Ida-Viru County – by supporting nearly 70 initiatives and projects with more than half a million euros.

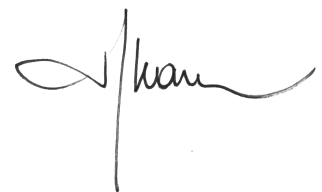
Social responsibility has never been a marketing ploy for Viru Keemia Grupp, but a value-based long-term contribution that helps promote development in the region and in the community. Listening to and accounting for each other is very important. We at VKG know very well from our own experience that long-term success and development is possible only in cooperation with the local community and with the support of society.

In 2024, we are celebrating the 100th anniversary of Estonian shale oil production which started in the current territory of VKG. Our engineers, chemists, miners and power engineers carry on traditions created over the years, expanding their knowledge and obtaining new experience. Thank you for that! I believe that we now have all the prerequisites to maintain and promote Estonia's own large industry and together write new pages in the industrial history of Viru Keemia Grupp, the local region and the whole country, broadening the horizons of industry in Estonia.

Enjoy the read!

**Ahti Asmann**

CHAIRMAN OF THE BOARD OF VIRU KEEMIA GRUPP





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## About the Company

Viru Keemia Grupp is a private Estonian large-scale industrial enterprise. We focus on oil shale mining, shale oil, combined heat and power production and production and marketing of fine chemical products.

Viru Keemia Grupp is located in Kohtla-Järve and is the largest producer of shale oil in Estonia, proudly carrying the tradition of adding value to Estonian oil shale which started in 1924. The company is based on private capital since 1997, when state-owned RAS Kiviter was privatised.

Our values are

## Openness • Commitment • Development

We are characterised by openness, commitment to our activities, and constant development. We believe that every step and every action we take must create greater value for everyone – our employees, partners, clients, and the local community.



## Main points of our vision

### Globally competitive

The creation of our future values is based on the principle of continually maintaining the role of a leader of sustainable oil shale industry in Estonia in the changing market situation. We can do this thanks to improved efficiency. Safe and coordinated activities help us solve the problems our industry faces and act as a steppingstone in taking advantage of opportunities.

### Innovating the shale oil industry

Constant development is essential to achieving success. In order to make our activities simpler and more standardised, we promote innovation through radical changes and cooperation. By developing our technologies, we work in an increasingly better, smarter and more efficient manner and are able to create permanent values.

Our objective, and a consistent principle is to add maximum value to oil shale and lengthen the value chain of the oil shale industry to the maximum extent possible. Today, VKG's value chain is the longest in Estonia and one of the longest in the world.

## Our strategic objectives

- 1 extracting the maximum amount of energy from oil shale.
- 2 adding maximum value to end products,
- 3 promoting an organisation culture aimed at efficiency,
- 4 ensuring the competitiveness of shale oil products,
- 5 developing new business verticals that support a climate-proof economy.

The Group's strategic objective in the field of occupational safety is to provide an accident-free and safe working environment for its own employees, partners, and the residents of the city.

# Sustainable development as a key to business management

Over the past decade, we have purposefully and consistently worked on integrating a model of sustainable development and corporate responsibility into the Group's management system. By today, those principles are an integral part of our business model. We are oriented on consistent long-term relationships with partners and clients as well as on the production of fuel and energy as efficiently as possible, considering its impact on the environment. In aspiring towards our strategic objectives, we wish to create values for stakeholders in all the stages of activity.

## Social responsibility developments



### PRODUCTION SAFETY

- Strategic priority of achieving an accident-free working environment
- Improving the working environment and occupational safety policy and adhering to it, developing the safety culture
- Systemic approach to the management of production risks



### ENVIRONMENTAL PROTECTION

- Accounting, control and reduction of greenhouse gases
- Plan for reducing the burden on ambient air
- System of environmentally sustainable management
- Monitoring of environmental indicators



### EMPLOYEE DEVELOPMENT

- Offering development and career opportunities to employees
- Training, development and career-building plans
- Partnership with trade unions



### SUPPORTING THE SOCIOECONOMIC AND CULTURAL DEVELOPMENT OF THE REGION

- Preservation and creation of jobs
- Competitive pay for the Group's employees
- Partnership with regional NGOs and authorities
- Supporting initiatives and projects aimed at promoting and diversifying the educational, sports and cultural life in the region

# Importance of environmental and social factors

The safety of people and processes, the impact of industry on the surrounding environment, and other social aspects are of increasingly broader resonance and interest in society and the demands, standards and needs of society in these matters are ever increasing.

The ecological and social aspects of activities acquire an increasingly prominent place in the activity plans of industrial enterprises which are looking for innovations for the development of low carbon emission technologies and the reduction of the environmental impact of their industry. Financial institutions are also taking an interest in these matters, with banks and funds already now restricting investments into enterprises engaged in traditional energy production and taking into account the carbon footprint in managing financing portfolios.

## Bases of sustainable economic activities



### ENVIRONMENTAL AND PRODUCTION SAFETY

- 2,335 dangerous situations were recorded in 2022, of which 98% were resolved. In 2023, the number of dangerous situations grew by 28%, to 2,993, of which 95% were brought to the 'resolved' status.
- The percentage of total registered incidents or the TRIR indicator for the reporting period is 1.43 (-28%) and 1.90 (+33%), respectively.



### DEVELOPMENT OF EMPLOYEE POTENTIAL

- The average salary was 1,939 euros in 2022 (+11.2%) and 2,146 euros in 2023 (+10.7%).
- Personnel expenses amounted to 51.9 million euros in 2022 (+6%), and grew by 8.5% in 2023, amounting to 56.3 million euros.
- During the reporting period, we invested 720,000 euros in the continuing education of our employees.
- During the reporting period, more than 50 training programmes were organised for employees.



## SOCIAL POLICY

- During the reporting period, we supported nearly 70 initiatives and projects with more than 500,000 euros in total.
- Voluntary work by the Group's employees is supported.



## GENERAL CORPORATE MANAGEMENT AND RISK MANAGEMENT

- A procedure has been established for preventing conflicts of interest and combating fraud and corruption.
- The Group's Code of Ethics and Code of Conduct have been implemented.
- Updating the risk management system.



## TECHNOLOGICAL DEVELOPMENT AND INNOVATION

- We continued work on the bioproducts production complex development project.
- We started work on the plastic waste recycling development project.
- We thoroughly reconstructed the Petroter I shale oil plant, which had a positive impact on the quality of ambient air.
- We started preparations for the opening of the Uus-Kiviõli Mine.



# Corporate responsibility strategy

For us, a responsible attitude towards business activities means caring for production and environmental safety, minimising the negative impact on the environment and taking into account the interests of a wide circle of stakeholders (including employees, clients, suppliers, subcontractors and local associations). Increasing the efficiency of the management of production processes and the related risks helps us to achieve these objectives.



## Safety

Area, objective

Ensuring the maximum possible level of production safety and reducing the environmental burden

Main tasks and problems

Ensuring the reliability of the technical condition of equipment and production processes.

Success indicators

Absence of fatalities.  
Absence of technical accidents.

Limiting the effect of the human factor where possible.

Sufficient training and qualification of employees before being allowed to commence work.



## Efficiency

Area, objective

Increasing the efficiency of all the areas of activity, including in adverse field conditions

Main tasks and problems

Using resources as efficiently as possible.

Success indicators

Higher oil extraction percentage with a decreasing environmental footprint.

Extending the oil shale value chain.



## Innovation

Area, objective

Development and introduction of innovative solutions.

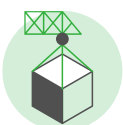
Main tasks and problems

Finding and introducing a functioning and economically effective solution that fits the production processes.

Success indicators

Use of virtual reality solutions in production training and fault diagnostics.

Training and developing the competences of personnel.



## Development

Area, objective

Successful implementation of development projects

Main tasks and problems

The completion and establishment of the designated spatial plan of the bioproducts production complex.

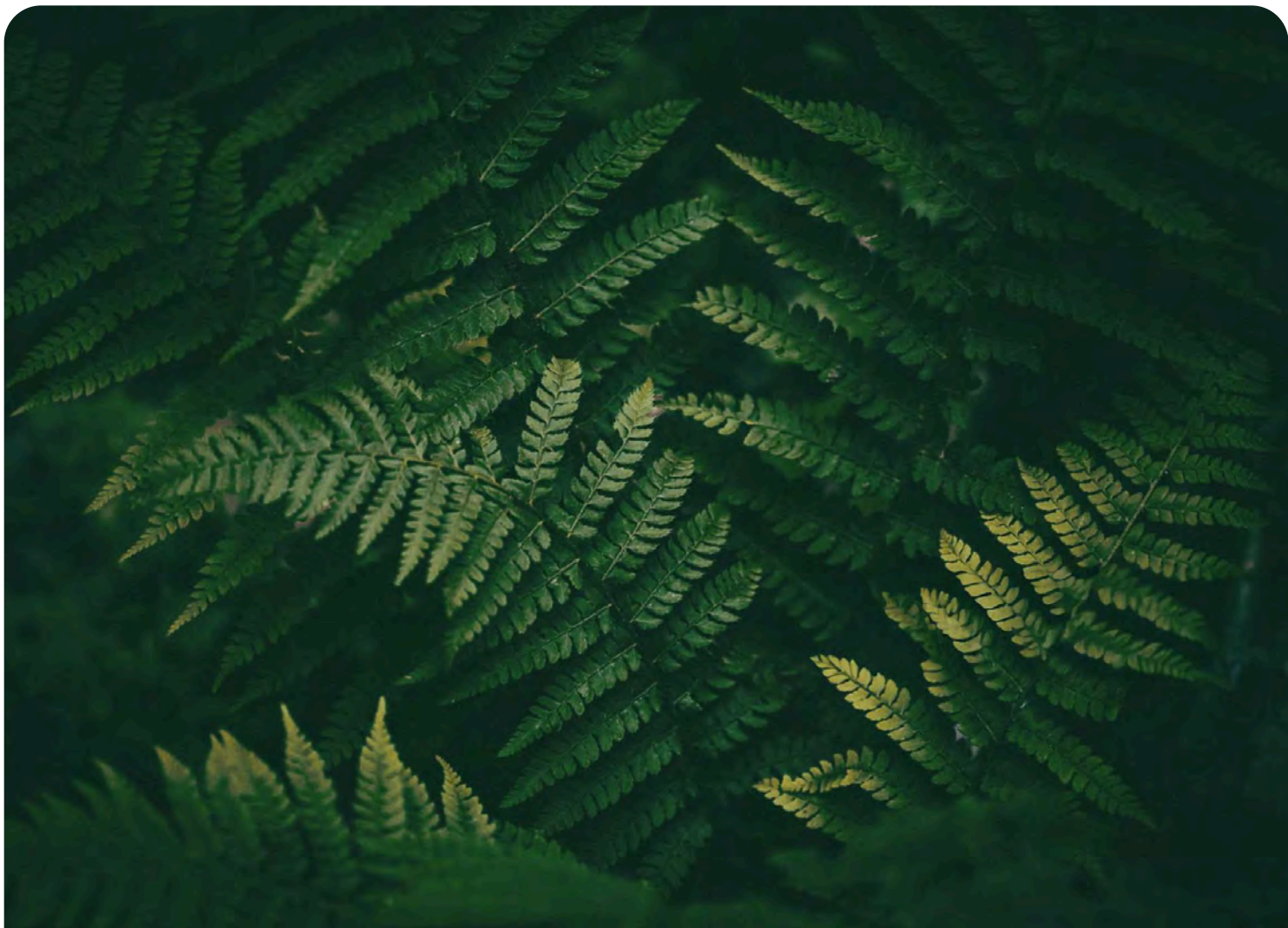
Success indicators

The designated spatial plan has been established and the community supports the development of the project.

The initiation of the plastic waste recycling project.

The technology has been selected and the state supports the implementation of the project.

The position of the local community with regard to the project is at least neutral.



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# Management of Sustainable Development

VKG has been implementing an integral policy of social responsibility and sustainable development for more than 15 years by now. In both short-term and long-term perspective, the Group's strategy accounts for Sustainable Development Goals in a period of changes in the energy market and the interests of society.





In strategic planning, we take into account risks and opportunities related to climate change and the transition to low carbon emission energy production, including the European Union's Green Deal and the 'Fit for 55' package.

Considering the Sustainable Development Goals, the Group's strategy has been designed to be resilient to different scenarios. In strategic planning, we take into account risks and opportunities related to climate change and the uncertainty of the regulative and investment environment.

## Our activity management system

Our activity management system offers a uniform framework which ensures safe and reliable activities in accordance with requirements. This also includes environmental and social requirements related to sustainability.

Our principles of activity and internal policies establish expectations and objectives with regard to how we manage the environmental and social areas before, during and after our activities. These documents contain environmental and social area requirements on which our sustainability goals are largely based.

While continuing integrating the principles of sustainability into the Group's management vertical, we review and update our internal policies and activity and management practices to ensure that these correspond to our sustainability framework and goals. Due to the effect of global changes, we also adapt and update the Group's environmental and social practices which include investment decisions, projects and activities.

Our aim is to further integrate sustainability into our management, investment and risk management processes, relying on the best world practices and our own long-standing comprehensive work experience.

The Group implemented organisational changes and is now fully focused on the implementation of the strategy and the underlying objectives, including sustainability. The responsible use and effective enrichment of natural resources is an integral part of our sustainability strategy. We are aware that the extraction and production of any mineral resources has an effect on the surrounding environment and therefore we always strive to do more than prescribed by laws or regulations.

While focusing on VKG's core activity – the production of shale oil – we also continue developing circular economy, renewable energy farms and bioproduction projects. New business verticals support the principles of sustainability and are aimed at alleviating and solving various green challenges.



In September 2015, the world's countries signed the 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals at the UN General Assembly.

Viru Keemia Grupp has selected eight high-priority areas on which we focus and to which we consistently contribute. These are: **'Good Health and Well-being'**, **'Quality Education'**, **'Affordable and Clean Energy'**, **'Decent Work and Economic Growth'**, **'Industry, Innovation and Infrastructure'**, **'Responsible Consumption and Production'**, and **'Climate Action'**.

VKG is working towards contributing to the achievement of the established goals not only within the framework of its core activities, but also by supporting and participating in regional projects and initiatives aimed at improving the quality of life and developing science and education, culture and environmental protection.

→ You can read more about VKG's social responsibility and sustainable development policy <https://www.vkg.ee/SAA2018/en/sustainable-development-strategy/>

## Sustainable development priorities



### Increasing the efficiency of the core activities

- production and occupational safety;
- minimising the environmental impact;
- energy efficiency and saving;
- development of employee potential;
- supporting regional development.



### Supporting initiatives and membership in associations

- we share the principles of the United Nations Global Compact;
- our sustainable development goals and areas of activity are related to the UN Sustainable Development Goals;
- we support the implementation of the Paris Agreement and the efforts towards achieving climate neutrality in the European Union by 2050;
- participation in associations:
  - Vastutustundliku Ettevõtluse Foorum
  - Hoolime ja Vastutame
  - ÜRO Global Compact
  - Global Reporting Initiative.



### Our guiding principles

- openness and transparency;
- honesty and correctness;
- acting responsibly;
- compliance with international standards.

# Organisation culture

For a large industrial enterprise, the integration of organisation culture with the principles of sustainable business is of critical importance. VKG's organisation culture supports the Group's values and strategic objectives.

We believe that organisation culture is important from the viewpoint of a company's success and sustainability and helps create a safe and inspiring working environment.

We consistently contribute to a strong organisation culture, because it:

- emphasises ethical conduct and honesty in all activities and relationships with employees, partners and stakeholder groups;
- encourages cooperation and teamwork, promoting open communication, knowledge sharing and collective responsibility;
- supports employee development and learning, offering training, mentoring and career opportunities;
- creates a positive working environment where employees feel motivated and included, encouraging them to think along and provide honest feedback;
- encourages flexibility and increases adaptability, allowing the company to promptly respond to changing market conditions and the clients' needs.

VKG's values – **openness, commitment, development** – are an integral part of our business activities and consolidate the interests of the Group and its employees. The values guide decision-making, shape our reputation and determine our work principles.



## We have a bronze badge!

In 2022 and 2024, Viru Keemia Grupp earned the bronze badge of the Corporate Social Responsibility Forum, which was even more valuable this year due to stricter assessment criteria!

A total of nearly 60 enterprises started completing the assessment form, 48 submitted it and 36 earned a badge. All these enterprises care about the surrounding living environment to a greater or lesser degree and wish to contribute to society more than actually required by law. These 36 enterprises and their managers have understood that the scope of impact of the decisions they make may reach significantly farther, out of their enterprise.

For VKG, responsibility is not a separate objective or plan. Above all, it is a natural output of our work and from year to year we have integrated this way of thinking into our strategy and everyday activities. We strive to do and contribute even a little more than required of us, because this way we ensure our own sustainability in the constantly evolving and changing business environment.

The Corporate Social Responsibility Forum (Vastutustundliku Ettevõtluse Foorum) is an organisation founded in 2005 and it unites enterprises that practice responsible entrepreneurship. The role of the Forum is to promote the way of thinking that business should in addition to earning a profit also be socially responsible in order to ensure the sustainability of the enterprise, society, and the state. Since 2007, the Forum organises responsibility assessments: the Responsible Business Index.

# Risk management

The Group runs a risk management system which determines a uniform approach to the risk management process and concentrates the standardised tools and methods for analysing risks, including environmental, production safety and social risks.

The risks in the area of sustainable development include risks related to environmental and production safety and the availability of qualified labour. We take appropriate preventive measures in order to prevent the risks from materialising and to protect people, the environment, equipment and technological processes.

We manage risks related to human life and health and the environment by taking the precautionary approach.

The risk management report is reviewed by the risk management team at least once in every two years or as necessary. The last update took place at the end of 2023. The Group's risk management report addresses risks in different areas and for each risk, the likelihood and impact of its occurrence are assessed and classified accordingly: critical, conditional, low impact, negligible and insignificant. For each risk, a responsible party and a mitigation plan have been assigned.

The precautionary approach has in international documents been formulated as follows: "Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation."

- **Rio Declaration on Environment and Development**, 14 June 1992

## Risk management objectives

- to support the adoption of management decisions,
- to avoid or reduce damage to the Group's assets and reputation,
- to increase the efficiency of the Group's activities,
- to improve the efficiency of using the Group's resources (capital, energy);
- to reduce the occurrence of unexpected situations and to create action plans for these.

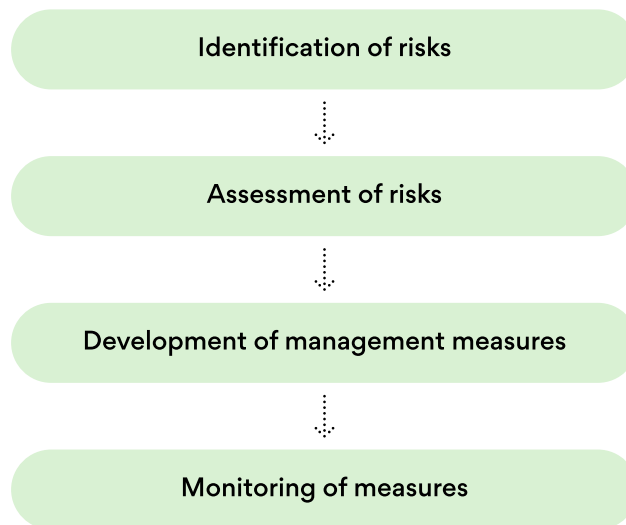
## Risk management methodology

The risk management report highlights the risks that are important for Viru Keemia Grupp, their descriptions, ratings and mitigation measures. Risk management is based on the Group's most important goals which are above all related to VKG's aim to add maximum value to oil shale and process it in the most efficient way.

The identified risks have been divided into five categories.

- 1 Strategic risks**  
related to the Group's long-term objectives (changes in the market, competition).
- 2 Operating risks**  
related to the Group's processes (activities of employees and equipment).
- 3 Financial risks**  
related to direct financial losses (interest rates, exchange rates).
- 4 Fraud and theft**  
related to damages and financial losses.
- 5 Compliance risks**  
related to regulations (laws, guidelines).

# Risk assessment process



## Assessment of risks

The risk management report highlights risks that need more attention and require a further action plan to mitigate the risk. The risks listed in the risk management report are assessed on a 4-point scale for their likelihood and impact. According to the assessment consensus, risks are ranked on the impact/likelihood scale as follows (the likelihood or impact rating from 1 to 4 is provided in brackets):

The total risk rating is determined as a product of impact and probability. The risk management report highlights risk with a total rating of 8 and more. Their mitigation measures are reviewed at least once in every two years or when the need arises, by interviewing the management board members responsible for the risk.

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### CRITICAL RISK

when the risk materialises, the Group's activities (processes) are significantly disrupted and the achievement of the objectives requires significant additional resources (3); or the activities cannot be continued, there is consequential damage, which requires significant additional resources (4). The materialisation of the risk is probable (3); or certain (4).

### LOW IMPACT RISK

the materialisation of the risk is probable (3) or certain (4), but if it materialises, it will cause little disruption to the Group's activities and require few additional resources (effects 1 and 2).

### INSIGNIFICANT RISK

mentioned only on the grounds that the risk has been previously mentioned as a significant risk but subsequently assessed as unlikely to materialise (0) and/or its impact as practically negligible (0).

### CONDITIONAL RISK

the materialisation of the risk will result in a need for significant additional resources (3) or significant damage to assets/reputation (4), but the risk is not critical because the probability of materialisation is low (1); or possible (2).

### NEGLIGIBLE RISK

the materialisation of the risk is unlikely (1); or possible (2) and will not lead to significant disruption to operations, achievement of objectives, resource needs (effects 1 and 2).

## Below are just a few examples of the mapped risks.

### Strategic market and legal risks

We operate in a volatile global market, where price volatility is influenced by a range of factors at the national, European and global level. Thus, one of the strategic risks we see is a fall in the oil sales price below a critical threshold in the context of a general fall in the price of petroleum. The sale of shale oil makes up 2/3 of the Group's net turnover, so the risk of changes in the market prices of petroleum and petroleum products is an inevitable part of the Group's activities. The majority of the sales contracts of VKG Oil AS have been concluded on the condition that the sales price of products is directly linked to the stock market prices of petroleum products.

The other part is indirectly dependent on world market prices. The sales price of shale oil may fall as a result of both a drop in the world market price of petroleum and the depreciation of the dollar.

#### Reasons for the rating of the risk:

The price of petroleum and petroleum products is very volatile, as even a small imbalance in production and consumption causes extensive rises and falls in prices. For instance, the average Brent Front Month price was:

in 2012

112

USD/barrel

in 2016

44

USD/barrel

in 2018

72

USD/barrel

in 2020

41

USD/barrel

in 2022

101

USD/barrel

Another important strategy risk is related to the **fall in the volume of free CO<sub>2</sub> quotas after 2025 and the rapid increase in the price of the quotas.**

The shale oil industry is a part of the EU's petroleum refining and carbon leakage sector which is allocated free CO<sub>2</sub> quotas. The fourth greenhouse gas (GHG) trading period of 2021–2030 is divided into two parts: 2021–2025 and 2026–2030. The trading rules and the methods for allocating free CO<sub>2</sub> quotas are currently known until 2025. Decisions to be taken by the European Parliament and the Commission in the course of the Green Transition will play an important role in ensuring the Group's economic activities and competitiveness, as they could significantly reduce the amount of free CO<sub>2</sub> quotas allocated to shale oil production and increase the purchase price of the quotas.

An extensive increase in the price of CO<sub>2</sub> quotas and/or a reduction of the free quotas will cause a great additional tax burden for oil production, making the production price of oil higher than its market price and thus rendering the business uncompetitive.

The CO<sub>2</sub> tax rate has risen over 10 times since 2017 and the proportion of VKG's taxable emissions has risen to 20% of all the emissions. The entailing CO<sub>2</sub> tax burden has grown to 20 million euros a year. Considering the EU's green policy, there is a risk that local production may go extinct as a result of carbon taxes. As the rules are in place until 2025 and the price of the quotas has recently been rather stable, the probability of major problems in the nearest two years is rather low than high.

Next, we map the **risk of continuity of supply of raw material** which would cause a stop in activities and the inability to fulfil contractual obligations.

The risk may materialise in two parts: a lack of crushed stone may halt the operation of the Kiviter plants. The suspension of the operation of the Ojamaa Mine may very strongly disrupt or halt all the production activities of VKG Oil.

We have also mapped the possible **risk of damage to reputation** which may arise in connection with environmental pollution, low salaries, the establishment of new plants/mines, accidents happening in our territory, violations of standards of ethics, and other such.

## Operating risks

Operating risks stem from deficient or ineffective processes and systems as well as the insufficient competences or activities of people in managing the work processes. In order to avoid operating risks, the Group has developed risk management principles, various standards and management systems. We understand operating risks to include technological and IT risks as well as operating risks related to the external environment, such as those related to clients and suppliers.

We pay great attention to risks related to occupational safety and the working environment. All the Group enterprises have implemented respective systems for managing and monitoring activities. We handle occupational safety risks on the principle that prevention is more important than dealing with consequences. The Group implements a system for registering dangerous situations, which is accessible to all the employees, partners and visitors to the production territory. An in-depth analysis of registered dangerous situations and the timely elimination of threats has prevented several potential work accidents.

Under **financial risks**, we have mapped a **currency risk** with regard to the euro and dollar rate. The Group's cost base is in euros, but the entire oil production is sold in dollars, which entails a considerable currency risk:

- the higher price of petroleum, the greater the effect of changes in the dollar rate and vice versa, the lower the price of petroleum, the smaller the effect of changes in the dollar rate;
- the weakening of the dollar together with a decrease in the price of petroleum deepens the decrease of our revenue.

We also assign a high rating to **compliance risks**, e.g. failure to obtain or delays in obtaining mining permits, a decrease in the availability of raw material due to changing regulations. The regulation of mining permits is strict and does not keep up with the actual extraction volumes of the market participants. Overbooking resources is not disapproved. The topicality of the Green Deal may cause legislative and public pressure to end mining.

Our special focus is on the management of the **risk of fraud**. In order to reduce the threat of the risk of fraud and theft materialising and causing damage, we primarily apply preventive measures and increase efficiency. We regularly conduct random inspections and improve the transparency of processes, paying great attention to the speed of detecting fraud and responding to it. Our focus is on everyday work in informing our employees and encouraging them to provide constant feedback for which we have created a number of operative channels.

## Management of social and environmental risks

### Production and environmental safety risks

Since VKG is a representative of the processing industry and a manufacturer of fuel containing carbon, significant environmental risks accompany VKG's activities, which manifest themselves both in oil shale extraction and in adding value to it. The goal of VKG is to be a pioneer in its sector, setting an example for others in how it is possible to resolve the environmental risks present in traditional production in a smart way, using modern technologies. Over the past 20 years, the Group has invested more than 100 million euros in various environmental projects in order to reduce its footprint. The main focus of the investments has been on using the resources as efficiently as possible and mitigating the entailing environmental impact.

### Risk management measures

- Regulation monitoring: the Environmental Department monitors changes in laws and directives on an everyday basis.
- Keeping up to date with the industry trends and being represented in decision-making processes: VKG participates in all possible workgroups via the Estonian Chemical Industry Association.
- Timely investments.
- The engagement of stakeholders and sharing information at the right time.



## Risks related to people

The Group's activities directly depend on its employees. A lack of a sufficient number of qualified employees, particularly in the area of engineering and technology, may cause risks related to labour deficit. employees, particularly in the area of engineering and technology, may cause risks related to labour deficit. Competition in the Estonian labour market may grow tighter, as there is a shortage of qualified specialists. Inability to attract new qualified employees and/or retain the existing qualified employees may have a negative effect on the attractiveness of the Group as an employer. The demand for and the expenses incurred on qualified employees are growing as expected, largely reflecting the interest of other industries and state projects in them.

### Risk management measures

- The Group offers safe jobs and a competitive salary, participation in large-scale projects and interesting work tasks and trains its employees under special programmes. We take additional measures to reduce labour turnover and encourage employees to engage in self-development.
- The company identifies the existing key employees and talents and creates a development programme for them in order to ensure the consistency of knowledge. We participate in the development of the study programmes of areas of specialisation of interest to us at TalTech.
- Scholarships for TalTech students in order to motivate them to stay at their homeplace.

## Risks related to the local community

The risk that the way of thinking in the community becomes increasingly greener and opposes the production of fossil fuels. Social unacceptance may affect the activities and reputation of the company and cause difficulties in implementing investment projects and recruiting employees.

The risk that the local community does not support the company's new development projects and the expansion of industrial production. In order to mitigate this risk, we communicate openly with the local residents and hold regular meetings with initiative groups, in the course of which we describe the directions of development and discuss environmental matters. We make extensive investments into the improvement of the local living environment, e.g. into the improvement of ambient air quality in the city of Kohtla-Järve. At the same time, it is important to note that the integration of the oil shale industry in socio-economic development and their mutual effect are characteristic features of the Ida-Viru region. The oil shale industry is one of the largest employers in the region – more than 5,000 people are directly employed in the sector, but many times more are indirectly involved. The sector also offers a salary that is above the average in the region. For the people living here, the presence and development of the sector therefore mean a confidence in their future and a stable income which ensures everyday subsistence and a sense of security.

# Combating the risk of corruption

Combating corruption has always been important in the VKG Group. VKG has identified three major corruption risks together with the measures used for mitigating the risks:

- Giving bribes to achieve the interests of the Group – VKG is a responsible and transparent enterprise which has established zero tolerance towards corruption and bribery.
- Accepting bribes in choosing suppliers and cooperation partners – VKG has established a procurement policy the aim of which is to avoid tilted procurements and always choose the most favourable cooperation partner for the Group. Internal audit monitors the implementation of the procurement policy in regular audits.

- Conflicts of interest of executive employees in representing the interests of the company – VKG has developed a procedure for the submission of reports of economic interests, pursuant to which executive employees have to report their holdings in and connections to companies outside the Group. It is forbidden for management board members to compete in any area of activity of VKG, unless the supervisory board has granted its prior written consent to that.

## CONFIDENTIAL CHANNEL

The Group has a special confidential channel ([vihje@vkg.ee](mailto:vihje@vkg.ee)), through which any employee or third person can report violations related to the activities of the Group, let it be issues related to corporate management, business ethics, compliance with human rights, work organisation, safety, protection at the workplace, quality of goods and services, or any other matters of corruptive nature.



## Report processing

Cooperation with stakeholders takes place via feedback channels which allow stakeholders to express their opinion or file complaints. One such channel is the hotline for reporting corruption, fraud and violations of law. The hotline is a tool for exchanging information in the Group and receiving feedback from stakeholders.

Reports may be sent to the hotline by e-mail or phone or via the webpage. The confidentiality of the person making the report is guaranteed in the use of any of these communication channels.

Anyone can use the hotline, also anonymously. All the reports are handled individually and after an objective and comprehensive review a decision is made and feedback is given. The reports are checked by the representatives of our subunits – personnel specialists, lawyers and production safety employees. We are interested in our employees/partners actively using the hotline and being aware of its possibilities.

## Compliance with human rights

VKG builds its activities on compliance with human rights and ensuring equal opportunities and labour law. We strive to create a working environment free of bullying and do not allow discrimination on the basis of nationality, gender, age or any other attributes. We expect our employees to treat each other with courtesy and respect. We do not use child labour or forced labour. The Group respects the employees' legal right to form voluntary associations to protect their rights and interests, including the right to form trade unions, and to join such associations. In the area of human rights, we responsibly comply with legal requirements and the standards of international law.

The Group's human rights positions are established in the following documents:

- Personnel Policy,
- Procedure for Combating Conflicts of Interest,
- Industrial and Environmental Safety and Work Protection Policy.

## Internal audit

Internal audit plays a crucial role in enhancing the efficiency of the management of the Group and in financial activities. The Group runs a system which ensures:

- risk minimisation;
- the continuity of the operations of the Group, the highest possible efficiency and sustainability and opportunities for development, including making timely changes to the operation of the company according to changes in the internal and external environment;
- a uniform and systematic methodological approach and high-quality information support and analytical support in making the Group's management decisions;
- resolving any conflicts of interest that emerge in the course of the activities of the company in a timely manner.

## Data security

Our attitude to data security is very serious. The Group has in place a document titled 'Procedure for Processing Personal Data'. In addition, we also have seven simple principles for responsible data processing, which are available to all employees on our internal website, and we have also covered this topic in the Group's internal newsletter. Data security is also covered in the Code of Ethics, with specific instructions for employees. The Group's subsidiaries most involved in the protection of personal data are those providing network services to customers – VKG Soojus and VKG Elektrivõrgud\*. These companies also have specialists responsible for personal data protection. In order to ensure data security, the Group has established a secure IT network that meets all the requirements, and has trained data processing personnel.

\* In October 2022, the Group sold VKG Soojus to Gren AS, and at the end of 2023, VKG Elektrivõrgud was sold to private capital fund BaltCap



## Disclosure of information

An important part of the management system of Viru Keemia Grupp is transparency and the disclosure of information, which is at the same time in balance with the protection of the Group's trade secrets and other confidential information.

Our objective is to present timely and regular information about our activities to all the persons interested in receiving it.

The main principles of information related to our activities include openness, reliability, promptness, timeliness and availability.

The most important means of transmitting information include the Group's official webpage and the webpages of the subsidiaries as well as social media channels such as Facebook, Instagram and LinkedIn.



[facebook.com/virukeemiagrupp](https://facebook.com/virukeemiagrupp)



[instagram.com/virukeemiagrupp](https://instagram.com/virukeemiagrupp)



[linkedin.com/company/viru-keemia-grupp](https://linkedin.com/company/viru-keemia-grupp)

The main information communication channels that have found a wide audience include the Group's official website, the Annual Report, and the Social Responsibility and Sustainable Development Report. The homepage and the reports provide news and information about important events as well as financial and production indicators.

In order to make information equally accessible to all the stakeholders, we publish information on the Group's homepage in Estonian, English and Russian (the Annual Report is available in Estonian and English, while the Social Responsibility and Sustainable Development Report is available in three languages).

## Cooperation with the media

Viru Keemia Grupp supports active cooperation with the representatives of the media. Cooperation with the media is regulated by the Procedure for Media Relations.

Procedure for Media Relations.

- to provide high-quality and fact-based information about the Group's activities;
- to shape and support the Group's reputation;

- to build an equal and partner-based dialogue with the representatives of mass media, the authorities and the social organisations related to the Group's area of activity.

VKG's Public Relations Department operatively responds to enquiries from the representatives of the media, providing thorough and accurate information about the Group's projects and commenting on important cross-sectoral topics.

# International management systems

The companies undergo regular monitoring of the fulfilment of the objectives of the quality management system and hold internal audits as well as external audits by an independent certification body. In the framework of implementing the best practices, new solutions and best practices are also sought in quality management.



The Group's companies use international ISO management systems.

Company name	ISO certificates (environmental and quality management systems)	ISO certificate (occupational health and safety management system)
<b>VKG</b>	ISO9001, ISO14001	-
<b>VKG Oil</b>	ISO9001, ISO14001, ISO50001	ISO45001
<b>VKG Kaevandused</b>	ISO9001, ISO14001	ISO45001
<b>VKG Energia</b>	ISO9001, ISO14001, ISO50001	ISO45001
<b>VKG Logistika</b>	ISO9001, ISO14001	ISO45001

## Recertifications and interim audits that took place in the Group companies during the reporting period

### VKG Oil

- certification of the energy management system in accordance with standard ISO 50001;
- recertification of the quality management system, the environmental management system and occupational health and safety system (in accordance with standards ISO 9001, ISO 14001 and ISO45001);
- a regular external audit of VKG Oil's chemistry laboratory in accordance with standard EVS-EN ISO/IEC 17025:2017.

### VKG Kaevandused

- ISO 9001 quality management system,
- ISO 14001 environmental management system,
- ISO 45001 occupational health and safety management system.

### VKG Energia

- ISO 9001 quality management system,
- ISO 14001 k environmental management system,
- ISO 50001 energy management system,
- ISO 45001 occupational health and safety management system.

### Viru Logistika

- ISO 9001 quality management system,
- ISO 14001 environmental management system,
- ISO 45001 occupational health and safety management system.

# Supply chain management

The procurement activities taking place in the Group are regulated by the Procedure of Procurement and the main points of conducting the process from the viewpoint of our partners are established in the Code of Ethics and in the Principles of Operation. We also apply the assessment of suppliers, the results of which are also available to all the Group's employees.

We expect our partners to comply with the applicable laws and internationally recognised human rights (which exclude the use of child labour, non-conformity with environmental requirements, etc.).

The Group's principles in communicating with suppliers:

- transparency,
- competition,
- equality,
- mutual securities,
- confidentiality,
- openness of information

The selection of and cooperation with suppliers is based on an integrated management system which is in conformity with standard ISO 9001. In purchasing works, services, materials and equipment, the Group uses competition between suppliers. The Procedure for Purchasing Goods, Works and Services applies at the Group level. It is the basic document in planning and performing purchase procedures and selecting suppliers.

We cooperate with partners who share our endeavours to work with safe methods and adhere to the standards of business ethics and laws.

The employees of the Purchase Division regularly check the conformity of the suppliers with our expectations and operating principles.

We expect and verify that our suppliers have environmental standards and principles. This is also one of the assessment criteria in the assessment of suppliers, i.e. we prefer companies that have established environmental management standards. There is a reference on VKG's homepage to VKG's environmental policy principles which the Purchase Division complies with in selecting suppliers.

The Purchase Division is responsible for all the purchases made by the Group and its subsidiaries. In order to achieve the necessary level of competition, the Purchase Division may conduct a public pre-qualification procedure to create a database of potential purchase participants which would include companies that are capable of performing works, providing services and supplying goods in accordance with the requirements established for production processes, quality and safety and the results of work and services. Potential participants, whose qualification meets the required level, may be invited to participate in future purchase procurements.

Main requirements for participants in procurement competitions:

- conformity with the main requirements for participants, which are specified in the Procedure for Purchasing Goods, Works and Services;
- experience, production capacity and the availability of qualified labour for the production (supply) of predefined types of goods, the performance of predefined types of work and the provision of predefined types of services at the necessary quality level;
- solvency;
- positive corporate financial and reputation value.

## The reporting period in figures:

### IN 2022

486

procurement competitions held

1 798

tenders received

130

million euros in purchases

### IN 2023

500

procurement competitions held

2 105

tenders received

122

million euros in purchases



## Cooperation with stakeholders

For Viru Keemia Grupp, constant cooperation with stakeholders is a foundation of a sustainable business model.

We strive to be in open dialogue in order to map, analyse and take into account the priorities and expectations of different stakeholder groups. Communicating with and engaging stakeholder groups helps create a trustworthy and positive reputation.

The Group has mapped stakeholder groups whose interests are notably related to our activities and may have a significant effect on the achievement of our strategic objectives. For the purpose of keeping the community up to date, we organise not only public discussions, but also non-formal meetings where we discuss topical matters and gather feedback and opinions on various topics/issues from the representatives of the community.

Stakeholders are organisations and individuals for whom the Group's activities, products or services may have a considerable effect or whose activities may have an effect on the achievement of strategic objectives.

The principles of cooperation with stakeholders include respect for the parties' interests, constructive cooperation, the transparency of information concerning the Group's activities, the regularity of joint activities, and the fulfilment of obligations. We have developed various formats from regular meetings to open-door events for cooperating with stakeholder groups.

### The main mechanisms of cooperation with stakeholders

- business contacts, cooperation contracts, and agreements;
- work-related meetings and presentations;
- the Group's communication system;
- public discussions;
- joint workgroups;
- surveying and studying the opinions of employees and clients;
- membership in social and expert associations;
- conferences and roundtables;
- reporting.

### The main stakeholder groups mapped by the Group

- shareholders;
- employees;
- clients;
- suppliers and partners;
- the state and local government institutions;
- the local community;
- NGOs and civic associations;
- professional unions.

# Mechanisms of cooperation with stakeholder groups



## Shareholders

### Main expectations and interests

- Openness of information
- Adherence to shareholders' rights

### Cooperation mechanisms

- Regular monthly meetings of shareholders
- The general meeting of shareholders
- Corporate reporting



## Employees

### Main expectations and interests

- Safe working conditions
- Professional development opportunities
- A decent benefit package
- Social support

### Cooperation mechanisms

- Internal communication system
- Meetings with the management of the enterprise to discuss topical matters
- Joint healthcare committees
- Meetings with the participation of trade union representatives
- Survey on psychological factors
- Forums, conferences, cultural and sports events



## Clients

### Main expectations and interests

- Production quality, its technical and ecological aspects
- Efficiency and flexibility of marketing channels and the sales division
- Transparent pricing
- Business ethics

### Cooperation mechanisms

- Contracts
- A feedback and proposal handling system
- Mass media tools
- An external communication system
- Business meetings, including outing meetings
- Conferences and forums
- Corporate reporting



## Suppliers and partners

### Main expectations and interests

- Fulfilment of mutual obligations
- Transparency, openness and competition in choosing suppliers
- Compliance with business ethics and fight against corruption

### Cooperation mechanisms

- Contracts and agreements
- An objective assessment system
- Business meetings
- Corporate reporting



## The state and local government institutions

### Main expectations and interests

- Ensuring energy independence
- Receipt of taxes
- Technological development of the oil shale sector
- Minimisation of negative environmental effects
- Conformity of activities with legal norms

### Cooperation mechanisms

- Joint workgroups, roundtables and meetings
- Corporate reporting
- Participation in committees and conferences



## The local community

### Main expectations and interests

- Creation of jobs in the region
- Supporting the growth of social activity and social entrepreneurship
- Receipt of taxes to the local budget
- Production and environmental safety
- Competitive salaries
- Supporting initiatives and cultural, sports and educational projects in the region

### Cooperation mechanisms

- Projects that support social development, education, healthcare, culture and sports
- Public discussions, roundtables and dialogues
- Internal and external corporate communication
- Corporate reporting



## NGOs and civic associations

### Main expectations and interests

- The Group's production safety, nature protection measures
- The Group's participation in local and sectoral development
- Openness of information and transparency of activities

### Cooperation mechanisms

- Conferences and exhibitions
- Roundtables
- Joint implementation of social projects
- Corporate reporting



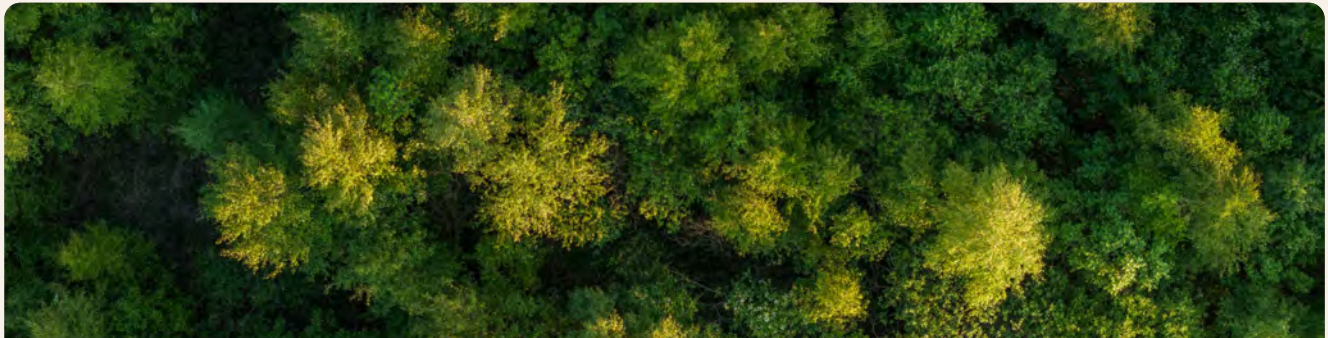
## Professional unions

### Main expectations and interests

- Participation in the development of the sector of the economy
- Corporate responsibility
- Compliance with human rights and production and environmental safety standards
- Exchange of information and knowledge

### Cooperation mechanisms

- Participation in professional and cross-sectoral events
- Participation in the committees of professional organisations
- Joint projects
- Corporate reporting



## Developing together with the local community

We consider the engagement of the local community particularly important in the case of development projects and especially in the assessment of environmental and social impacts. We see from our practice that the engagement of stakeholder groups brings forth different viewpoints and information which helps make better and more contemplated decisions. This may improve strategic planning and reduce uncertainty.

Engaging stakeholder groups at an early stage of development helps us to better understand and prevent potential concerns, reduce risks and avoid conflicts which may later become an insurmountable problem and even cause us to abandon the development of the project. Engaging stakeholder groups and holding a dialogue with them in the Group's core area of production helps gather feedback and input and the generally diverse symbiosis of opinions and viewpoints contributes to innovation, corporate development and good partnership.



# Conducting public discussions

## **ASSESSMENT OF THE ENVIRONMENTAL IMPACT OF THE UUS-KIVIÕLI OIL SHALE MINES**

On 16 June 2022, a public discussion was held on the environmental impact assessment (EIA) programme of the Uus-Kiviõli oil shale mines. According to the programme, the effects of increasing the allowed annual extraction rates stipulated with the environmental permits of Uus-Kiviõli issued to Enefit Power and Uus-Kiviõli II issued to VKG Kaevandused will be jointly assessed. More specifically with regard to the Uus-Kiviõli II mine, the programme – approved by the Environmental Board as conforming to requirements in 2022 – prescribes the assessment of increasing the annual maximum amount of oil shale allowed under the environmental permit to 5 million tonnes and the related entry of special water and waste parts to the environmental permit. The Environmental Board initiated the EIA of the planned activities on 9 April 2021.

## **ASSESSMENT OF THE ENVIRONMENTAL IMPACT OF THE EXTENSION OF THE OJAMAA OIL SHALE MINE**

The public discussion of the EIA programme of the application for the extension of the Ojamaa oil shale mine was held on 15 July 2022 and the public discussion of the EIA report was held on 20 April 2023. The Environmental Board initiated the EIA on 22 April 2021.

VKG Kaevandused is applying for the extension of the Ojamaa Mine to the Aidu and Kohtla mining fields, as a result of which the area of the mining claim would grow by 279.16 hectares. As a result of the requested extension, the active proved reserves of oil shale related to the mining claim would grow by 10 million tonnes. VKG Kaevandused is also applying for the water permit, waste permit and air pollution permit issued to the Ojamaa oil shale mine to be merged into a joint environmental permit No. KMIN-055.

## **DESIGNATED SPATIAL PLAN OF THE BIOPRODUCTS PRODUCTION COMPLEX**

The public display and discussions of draft decision on the preselection of the location of the designated spatial plan of VKG's bioproducts production complex (BPC) in the rural municipality of Lüganuse and the report on the 1st stage of the strategic assessment of environmental impact took place on 6 June 2023. Considering the results of the public display and the discussions, the Lüganuse Rural Municipality Council approved the most suitable location for the erection of the planned bioproducts production complex (the so-called Põhja area).

The complex would start producing key components for manufacturing environmentally friendly retail products and the production volume would be up to 500,000 tonnes a year. The planned product range would include cellulose, soluble cellulose and tall oil. Demand for products made from such environmentally friendly materials is growing rapidly in the world market. Green energy solutions would be one output of the planned production complex. The bioproducts complex would produce 730 GWh of renewable electricity a year and provide green heat energy for supplying the cities of Kohtla-Järve and Jõhvi. The planned complex would use the most modern and flexible KRAFT technology, which involves the chemical processing of wood and is today the best available technology for producing cellulose, using both coniferous and non-coniferous wood.

After the most suitable location for the BPC was approved, work started on the preparation of a detailed solution for the designated spatial plan which will determine the building right of the planned production complex and solve other relevant tasks specified in the Planning Act (detailed spatial plan tasks). In preparing the detailed solution, more specific assessments will be given on the effects of operating the production complex and the necessary information will be obtained for outlining the preferred development scenario. The implementation of various in-depth surveys also continues. The earliest launch date for the complex is 2028.



## Estonia's own bioproducts



The strategic assessment of the environmental impact of and the preparation of a designated spatial plan for the bioproducts production complex (BPC) is taking place in the village of AA in the rural municipality of Lüganuse. According to the time schedule, the process will be completed at the end of 2024.

On 29 June 2023, the Lüganuse Rural Municipality Council approved the report on the 1st stage of the designated spatial plan, with which it also made the preselection of the location for assessing the environmental impact. The designated spatial plan process has progressed exactly according to the time schedule and without any setbacks. During the reporting period, we held several meetings with local people, in the course of which we gave an overview of the progress of the project. Being open and answering the questions of local people is extremely important in this process in order to prevent needless suspicions.

We are now feeling that changes are happening in society this year due to which public support to the BPC project has grown. On the one hand, the turnovers of the Estonian timber industry enterprises have dropped by nearly a third this year and the export demand for paper wood has decreased, which is why the sellers of wood strongly support the BPC project as a stable facility that would add value to local paper wood and wood chips in Estonia. In the previous months, we have met with the largest potential suppliers of wood and confirmed the will to cooperate. Secondly, specifications that have been obtained in the meantime have shown that the BPC has the potential to produce 0.9 TWh electricity (0.6 TWh for sales), which is 12% of Estonia's electricity consumption and the advantages of which include environmental friendliness and stability (and independence of weather conditions). Thirdly, Estonia is suffering from an economic recession which has increased society's support to companies that create new jobs and add value in the so-called green industry sector.

We have closely communicated with technology suppliers in 2023, specifying the inputs of industrial criteria (technical, environmental, etc.), and received preliminary feedback.

As a billion-euro project is a first in Estonia, the related additional preconditions are currently being agreed. In conclusion we can say that we are moving according to the schedule, which would allow us to launch the complex in 2028, but the more serious stage of the project – from preparing the business plan to making the final investment decision – is still ahead of us.

**Lauri Raid**

VKG BIOPRODUCTS DEVELOPMENT MANAGER





## VKG'S ENVIRONMENTAL DAY 2022:

### Regarding the potential and prospects of adding value to Estonian forests

In 2022, VKG's Environmental Day was dedicated to our new area of development – to adding value to wood. We are convinced that the bioproducts production complex planned in the rural municipality of Lügánuse is a very necessary step in order to end the dependence on exporting and burning the unused wood resource in Estonia, allow the replacement of fossil raw materials and bring new economic activity and jobs to the region.

On the Environmental Day, scientists, environmental experts, policy-makers and politicians discussed the opportunities of adding value to wood which is one of the greatest natural resources in Estonia.

The raw material need of the planned production complex would be 2 to 2.3 million cubic metres of pine, fir and birch paper wood a year. For comparison: tree-cutting in Estonia generates more than 5 million cubic metres of raw material suitable for the cellulose industry, which is being exported as raw material or burnt together with energy wood adding no or very little value to it. VKG's primary interest is to develop the further processing of soluble cellulose, the end products of which are used in the textile and biochemistry industries as well as in the paint, food and pharmaceutical industries. The largest user group is viscose fabric, but the spectre of needs and possibilities is wide and the replacement of fossil raw materials with biochemistry is being developed practically in every sector. The complex would also produce 730 GWh renewable energy, over a half of which would be fed to the network, thus supporting Estonia's energy security. The planning phase of the production complex takes place in 2021–2024, the expected construction of the complex will take place in 2025–2026 and the complex will be launched in 2027.

# Designated spatial plan of the industrial waste landfill

On 5 June and additionally on 1 August 2023, public discussions of the results of the public displays of the draft decision on the preselection of the location of the designated spatial plan of VKG's industrial waste landfill in the rural municipality of Lügänuuse and the report on the 1st stage of the strategic environmental impact assessment were held. The aim of the designated spatial plan being applied for is to make the selection of the best possible location for a building of significant spatial impact in the 1st stage and to develop a detailed solution (including constructional matters) for establishing the landfill in the 2nd stage.

The planned landfill would hold 63 million m<sup>3</sup> of industrial waste and its expected useful life would be 25 years with the current quantity of waste being deposited. In the course of the preselection of the most suitable location conducted in 2023, the Tuhavälja cadastral unit where soil was prepared for the establishment of a landfill decades ago turned out to be the best location where it is possible to ensure the continuation of VKG's production activities in such a way that the adverse effect on the natural environment and people is as small as possible.

## A new, more environmentally friendly landfill

In order to continue VKG's production activities, an additional place for depositing industrial waste is presumably needed in 2026. The location suitable for establishing a landfill proved to be the most preferable by most of the criteria. The new landfill is planned to be established on the border of the rural municipality of Lügänuuse and the city of Kohtla-Järve, to the west of the existing landfill. The main advantage of the location is its proximity to an area already influenced by industry. The existing industrial waste landfill is a residual contamination site and upon creating the new landfill near the existing one the area added to the high-risk region is smaller. In addition, preparatory work has been done in the area for establishing a landfill during the Soviet era and it has already been influenced by human activity. It is also the nearest area to the production complex where the existing conveyor can partly be used for access, with no need to establish a transport corridor that would fragment the green network and forest area.

The location of the landfill was finally approved on 24 August 2023, when the Lügänuuse Rural Municipality

Council approved the report on the 1st stage of the preselection of the location of the local government designated spatial plan of the industrial waste landfill of Viru Keemia Grupp in the rural municipality of Lügänuuse and the strategic assessment of environmental impact. That decision ended the first stage of the designated spatial plan and work continues on a detailed solution for the designated spatial plan until the designated spatial plan enters into force.

The detailed solution for the designated spatial plan and the environmental assessment report have been completed by the time of disclosure of this report (May 2024) and presented to the rural municipality of Lügänuuse for initial review. The next stages are the approval and disclosure of the designated spatial plan and discussions and, as the last stage, the entry into force of the plan by the Lügänuuse Rural Municipality Council. According to the time schedule, the entry into force of the designated spatial plan will take place in September 2024. The designated spatial plan will be the basis for preparing the construction design for the landfill, and the landfill will be completed in 2026.

### Tiit Lukas

HAZARDOUS WASTE LANDFILL PROJECT MANAGER



# The Climate Act

In September 2023, the Ministry of Climate initiated the preparation of the Climate Act. This should be a so-to-say framework act which stipulates climate neutrality by 2050 at the level of a law together with the necessary interim goals for different sectors.

VKG made the proposal to prepare a climate act as early as in 2021 in order to launch a wider discussion in Estonia about climate goals achievable for us and to acknowledge the effects, opportunities and risks entailed. To do this, a balanced and reasoned social discussion has to be created, where in addition to establishing goals, the parties would also analyse the possibility of achieving the goals, the availability of the necessary technologies, the related costs and impacts on the

environment on a broader scale than just the one-dimensional CO<sub>2</sub> emissions. The first discussions showed that the state does not have a clear vision of what it wants to achieve with the Climate Act other than establishing national greenhouse gas reduction goals until reaching climate neutrality in 2050. VKG is therefore rather sceptical towards this process. The preparation of the Climate Act should be completed in 2024 and the Act should enter into force in 2025.



On 12 September, the Environmental Day took place at the Arvo Pärt Centre, organised by Viru Keemia Grupp, focusing on the necessity of creating the Climate Act in Estonia. During the day, various prominent experts

presented their vision of the Climate Act and the impact of the Green Transition. The opening speech was given by the Minister of Climate **Kristen Michal**, who presented the political view of the Climate Act to the audience.

The presentations and videos can be found here:

[www.vkg.ee/en/environment/](http://www.vkg.ee/en/environment/)

# A reliable partner in promoting local life

The Group is a good partner to local organisations that help to promote the region's cultural, sports and educational life. Our main focus is on local youth.

During the reporting period, we supported nearly 70 initiatives and projects with a total amount of more than 500,000 euros. The Group has a number of initiatives of its own aimed at promoting life in the region: the **Five Schools Competition**, the **Jõhvi Ballet Festival** (in cooperation with the Jõhvi Concert Hall), educational projects, e.g. **STEM**, and the celebration of the **Day of Miners** and the **Day of Chemists**.

For years now, we have been supporting the maternity and paediatric wards of the **Ida-Viru Central Hospital** instead of making business presents. Twice a year, we hold city clean-up days under the **Let's Do It!** and the **World Clean-up Day** initiatives with the participation of our employees, their family members and the upper-secondary schools of the region. The Group is a long-term partner to blood centres and we hold a donor day in our production territory four times a year.



We also have various projects at the local government level, particularly with the City of Kohtla-Järve and the rural municipality of Lüganuse.

In the two years, VKG's employees gave more than **140 litres of donor blood**. We also promote an active lifestyle among our employees and allocated 50,000 euros to it.

The assistance and support of Viru Keemia Grupp can be provided to any non-profit association and/or organisation operating in Estonia, which is interested in improving the life in Ida-Virumaa or in Estonia as a whole. Most of all, we focus our attention on local children's groups, sports clubs, and education institutions. The provision of a direct subsidy to individuals is only considered in exceptional cases if we are dealing with humanitarian needs.



# Management

The executive management of the Group is the responsibility of the Management Board of Viru Keemia Grupp, which consists of five members



**Ahti Asmann (1973)**  
Chairman of the Management Board



**Jaanis Sepp (1982)**  
Vice Chairman of the Board / Financial Director



**Raivo Attikas (1979)**  
Member of the Board / Technical Director



**Nikolai Petrovitš (1972)**  
Member of the Board / Member of the Board of VKG Oil



**Margus Kottise (1968)**  
Member of the Board / Member of the Board of VKG Kaevandused

The Management Board of the parent company adopts all the important decisions that concern the economic activities of the VKG Group. During 2023, one change took place in the Management Board – Vice Chairman of the Board and Technical Director Meelis Eldermann reached his well-earned retirement in May and was replaced by Management Board Member and Technical Director Raivo Attikas.

As an event after the balance sheet date, a change was made in the Management Board of VKG on 16 February 2024 and Ervin Küttis (1975) became a member of the Management Board, replacing Margus Kottise.

The Supervisory Board of VKG consists of four members



**Kristjan Piilmann**  
(1990)



**Margus Kangro**  
(1974)



**Ants Laos**  
(1943)



**Elar Sarapuu**  
(1964)

Changes in the Supervisory Board of VKG during the reporting period

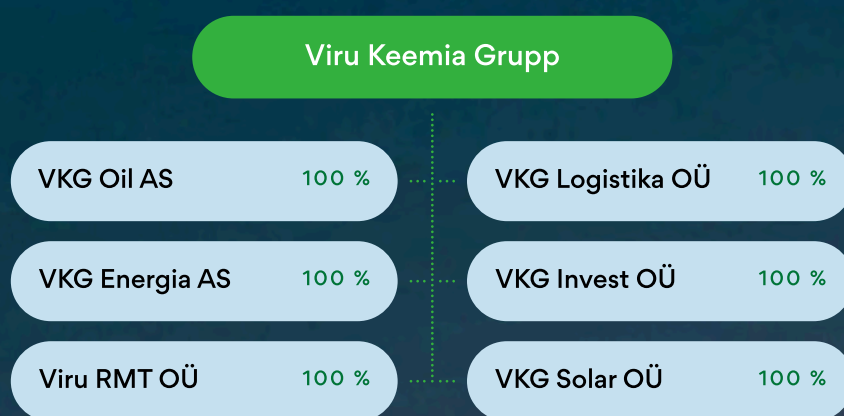
In connection with the passing of Viru Keemia Grupp's founder and major shareholder Priit Piilmann in November 2022, Kristjan Piilmann assumed his position on the Group's Supervisory Board.

The number of the members of the Supervisory Board was reduced to four as a result of the passing of the long-term Chairman of the Supervisory Board of VKG, Toomas Tamm, in October 2023.



# Structure of the Group

The legal structure of the consolidation group of Viru Keemia Grupp as at **31 December 2023**



The following changes took place in the structure of the VKG Group during the reporting period

- Viru Keemia Grupp AS was divided on 30 June 2022, creating a **new Viru Keemia Grupp AS** that is engaged in shale oil production and includes all the related activities. The old Viru Keemia Grupp AS was renamed as **Kirde Varad AS**, the main area of activity is industrial real estate investments. Regulated companies VKG Elektrivõrgud OÜ and VKG Soojus AS that are not directly related to shale oil production also remained in the ownership of Kirde Varad.
- On 20 September 2022, a new subsidiary called **VKG Solar OÜ** was founded with the aim of adding the development of the generation of renewable energy to VKG's electricity production portfolio.
- On 6 December 2022 VKG Oil was divided for the purpose of simplifying the group structure, as a result of which VKG Oil's former subsidiary VKG Energia obtained a new parent company, **VKG Energiatootmise OÜ**. As an event after the balance sheet date, VKG Energia OÜ and VKG Energiatootmise OÜ merged, as a result of which Viru Keemia Grupp AS has seven subsidiaries of the same level according to their areas of activity.
- The merger of VKG Energiatootmise OÜ and VKG Energia OÜ was completed on 27 March 2023, after which VKG Energia continued its ordinary activities as a direct subsidiary of VKG AS.
- On 14 April 2024, VKG was divided, as a result of which VKG Kaevandused was separated from VKG and the divided entity merged with Kirde Varad AS. Although considering the larger structure of the Group the initial plan was to only separate the non-current assets related to mining from VKG, we were forced to transfer all the mining activities to the business vertical of Kirde Varad AS in order to avoid certain risks.
- We took a number of steps to distribute the functions of Viru RMT among other Group companies in 2023 – in April, the lifting mechanisms unit moved to VKG Logistika, and in June, industrial automation specialists moved to VKG and automation mechanics to VKG Oil and electricians to VKG Energia.
- As an event after the balance sheet date, Viru RMT sold all the activities related to the maintenance of electricity networks to Viru Elektrivõrgud on 17 January 2024. As a result of a split effected on 8 March 2024, all the other assets of Viru RMT were transferred to VKG Energia, and on 19 March 2024 Viru RMT together with the remaining metal structure production was sold to ICESTONIA OÜ.

## Audit Committee

Pursuant to the Auditors Activities Act, Viru Keemia Grupp is considered a public-interest entity which has to have an audit committee.

Pursuant to the statutes, the Audit Committee is an advisory body to the Supervisory Board of Viru Keemia Grupp in the areas of accounting, auditing, risk management, and internal control and auditing, supervision and budgeting as well as the lawfulness of activities. The members of VKG's Audit Committee are: Ants Laos (Chairman of the Committee), Kristjan Piilmann, Margus Kangro and Elar Sarapuu.

## Prevention of possible conflicts of interest

The corporate management system of the Group incorporates a set of norms and procedures, which are aimed at the exclusion of conflicts of interest between the governing bodies of the Group.

If a conflict arises, there are certain mechanisms aimed at taking the necessary measures for the complete regulation of the conflict and for creating the conditions that would exclude such a conflict in the future.

The Group's Internal Audit Service and other competent subunits are jointly engaged in the prevention of conflicts of interest. In order to prevent possible conflicts of interest, the Group has established clearly defined restrictions and requirements for the members of the Supervisory Board and the Management Board. Management Board members are prohibited from competing in an area of activity of Viru Keemia Grupp without the prior written consent of the Supervisory Board.

No members of the Management Board or the Supervisory Board had any conflicts of interest during the reporting years.

In order to exclude the occurrence of conflicts of interest, the management board members and mid-level managers of the Group companies are upon any changes taking place obligated to submit a declaration in the approved format, stating their holdings in legal entities and/or membership in the governing bodies of legal entities and/or activities as a sole proprietor.



6

# Safety First and Foremost

We aim for an accident-free  
working environment

Viru Keemia Grupp place the safety of its employees and subcontractors and the minimisation of the environmental impact first and foremost. We are committed to creating a working environment where no serious work accidents happen.

Process safety and occupational safety is ensured in all the Group's companies through a systemic approach and efficient cooperation. The life and health of every employee is our priority.

In order to ensure occupational safety, we adhere to strict occupational safety requirements which we regularly check by way of workplace inspections and issuing work order permits. We believe that achieving the goal of zero work accidents is possible through carefully planned and systemic improvement of working conditions and occupational safety.

We also improve risk management in processes, invest in innovative technologies, increase the reliability of our equipment and promote safety culture.

In order to achieve the Group's target of providing an accident-free working environment, each manager has made personal commitments to improve safety in production. These commitments are reflected in the performance indicators established for managers, thus helping to ensure that safety is always first and foremost.

The main objectives formulated in the safety policy are the following:

- **Reduction of production injuries, occupational diseases, accidents and adverse environmental effects:** by reducing the occurrence of work accidents and occupational diseases, our aim is to ensure that all the employees can work in a safe and healthy environment.
- **Organisation of safe production through comprehensive analytics and the management and minimisation of production risks:** we apply thorough analysis and risk management to ensure safe production and prevent accidents.
- **Implementation of the best possible practices:** we apply the best area-specific practices in order to constantly move forward and help achieve the UN Sustainable Development Goals.

Keeping our eyes on clear objectives and systemically engaging all the interested parties in our activities, we use our best efforts to ensure increasingly better results.

## The Group's priorities in the area of safety

Our main priorities in occupational safety and safety culture are:

### → The management's commitment to occupational safety

The management's active participation and commitment in ensuring safety at all levels. The management always places safety first and foremost, creating and promoting safety culture in the entire organisation. The management's commitment is expressed in regular safety visits, participation in safety training and constant communication with the employees in order to ensure the fulfilment of safety requirements.

### → The employees' awareness and consistent safety culture at every level

The promotion of high awareness and safety culture among all the employees. We constantly offer training and instructions in order to increase the employees' awareness of safety requirements and best practices. Each employee is responsible for their own safety and the safety of their colleagues, which creates a strong and uniform safety culture.

### → Ensuring the reliability and safety of production processes

The integration of safety into all the production processes. We use the best available technologies and practices to ensure the reliability and safety of production processes. Regular maintenance and inspections help prevent faults and reduce the risk of accidents.

### → Secure and safe working conditions

The constant improvement of working conditions to ensure safety and security. We create and maintain workplaces that meet the strictest safety requirements. We constantly monitor working conditions and apply improvements in order to reduce risks and ensure a safe working environment.

→ **The constant improvement of the injury prevention system**

The constant improvement of the injury and work accident prevention systems. We develop and apply efficient prevention measures to reduce the number of work accidents and injuries. We use the results of the analyses of accidents to improve the existing systems and prevent possible accidents in the future.

→ **Absence of fatalities caused by work accidents**

The prevention of fatalities caused by work accidents both in the Group and among contractors. We are committed to our workplaces being completely safe and to preventing any fatalities. We use the best practices and make our best efforts to ensure the safety of our employees.

→ **Absence of large-scale accidents**

The prevention of large-scale accidents in all our activities. We constantly focus on risk management and take measures to prevent large-scale accidents. If an emergency arises, we are ready to respond promptly and efficiently.

→ **A risk-oriented approach**

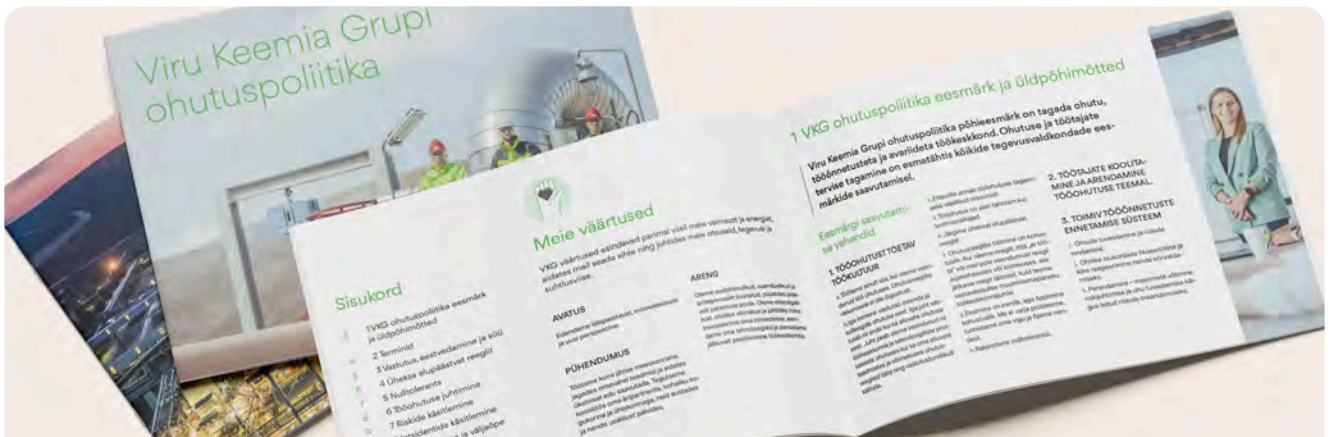
The implementation of a risk-based approach in ensuring work protection and production safety. We systematically assess and manage risks in order to ensure safety in all our activities. We apply risk analyses and risk management measures to reduce threats and create a safe working environment.

→ **Systemic cooperation with contractors**

The establishment of efficient cooperation with contractors in safety-related matters. We closely cooperate with contractors in order to ensure their compliance with our safety standards. We instruct and support our contractors so that they adhere to our safety requirements and best practices.

→ **The application of the principle of consecutive procedures**

Every subsequent activity is shaped on the basis of the results of the previous procedure. We apply a constant improvement cycle where every activity is based on the analysis and results of the preceding activities. This approach ensures that our safety measures are always up-to-date and efficient.



The Group's safety policy document was approved in March 2023. The policy covers all the important safety principles with which all the Group's employees have to comply regardless of their position.

The main aim of the Safety Policy is to ensure a safe and fault-free working environment where no accidents happen. Ensuring a safe and healthy working environment for employees is of primary importance, as this in turn ensures the achievement of the desired objectives in all the areas of activity.

The document consists of 11 chapters. The Safety Policy describes the main terms and definitions used therein, defines the terms of liability, fault and zero tolerance and the structure of safety management. It also presents the principles of risk management, conducting instruction and training, performing works and inspecting the working environment. A special emphasis is on the investigation of incidents.

In order to facilitate and support the creation and implementation of a safety management system aim at risk prevention, the Group has established the following positions and roles: the Group's safety manager, the subsidiary's safety manager, working environment specialist (in subsidiaries), working environment representative, working environment council member, occupational safety mentors.

Pursuant to the Safety Policy, everyone is personally responsible for their safety and for their activities not endangering others. Every employee must also immediately report all the accidents that have happened to him or her as well as all dangerous situations which may end in an accident involving him or her or his or her colleagues.

# A programme for improving the efficiency of the level of occupational safety

Our programme for improving occupational safety and the conditions of the working environment and for preventing and eliminating extraordinary situations includes the following activities.

## → Preventing accidents and injuries

Taking systemic measures to prevent accidents and injuries is a central part of our occupational safety programme. We conduct regular risk and safety audits in order to identify potential sources of danger. In the case of all the identified risks, we apply preventive measures which include technological solutions and making changes to work processes. We also constantly inform and train employees in order to increase awareness of safety requirements and best practices.

## → Implementing an occupational safety culture

The promotion of a safety culture in the entire organisation is of critical importance in achieving our objectives. Our employees regularly participate in safety training and exercises which contribute to ingraining safe conduct in everyday work. The management sets an example by adhering to and promoting high safety standards, thereby creating a positive and inclusive safety culture.

## → Ensuring protective equipment for employees

We supply all the employees with the necessary protective equipment which meets the highest safety standards. Protective equipment includes personal protective equipment such as helmets, protective glasses, earplugs, gloves and protective clothing. We constantly monitor the

condition of the protective equipment and ensure their timely replacement. We also organise regular training to ensure that the employees know how to correctly use and maintain the protective equipment.

## → Exercises and instructions

Regular exercises and instructions are important in order to ensure our employees' readiness for extraordinary situations. We organise both theoretical and practical exercises which cover various safety situations and extraordinary incidents. Exercises help employees to obtain the skills and knowledge necessary for responding promptly and efficiently in crisis situations. We also hold regular instructions where the employees receive additional information and instruction on occupational safety and environmental protection.

## → Preventing occupational diseases

Preventive measures to avoid occupational diseases are an important part of our programme. We perform regular health checks and assessments of health risks in order to identify potential threats of occupational diseases. We also apply ergonomic workplace solutions and improve working conditions to reduce risks to the health of the employees.

For several years now, the Group is applying the following measures that promote safety culture:

## → Safety visits

Conducting safety visits with the participation of line managers is an important part of our safety culture. These visits allow the managers to directly communicate with the employees at workplaces, identify possible sources of danger and provide immediate advice on their elimination. Through regular safety visits, we can ensure that all the work processes meet the applicable safety standards and requirements.

## → Safety and Health Month

The annual Safety and Health Month includes various safety-related activities and events, including the organisation of safety days. The aim of these events is to increase the employees' awareness of safety requirements, share the best practices and offer practical training. The safety days are focused on specific topics, such as occupational safety, health protection and risk management, offering the employees valuable knowledge and skills.

## → Joint exercises with the Rescue Board

In cooperation with the Rescue Board, we organise regular joint exercises to prepare our employees for various emergency situations. These exercises cover realistic scenarios and practical exercises which help the employees to learn to effectively respond in extraordinary situations. The joint exercises strengthen our cooperation with the Rescue Board and ensure that our safety protocols are up to date and efficient.

## → Registering dangerous situations

We have implemented a system which allows our employees to simply and promptly register dangerous situations.



## An exercise that put theory to the test

In March 2022, joint fire exercise of VKG Oil and the Rescue Board was held with the main aim of testing the company's readiness in accordance with the emergency response plan and practice the actions of the employees in the case of a large-scale accident. We also wanted to practice the movement of information, the functioning of chains of command, and cooperation with various parties.

According to the legend, column K-2 of the generator oil distillation equipment depressurised, as a result of which the product started leaking. One of the operators tried to eliminate the leak, but the product self-ignited. The operator fell into the fire and two colleagues rushed to his aid, trying to save him from the fire.

The exercise started with the fire, of which the Emergency Response Centre was immediately informed. Rescue and ambulance crews were sent to the scene of the accident. The joint exercise included saving casualties, extinguishing burning liquid with foam, protecting endangered objects, and testing the designated water supply. The exercise involved professional rescue workers from the Kohtla-Järve and Jõhvi rescue crews and volunteer rescue workers from the Purtse and Mäetaguse volunteer rescue crews.

Not everything worked as smoothly as could have been hoped, but this is a great advantage of exercises. An exercise is not aimed at putting on an ideal performance, but at identifying all the bottlenecks and making the respective adjustments. Every exercise helps put theoretical knowledge to the test also in practice. It is clear that such cooperation allows us to act smoothly and surely in the case of an actual alarm. This way, we can be best prepared for any situation.

According to the Rescue Board, training exercises like this one are extremely important for both the company and the rescue workers. It is a very important experience which helps us to coordinate activities in the case of an actual accident and work together as a team. An exercise also provides an opportunity to get familiar with the industrial territory, the location of equipment and different access roads, which ensures better and more efficient preparedness for managing a large-scale accident, if one should happen.

After the exercise ended, the parties exchanged thoughts, shared their observations and drew interim conclusions. The joint exercise will be concluded only after a thorough analysis of the activities of all the parties. In conclusion, it can be surely said that it was a valuable experience and I think such exercises could take place regularly," Leino Vaigla said, summarising the results.



**Ksenia Moskvina**  
VKG SAFETY MANAGER

# Occupational safety exercises

We apply all kinds of precautions to prevent any accidents, even theoretical. We pay the greatest attention to preventive measures and training employees in how to act in an emergency. Every year, the Group holds events the aim of which is to increase the employees' awareness of production, fire and occupational safety, to finish the respective skills and improve the quality of training in this area.

The main events include the following:

- **training, preparation and further qualification of employees in the form of classroom and distance learning;**
- **updating production safety and work protection training and control programmes;**
- **implementing a special training system for employees operating dangerous sites;**

## → supporting the promotion of safety culture.

Emergency exercises take place once in a quarter and in every shift. We have established close and consistent cooperation with the Rescue Board, which helps ensure the necessary actions in the case of a large-scale accident and reduce the consequences of the accident. We also hold regular joint (fire) exercises with the Rescue Board, aimed at increasing the employees' awareness and promoting occupational safety culture. We also practice the movement of information and cooperation between various parties and test the functioning of chains of command. The exercises help us to discover all the bottlenecks and make the necessary adjustments.

The Group uses electronic and video instruction for both its own employees and the employees of subcontractors.



## Cooperation with the trade union in the area of occupational safety

The trade union organisation operating in the Group also actively participates in occupational safety matters.

As a partner of the Group, the Trade Union of Chemists is involved in various processes, such as complying with safety requirements, preventing injuries and occupational diseases, ensuring personal and collective protective equipment, informing the employees of occupational safety, and other ways of implementing an occupational safety culture.



## Cooperation with local communities

VKG is a large production facility that creates a lot of jobs for the local residents. As at the end of the reporting year, approximately 1,600 employees were employed in the oil shale extraction and processing segment, mainly local residents. Our oil shale processing facilities are located within city limits and therefore the safety of the population and the employees is our priority. We apply process safety and occupational safety programmes, striving to minimise the risk of production accidents. We assign the improvement of occupational safety culture an important role in this process.



## Cooperation with subcontractors

The Group has established uniform requirements for employees and subcontractors performing works at the Group's sites or in the interests of VKG in the area of production safety, occupational safety and environmental protection. These requirements include the obligation to plan and perform activities in accordance with the applicable legal acts and the standards of international law. While carrying out projects, all the parties also have to prevent any adverse effects on nature, including the plant and animal kingdom.

The respective mandatory terms and conditions have been included in the contracts for works and services concluded with subcontractors. In addition, we constantly instruct subcontractors and regularly communicate with them to ensure the fulfilment of the uniform requirements.

Specialists conduct exercises and explanatory instructions for the employees working at the Group's sites, covering the use of personal protective equipment, the safe use of means of transport, environmental protection, and other requirements established by normative acts. Our aim is to ensure that all the employees and subcontractors are well informed and ready to comply with all the safety and environmental requirements.



# Mental health

Viru Keemia Grupp values the mental health of its employees and is committed to ensuring their wellbeing. As an employer, we offer free of charge and anonymous psychologist services to our employees in order to support them in coping with mental health challenges. These services were launched in the summer of 2020, after the assessment of psychosocial risk factors conducted in 2019.

By now, we can say that on the one hand, it is good that these services are not used on a massive scale. At the same time, the unstable condition in the world and changes that require fast adaptation leave a mark on our mental condition and seeing a psychologist may therefore prevent possible problems.

In order to keep the topic of mental health in constant focus, we organise regular training and seminars that address maintaining mental health, coping with stress and adapting to changes. In April 2021, we organised a mental health week where specialists from the NGO Peaasjad (Head Matters) talked about maintaining mental health, the difficulties of the coronavirus, and coping with changes. We continued addressing the topics of mental health also in the framework of the safety month of 2022, offering constant support and knowledge to our employees.

Our training programmes and information events take place regularly throughout the year in order to ensure that our employees are always aware of mental health issues. Our aim is to create a working environment where the topics of mental health are open for discussion and every employee knows that they have access to the necessary resources and support.

We believe that supporting mental health is of key importance from the viewpoint of both the personal wellbeing of the employees and the overall success of the organisation. For this purpose, we continue to constantly pay attention to the topics of mental health and make sure the necessary support and training is always available to our employees.

In addition to individual consultation, we also have experience with group consultation. For instance, such a session was held after the tragic incident at VKG Energia and colleagues had the opportunity to talk about it and cope with the difficult period together. The heads of departments or subunits may also contact a psychologist for an assessment of the internal climate of their work collective. In one subunit, a survey of employees was conducted together with a psychologist. The questionnaires were developed and the survey results were processed by a specialist who gave the manager recommendations for future actions.

## 'I Choose' is our joint choice

In 2022, we conducted a Group-wide safety training course in which 90% of our employees participated. The study programme 'I Choose' was aimed at improving our safety culture, systemising the knowledge in this area and analysing our behaviour models.

As at the end of 2023 four VKG's subsidiaries (VKG Kaevandused, VKG Oil, VKG Energia and VKG Logistika) held the international ISO 45001 standard certificate which allows us to develop an occupational and process safety management system that is integrated into all the business processes.



## The initiative ‘Report Danger!’ has been created for promoting safety culture

In 2017, the Group created a **near miss registration system** which allows every employee to promptly and conveniently report dangerous situations that occur at work. This system helps us to prevent work accidents by promptly responding to emerging problems and engage all the employees in making the working environment better.

There are several options for **registering dangerous situations**. The easiest and the most accessible way for all the Group’s employees and subcontractors is via the Group’s website [www.vkg.ee](http://www.vkg.ee). In addition to this, **QR codes** can be used, which direct the user directly to the dangerous situation reporting form, making reporting even more convenient and faster. In 2022 and 2023, a total of 5,380 dangerous situations were registered via the system, and the timely resolution of these helped prevent accidents.



Dangerous situations are situations which in certain circumstances may end in an injury or proprietary damage. For instance, failure to use protective equipment at work may end in an injury. Performing work where risks are higher than usual without obtaining the respective permit increases the risk of injuries. Thus, dangerous situations and near misses or almost-accidents are the foundations of the ‘pyramid of injuries’ – they can, indeed, be prevented by identifying the causes and eliminating these.

Special attention must be paid to work accidents that nearly happened. The line between potential and actual injury is hair-thin particularly in the case of such incidents. A most elementary example: an employee tripped on a protruding metal object, but did not fall or hurt himself – this is called a near miss. In a coincidence of different circumstances, the employee could have hurt his foot or fall – and that would be an injury. The easiest way is to mark the protruding component with a sticker or paint. Would that work? This is a point of dispute, as people cease noticing markings over time. It is more efficient to remove the dangerous item or redirect the people’s path of movement. We must learn to notice the root causes for the occurrence of various situations.

Employees are also engaged in the promotion of occupational safety via openness and communication. All the employees can run for the position of a working environment representative and take part in the work of the Working Environment Council. Working environment representatives are elected by the employees and work together with the employer’s representatives to improve the working environment and ensure safety.

As an important measure for promoting safety culture, the Group has established 9 lifesaving rules compliance with which is mandatory for all the employees, including subcontractors and visitors. These rules have been created to ensure the safety of each employee and visitor and to promote safety culture in the entire organisation.

# 9 ELUPÄÄSTVAT REEGLIT ЖИЗНЕННО ВАЖНЫХ ПРАВИЛ



**1** Enne töö alustamist hinda riske ja veendu, et see on ohutu! Kui töö käigus muutuvad tingimused ohtlikuks, siis lõpeta töö!

Приступая к работе, оцени риски и убедись, что это безопасно! Если в процессе выполнения работы условия становятся опасными, прекрати её!



**5** Avariikaitsete (blokeeringu) väljalülitamiseks peab olema vormistatud vastutava isiku kirjalik luba.

Для отключения аварийной защиты (блокировок) оформляется письменное разрешение ответственного лица.



**9** Järgi alati liikluseeskirju! Всегда соблюдай правила дорожного движения!



**2** Märgates ohtlikku käitumist, sekku koheselt, juhi tähelepanu rikkumisele ja vajadusel peata tööd!

Не допускай опасное выполнение работ коллегой, укажи ему на это и, при необходимости, останови работу.



**6** Jälgi töstetööde ohutust! Tõstetööde teostamisel ära kunagi liigu koorma all või ohutsoonis!

Следи за безопасностью грузоподъемных работ! При производстве подъемных работ не проходи под грузом и не передвигайся в опасной зоне.



**3** Kasuta vajalikke isikukaitsevahendeid! Обязательно используй необходимые средства индивидуальной защиты!



**7** Avariide, tulekahjude, insidentide ja traumade varjamine on rangelt keelatud!

Не скрывай возникшие аварии, пожары, инциденты, травмы и несчастные случаи.



**4** Eritöid teosta ainult vastava loa alusel! Спецработы выполняй на основании соответствующего разрешения!



**8** Ettevõtte territooriumil narkootilises, toksilises, alkohooljoobes või psühhotroopse aine mõju all viibimine ning suitsetamine väljaspool ettenähtud suitsetamisalasid on rangelt keelatud!

Запрещается находиться на территории предприятия под воздействием алкогольных, наркотических и психотропных веществ, а также курить за пределами специально отведенных для этого мест!



## Hear the voice of employees, or a system of working environment representatives

All the employees have the opportunity to run for the position of a working environment representative and thereby take part in the work of the Working Environment Council. Engaging employees in work safety discussions and workshops is our common everyday practice.

Working environment commissioners are the carriers of the voice of our people, whose aim is to notice and register problems and thereby make the working environment better. Working environment representatives actively and closely cooperate with working environment specialists and are involved in various workgroups. For instance, we organise joint trips for working environment specialists and representatives to other enterprises in order to see their functioning and successful practices.

The working environment representatives of our subsidiaries meet up regularly; the frequency of such meetings is regulated separately in each company. Once a year, the general meeting of all the environment representatives is held, convened by the Safety Manager. In VKG Oil, for instance, meetings with the working environment representatives take place once in a quarter. A motivating incentive system has been developed and the working environment situation at other departments (where the representatives themselves do not work) is also checked.

# Safety and Health Month

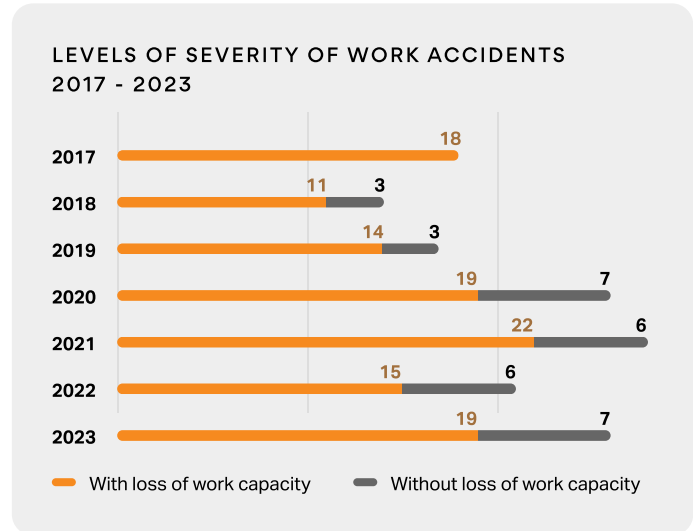


The Safety and Health Month that has already become a tradition is held in April and serves as a sort of an additional impulse to pay attention to the topic of safety and a call to acknowledge and take more seriously the matters of personal safety both at the workplace and outside it. Safety starts from everyone's personal informed attitude! We can only create a positive occupational safety culture together and in cooperation! For this, we have to openly exchange information and hold dialogues that are based on trust and mutual respect.

We always choose a topical theme that is in the Group's focus for the Safety and Health. During the month, we offer our employees a number of interesting information classes with open dialogues, incident analyses of their own company and those of other companies, and active play, always ending the month with a discussion circle where ordinary employees, safety enthusiasts, top managers and external experts exchange their thoughts.

## Statistics for 2022 and 2023

A total of 21 accidents were registered in the Group in 2022 and a total of 26 in 2023. In 2022, one of our employees lost their life when fulfilling work duties. Across the severity of health damage, the Group registered two work accidents that ended in a bodily serious injury (the fatal work accident is recorded under serious accidents in the diagram below) and twelve work accidents that ended in a mild bodily injury in 2022 and in six work accidents the victim only required first aid. The determination of the level of severity was abolished in 2023 in connection with the Occupational Health and Safety Act. The Group established its own classification and in 2023 registered 19 work accidents with loss of work capacity (temporary, the employee needed a certificate for incapacity for work to be drawn up) and seven work accidents with no loss of work capacity (the employee either needed first aid at the workplace or went to a healthcare institutions for medical assistance, but returned to work).



The main causes of work accidents in 2022 and 2023 were:

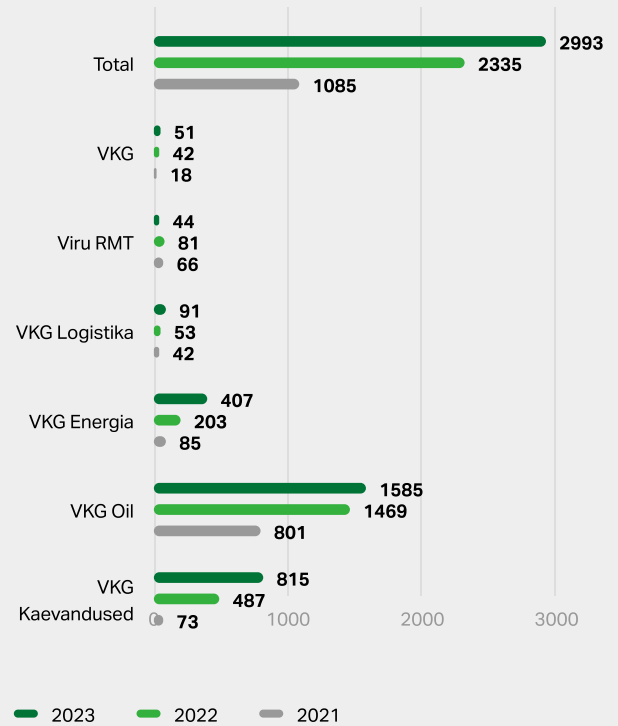
- violation of the occupational safety requirements by the employee;
- non-conformity of the path of movement/work room with safety requirements;
- failure to use personal protective equipment;
- insufficient organisation of work,
- underestimating the risk factors;
- using dangerous practices.

Below is a presentation of the past four years' **total recordable incident rate** or TRIR indicator which shows the number of work accidents per million working hours.

The most important measures for improving the working environment in 2023:

- establishing the Group's Safety Policy and implementing its principles;
- continuing to increase the safety awareness of all the employees through training;
- improving the system for registering dangerous situations;
- organising a campaign for reporting dangerous situations;
- developing and implementing a procedure for handling incidents;
- performing an in-depth analysis of the causes of work accidents and faults that have taken place in the Group and checking the preventive measures;
- increasing the awareness of the employees and subcontractors and promoting safety culture;
- preparing video instructions;
- improving communication;
- developing and implementing a uniform procedure for working environment inspection, including introducing safety visits;
- harmonising the system of instructing the employees and conducting examinations (new employees, employees with high-risk behaviour, long-term employees).

#### THE NUMBER OF REGISTERED DANGEROUS SITUATIONS



#### 2020-2023 TRIR AVERAGE VALUES

	2020	2021	2022	2023
Viru RMT	7,74	3,42	0	0
VKG OIL	1,54	2,56	2,19	2,31
VKG Energia	1,09	3,40	0	0
VKG Logistika	1,65	0,00	0	0
VKG Kaevandused	0,92	1,62	1,63	2,90
Viru Keemia Grupp	0	0	0	1,20
<b>The Group's average</b>	<b>1,75</b>	<b>2,0</b>	<b>1,43</b>	<b>1,90</b>

In 2024, we continue to consistently contribute to the improvement of the working environment and occupational safety. The focus is on the following goals:

- increasing the quality of investigating incidents;
- harmonising the principles of working environment inspection;
- increasing the awareness of the employees in the area of safety.

## Preparedness for the elimination of emergency situations

The Group has developed and implemented a set of measures aimed at the prevention and elimination of emergency situations in the industrial enterprises of the Group. Within this system:

- measures to prevent emergency situations are planned and implemented;
- the protection of employees and production facilities is ensured;
- the functioning reliability of production facilities is increased;
- the risk of occurrence of emergency situations of technical origin is reduced;
- proprietary damage in the case of emergency situations is minimised;
- the consequences of emergency situations caused by natural and technological factors are eliminated in accordance with the respective action plans.

The Group has established a plan of regular exercises and training sessions. In exercises, the employees practice the following practical activities:

- reporting the occurrence of an emergency situation;
- bringing the accident and rescue unit into readiness for action;
- fault-free stoppage of technological equipment;
- localisation of accidents;
- using individual protection equipment and primary firefighting equipment;
- helping casualties.



## Chemical safety

VKG takes part in the activities of the chemical industry at the local, national and international levels.

The Group is a member of the Estonian Chemical Industry Association (ECIA) and is thereby closely involved in the implementation of the initiatives of CEFIC, the umbrella organisation of the European and global chemical industry. We committed to the Responsible Care (RC) initiative as early as 20 years ago.

The aim of chemical safety is to reduce the risks related to chemicals in order to prevent the occurrence harmful effects. At VKG, risks arise from the properties of and possible exposure to the hazardous chemicals produced and used. Based on the existing risks, measures are taken to reduce these.

## Accounting and reporting of hazardous chemicals

The availability of sufficient information about the properties and conditions of use of chemicals in the company is a prerequisite to the management of chemical risks.

VKG keeps account of hazardous chemicals and maintains the relevant reporting and harmonises and improves it at the level of the entire company for more than 10 years by now. Cooperation between subsidiaries, synergy and encouraging learning from each other are the Group's priorities in this area. Keeping accounts shows where additional information needs to be gathered and which jobs are exposed to hazardous chemicals, which helps assess the risks in using the chemicals and provides information for reducing the risk at workplaces and controlling the waste released to the environment.

## Product liability

REACH is Regulation (EC) No. 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals.

REACH obligates all the producers of chemical substances to identify the properties of their chemicals and register these. Thus, VKG has submitted to the European Chemicals Agency registration files on all the substances which are produced in quantities of one (1) tonne or more per year. The registration files are very extensive, specific, complex and detailed documents that contain information about the properties, use and safety requirements of substances. REACH allows enhancing the results and usefulness for the entire European chemical industry and increasing the trust of the public towards the safe handling of chemicals.

The safety certificates of the chemicals produced are tools for conveying information about the chemicals in the supply chain and safety data sheets provide information about potential threats to human health and the environment. By forwarding safety data sheets to users, VKG ensures that clients receive sufficient and correct information. VKG takes care to provide the clients sufficient information for safely using and handling our products and makes sure the clients understand the forwarded information (the so-called producer liability principle). The aim is to ensure that the users have the information to take the necessary measures to protect the employees' health, safety and the environment.

The objectives of a well-functioning system of safety data sheets

- 1 to promote product liability and ensure the proper handling and use of chemicals across the entire value chain by providing relevant and reliable information;
- 2 to facilitate and develop communication with clients so that they trust the supplier's knowledge about the composition and properties of the chemical being sold.

## Awareness

The safe use of chemicals at the workplace is extremely important from the viewpoint of the health of employees and the wellbeing of the environment. Pursuant to law, the employer has to establish risk management measures to ensure the safe use of chemicals. However, it is the obligation of each employee to apply the recommended risk management measures in order to avoid falling ill, accidents and environmental contamination. For this purpose, VKG actively conducts internal chemical safety training. The aim of this training is to increase the employees' awareness of chemical risks, while influencing the safety culture and the behaviour of the employees of the entire organisation.





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## For a Cleaner Environment

The extraction and production of any mineral resource has a certain effect on the surrounding environment. We therefore always strive to do more than prescribed by laws and regulations.

European and national trends give us a clear signal that the production of shale oil does not fit within the framework of climate neutrality and the new green economic model. On the one hand, it is a great challenge and rearrangement, while on the other hand it inspires us to even more actively seek new development opportunities, while remaining a large industrial enterprise and a reliable partner to the state, the local communities and our people.

Viru Keemia Grupp's environmental objective is to reduce the footprint and environmental impact of shale oil production by efficiently using the oil shale resources and the best available technology.

Our environmental activities are increasingly focused on the European Green Deal and the Fit for 55 package and the related reduction of greenhouse gas emissions. On the backdrop of the European Union and Estonian climate policy goals, VKG has started investments into the expansion of production activities in new areas which support the new climate-proof economic model. We also continue investing into the optimisation of production processes and increasing efficiency, thereby reducing the environmental impact.

## Strategic vision of reducing the impact of industry

The main focus of environmental activities is on reducing ambient air emissions, particularly with regard to sulphur compounds and emissions which cause unpleasant odours. We pay a lot of attention to increasing the energy efficiency of the entire production chain and finding ways to reuse waste.

### **Our environmental goals are as follows:**

- it is important for the Group to apply the principle of a circular economy, which ensures the most efficient use of resources;
- we reduce sources of pollution which cause unpleasant odours;
- we minimise the effects related to extraction and find additional possibilities for the maximum recycling of oil shale waste rock;
- we develop the best available techniques (BAT) for oil shale processing and lengthen the existing production chain to the maximum extent possible.

## The Group has established the following guiding environmental principles

- We operate in accordance with the **ISO 14001** environmental management system. The Group's subsidiaries have also implemented the **ISO 9001** quality management system and the **ISO 45001** occupational health and safety management system and VKG Oil AS and VKG Energia OÜ have implemented the **ISO 50001** energy management system.
- In our everyday activities, we adhere to the requirements arising from Estonian and European Union legal acts and contracts.
- We identify the environmental aspects and the environmental impact related to the company's production activities and assess their conformity with legal acts and other requirements.
- We consider it important to inform the relevant authorities and the local residents of the company's activities and the possible effects on the environment.
- We pay great attention to the promotion of the principles of sustainable development and circular economy in the company. We process the waste generated in the production process on the basis of the waste treatment hierarchy.
- We place importance on cooperation with science and research institutions in solving various environmental challenges, assessing environmental impacts and developing new technologies.
- We inspire our employees to expand their environmental knowledge and welcome and encourage the application of such knowledge in practice.
- We work towards adding value to oil shale with the aim of creating as long a product value chain and efficient production as possible.

## The following environmental studies were conducted during the reporting period

- verifying the CO<sub>2</sub> emission quantities generated at the Group and upgrading the system;
- monitoring groundwater and surface water at the Ojamaa Mine;
- developing the hydrogeological model of the Ojamaa Mine and its expansion and assessing the environmental impact;
- monitoring the groundwater of the ash field of the Ahtme Thermal Power Plant;
- analysis of the test methodology and results of the landfill greenery;
- strategic assessment of the environmental impact of a new industrial waste landfill;
- wood grouse monitoring;
- preliminary assessment of a solar power plant and the base structure;
- monitoring groundwater and surface water in the region of the Uus-Kiviõli and Uus-Kiviõli II mines;
- assessment of the environmental impacts of the Uus-Kiviõli and Uus-Kiviõli II mines;
- strategic assessment of the environmental impact of the bioproducts production complex.

# Environmental footprint

The Group continues to invest in development activities aimed at reducing carbon emissions, in the course of which we seek opportunities to reduce the environmental footprint of shale oil production.

In the light of the renewed climate policy goals, VKG is also analysing investment opportunities in expanding production activities in new areas in order to support movement towards climate neutrality.

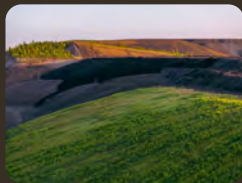
For the purpose of analysing the carbon footprint of the entire Group, VKG for the first time ordered the carbon footprint assessments of its scopes 1, 2 and 3 in accordance with the principles of the Corporate Sustainability Reporting Directive (CSRD) from external consultants UAB Vesta Consulting and Nomine Consult OÜ in 2023. According to the report concerning scopes 1 and 2 drawn up in the first stage, direct greenhouse gas emissions, i.e. emission arising from production processes make up the majority of the Group's emissions. In order to reduce direct emissions, we conduct annual energy and fuel consumption audits and look for the newest innovative technologies. Indirect emissions from the use of energy (scope 2) are related to the use of non-renewable electricity. An in-depth analysis of emissions related to the use of external products and services and the use of the Group's products by consumers (scope 3) will be completed in 2024.



The amendments of the integrated **environmental permits of the Kiviter and Petroter plants** of VKG Oil that had lasted for more than three years were completed in 2022. The amendments of the permits included changes in the composition of emission sources of insignificant impact, bringing the data and the environmental protection conditions into conformity with the legal acts that had been amended over the years, and allowing semi-coke to be given to the Ministry of Climate for reconstructing the state's landfill.



Within the framework of the reconstruction of the Petroter I oil production plant which started in 2021, the recovery boiler, electrical filter and other components that have a significant effect on the production process were replaced, as a result of which the **plant's CO<sub>2</sub> emission was reduced by nearly ten times** and dust emission by a half. This means a significant positive effect on the air quality of Kohtla-Järve.



In 2022, VKG Oil considered the testing of the reuse of waste water sediment compost in planting greenery at the hazardous waste landfill successfully completed. By the end of the 2nd stage of the tests, **viable vegetation grew on an area of almost 17,000 square metres**, which demonstrates significantly better results compared to the former hydro-seeding method of planting. Before taking the new planting method into use, a respective amendment must be made to the integrated environmental permit and this is planned to be done in 2024.



As an important change, VKG Oil's **METEO app** was introduced in 2022, the aim of which is to increase the response speed of production units in preventing and reducing possible odoriferous disturbances by way of operatively sharing meteorological data.



Making amendments to the environmental permits of the Ojamaa Mine and the Uus-Kiviõli II Mine on the basis of VKG Kaevandused's earlier applications and environmental impact assessments continued. While the assessment of the joint environmental impact of the Uus-Kiviõli and Uus-Kiviõli II mines continues in 2024, the Ministry of Climate declared the report on the environmental impact of the expansion of the Ojamaa Mine to be in conformity with requirements in 2023 and continued with amending the respective environmental permit.



On 9 December 2022, VKG Kaevandused submitted an application to the Environmental Board for adding special water and air parts to the environmental permit of the Uus-Kiviõli II Mine (redirecting mining water from a groundwater layer to a receiving body of water and releasing the contaminants entailed in underground blasting works to ambient air via a ventilation shaft) and for changing the main transport corridor on the existing permit (from the service area of the Uus-Kiviõli Mine to the industrial territory of the Ojamaa Mine). The Environmental Board amended the environmental permit of Uus-Kiviõli II and added the water part to the permit. The processing of the change in the transport corridor continues in 2024. VKG Kaevandused also submitted an application to the Environmental Board for amending the waste permit in connection with the erection of the base structure for a solar farm and that process was still underway at the end of 2023.

# Management system

In order to consistently reduce the environmental impact, the Group runs an environmentally friendly management system that meets the requirements of international standard ISO 14001.

The majority of the subsidiaries of Viru Keemia Grupp AS comply with the international ISO standards



VKG Oil holds environmental and quality management system certificates **ISO 14001** and **ISO 9001** since 2006, and has also implemented occupational health and safety management system **ISO 45001** and, since 2019, energy management system **ISO 50001**.



VKG Energia has implemented occupational health and safety management system **ISO 45001** and, since 2013, environmental and quality management system **ISO 14001** and **ISO 9001**, as well as energy management system **ISO 50001**.



VKG Kaevandused applies environmental and quality management system **ISO 14001** and **ISO 9001** and occupational health and safety management system **ISO 45001**.



VKG Elektrivörgud has implemented quality management system **ISO 9001** and occupational health and safety management system **ISO 45001**.



VKG Logistika has implemented environmental and quality management system **ISO 14001** and **ISO 9001** and occupational health and safety management system **ISO 45001**.

# Investments into environmental protection, and environmental charges

VKG is an enterprise of significant environmental impact and pays environmental charges for the use of the environment and for emissions in line with the polluter pays principle.

The Group paid the state 35.8 million euros in environmental charges in 2022, and 25.1 million euros in 2023. The charges paid increased in 2022 and decreased in 2023 significantly on account of the resource charge paid for the extraction of oil shale.

Pursuant to regulation "The rates for state-owned mineral resource extraction charge" adopted by the Government of the Republic on 7 July 2016, the oil shale extraction charge is determined for every three-month period (reporting quarter) on the basis of the average world market price of 1% sulphur content heavy fuel oil applicable during that period. The world market price of the said fuel oil rose to record high levels in 2022 in connection with the Russian-Ukrainian war and the changed economic situation and had an equivalent effect on the resource charged payable for the extraction of oil shale. In 2023, the world market prices of heavy fuel oil were lower, which in turn reduced the oil shale extraction charge.

VKG in the minimisation of the environmental impact and constantly works towards improving the efficiency of processes. The aim is to increase the value of oil shale to the maximum, i.e. to fully use up the potential of the resource. From the perspective of the environment, that means a smaller environmental impact per one unit of processed oil shale and greater social and economic benefit. In order to ensure the sustainability of shale oil production, we need to invest into environmental protection and the development of the best possible technologies, take part in the development of legal acts, perform production and environmental monitoring, optimise production, and implement energy-efficient solutions. The legal acts of the European Union and the Republic of Estonia as well as the increasing production needs establish ever greater demands and new higher environmental goals for the Group enterprises.

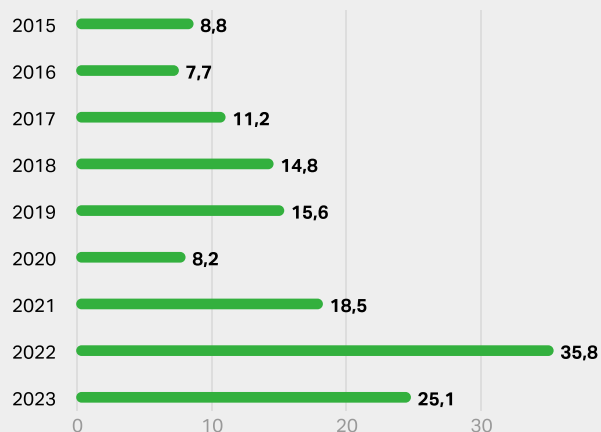
VKG jagab investeringud keskkonnakaitsesse kaheks:

- 1 investments that directly reduce the impact on the environment,
- 2 investments that indirectly reduce the impact on the environment.

Investments that directly reduce the environmental impact include investments that provide immediate reduction of the environmental impact. They include, for instance, the so-called end-of-pipe investments (trapping equipment), the renovation of tank fleets, investments related to closing or reducing the existing sources of pollution, investments related to the treatment of waste, etc.

## THE GROUP'S ENVIRONMENTAL CHARGES PAID (MILLION EUROS)

(exclusive of the costs of capture devices, environmental monitoring, environmental studies, and other such)



## DIRECT AND INDIRECT INVESTMENTS THAT REDUCE THE ENVIRONMENTAL IMPACT (MILLION EUROS)



Investments that indirectly reduce the environmental impact include activities which reduce the environmental impact in the course of long-term consistent activities. This includes, for instance, investments into technologies that save natural resources, including the improvement of the existing equipment and the development and application of new more efficient technologies.

In 2017–2020, VKG's direct environmental investments were mainly aimed at reducing the emission of odoriferous substances. In 2017, a study of the Estonian Environmental Research Centre, 'Assessment of the quality of ambient air, odoriferous disturbances and pollutant emission quantities in the Järve district of the city of Kohtla-Järve' was published, on the basis of which VKG Oil AS commissioned additional measurements and the modelling of odoriferous substances in its production territory. On the basis of the obtained results, the enterprise prepared a new action plan for reducing odoriferous substances, foreseeing activities in the extent of approximately 1.1 million euros in total. In 2020, measurements of the levels of odoriferous substances were conducted in order to assess the effectiveness of the measures taken and an inventory of the sources of emission of odoriferous substances was carried out.

In 2023, a new study of the ambient air quality of the Järve district of the city of Kohtla-Järve was started, commissioned by the Ministry of Climate in order to assess the efficiency of the measures taken after the 2015–2016 odour study (the impact of the measures established in the odoriferous substance reduction plans applied by industrial enterprises causing odoriferous disturbances on the quality of ambient air in the region).

In 2020, we carried out a cooler project in the framework of which we installed three coolers on the piping of the semi-coke gas generated in the process of oil production and two coolers on the distillation equipment of VKG Oil AS. As a result of this, the Group's annual CO<sub>2</sub> emissions decreased by nearly 12,000 tonnes. Important investments were also made in the renovation of heating mainlines and the humidification system of the hazardous waste landfill as well as in increasing the work efficiency of the flue gas desulphurisation devices at the Põhja Thermal Power Plant.

## The Group's major completed and current environmental projects

In 2022, the **Petroter I plant reconstruction project** in a total volume of 23.5 million euros was the Group's biggest investment. In 2023, investments into the **construction of belt conveyors** at the Uus-Kiviõli mines were the biggest.



### Reconstruction of the Petroter I plant

Viru Keemia Grupp's first shale oil plant operating on the basis of the Petroter technology was launched in 2009. During its time of operation, the Petroter I plant has processed 10 million tonnes of oil shale and produced more than 1 million tonnes of shale oil. In 2021, active preparations started for a large-scale reconstruction of the Petroter I plant and production was shut down for construction works from 15 June 2022 to 10 November 2022.



In the course of the works, the following was replaced at Petroter I:

- recovery boiler,
- electrical filter,
- five blocks of the ash heat exchanger,
- dust chamber,
- reactor lining,
- air coolers of the wet cleaning equipment,
- internal equipment of the distillation column,
- automatic control system.

The reconstruction of the plant increased the oil shale processing capacity from 140 tonnes to 160 tonnes per hour and the modernisation of the reactor increased the yield of shale oil obtained from one tonne of oil shale. The most important and large-scale change was the replacement of the recovery boiler responsible for the purification of flue gases, as a result of which the environmental impact of flue gases was reduced and the residual heat of flue gases can now be used for producing steam and hot water. The volume of the investment was over 24 million euros.

**CO<sub>2</sub> specific emission per ton of oil**

-20%

**CO<sub>2</sub> emission**

-10x

**Dust emission**

-80%

Among other things, the reconstruction included the installation of a new flue gas recovery boiler and an electrical filter, which contribute to significantly reducing the impact of VKG's production activities on the ambient air of the city of Kohtla-Järve and its vicinity. The renovation of the recovery boiler at Petroter I reduced the specific emission of CO<sub>2</sub> per a tonne of oil by approximately 20% and the emission of CO<sub>2</sub> by more than ten times and the emission of dust by nearly 80%.



## Bioproducts production complex

Together with the Lügänuše rural municipality and area-specific experts, we continued conducting the designated spatial plan that was initiated in 2021, exploring the possibilities of establishing a bioproducts production complex in Ida-Viru County. The complex would start adding value to paper wood left unused in Estonia – formerly either exported or burnt for energy – and to produce bioproducts.

One of the outputs of the production complex would be green energy solutions: the complex would produce renewable electricity and provide green heat energy to supply the cities of Kohtla-Järve and Jõhvi. It would also help take a step further in diversifying the economy of Estonia and Ida-Viru County and achieving the environmental goals as well as meeting the constantly growing global demand for an increasing use of bioproducts. The environmental in-depth studies conducted since the initiation of the plan include, for instance, an inventory of the vegetation of the plan area, hydrogeological modelling, and a survey of marine impacts. A comprehensive water survey is currently underway for the selection of possible sources of raw water for the production complex. The designated spatial plan and strategic environmental impact assessment (SEIA) report will be completed in 2024.



## Plastic waste circular economy project

In 2022, VKG exited the joint project for the reuse of plastic waste based on shale oil production technology, initiated together with Kiviõli Keemiatööstus, and initiated a project for a novel plant for the chemical recycling of plastic waste. The chemical recycling of plastic waste means a thermal processing of plastic waste in order to produce the source chemicals for plastic production or raw materials for producing other products. Chemical reuse allows reprocessing unsorted and dirty plastic waste that contains additives first into pyrolysis oil and then into virgin plastic in the extent of at least 70%. An investment of 70 to 100 million euros would allow us to turn 20,000 to 30,000 tonnes of plastic waste into 15,000 to 22,000 tonnes of pyrolysis oil used in the production of plastic, while creating approximately 60 new jobs in Kohtla-Järve (plus additional indirect jobs in sectors servicing the plant).

### Target number

55%

plastic waste recycled

### Factory capacity

30 000

tons of plastic waste per year

VKG's plant would help Estonia achieve an increase in the targets of plastic waste recycling from the current 25% to 55% by 2030. The planned capacity of the plant is up to 30,000 tonnes a year. For comparison: Estonia currently generates about 100,000 tonnes of plastic waste a year, most of which is burnt at the Iru Power Plant.



## Aidu solar farm

The planning process that we started in 2021 for establishing a 38 MW solar farm in the territory of the former Aidu quarry in order to produce green electricity. As at the end of 2023, the Environmental Board was still processing VKG Kaevandused's environmental permit on the basis of which the base structure of the solar farm could be built from the byproducts of mining – limestone waste rock. In addition to increasing the efficiency of the solar farm, this would also allow fully reusing the waste rock generated in the company's mining activities.

**Capacity**

38 MW



## Uus-Kiviõli II Mine

Although preparations for establishing the Uus-Kiviõli oil shale mines started nearly 20 years ago, the main construction works started in 2022–2023. In these years, the roads, the sites and a sediment pool necessary for erecting other facilities were built on the Uus-Kiviõli cadastral unit in the village of Rääsa, as well as connecting roads to the Ojamaa Mine to the industrial territory of which the material extracted from the Uus-Kiviõli Mine will be transported in order to reduce the environmental footprint of the new mine. The construction of a causeway for a closed (dust-free) belt conveyor between the Uus-Kiviõli and Ojamaa mines started in 2023. Using the belt conveyor will allow us to avoid air emissions which would be generated upon using tipper trucks for transporting the extracted material.



## Industrial waste landfill

In order to continue with VKG's shale oil production, new production waste depositing areas need to be established in the coming years. In the course of preparing a designated spatial plan of the Lügenuse rural municipality, the Lügenuse Rural Municipality Council approved the most suitable location of establishing an industrial waste landfill in 2023. The aim of the preselection of the location for VKG's industrial waste landfill was to find a location for the new landfill which would ensure the continuation of VKG's production activities so that the adverse effect on the natural environment and human life would be as small as possible – these criteria were met by the Tuhavälja cadastral unit (cadastral registration number 43701:003:0127) where the soil had been prepared for establishing a landfill decades ago, and partly by the Kohtla metskond 3 cadastral unit (cadastral registration number 43701:003:0320). After the preselection of the location, the process moves on with a more detailed solution, the 2nd stage of the designated spatial plan and the strategic assessment of environmental impact. The planned landfill would hold 63 million cubic metres of industrial waste and its expected useful life would be 25 years with the current quantity of waste being deposited.

Considering the time-related uncertainty of the designated spatial plan of the new landfill, VKG also started analysing the possibilities of expanding the existing landfill in 2023, which would also allow us to create a new depositing area. Establishing a new depositing area by using the first or the second solution will allow VKG to continue its production activities and thereby the development of life in the region.

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### Volume

63 million

cubic meters of industrial waste



## Reduction of odour emissions

In order to further reduce the environmental impact of flue gases released from production activities in the reconstruction of the Petroter I plant, VKG Oil implemented the METEO app in 2022, the aim of which is to increase the response speed of the production unit in preventing and reducing possible odoriferous disturbances by operatively sharing meteorological data. In 2023, we continued analysing and adjusting the operating modes of production equipment in situations where odoriferous disturbances occur, in order to minimise the intensity and duration of odoriferous disturbances arising from VKG's production activities and the combined effect of the activities of other companies. According to VKG's constant monitoring station, the hourly average air quality limit of hydrogen sulphide (H<sub>2</sub>S) which characterises the intensity of a disturbance was in the case of wind blowing from the direction of VKG Oil's production territory exceeded on 120 occasions, which was 41% less than in 2022.

In order to further reduce odoriferous disturbances, a cooperation agreement was concluded with Envirosuite Limited (hereinafter Envirosuite) at the end of 2023, thanks to which we are now connected to a software solution that also helps forecast pollution levels and minimise environmental impacts through decisions made on that basis. Envirosuite is introducing the environmental information platform Omnis in VKG, which will allow us to gain better situation-based information about pollution levels both in the production territory and outside. This in turn will allow us to optimise work processes and reduce environmental impacts. The platform is also supported by additional monitoring equipment which help us to faster detect the occurrence of higher pollution levels and promptly respond to prevent the spread of the effect outside VKG's production territory.

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**In 2023**

41%

fewer air quality limit exceedances

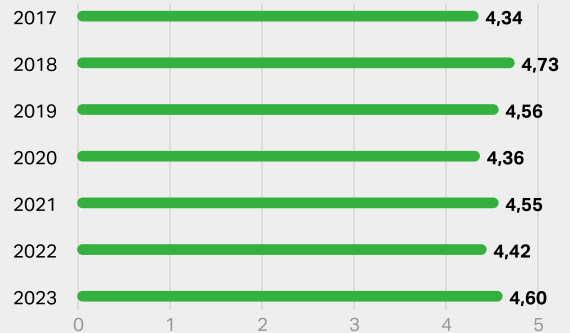
# Use of resources

## Extraction of mineral resources

The resource necessary for the production of shale oil and other products in the Group is provided by VKG Kaevandused whose active mining activities take place under three mineral resource extraction permits: Ojamaa, Sompa and Viru II. In connection with the exhaustion of the oil shale resource in the mining claims of the said extraction permits in the coming years, we have started the process of opening the Uus-Kiviõli II Mine.

VKG Kaevandused extracted 3.42 million tonnes of oil shale in 2022 and 3.51 million tonnes in 2023. In calculating the resource charges for extracting mineral resources, extraction losses are added to the extracted geological resource (in the case of underground mining, the pillars left to support the ground which together make up the extracted mineral reserve that has been rendered unusable. VKG Kaevandused extracted and rendered unusable a total of 4.42 million tonnes of oil shale in 2022 and 4.6 million tonnes in 2023.

EXTRACTED OIL SHALE QUANTITIES (IN TONNES)

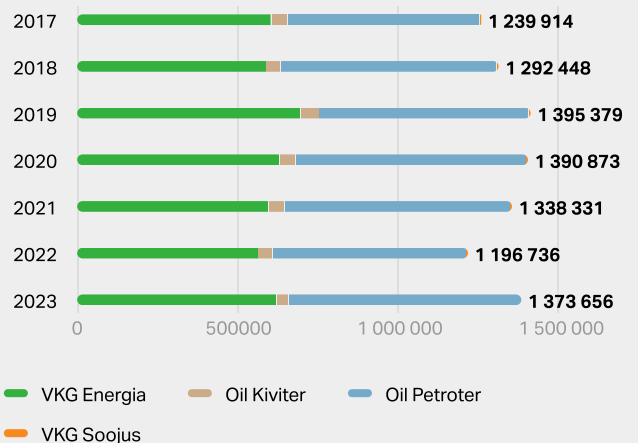


# Air emissions

## Carbon dioxide (CO<sub>2</sub>) emissions

The carbon dioxide emission quantities of the Group consistently decreased in 2020–2022 in connection with a decrease in production volumes and measures restricting greenhouse gas emissions. In 2023, the Group's production volumes grew considerably and CO<sub>2</sub> emission quantities increased. VKG's direct specific CO<sub>2</sub> emission, or the quantity of CO<sub>2</sub> in tonnes per a tonne of oil products was 2.05 t/t in 2023, remaining at the same level as in 2022. VKG continues investing into the reduction of the direct CO<sub>2</sub> emission per produced tonne caused by the production of oil products.

THE GROUP'S CO<sub>2</sub> EMISSIONS ACROSS COMPANIES (IN TONNES)



## Sulphur dioxide (SO<sub>2</sub>) emissions

The specific emission of sulphur dioxide (emission quantity per unit of production) is on a downward trend in the entire Group, demonstrating the increased efficiency of the sulphur removal system (including the application of automatic equipment and timely maintenance). The increase in specific emissions at VKG Energia in 2023 was caused by the composition of gas and equipment downtime. The decrease of specific emissions at VKG Oil was achieved thanks to suspending the operation of the electrode coke equipment.

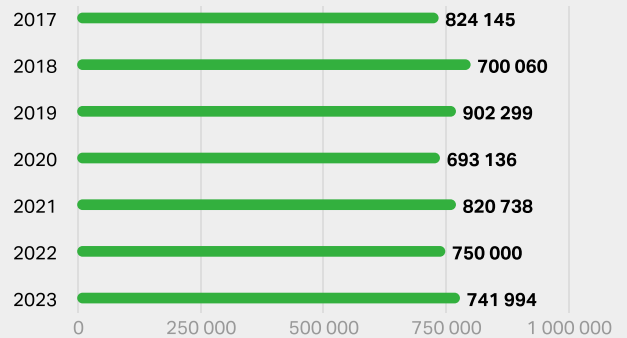
SPECIFIC EMISSIONS OF VKG OIL AND VKG ENERGIA SO<sub>2</sub> PER PRODUCTION



## Ambient air pollution charge

Although the Group's production volumes grew in 2023, the air pollution charges remained similar to the previous year, as the flue gas pollution levels of the Petroter I plant decreased after its reconstruction. In addition, the electrode coke equipment – which was one of the biggest sources of ambient air pollution in VKG's production territory – was conserved in 2023.

AIR POLLUTION CHARGES IN THE GROUP (EUR)



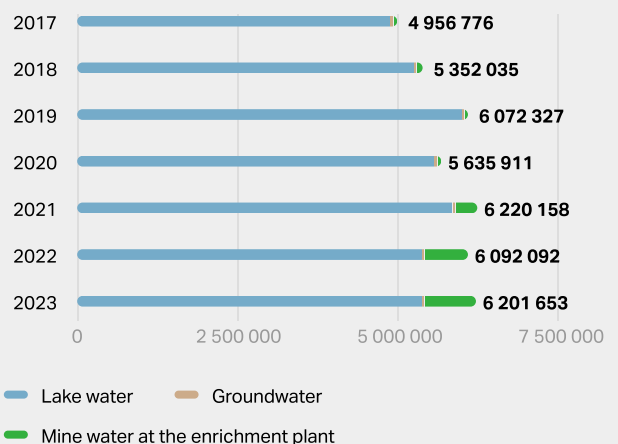
## Water usage and water emissions

### Water usage

The main objectives in the area of water usage include the expedient use of water resources, the efficient purification of waste water and the prevention of the entry of contaminants into water bodies. In cooperation with accredited chemistry laboratories and area-specific experts, VKG performs constant supervision over water protection areas, surface water, groundwater and waste water, and the soil.

The Group's total water usage has remained more or less the same in recent years. Due to the nature of work processes, the enrichment plant of the Ojamaa Mine has started to increasingly reuse mine water, while the use of lake water decreased in 2022 and 2023 compared to 2021 due to a decrease in the clients' water needs.

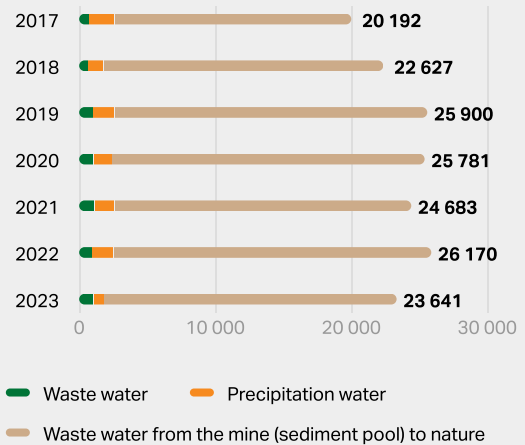
WATER USAGE IN THE GROUP (m<sup>3</sup>)



## Water emissions

Since 2020, the amount of waste water generated in the Group has been decreasing as a result of improved work processes, with the exception of 2022 when the quantities of discharged mine water increased due to an abundance of precipitation. In 2023, there was less precipitation.

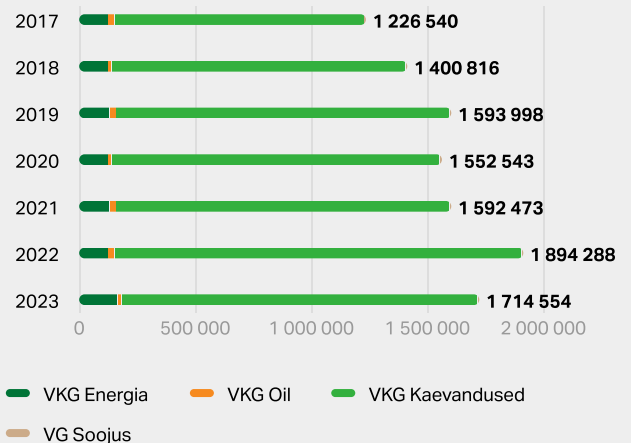
WATER EMISSIONS IN THE GROUP (TH m<sup>3</sup>)



## Environmental charges for water

The environmental charges for water (water abstraction charge + pollution charge) increased in 2022 due to an increase in the quantity of water pumped out of the mine and discharged to the natural water circulation caused by an abundance of precipitation. There was less precipitation in 2023 and therefore the environmental charges decreased.

WATER ABSTRACTION CHARGE AND WASTE WATER POLLUTION CHARGE (IN EUROS)



## Industrial waste

VKG works on the principle of circular economy with the strategic objective of adding maximum value to oil shale as a resource and using as much of the production waste as possible in new production processes. Nevertheless, the Group's activities generate waste for which no outputs currently exist that would meet the criteria of recycling and such waste remains in waste depositories to await suitable valorisation technologies.

### Industrial waste and its processing

VKG's activities generate mining waste, hazardous waste and ordinary waste. The enrichment of extracted material generates waste rock as a byproduct which is included among mining

waste and of which we reused 1,253,808 tonnes or 54% in 2022. While in preceding years waste rock was in accordance with project terms and conditions mainly used in tidying up the Aidu quarry, in 2022 the sales of limestone filler material (gravel) made from waste rock made up approximately as large a part (~600 000 tonnes). The remaining waste rock was temporarily placed into interim storage. In 2023, we reused 771,554 tonnes of waste rock (33%), which was less than before as we were waiting for an amendment to be made to the waste permit which would allow us to use waste rock for establishing a base structure for a solar farm. In 2023 we sold 713,293 tonnes of gravel.

In addition to the waste rock, we successfully recycle nearly all the scrap metal generated in the Group. With the help of our cooperation partners, we recycled 1,043 tonnes of scrap metal in 2023.



GENERATION QUANTITIES OF THE MAIN ORDINARY WASTE AND ITS REUSE IN THE GROUP (TONNES/YEAR)

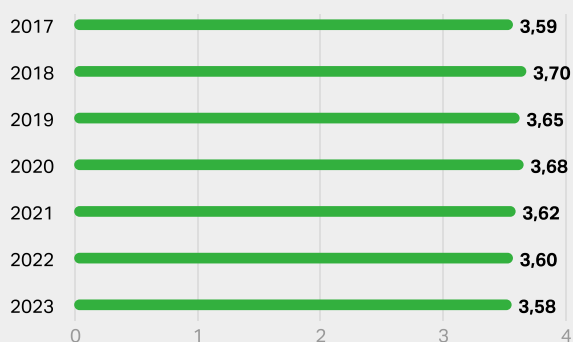
	2017	2018	2019	2020	2021	2022	2023
Construction and demolition debris	459	513	630	320	222	339	395
Everyday waste	284	283	286	166	160	241	230
Scrap metal	763	3 136	1 518	2 757	1 324	2 071	1043
Waste rock	2 053 864	2 298 701	2 274 156	2 292 205	2 423 944	2 330 142	2 334 338
Oil shale ash	1 651 832	1 768 186	1 883 510	1 858 566	1 784 323	1 632 760	1 913 561
<b>Total ordinary waste, in tonnes</b>	<b>3 707 202</b>	<b>4 070 819</b>	<b>4 160 100</b>	<b>4 154 014</b>	<b>4 209 392</b>	<b>3 965 553</b>	<b>4 249 567</b>

THE GENERATION QUANTITIES OF THE MAIN HAZARDOUS WASTE IN THE GROUP (MILLION TONNES/YEAR)

	2017	2018	2019	2020	2021	2022	2023
Semicoke	0,63	0,73	0,79	0,66	0,65	0,65	0,66
Gas purification waste	0,05	0,06	0,06	0,06	0,06	0,06	0,06
Phenol water	0,33	0,32	0,34	0,3	0,3	0,29	0,26
<b>Total hazardous waste (million tonnes)</b>	<b>1,01</b>	<b>1,11</b>	<b>1,17</b>	<b>1,02</b>	<b>1,01</b>	<b>1</b>	<b>0,98</b>

Semicoke (waste code 05 06 97\*) and oil shale ash (waste code 10 01 97) are the main types of waste generated in the process of producing shale oil. The former is generated in equipment using the Kiviter technology and the latter in equipment using the Petroter technology. The production of shale oil using the Kiviter technology also generated large quantities of phenol water from which we separate – as the only one doing so in Estonia – valuable chemicals of up to 99.8% purity. Similarly to semicoke and phenol water (waste code 05 06 96\*, the residue from the purification of the flue gases generated upon burning the residual gases from the production of shale oil is also considered hazardous waste (waste code 10 01 18\*) and they are therefore subject to stricter usage restrictions and the currently most environmentally friendly method of handling them is depositing them in a production waste landfill. Oil shale ash, the quantities of which have decreased in recent year in connection with production capacities, is also deposited in an industrial waste landfill designed by specialised engineers.

THE GENERATION QUANTITIES OF THE MAIN HAZARDOUS WASTE IN THE GROUP (MILLION TONNES/YEAR)



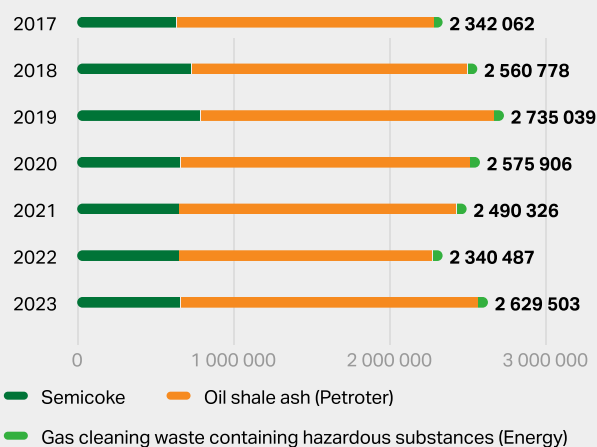
## REUSE OF WASTE IN THE PAST 5 YEARS (T/A)

	2019	2020	2021	2022	2023
<b>Reuse of waste (t)</b>	<b>2 435 247</b>	<b>2 058 266</b>	<b>2 621 778</b>	<b>1 550 565</b>	<b>1 036 191</b>
incl. waste rock	2 093 845	1 753 048	2 324 390	1 253 808	771 554
incl. scrap metal	1518	2757	1324	2071	1043
incl. phenol water	339 884	302 461	296 064	294 686	263 594

## Deposition of waste

The industrial waste of VKG Oil (ash and semicoke) and VKG Energia (gas purification waste) is deposited in an industrial waste landfill. Pursuant to the integrated environmental permit of VKG Oil, waste (mainly contaminated soil) from environmental projects carried out by external companies can also be deposited. Upon depositing waste from other environmental projects, the methodology suitable for properties of the specific waste is used. In 2023, we deposited 48,655 tonnes of contaminated soil from environmental projects.

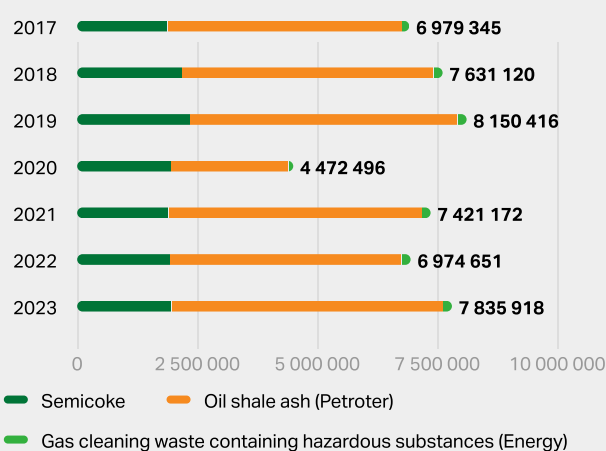
### THE QUANTITIES OF THE MAIN TYPES OF WASTE DEPOSITED IN THE INDUSTRIAL WASTE LANDFILL



## Waste disposal charges

The disposal charge paid by VKG decreased since 2019 and increased in 2023 in connection with changes in production volumes. The difference became apparent in 2020 when the state temporarily applied a smaller charge for depositing oil shale ash. The disposal charge paid in 2023 amounted to approximately 9.3 million euros, of which 1.5 million euros was made up by charges for depositing waste from other environmental projects, i.e. waste not generated by the Group.

### DISPOSAL CHARGES FOR THE MAIN TYPES OF INDUSTRIAL WASTE (IN EUROS)



# Energy efficiency

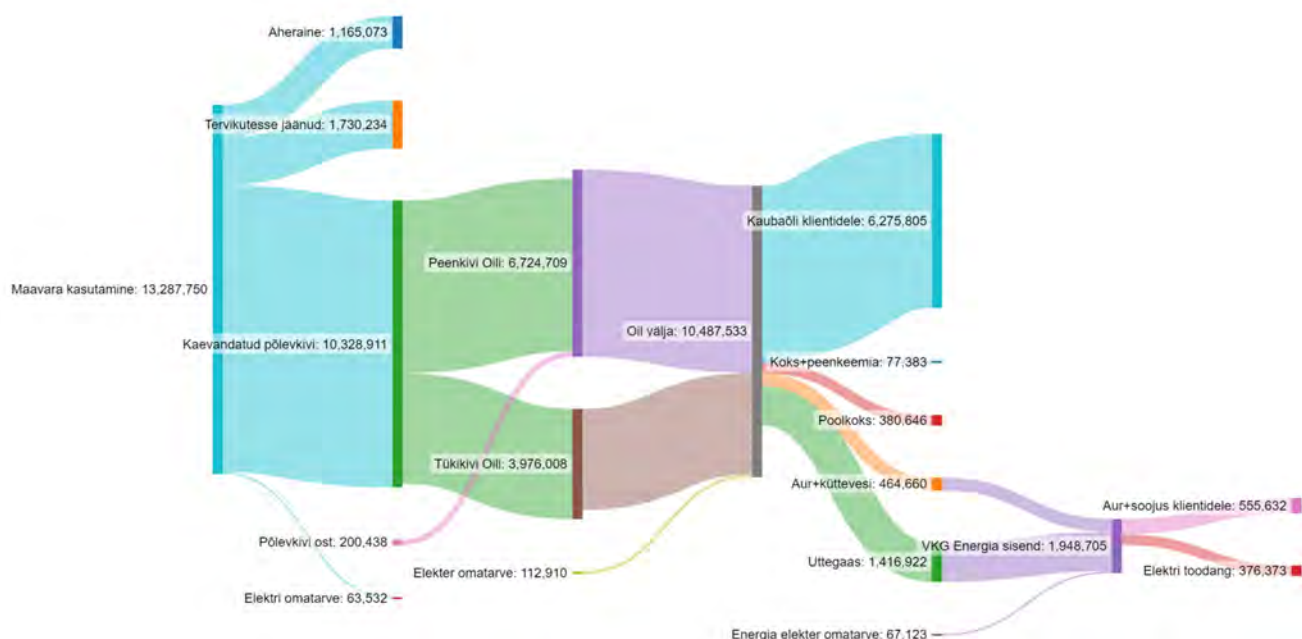
The efficient use of energy resources allows us to improve productivity, optimise production resources and reduce the environmental footprint.

In achieving the energy efficiency goals, we comply with the following principles:

- the development of energy management and certification under international standard **ISO 50001**;
- **training the personnel** in the area of energy management and efficiency;

- **innovation** in measures and technologies **aimed at energy economy**;
- **implementation of automation and digitisation** projects;
- **exchanging information** with other companies in the same sector, and with research institutions.

## Energy efficiency at VKG



## Year 2022

In 2022, we extracted oil shale in a quantity corresponding to **13,287,750 MWh of energy**, from which we produced:

**of oil products**

6 275 805

MWh

**of coke and fine chemistry products**

77 383

MWh

**steam and district heat**

77 383

MWh

**of electricity**

376 373

MWh

**The Group's companies produced from the extracted oil shale**

7 285 193

MWh of products

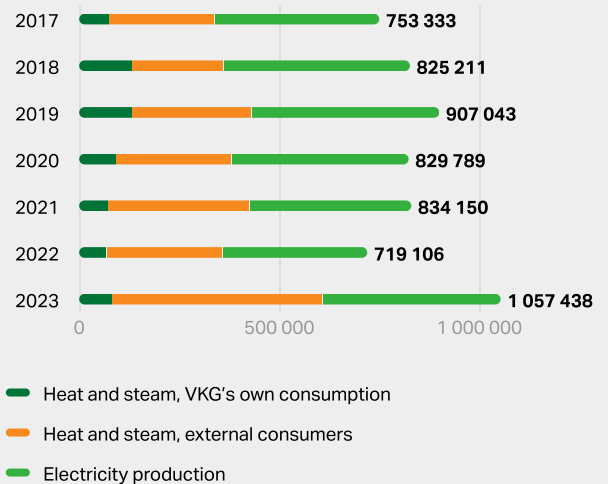
**In 2022 VKG's energy efficiency in using the oil shale resource was**

54,8%



Compared to previous years, the amount of energy produced by VKG Energia decreased in 2022 in connection with the extensive reconstruction of the Petroter I plant carried out by VKG Oil, due to which the plant did not operate for nearly half a year and no ewe gases were supplied to VKG Energia. However, largely thanks to the successful reconstruction of the Petroter I plant, the production of energy grew to over 1 million MWh in 2023. Compared to 2022, we managed to supply as much as 50% more heat and steam to external consumers.

ENERGY PRODUCED BY VKG ENERGIA (MWH)

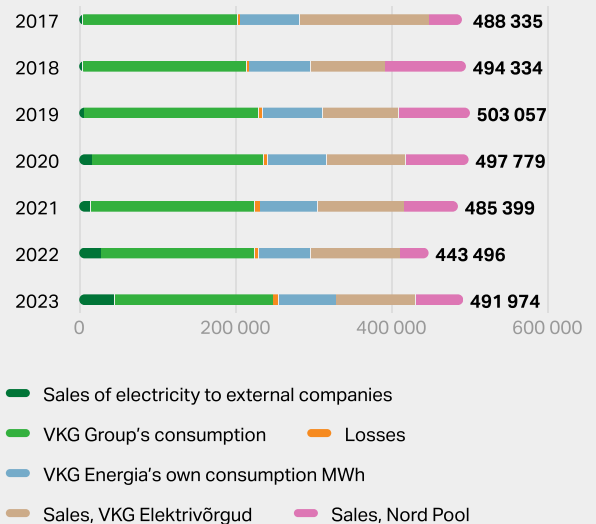


VKG Energia's heat sales volume mainly depends on the weather with regard to district heating and on the clients' consumption pattern with regard to steam. The own need for heat mainly depends on the volume of oil shale processing and cannot be significantly influenced in a cost-effective way. The main energy efficiency measures are therefore aimed at reducing electricity consumption.

VKG's electricity consumption has been relatively stable in recent years, below 500 thousand MWh a year. In 2022, the need for electricity decreased due to the production downtime caused by the reconstruction of the Petroter I plant.

We apply Group-wide energy consumption monitoring in accordance with the principles of ISO 50001. A system of energy consumption indicators has been developed per individual consumers and consumption optimisation solutions have been prepared for high-consumption production sections and equipment. By using energy in a more optimal manner, we increase the level of adding value to oil shale and improve the management of the production process, thereby reducing the risks of production stoppages. Production equipment is additionally fitted with modern measurement and control instruments, such as the Coriolis flow metres and additional frequency converters on rotating equipment.

VKG'S ELECTRICITY CONSUMPTION AND SALES TO THE OPEN MARKET (MWH)





8

## Our People

Our people are of utmost importance in implementing our strategy and achieving our objectives. We focus on supporting them and developing their skills so that they can successfully work and help us to achieve success.



People are our greatest value. Without their dedication and work we would not be able to achieve our objectives and continue our successful journey. The contribution of every employee is priceless and we are sincerely grateful for it to everyone.

As an employer, our aim is to ensure a safe and motivating working environment for our people. We wish for our employees to feel valued and esteemed at every step. People's wellbeing and satisfaction are of primary importance for us, because we know that a happy and satisfied employee is the best recommender of the employer.

We are committed to offering people the best conditions and opportunities for development. Together we can build a strong and closely-knit team where everyone feels important and valuable.



**Eve Rei**  
HUMAN RESOURCES DIRECTOR

## The focal points of our personnel policy

- We value
- We recognise
- We support the team spirit
- We facilitate and develop future employees
- We create a safe working environment

We promote cooperation between the Group and the employees on the basis of the principle of partnership, maintaining an optimal balance of the parties' interests in the framework of the Group's objectives and the obligations assumed. VKG aims to offer its people stability and a sense of security with regard to the future, but achieving this is a challenge, considering the volatility of the oil market and the fickle policies of the state.

Viru Keemia Grupp is one of the largest employers in Ida-Viru County. In addition to its own 1,560 employees, the Group's wellbeing influences the wellbeing of another several thousand people in the region, who are related to the Group via family members or the employees and family members of cooperation partners and suppliers.

# The most important principles of the personnel policy

## SAFETY

We place the safety of employees, local residents and the environment above any economic, technical or other considerations. We ensure safe working conditions for our employees and demand the same from our partners.

## EFFICIENCY

We strive to be as efficient as possible in our activities and recruit professionals who are the best in their field, highly motivated and determined.

## INCLUSION

We believe that the achievement of our established ambitious objectives is only possible through the joint efforts and concerted activities of the Group's employees. We invite our employees to participate in corporate processes and to actively provide feedback.

## RESPECT AND NO DISCRIMINATION

Relationships in the Group are based on mutual respect and trust – we value every employee and listen to their opinions. The diversity of competences, viewpoints and experience aimed at our joint objective allows us to solve complex tasks.

## HONESTY

We comply with high ethical standards and are honest towards our employees.

## Code of Ethics

The Code of Ethics and the Principles of Operation form a master document which regulates our activities and conduct and we expect all of our employees and members of the Management Board and Supervisory Board as well as our cooperation partners to adhere to it. Not only our reputation, but also our sustainability depends on our attitude to our colleagues and the fulfilment of our work tasks. Ethical behaviour and attitudes are the basis for reliable partnership and our image as an employer.

The ethnic, gender, age and language diversity of our employees set great demands for us with regard to equal treatment, inclusion and exchange of information. The uniform rules of conduct, corporate values and ethical conduct guidelines described in the personnel policy ensure honest and fair employment relationships and the loyalty of employees.

In 2023, we received three complaints, all related to verbal offence between colleagues. We talked to the parties and they apologised and made up. Unbiased representatives of the Group handle the determination of the circumstances of incidents, the provision of feedback and the development and implementation of preventive measures. All the violations of the standards of ethics are reported to the management.





# About our employees

The success of Viru Keemia Grupp is based on competent and motivated employees who do their work with dedication, are loyal to the company, and jointly create value.

As at the end of 2022, the Group employed 1,193 men and 367 women. The proportion of male employees is significantly higher due to the physical nature of work. The average age of employees is 45 years, with nearly 900 employees in the age group of 35–54. As at the end of 2023, the Group employed 1,502 employees, including 1,184 men and 353 women.

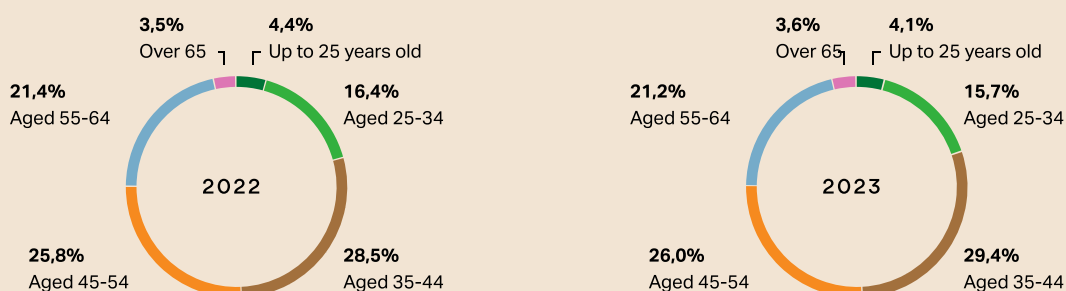
The average length of service of the Group's employees is 10 years. The Group has 129 employees whose length of service is more than 25 years and 21 of them have been working at the Group for over 40 years. There were no great fluctuations in personnel during the reporting period.

## The number of employees by companies during the reporting period, as at 31 December 2022 and 31 December 2023

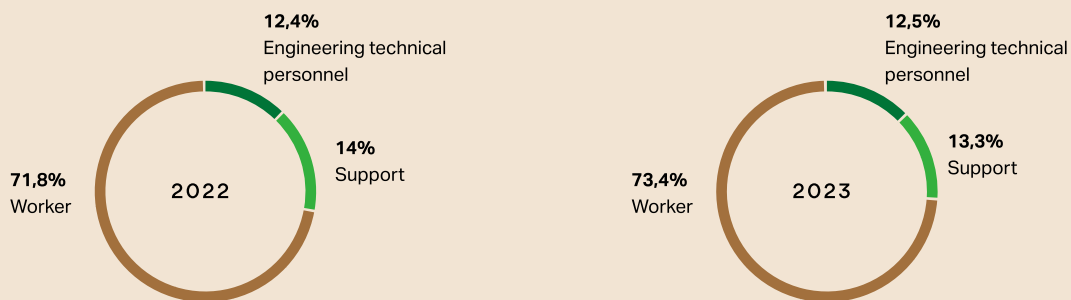


Several structural changes took place in the Group in 2023, the greatest being the restructuring of Viru RMT, where employees were transferred from Viru RMT to Viru Keemia Grupp, VKG Oil and VKG Logistika.

## The age structure of the Group's employees, 2022-2023



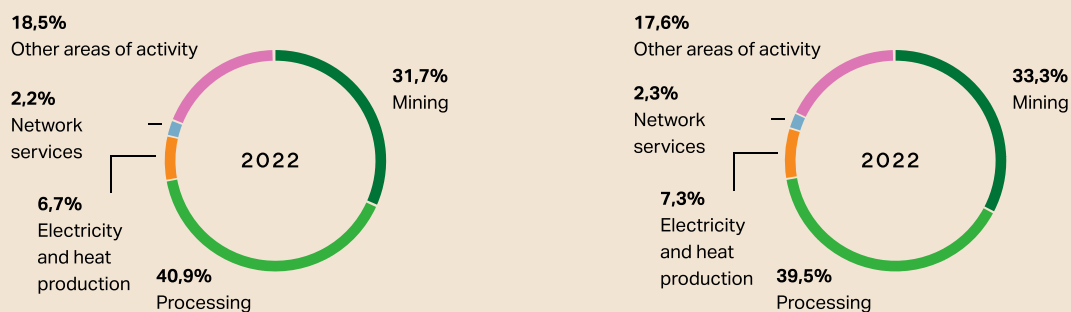
### Distribution of employees by categories, 2022–2023



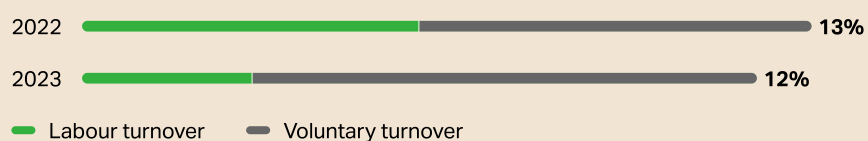
### Ratio of men and women in the management, 2022–2023



### Distribution of employees by the main area of activity, as at 31 December 2022 and 31 December 2023



### Labour turnover (%)



In 2022, 206 new employees started work and the employment relationship was ended with 227 employees. The labour turnover rate was 12%, with voluntary turnover being 9%. The turbulent energy market changed the Ida-Viru labour market situation significantly and increased the Group's labour turnover, particularly at VKG Kaevandused. Demographic changes, emigration from Ida-Viru County and other external factors have caused an increase in the deficit of suitable employees in the region, which has lengthened the time of recruitment of employees and put significant pressure on the price of labour.

In 2023, 177 new employees started work, with the majority of them in the age group of 25–44. The employment relationship ended with 208 employees. The labour turnover rate was 13% in 2023, with voluntary turnover being 7%.

## Gross salary



90% of the Group's employees are the residents of Ida-Viru County and through their wellbeing we contribute positively to the regional standard of living. In 2023, the salary paid at the Group was 17% higher than the average in Estonia and 49% higher than the average in Ida-Viru County. The Group's average salary was 2,146 euros in 2023. We also offered various additional benefits and compensation to our employees in the amount of 1.6 million euros last year.

Remuneration at the Group is based on the labour market situation in the region, the salary market conditions of different sectors, the level of responsibility and skills of the employee, and other indicators which may have an effect on the bases of pay. The results of the Estonian salary survey conducted by Fontes confirm that the salaries paid at the Group are higher than the average salary of Ida-Viru County and our competitive position in the labour market is strong.

VKG applies a transparent performance pay system with clearly defined principles. Balanced working conditions and a fair remuneration system ensure motivated and loyal employees and a strong work culture. The employees' satisfaction and commitment were also increased thanks to the Christmas benefit paid to all the employees at the end of 2022.

Employees receive additional pay for working in the evening and at night. The Group strictly adheres to the Employment Contracts Act. The working time regime is in conformity with the law and the collective agreement. If the working time of an employee differs from the provisions of the employer's general rules, the working time is regulated in the employment contract, taking into account the nature of work, the specifics of production, and working conditions. Work is organised in shifts, if the production process is longer than the allowed working day, as well as for the more efficient use of the equipment and for increasing the production volume or providing more services.

In addition to salary, a tenure bonus is paid to the Group's employees as well as a child birth bonus, an anniversary bonus, and a funeral bonus on sadder occasions. Parents with small children can take additional paid leave.

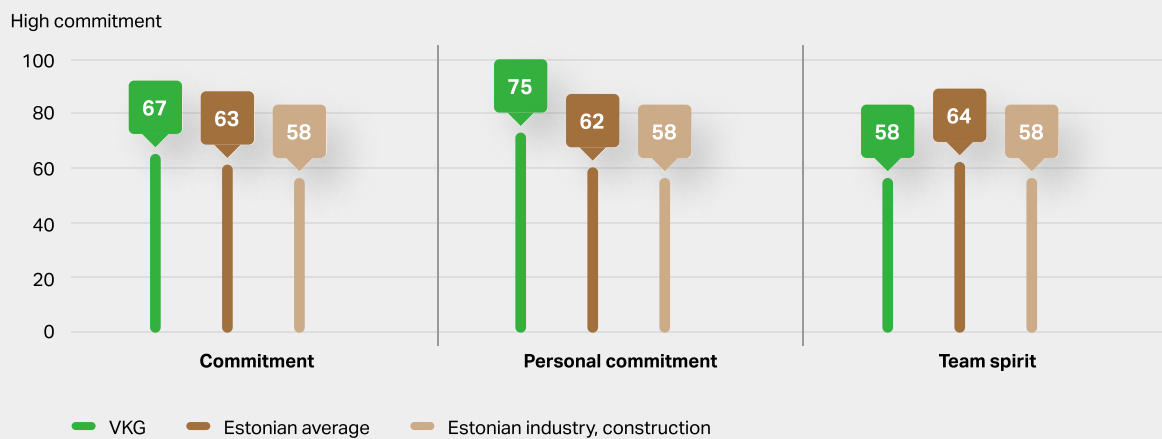
# Commitment and satisfaction survey: VKG's employees are satisfied with their employer

At the beginning of 2023, we conducted a survey of the commitment and satisfaction of VKG's employees in cooperation with market research company Kantar Emor. The survey was open to all the employees of VKG and 66% of our employees responded to the survey.

On the basis of the employees' answers, VKG's commitment index is 67, which exceeds the average of both Estonia and the sector of industry. The personal commitment indicator – 75 points – is significantly higher than the average in Estonia. With regard to team spirit, we are at the Estonian average level, but remain below the Estonian average compared to the

construction and industrial sector. Thus, we can conclude that we still have room for development in the areas of teamwork, common goals and cooperation and we can grow together. It was pleasing to see that general satisfaction with VKG as an employer was 4.1, and 45% of the respondents supported VKG's future plans with the maximum points.

## EMPLOYEES' COMMITMENT



## Development of our people

The Group focuses on ensuring the availability of new employees and offering development opportunities to our employees. We are also a practice place for many students. We believe that we can stay in competition and be successful as an organisation in changing market conditions only by developing and updating the skills and knowledge of our employees.

Every employee of the Group has an opportunity to improve their skills and to develop. An employee's needs and wishes are mapped at development interviews and his or her training map is prepared on the basis of that. We support and facilitate our employees' wishes to learn and obtain new knowledge. At the same time, our training portfolio also includes a mandatory study programme which introduces the relevant laws and regulations and out internal standards.

VKG's priorities in the area of training in 2022:

- **development of competences that facilitate teamwork and cooperation,**
- **improvement of the skills of using Office programmes,**
- **implementation of the Toolkit training opportunities,**
- **improvement of the level of skills of using the software used in the Group,**
- **ensuring the availability of future specialists/operators for VKG Oil,**
- **improvement of work-related competence/qualification.**



## Training 'I Choose', completed by 90% of the employees, i.e. 1,461 people

In autumn 2022, we conducted – for the first time in the Group's history – an extensive study programme titled 'I Choose' which covered all the Group's employees. The 'I Choose' study programme was aimed at improving our safety culture, systematising our knowledge in this area, and analysing our patterns of behaviour.

As long as accidents happen in the Group's companies, we cannot say that all is well! Colleagues who promote occupational safety organise various events to increase awareness in these matters. This is not enough, however. Without everyone's active participation and responsible attitude, we shall never reach the level of conscious safety. Safety culture is a behaviour culture. Placing safety first and foremost and noticing any violations of safety rules must become natural for us, an integral part of everyday life – such as greeting colleagues or home folks when arriving at work or at home.

Our jobs and work duties may be very different, but there is one thing that connects us. Regardless of whether we descend to the depth of 30 metres, clean a reactor, configure high-technological equipment, bear responsibility for the functioning of a turbine, drive a truck or sit at a computer in an office – every one of us must feel protected and be sure that nothing at work endangers their health and life. At the same time, everyone must act so that their activities do not endanger themselves, their colleagues, partners, and city residents.



We have never had a project like this before and I personally am very pleased that we are training such a number of people. The employees' conscious occupational safety training is worth all the efforts, despite the volume of preparation, organisation and subsequent activities. I also think that now is the best time for it.



**Ksenia Moskvina**  
SAFETY MANAGER



I am so thrilled about this project! VKG's dedication to occupational health and safety and their desire to seriously work with the human factor is very cool! I am honoured to participate in this process. I can say from experience that training influences everyone individually, but if we talk about the whole group, training has an in-depth effect on the entire safety culture.

I fully support the need to conduct a 'base survey of safety culture maturity' and the monitor its development. The human factor, care, trust, openness, and a grown-up attitude to work and life are the key to personal wellbeing and corporate success.



**Erkki Anttila**  
EDUCATOR

**total for all group employees**

3 062

training days

By the end of 2022, the Group's employees accumulated a total of 3,062 training days, with our colleagues being engaged in self-improvement on 103 out of 365 calendar days. These figures very clearly show that 2022 was a year of development for us and VKG's employees learnt more than ever before in that year.

## A new learning management system – Coursy

We obtained a full-service user licence for the Coursy learning management system at the end of 2022. The need for a learning management system stemmed from the large number of internal and external training courses. Many of our employees are involved in organising various training courses and events: working environment specialists, equipment operators, workplace instructors, immediate superiors, quality specialists, secretaries and manager assistants, and the training manager. In parallel to their main duties, they constantly looked for possibilities to satisfy the training needs, organising training and storing training documents.

By now, all the Group's mandatory training courses have been transferred to the learning management system: introductory occupational safety instructions and examinations as well as the instruction materials and tests necessary for acquiring and improving qualifications. This helped make instructions and knowledge testing uniform in the entire Group and made results easily available. We automated the time-consuming organisation and documentation of tests and exams. When certificates are about to expire, the system provides automatic notifications and, if necessary, we can also make extracts ourselves.

By using the learning management system, we reach every employee individually – we map their development needs and direct them to the necessary training course.

The following was in the focus of human resource development at the Group in 2023:

- **development of first-level managers;**
- **development of a follow-up safety culture programme;**
- **increasing cyber awareness in the entire Group;**
- **certification and improvement of qualification, harmonising the Group's qualification system;**
- **development of skilled workers.**

The 2023 priorities in the area of employee development included a mid-level manager development programme, in which 249 employees participated, and a development programme for internal training instructors, mentors and tutors, with the aim to ensure the systemic internal transfer of work-related competences. In 2023, 651 employees took part in internal training.

VKG Oil's technological equipment operator progeny project continued in 2022 and 2023. In 2022, we recruited 21 employees who started studying under the on-the-job study programme of the Ida-Viru Vocational Education Centre and working as technological equipment operators at VKG Oil. In 2023, another 14 future technological equipment operators joined the programme, while simultaneously acquiring a vocational education.

An on-the-job study group was also opened for industrial automation specialists. The graduates of the on-the-job study groups will in 2023 and 2024 be an important addition to our qualified personnel.

In 2023, we organised over 80 training days in which nearly 700 employees participated. This took 1,017 working days during which the employees were absent from their main duties to ensure that their skills and knowledge are significantly improved when they return to their workplace. We invested 500 working days into the development of the management experience of first-level managers and continue with that in 2024.

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In 2023

**We organized over**

80

training days

**Nearly participated**

700

employees

**It took**

1017

workdays

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During the reporting period, we provided internships

**In 2022**

42

to students/pupils

**In 2023**

59

to students/pupils

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The group's investment in employee further education

**In 2022**

400 000 €

**In 2023**

320 000 €

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## What will the Group's training year 2024 be like?

When mapping problems and development needs and sensing the large number of tasks waiting to be fulfilled, we established the following training priorities for this year:

- **improvement of the level of work-related qualification – creating a systemic internal training structure, developing the competence of internal training instructors and tutors,**
- **development of the management skills of first-level managers (continued programme),**
- **development of the knowledge and skills of automation specialists and electricians.**

## INTERNAL EVENTS AS AN OUTPUT IN THE VALUATION OF EMPLOYEES



We value our employees and show it with our traditions. While the Day of Chemists and the Day of Miners have by now become the favourite public parties in Ida-Viru County, we also have a number of internal events: Christmas parties, jubilee gratitude events, the School Bell Party for children starting in the 1st grade and their parents, where children receive a schoolbag equipped with all the necessary school supplies as a present.

## CHILDREN SAFELY TO SCHOOL



For more than 20 years now, VKG has been holding a festive day for first grade pupils in order to together enjoy the last days of summer and prepare for school. Every year, we give children cool schoolbags with all the necessary school supplies a present. During the reporting period, 140 children of the Group's employees started their school career.

## PARTICIPATING IN PROMOTING SAFE TRAFFIC ON THE RAILWAY



We take part in the fun international event called the Handcar Rally. The two-day 140-kilometre competition on rails started from the territory of VKG in Kohtla-Järve on 28 July 2023 and put the team spirit of VKG's employees to the test. The Handcar Rally took place for the 13th time, with 14 teams from various railway companies, institutions and safety organisations. VKG participated for the fifth time, but we put out our team first in 2014.

## VKG MOVING FOR YOUR HEALTH



An active lifestyle and health have become an increasingly important topic in recent years and take up an increasing part of our time every day. We promote this attitude also among our employees and invested 100,000 euros in supporting our employees' sports hobbies in the reporting period.

For a long time, we have also cooperated with the YuMuuv team, using the app to offer our employees different monthly challenges which inspire and make it easy to take care of the most important thing – our own health. It has been proven that moving releases happiness hormones which improve our wellbeing. By moving, we keep our physical health in a good state, while also taking care of our mental health. It is also an important step towards reducing the level of stress at work.

## Cooperation with educational establishments

The Group has been supporting the best students with scholarships since 2003. With the scholarships, we wish to primarily support education in the areas of engineering and chemistry and motivate successful students. The Group's annual scholarship fund is 13,100 euros and applying for a scholarship is done via the TalTech Development Fund. The total amount of scholarships we have awarded over time exceeds 165,000 euros.

VKG's bachelor's degree scholarships are granted to up to two successful bachelor's students of electrical engineering, mechatronics, earth sciences and geotechnology, environmental and chemical technology or thermal engineering at TalTech's School of Engineering. One scholarship is 2,000 euros.

VKG's master's degree scholarships are granted to one successful master's student of environmental and chemical technology, fuel chemistry and technology, thermal engineering, and electrical engineering at TalTech. One scholarship is 3,000 euros.

VKG's professional higher education scholarships are granted to up to two successful professional higher education students of fuel technology, industrial automation, machine building technology, energy technology, chemistry technology, energy technology process control and telematics and smart systems at TalTech's Virumaa College. One scholarship is 2,000 euros.

Since 2020, we are also awarding two VKG Medallist Scholarships to the students of the TalTech Virumaa College. The amount of VKG's gold scholarship is 1,500 euros.

Starting from the academic year of 2023/2024, we established a scholarship for the employees of Viru Keemia Grupp and its subsidiaries studying chemistry technology (professional higher education studies) and sustainable chemistry technologies (master's studies) at the TalTech Virumaa College. The amount of the scholarship is 1,000 euros upon the completion of each academic year. Upon completing the chemistry technology (professional higher education studies) and sustainable chemistry technologies (master's studies) study programmes in the nominal time, the scholarship is 2,000 euros.



VKG's scholarships support the students' motivation in acquiring the professions necessary in the Group and give a clear signal that we expect young specialists to join our ranks.

The Group also places great importance on cooperation with schools. We strive to create an uninterrupted path of education: school – university – company, aiming to ensure a constant inflow of young people and the proper qualification and the necessary competence of our future specialists. The Group cooperates closely with the local upper-secondary schools, from the STEM programme to the Five Schools' Contest.

During the reporting period, the Group also continued its cooperation with the programming school kood/Jõhvi operating in Jõhvi.

The Group's team is also an active participant in various student career events, talking about exciting challenges in the industrial sector.



## Cooperation with trade unions

The Group has a long-standing partner relationship with the Trade Union of Chemists. The representatives of the trade union actively participate in the development of the Group's production safety culture, discussions on changes in the system of social benefits, and measures to create safe working conditions.

Virus Keemia Grupp has a collective agreement which establishes the Group's social obligations towards its employees. At the end of 2022, Virus Keemia Grupp and the Trade Union of Chemists signed a new collective agreement for 2023–2024.

The new collective agreement preserved all the previously agreed social guarantees and benefits. A great emphasis is on the improvement of the working environment, which is extremely important for both parties. When discussing occupational safety and working environment topics, the parties are generally always in one mind and convinced that the working environment can be made better and safer only through cooperation. An important change was that the employer will invest even more financial resources in the training of trade union members and trustees, thereby supporting an important value of the Group – development – and helping to ensure the quality of the contribution of trustees.

As at the end of 2023

of the Group's employees

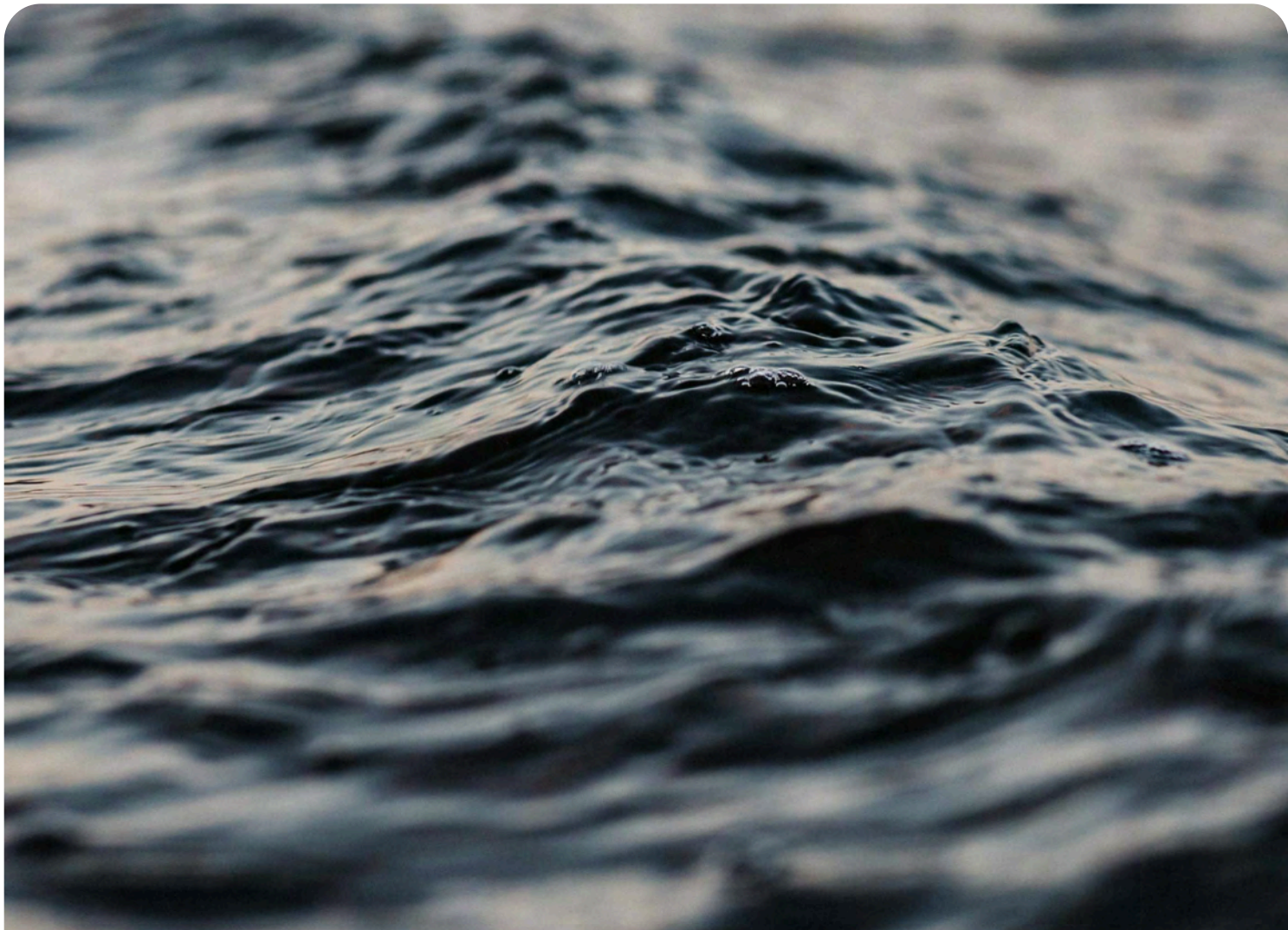
30%

were members of the trade union

the collective agreement covered

100%

of the employees



# Economic Environment and Main Economic Results

The past two years turned out to be very extraordinary, which was doubtlessly reflected in the Group's financial indicators. We have outlined the main economic results of the reporting period below.

## Economic environment in 2022

2022 began with the continued effect of the COVID-19 pandemic, but the pandemic started to wane by the second quarter of the year thanks to vaccination and the virus becoming less dangerous. This allowed the people's free movement to be restored and economic activity increased considerably, until we started even forgetting the coronavirus crisis.

However, before the complete withdrawal of the pandemic, a new crisis erupted – Russia's invasion of Ukraine. This caused extensive economic sanctions for Russia, as a result of which energy and raw material prices steeply rose. This added inflation pressure which had already started with the removal of the COVID-19 restrictions and which was also supported by the aggressive monetary policy of central banks. In order to curb the inflation, central banks increased interest rates – the US Federal Reserve interest rate rose from zero to 4.33% and the European Central Bank's depositing base rate rose to 2%, which was the highest since 2008. These steps caused the economic activity to drop and hindered economic growth.

The Estonian economy quickly responded to the global situation, causing a rise in consumer prices and a decrease in GDP calculated in real prices. In 2022, the average increase in consumer prices was 19.4% in Estonia, with GDP dropping by 1.3%. The rapid price increase and the salary pressure which caused a salary increase of 8.9% reduced the purchase power of Estonian people, as salaries could not keep up with the inflation.

Viru Keemia Grupp was influenced the most by events in the global oil market. The Brent oil price rose significantly in 2022, reaching the level of 128 dollars a barrel in March – the highest level since 2008. The crude oil prices remained volatile, fluctuating between 100 and 120 dollars, but dropped back to the same level as at the beginning of the year. The average price was 99 \$/bbl.

## Economic environment in 2023

In 2023, the world economy was characterised by the continued war in Ukraine, rapid inflation, and high interest rates. According to the assessment of the International Monetary Fund, the world economy grew by 3.1% in 2023, but that was lower than the historical average. The euro zone GDP grew by only 0.4%, curbed by high interest rates and inflation pressure. The US and European central banks raised the interest rates to record levels to combat inflation caused by the preceding expansive monetary policy and the increase in energy prices due to Russia's invasion of Ukraine.

The economic situation was even more complex in Estonia. According to Statistics Estonia, Estonia's GDP dropped by 3% in 2023. The constant price increase and high labour expenses reduced the competitiveness of the economy. The inflation and the increase in the average gross salary remained at a level that indicated a deepening economic recession.

VKG's economic results were influenced by the global oil markets in 2023. The volatility of oil prices was smaller than in the previous year, but still notable. The Brent oil price dropped to 72 dollars a barrel in June, but rose again to 97 dollars by the end of September, dropping back to 77 dollars a barrel by the end of the year. The average price was 82 \$/bbl, which was 17% lower than in the previous year.

VKG sells most of its products at the price of the 1% sulphur content fuel oil, the average price of which increased by 43% in 2022, reaching 542 €/t, which was higher than the increase in the Brent oil price measured in euros, as the euro exchange rate to the dollar weakened. The fuel oil price stabilised by the end of 2022.

The 1% sulphur content fuel oil prices were also volatile in 2023, starting the year from 400 €/t and rising to 539 €/t in September, and then dropping back to 405 €/t by the end of the year. The average price of fuel oil was 437 €/t in 2023, which was 19% lower than in the previous year. The proportion of VKG's export sales grew to 62% in 2023, although some of the sales was recorded as local sales due to large buyers being located in Estonia.

THE PRICE OF 1% SULPHUR CONTENT FUEL OIL IN 2022-2023



The proportion of VKG's export of the consolidated net turnover was 62% in 2023 (36% in 2022). Although the majority of the end consumers of our products are outside Estonia, the proportion of export was lower than usually in 2023 and particularly in 2022, as one major buyer has a permanent establishment and a VAT number in Estonia, and that sales was therefore recognised in VKG's statements as local sales. In managing the Group's financial risks, it is extremely important to take into account the volatility of the oil market and the growth trends in production prices. In order to ensure the sustainability of the company in the volatile market environment, it is important to maintain liquidity buffers that are larger than those of ordinary companies, so that we would be able to survive in steep drops in market prices. When competing in the global raw material market as a producer of base products, we must constantly control our production expenses in order to ensure the competitiveness of production also during low periods in the oil market.

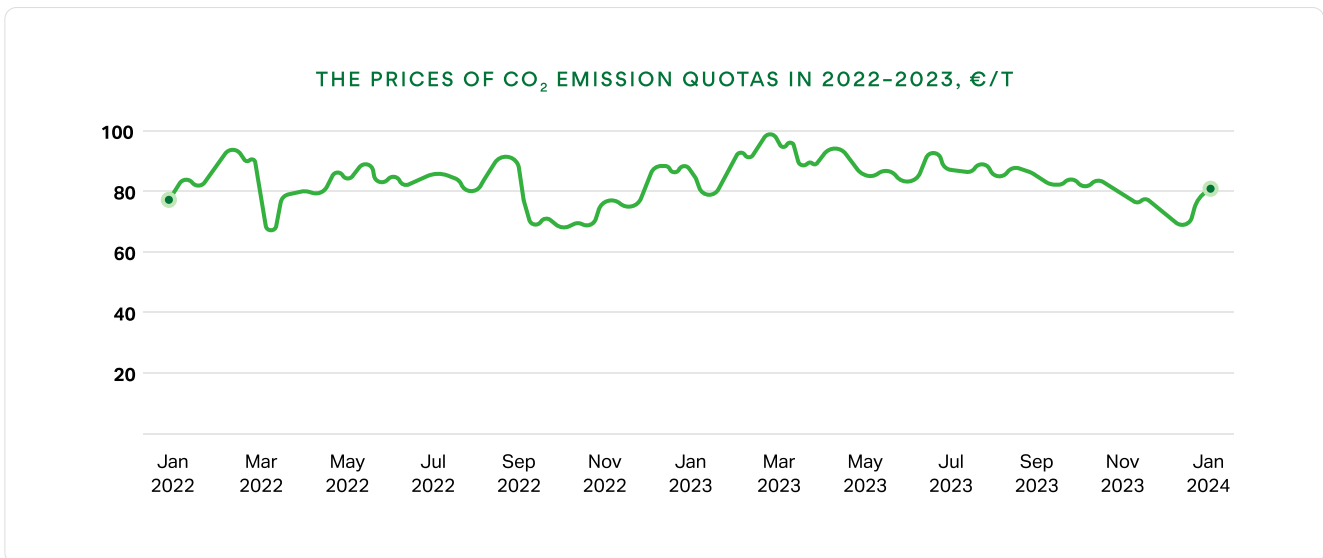
In conclusion, we can say that the economic environment of 2022 and 2023 was full of challenges, starting from the waning pandemic and continuing with a military conflict in Europe, which had an impact on the energy markets and caused extensive inflation. The central banks' increase in interest rates and a decrease in economic activity hindered economic growth both globally and in Estonia. Viru Keemia Grupp was strongly influenced by events in the global oil market, but was able to adapt to volatile prices and geopolitical tensions, maintaining its production and export competitiveness.

## The prices of CO<sub>2</sub> emission quotas continued at historically high levels

The aim of the emission quotas system is to reduce the release of CO<sub>2</sub> emissions to air across Europe by compelling energy producers to use less polluting raw materials and invest in more efficient production technologies.

In 2022, the average price of CO<sub>2</sub> emission quotas was 81.2 €/t, which was 51.3% (+27.5 €/t) higher than in 2021. Until the end of the first half of the year, the prices were affected by high natural gas prices and the increased use of coal plants. At the beginning of the second half-year, a decision was made to finance the renewable energy and energy efficiency goals with the sale of CO<sub>2</sub> emission quotas, which together with the exceptional measures announced in summer reduced the price from the year's peak – 92.2 €/t – to 66.5 €/t. The prices rose to 83.9 €/t by the end of the year, influenced by changes to Europe's climate goals and increasing the emission reduction goal.

In 2023, the average price of CO<sub>2</sub> emission quotas was 85.3 €/t, which was 5% (+4.0 €/t) higher than in 2022. The average price of the first half of the year was 89.4 €/t, influenced by the more extensive use of coal plants. In the second half of the year, the average price was 81.2 €/t, influenced by the larger number of traded quotas, warmer weather and increased renewable energy production forecasts. The price dropped to 72.4 €/t in December, which was the lowest in the past 14 months, strongly in connection with a drop in natural gas prices.



### Average CO<sub>2</sub> price

year 2020  
24,8 €/t

year 2021  
53,7 €/t

year 2022  
81,2 €/t

year 2023  
85,3 €/t

The changing CO<sub>2</sub> pollution charge of the EU Emission Trading System (ETS) is one of the central instruments of EU's climate policy. The introduction of the ETS was decided in 2003 by the 15 Member States that formed the Union. For those who joined later, including Estonia, the ETS has just been a fact to be accepted upon joining the Union. The EU Member States issue environmental permits to allow the emission of CO<sub>2</sub> into ambient air. In processing environmental permits, the issuer has fulfilled the obligation to ascertain that the planned activity does not exceed environmental tolerance. In the areas of activity included in the ETS, environmental permits thus mean the state's confirmation that the activity is in accordance with environmental requirements and the operators of facilities have the right to emit the allowed quantities of CO<sub>2</sub> into ambient air.

## The Group's economic results and key indicators

The presented data are consolidated economic results, based on the audited financial statements of the financial years of 2022 and 2023.

Annual reports are approved at the annual general meeting of shareholders, in which 100% of the votes represented by shares participate. In 2022 and 2023, **5,500,000 euros** and **8,000,000 euros** were paid in dividends, respectively.

As at 31 December 2022, the company had four shareholders and their holdings were as follows:

**OÜ Tristen Trade**

38,91%

**OÜ Alvekor**

25,49%

**OÜ Revellis Invest**

19,53%

**OÜ Sergos Invest**

16,07%

Starting from 19 January 2023, the company is held 100% by TARS International GmbH, registered in Switzerland.

**TARS International GMBH**

100%

Every year, VKG publishes a consolidated annual report together with an auditor's report. The transparency of financial reporting is one of the main elements of corporate management. In July 2024, the Group published the consolidated audited annual report for the year 2023. Since 2015, KPMG Baltic OÜ provides auditing services to the Group.

For VKG, the main keywords of 2022 were changes in the Group's structure and work organisation and the reconstruction of the Petroter I oil plant. As a result of the reorganisations, the entire production activity was moved to a new company created as a result of the division. In addition to the continued reorganisation of the Group's structure in 2023, the main 2023 priorities of VKG as a production enterprise included the improvement of the energy efficiency of production and ensuring the reliability of equipment and the occupational safety of employees.

The main key indicators that reflect VKG's economic results are presented in the table below:

In comparing the financial and production indicators of 2023 with those of the preceding year, it has to be taken into account that 2022 was a half-year in terms of financial accounting. It must also be kept in mind that VKG no longer holds production-related assets, but leases these from Kirde Vara AS under a long-term contract. In accordance with the requirements of IFRS 16, VKG still recognises long-term lease obligations as non-current assets. While VKG still owned assets related to the extraction of oil shale as at 31 December 2022, by 31 December 2023 these assets had also moved to Kirde Varad and VKG buys the oil shale necessary for oil production from Kirde Varad's subsidiary VKG Kaevandused OÜ under a long-term contract. This has caused a decrease in both the balance sheet volume and equity compared to the previous year. Although the market conditions were worse in 2023 than in 2022, both the profit and the net profit margin have improved. The reason for this is that Petroter I was down most of the second half of 2022 due to major repairs and the 2022 production and sales were therefore smaller than usual.

Key indicators	Unit	2022 (6 months)	2023
Average Brent crude oil price	\$/bbl	93	82
Average 1% fuel oil price	€/t	512	437
Average NPS Estonia price	€/MWh	247	91
Sales turnover	th €	184 747	339 462
Operating profit	th €	11 943	23 727
Balance sheet volume	th €	763 827	705 513
<b>Equity</b>	th €	<b>218 493</b>	<b>169 110</b>
<b>Equity level</b>	%	<b>29%</b>	<b>24%</b>

## Consolidated Income Statement

In thousands of euros

	2020	2021	2022	2023
Revenue	207 841	285 523	184 747	339 518
Cost of goods sold	-216 077	-275 880	-200 414	-404 092
<b>GROSS PROFIT</b>	<b>-8 236</b>	<b>-9 643</b>	<b>-15 667</b>	<b>-64 574</b>
Marketing expenses	-5 548	-5 232	-2 380	-4 894
General administrative expenses	-11 179	-12 722	-7 371	-14 722
Other operating income	40 942	66 283	42 495	109 604
Other operating expenses	-1 232	-1 793	-5 133	-1 687
<b>OPERATING PROFIT</b>	<b>14 748</b>	<b>56 178</b>	<b>11 944</b>	<b>23 727</b>
Total financial income and expenses	-4 424	-1 860	-6 785	-4 402
<b>PROFIT BEFORE TAX</b>	<b>10 324</b>	<b>54 319</b>	<b>5 158</b>	<b>19 325</b>
Extraordinary expenses				
Income tax	-244	-4 532	-1 099	-1 619
<b>NET PROFIT FOR THE REPORTING YEAR</b>	<b>10 080</b>	<b>49 787</b>	<b>4 059</b>	<b>17 706</b>

# Consolidated Balance Sheet

In thousands of euros

	2020	2021	2022	2023
<b>ASSETS</b>				
Current assets	158 937	198 028	337 535	147 669
Non-current assets	511 394	811 342	426 292	557 844
<b>TOTAL ASSETS</b>	<b>670 331</b>	<b>1 009 370</b>	<b>763 827</b>	<b>705 513</b>
<b>LIABILITIES AND EQUITY</b>				
Total current liabilities	51 435	76 586	266 478	259 822
Total non-current liabilities	102 191	27 333	278 855	278 200
Total liabilities	153 626	103 920	545 333	538 022
<b>Total equity</b>	<b>516 705</b>	<b>905 451</b>	<b>218 494</b>	<b>167 491</b>
<b>TOTAL LIABILITIES AND EQUITY</b>	<b>670 331</b>	<b>1 009 370</b>	<b>763 827</b>	<b>705 513</b>

## Investments

The 2022 volume of investments of the VKG consolidation group was 6.5 million euros in total, of which 5.5 million euros were the investments of VKG Kaevandused, mainly related to ensuring the reliability of equipment. As the assets related to the production of oil products and energy no longer belong to the VKG consolidation group, the investments related to these assets are not recognised in VKG's statements. The majority of the investments made in 2022 were financed from the company's own funds, but leasing financing was also used upon procuring more liquid assets.

The 2023 volume of investments was 34.9 million euros, of which 17.1 million euros went to the implementation of reliability projects, 10.8 million euros were development investments, and 1.4 million euros went to environmental protection. The asset-related investments are not recognised in VKG-s statements.

## Loan burden

The Group is loan-free since 2021, the only valid loan obligations are related to leasing or long-term rental contracts. In 2023, however, the Group assumed a non-bank loan.

## Tax burden

In millions of euros

	2020	2021	2022	2023
Labor taxes	18,8	19,5	21,4	23,4
Environmental charges	9,7	19,2	35,8	25,1
Excise duty	3,9	3,1	0,6	0,6
Other taxes	3,9	3,6	3,9	3,8
<b>Total</b>	<b>36,3</b>	<b>45,4</b>	<b>61,7</b>	<b>52,9</b>

In 2022, VKG paid 61.7 million euros to the state budget. The largest part of the tax burden was made up by labour taxes (21.4 million euros) and various environmental charges (35.8 million euros).

In 2023, the Group paid 52.9 million euros to the state budget in taxes, of which 23.4 million euros were taxes related to labour and 25.1 million euros were environmental charges.



# Events of the Reporting Period



# 2022

## JANUARY



Viru Keemia Grupp and Kiviõli Keemiatööstus have started a joint project to use existing shale oil production technology to **convert plastic waste**, which has become unusable elsewhere, **into oil and gas**. The industrial pilot plant could be ready in five years at the earliest and, following the principles of the circular economy, could help solve the ever growing problem of plastic waste.

## FEBRUARY



From 1 February, the **Hazard Hunt campaign** started, dedicated to noticing, caring and recording hazards. The campaign ran until 22 April and 410 hazardous situations were recorded, of which 14% were records of dangerous behaviour.



For many years, we have been supporting the good initiative of „**Bring you child to work!**“ of the Estonian Chamber of Commerce and Industry, which invites employers, parents and schools to work together to create opportunities for children and young people to learn about work life.

## MARCH



On 18 March, VKG Oil and the Rescue Board held a **joint fire drill** to test the readiness of the company's emergency response plan (ERP) and to practice the actions of employees in the event of a major accident. It was also intended to test the flow of information, the functioning of the chain of command and cooperation between the various parties involved.

## APRIL



**Safety and Health Month.** We believe that safe behaviour starts with personal choices and safety is the result of those choices.

## MAY



Starting from May, we became a **member of the Estonian Forest and Wood Industries Association.**



On 6 May, **public discussions** of the terms of reference for and the intent of development of the designated spatial plan of VKG's bioproducts production complex and the strategic environmental assessment were held in Kiviõli and Püssi.



On 16 May, an important **cooperation agreement** was signed, which will result in the construction of a modern training centre for Elektrivõrgud. The parties to the cooperation agreement are VKG's subsidiary VKG Elektrivõrgud, Elektrilevi and Elering, and the aim is to build a training centre in the rural municipality of Kiili by the academic year of 2023/2024.



On 19 May, another recognition ceremony for outstanding students was held, during which the **TalTech Development Fund scholarships** were awarded. VKG's scholarships were awarded to three students in the spring scholarship competition.



On 24 May, Estonian **mine rescuers** celebrated their 75th anniversary of service. There is also a mine rescue crew at the Ojamaa mine.



On the last day of May, the Responsible Business Forum recognised companies that care about the environment and want to contribute more to society than the law requires. The RBF recognised Viru Keemia Grupp with the **Responsible Entrepreneurship Bronze Award!**



On 28 May, we celebrated the **Chemists' Day** with a spectacular public party. Popular sports competitions, interesting workshops and favourite artists like Swingers, Nublu and GameBoy Tetris attracted thousands of people from Eastern Estonia.

## JUNE



On 15 June, a **public discussion of the environmental impact assessment (EIA) programme** was held at the Maidla community hall, where EIA experts from Maves OÜ gave an overview of the plan of environmental analyses necessary for the mine expansion and all interested parties were able to ask clarifications and make proposals for the programme. During the public presentation of the programme, the assessment of the climate impact of the activities and the clarification of the impact on the Aidu quarry were raised in particular.



The restructuring of the group will **separate the regulated businesses from the oil shale industry**. The legal restructuring of the group has started, as a result of which the subsidiaries VKG Elektrivõrgud and VKG Soojus, which today are part of VKG, will be separated into independent businesses. When the change comes into force, VKG Elektrivõrgud and VKG Soojus will operate respectively under the new parent companies Kirde Elekter AS and Kirde Soojus AS. The shareholder structure of the companies will not change as a result of the division.



Recognition of the TalTech Virumaa College graduates!

## AUGUST



The Group-wide conscious safety training „**I Choose**“. By changing the way we think about safety, we improve the working environment and make it safer! It's important to understand and acknowledge the importance of your own personal attitude and behaviour in shaping safety culture.



We held our **traditional school bell party** for the 22nd year in a row in 2022. This year, 64 children from our family of employees set off to discover the world of knowledge.



An **amendment to the Uus-Kiviõli mining permit** allowing VKG to extract 5 million tonnes of geological reserves under certain conditions.



The Miners' Day, newly renamed as **ViruFest**, is not just a tribute to the best workers and a concert programme, but also includes sports, entertainment, children's activities and more.

## SEPTEMBER



The traditional **VKG Environmental Day** took place. Organised by Viru Keemia Grupp, the Environmental Day brought together scientists, environmental experts, policy makers and politicians to discuss the possibilities of refining one of Estonia's largest natural resources – wood.



The joy of working together – for the fifth year in a row, we organised **World Clean Up Day** activities, this time also involving the city's schools.

## OCTOBER



The Group signed an agreement with Gren AS for the **sale of the network company VKG Soojus**.



The second „**Learn and Work**“ campaign was launched. It is a learning programme driven primarily by the need to ensure the necessary next generation of employees for our production units.



The „**I Choose**“ safety training programme was completed, with 1,300 Group employees participating.

## NOVEMBER



A major **reconstruction of Petroter I was completed**. The whole project, from the conclusion of contracts for the manufacture and supply of the main components to the start-up of the plant, took just under two years. The investment amounted to more than 24 million euros.



A traditional **job shadowing day** took place, where students had the opportunity to discover world of work, learning about the tasks and challenges of professionals in their field.



A founder and major shareholder of Viru Keemia Grupp, **Priit Piilmann**, passed away.

## DETSEMBER



VKG and the Chemical Workers' Union signed a new **collective agreement** for the period of 2023–2024.



Once again, we opted for charity. We continued our good tradition and instead of hundreds of corporate gifts, we made a donation to the **paediatric department of the Ida-Viru Central Hospital**.



In order to cope with high energy prices, VKG decided to pay an exceptional Christmas **bonus of five hundred euros to all the Group's employees**.

# 2023

## JANUARY



The 58th **Five Schools Competition** was held at Tamme Upper Secondary School in Tartu and the Ida-Viru team also participated. In the regional preliminary round, Jõhvi Upper Secondary School showed the strongest result and its students represented the region at the main competition.

## FEBRUARY



**A commitment and satisfaction survey** was conducted among all the employees with the aim to understand what is the most important thing about work for the employees of VKG – what are the employees satisfied with, what requires more attention, and what should be changed.



**VKG's Partners Day** was held, which included a roundtable and a tour of the production territory together with the officials of the Environmental Board and the Ministry of Climate.



Another **'Bring your child to work!'** day was held, in the course of which the children of VKG's employees were introduced to the company's IT world and were told about cyber security and safety. The day peaked with an excursion to the Petroter III plant.



A festive handing-over of diplomas to new specialists – who also included graduates from the first **'Study and Work'** group – took place at the Ida-Viru Vocational Education Centre.

## MARCH



**The Group's safety policy was approved.** The policy covers all the basic safety principles with which all the Group's employees must comply regardless of their position. The main aim of the safety policy is to ensure a safe working environment without break-downs and accidents. Ensuring a safe and healthy working environments for employees is of primary importance, as thanks to this the desired objectives are achieved in all the areas of activity.



The Group's brilliant team took part of the youth career trade show **'A Key to the Future'**, introducing career opportunities at the Group, from chemical engineers to cyber security specialists, to young people.

## APRIL



According to established tradition, April was the **month of safety and health** at the Group. The main topic last year was a positive work safety culture which can only be created together and in cooperation. The month included a number of information seminars, a panel discussion and, for the first time, a safety game which offered the participants a lot of emotions and useful knowledge.

## MAY



In close partnership with Jõhvi Upper Secondary School, we continue conducting the **STEM elective subjects programme**. We are investing our time in organising the STEM course, as we wish to show young people that there are vital and innovative enterprises in their home region, where youngsters thinking about acquiring a qualification in engineering can do seriously big and important things.



**LET'S DO IT 2023!** Together with the Eastman team and the teachers and students of Kohtla-Järve, we organised a large-scale volunteer work day with the aim of making the urban space of Kohtla-Järve more beautiful and cleaner.



VKG's Supervisory Board appointed **Raivo Attikas** as a new Management Board Member and Technical Director of the Group.



In connection with the Member of the Management Board of Viru RMT, Andry Pärnpuu, moving to the position of a Member of the Management Board of VKG Energia, **Ivo Järvala** became the new Management Board Member of the subsidiary, while also continuing to manage VKG Elektrivõrgud.



The popular favourite event, the **Days of Chemists**, was held, with activities and entertainment for every age and taste. The programme of the day was full of surprises, exciting sports competitions and cool performers.

## JUNE



A change was made in the **structure of the Ojamaa Mine**: the activity of the mine was divided into three areas – a production area, a technical and asset management area, and an area focused on the development of Uus-Kiviõli. The main aim of the production area is to ensure the smooth functioning of deliveries between VKG Oil and VKG Kaevandused, and the quality of oil shale. The expectations to the technical area are primarily related to ensuring the reliability of the equipment fleet as well as improving the efficiency indicators of production equipment. The main task of the area engaged in the development of Uus-Kiviõli is the opening of the mine by the planned term. A former member of the Management Board of VKG Logistika, Ervin Küttis, joined the team of the Ojamaa Mine to manage the technical and asset management area.



**The strategic environmental impact assessment** of and the preparation of a designated spatial plan for the bioproducts production complex (BPC) is taking place in the village of Aa in the rural municipality of Lügänuuse, scheduled to be completed at the end of 2024. On 29 June 2023, the Council of the rural municipality of Lügänuuse approved the report on the first stage of the designated spatial plan and made the preliminary selection of the location for the assessment of environmental impact. The designated spatial plan process has advanced exactly as scheduled and without setbacks. In the preceding months, we met with the residents of the region and given an overview of the progress of the project.

## JULY



The rural municipality of Lügänuuse gave a green light to the second stage of the bioproducts production project. At the beginning of June, the report on the **first stage** of the preliminary selection of the location for the designated spatial plan and the strategic environmental impact assessment of our bioproducts production complex (BPC) project was completed.



**Tarmo Vadi** joined the team of Viru Keemia Grupp, replacing the former member of the Management Board of VKG Logistika, Ervin Küttis, who has in turn moved on to act as a member of the Management Board of VKG Kaevandused, where he is responsible for managing the technical and asset management area.



On 28 July, the international **Handcar Rally** started from Kohtla-Järve. The main aim of the race is to promote safe railway traffic

## AUGUST



A festive day for **first class students** was held – a tradition that is over 20 years old – to enjoy the last summer days among the family and prepare for school.



The grand festivities of the **Miners' Day** brought all the friends of mining to ViruFest. According to tradition, the day to recognise the profession of miners is held on the last Sunday of August and includes the honorary miners' award ceremony.

## SEPTEMBER



**The Environmental Day** organised by Viru Keemia Grupp was held at the Arvo Pärt Centre. The event included discussions about the Estonian Climate Act to be developed in the near future, as well as about the main topics of the climate policy. The representatives of areas and stakeholder group most influenced by the green reform took part.



The **electrode coke equipment** was shut down due to the market situation. The former sales volumes had significantly decreased by that time, as the sales of electrode coke was largely linked to the Ukrainian market.



A change took place in the management of VKG Oil – long-term Management Board Member Priit Pärn left the position. VKG Oil's Financial Director **Aleksei Holomejev** became the other member of the Management Board besides Nikolai Petrovitš.



In gratitude for long-term cooperation with the **Blood Centre**, the VKG Group was given its own blood group: #VKG\_viru\_keemia\_grupp.

## OCTOBER



The leading Baltic private capital fund **BaltCap** acquired a **100% holding in the second largest Estonian power distribution enterprise VKG Elektrivõrgud**. BaltCap sees considerable potential in the further development of the network enterprise in the area of providing additional services related to electricity and the network besides electricity network services and the sales of electricity. The sales transaction was concluded and the enterprise moved from the structure of the Group in January 2024.

## NOVEMBER



The fourth drawing contest for children and young people, 'A New Era for Balley and Industry', was held in the framework of the **15th Jõhvi Balley Festival** which VKG has been supporting for years.

## DECEMBER



Preparations for the **Uus-Kiviõli Mine** reached a new stage, as an aboveground inclined shaft and two tunnels were completed. We started the renovation of the conveyor belt between the Ojamaa Mine and the Kohtla-Järve production territory, which will in the future be partly also used for transporting the oil shale mined at Uus-Kiviõli to oil shale plants.





# Annexes

## Defining the more important topics of the report

In presenting its activities in the Sustainable Development Report, Viru Keemia Grupp strives to cover issues that are of interest to its stakeholders.

In disclosing information in the report, the obligations of the enterprise, including those stipulated in international documents (e.g. the UN Global Compact guidelines) have been taken into account.

In choosing the more important topics and the relevant indicators for the report, we analyse:

- the effect of the activities on the economy and the social and natural environment as well as the results of monitoring its extent and nature;
- the content of cooperation with stakeholders and their requests for information;

- Estonian and international studies on the practices of sustainable development management in the industry sector and reports published in that area.

The following was analysed in assessing the cooperation between the Group and the stakeholders and in identifying the topics important for them:

- the recommendations of the GRI standards;
- the results of the monitoring of the notices published about the Group in mass media.

As a result of that, we prepared a list of important topics for the report and selected the topics of the highest importance.

## VKG's and subsidiaries participation in the associations and organisations

- Vastutustundliku Ettevõtluse Foorum
- Eesti Keemiatööstuse Liit
- Eesti Inseneride Liit (EIL)
- Eesti Töoandjate Keskkliit (avaldus saadetud august 2020)
- Eesti Töoandjate Keskkliidu 2% klubi
- Kaasarääkimine tööruhadest:
  - Majandusarengu ja maksupoliitika tööühm
  - Tööjõupoliitika tööühm
  - Innovatsiooni tööühm
  - Jätkusuutliku arengu tööühm
  - Tervishoiu tööühm
- Hoolime ja Vastutame
- Eesti Suhtekorraldajate Liit (EPRA)
- UN Nations Global Compact
- Global Reporting Initiative
- Eesti Loduskaitse Selts
- Tuuleenergia Assotsiatsioon (ETEA)
- Eesti Metsa- ja Puidutööstuse Liit (EMPL)
- Eesti Sisekoolituse Arendamise Liit
- Eesti Keskkonnajuhtimise Assotsiatsioon
- MTÜ Eesti Elektritööstuse Liit (ETL)
- Eesti Jõujaamade ja Kaugkütte Ühing (EJKÜ)
- EJKÜ volikogu
- Eesti Kaubandus-Tööstuskoda
- Rahvusvaheline Kaubanduskoda (ICC Eesti MTÜ)
- Põhjamaade elektribörs Nord Pool
- MTÜ Eesti Mäeselts
- Eesti Mäetööstuse Ettevõtete Liit (EMTEL)
- Majandus- ja kommunikatsiooniministeerium Energeetikanõukogu
- Põlevkivivaldkonna standardimise tehniline komitee - Põlevkivi Kompetentsikeskus
- Kliimaministeerium – Eesti põlevkivi energeetilise kasutamise parima võimaliku tehnika nõuete ajakohastamise tööühm (PVT järelused)
- Kliimaministeerium - põlevkiviõli tootmise parima võimaliku tehnika järeluste ajakohastamise tööühm
- Eesti Standardikeskuse ekspertide tööühm „Põlevkivi ja põlevkiviproduktide tööühm“
- Eesti Standardimis- ja Akrediteerimiskeskuse „Ringmajandus“ komitee
- Ida-Virumaa Kutsehariduskeskus kutsekomisjon
- Ida-Virumaa Kutsehariduskeskus nõunike kogu
- Jõhvi Gümnaasiumi hoolekogu
- Ida-Virumaa Omavalitsuste Liit, Ida-Viru maakonna õiglase ülemineku platvorm
- Eesti Töoandjate Keskkliidu esindaja Ida-Virumaa suunaliste Õiglase Ülemineku Fondist (ÕÜF) rahastatavate haridus- ja teadusmeetmete juhtkomisjoni tegevuses
- Eesti Keemiatööstuse Liidu esindajatena Eesti Geoloogiateenistuse projektis „Fosforiidi ja kaasnevate ressursside uuringu II etapp“ nõustavas kogus
- SA Eesti Kaevandusmuuseumi nõukogu
- Insenerihariduse valdkonna edendamise juhtnõukogu
- TA programm „Kohalike ressursside väärdamine – maapõueressursid“ (Haridus- ja Teadusministeerium)

# GRI register

The report focuses on topics that have been identified as important for the Group and the stakeholders. The Group relied on the G4 version of the GRI standard in preparing the report.

## The organization and its reporting practices

GRI 2-1	<b>Organizational details</b>	<a href="#">About the company</a> <a href="#">Contact and feedback</a>
GRI 2-2	<b>Entities included in the organization's sustainability reporting</b>	<a href="#">About the report</a>
GRI 2-3	<b>Reporting period, frequency and contact point</b>	<a href="#">About the report</a>
GRI 2-4	<b>Restatements of information</b>	<a href="#">About the report</a>
GRI 2-5	<b>External assurance</b>	The report is not verified by the external experts

## Activities and workers

GRI 2-6	<b>Activities, value chain and other business relationships</b>	<a href="#">About the company</a> <a href="#">Fields of activity</a>
GRI 2-7	<b>Employees</b>	<a href="#">Our people</a>
GRI 2-8	<b>Workers who are not employees</b>	<a href="#">Our people</a>

## Governance

GRI 2-9	<b>Governance structure and composition</b>	<a href="#">Management of sustainable development</a> <a href="#">The executive management</a> <a href="#">Structure of the Group</a>
GRI 2-10	<b>Nomination and selection of the highest governance body</b>	<a href="#">The executive management</a>
GRI 2-11	<b>Chair of the highest governance body</b>	<a href="#">The executive management</a>
GRI 2-12	<b>Role of the highest governance body in overseeing the management of impacts</b>	<a href="#">The executive management</a>
GRI 2-15	<b>Conflicts of interest</b>	<a href="#">Code of Ethics</a> <a href="#">Combating the risk of corruption</a>
GRI 2-22	<b>Statement on sustainable development strategy</b>	<a href="#">Chairman's letter</a> <a href="#">Sustainable development as a key to business management</a> <a href="#">Corporate responsibility strategy</a> <a href="#">Management of sustainable development</a>
GRI 2-23	<b>Policy commitments</b>	<a href="#">The Climate Act</a> <a href="#">Regulative framework</a>
GRI 2-24	<b>Embedding policy commitments</b>	<a href="#">Regulative framework</a>
GRI 2-25	<b>Processes to remediate negative impacts</b>	<a href="#">Conducting public discussions</a>
GRI 2-26	<b>Mechanisms for seeking advice and raising concerns</b>	<a href="#">Developing together with the local community</a> <a href="#">Conducting public discussions</a> <a href="#">Cooperation with local communities</a>
GRI 2-28	<b>Membership associations</b>	<a href="#">Appendix</a>

## Stakeholder engagement

GRI 2-29	<b>Approach to stakeholder engagement</b>	<a href="#">Cooperation with stakeholders</a>
GRI 2-30	<b>Collective bargaining agreements</b>	<a href="#">Cooperation with trade unions</a>

# Management of material topics

GRI 3-1	<b>Process to determine material topics</b>	<a href="#">About the report</a>
GRI 3-2	<b>List of material topics</b>	<a href="#">Main topics of the report</a>
GRI 3-3	<b>Management of material topics</b>	Throughout the reports

## Environmental

### GHG emissions

Oil and Gas Sector Standard 11.1  
All the emissions are verified by external assurance

Oil and Gas Sector Standard 11.1.1 GRI 3-3	<b>Management of material topics</b>	<a href="#">Strategic vision of reducing the impact of industry</a>
Oil and Gas Sector Standard 11.1.2 GRI 302-1	<b>Energy consumption within the organisation</b>	<a href="#">Production and consumption of energy</a>
Oil and Gas Sector Standard 11.1.3 GRI 302-2	<b>Energy consumption outside of the organisation</b>	<a href="#">Production and consumption of energy</a>
Oil and Gas Sector Standard 11.1.4 GRI 302-3	<b>Energy Intensity</b>	<a href="#">Energy efficiency</a>
GRI 302-4	<b>Reduction of energy consumption</b>	<a href="#">Energy efficiency</a>
Oil and Gas Sector Standard 11.1.5 GRI 305-1	<b>Direct (Scope 1) GHG emissions</b>	<a href="#">Environmental footprint</a> <a href="#">Environment-related focal areas in 2023</a>
Oil and Gas Sector Standard 11.1.6 GRI 305-2	<b>Energy indirect (Scope 2) GHG emissions</b>	<a href="#">Environmental footprint</a> <a href="#">Environment-related focal areas in 2023</a>
Oil and Gas Sector Standard 11.1.8 GRI 305-4	<b>GHG emissions intensity</b>	<a href="#">Environmental footprint</a> <a href="#">Air emissions</a>

### Climate adaptation, resilience, and transition

Oil and Gas Sector Standard 11.2

Oil and Gas Sector Standard 11.2.1 GRI 3-3	<b>Management of material topics</b>	<a href="#">Our activity management system</a>
Oil and Gas Sector Standard 11.2.2 GRI 201-2	<b>Financial implications and other risks and opportunities due to climate change</b>	<a href="#">Strategic market and legal risks</a>
Oil and Gas Sector Standard 11.2.3 GRI 305-5	<b>Reduction of GHG emissions</b>	<a href="#">Investments into environmental protection, and environmental charges</a>

### Air emissions

Oil and Gas Sector Standard 11.3

Oil and Gas Sector Standard 11.3.1 GRI 3-3	<b>Management of material topics</b>	<a href="#">Strategic vision of reducing the impact of industry</a>
Oil and Gas Sector Standard 11.3.2 GRI 305-7	<b>Nitrogen oxides (NOX), sulphur oxides (SOX), and other significant air emissions</b>	<a href="#">Air emissions</a>

## Biodiversity

Oil and Gas Sector Standard 11.4

Oil and Gas Sector Standard 11.4.4 **Management of material topics**  
GRI 304-3

Research and monitoring of the Ojamaa mine area started even before the opening of the mine - since 2004, surface water and since 2005 groundwater, has been monitored. In addition, since 2007 we monitor the number of capercaillie in the mine areas, and since 2015, the condition of Muraka swamp. The new capercaillie monitoring methodology plan was developed in 2020 on behalf of the VKG Kaevandused. It was done to evaluate the effect of noise on the behaviour of capercaillie. The methodology plan was approved by Keskkonnaagentuur in 2021. Ojamaa's capercaillie monitoring (specimen counting) is now carried out within the framework of national monitoring. In 2021, groundwaters and surface waters monitoring were started in the area of Uus-Kiviõli II mine.

Oil and Gas Sector Standard 11.4.5 **Red List species and national conservation list species with habitats in areas affected by operations**  
GRI 304-3

Animal species of protection category I: Siberian flying squirrel (*Pteromys volans*), Sonda mining field (currently the company does not operate in this protected area, i.e. no impact). Vertebrates of protection category II: Tetrao urogallus in the wild, Ojamaa excavation field (a protection zone has been created in the permanent habitat, census monitoring is carried out)

## Waste

Oil and Gas Sector Standard 11.5

Oil and Gas Sector Standard 11.5.1 **Management of material topics** [Industrial waste](#)  
GRI 3-3

Oil and Gas Sector Standard 11.5.2 **Waste generation and significant waste-related impacts** [Industrial waste and its processing](#)  
GRI 306-1

Oil and Gas Sector Standard 11.5.3 **Management of significant waste-related impacts** [Industrial waste and its processing](#)  
GRI 306-2

Oil and Gas Sector Standard 11.5.4 **Waste generated** [Generation quantities of the main ordinary waste and its reuse in the Group \(tonnes/year\)](#)  
GRI 306-3

Oil and Gas Sector Standard 11.5.5 **Waste diverted from disposal** [Reuse of waste](#) [Plastic waste circular economy project](#)  
GRI 306-4

Oil and Gas Sector Standard 11.5.6 **Waste directed to disposal** [Deposition of waste](#)  
GRI 306-5

## Water and effluents

Oil and Gas Sector Standard 11.6

Oil and Gas Sector Standard 11.6.1 **Management of material topics** [Water usage and water emissions](#)  
GRI 3-3

Oil and Gas Sector Standard 11.6.2 **Interactions with water as a shared resource** [Water usage](#)  
GRI 303-1

Oil and Gas Sector Standard 11.6.3 **Management of water discharge-related impacts** [Water usage](#)  
GRI 303-2

Oil and Gas Sector Standard 11.6.4 **Water withdrawal** [Water usage](#)  
GRI 303-3

Oil and Gas Sector Standard 11.6.5 **Water discharge** [Water emissions](#)  
GRI 303-4

Oil and Gas Sector Standard 11.6.6 **Water consumption** [Water emissions](#)  
GRI 303-5

## Asset integrity and critical incident management

Oil and Gas Sector Standard 11.8

Oil and Gas Sector Standard 11.8.1 **Management of material topics** [Preparedness for the elimination of emergency situations](#) [Chemical safety](#)  
GRI 3-3

Oil and Gas Sector Standard 11.8.2 **Significant spills** No significant spill accidents were registered during the reporting period  
GRI 306-3

Oil and Gas Sector Standard 11.8.3 **Additional sector disclosures** [Preparedness for the elimination of emergency situations](#) [Chemical safety](#)

# Social

## Occupational health and safety

Oil and Gas Sector Standard 11.9

Oil and Gas Sector Standard 11.9.1 GRI 3-3	<b>Management of material topics</b>	<a href="#">Safety first and foremost</a> <a href="#">The Group's priorities in the area of safety</a> <a href="#">Group's Safety Policy</a>
Oil and Gas Sector Standard 11.9.2 GRI 403-1	<b>Occupational health and safety management system</b>	<a href="#">Safety first and foremost</a> <a href="#">The Group's priorities in the area of safety</a> <a href="#">Group's Safety Policy</a>
Oil and Gas Sector Standard 11.9.3 GRI 403-2	<b>Hazard identification, risk assessment, and incident investigation</b>	<a href="#">A programme for improving the efficiency of the level of occupational safety</a>
Oil and Gas Sector Standard 11.9.4 GRI 403-3	<b>Occupational health services</b>	<a href="#">Occupational safety exercises</a>
Oil and Gas Sector Standard 11.9.5 GRI 403-4	<b>Worker participation, consultation, and communication on occupational health and safety</b>	<a href="#">Occupational safety exercises</a> <a href="#">The initiative 'Report Danger!' has been created for promoting safety culture</a> <a href="#">Cooperation with the trade union in the area of occupational safety</a> <a href="#">Hear the voice of employees, or a system of working environment representatives</a> <a href="#">Safety and Health Month</a>
Oil and Gas Sector Standard 11.9.6 GRI 403-5	<b>Worker training on occupational health and safety</b>	<a href="#">Occupational safety exercises</a>
Oil and Gas Sector Standard 11.9.7 GRI 403-6	<b>Promotion of worker health</b>	<a href="#">Hear the voice of employees, or a system of working environment representatives</a> <a href="#">Safety and Health Month</a>
Oil and Gas Sector Standard 11.9.9 GRI 403-8	<b>Workers covered by an occupational health and system</b>	<a href="#">Group's Safety Policy</a>
Oil and Gas Sector Standard 11.9.10 GRI 403-9	<b>Work-related injuries</b>	<a href="#">Statistics for 2022 and 2023</a>
Oil and Gas Sector Standard 11.9.11 GRI 403-10	<b>Work-related ill health</b>	<a href="#">Statistics for 2022 and 2023</a>

## Employment practices

Oil and Gas Sector Standard 11.10

Oil and Gas Sector Standard 11.10.1 GRI 3-3	<b>Management of material topics</b>	<a href="#">Our people</a>
Oil and Gas Sector Standard 11.10.2 GRI 401-1	<b>New employee hires and employee turnover</b>	<a href="#">About our employees</a>
Oil and Gas Sector Standard 11.10.3 GRI 401-2	<b>Benefits provided to full-time employees that are not provided to temporary or part-time employees</b>	Part-time and full-time employees have the same benefits, though these may vary based on subsidiary regulations.
Oil and Gas Sector Standard 11.10.4 GRI 401-3	<b>Parental leave</b>	Personnel policy (internal document, EST only)
Oil and Gas Sector Standard 11.10.5 GRI 402-1	<b>Minimum notice periods regarding operational changes</b>	Personnel policy (internal document, EST only). Not reported. We seek to conduct the job reductions process in accordance with our core values of honesty, integrity and respect for people.
Oil and Gas Sector Standard 11.10.6 GRI 404-1	<b>Average hour of training per year per employee</b>	<a href="#">Development of our people</a> <a href="#">We report the total number of formal training days for employees</a>
Oil and Gas Sector Standard 11.10.7 GRI 404-2	<b>Programs for upgrading employee skills and transition assistance programs</b>	<a href="#">Development of our people</a>

## Non-discrimination and equal opportunity

Oil and Gas Sector Standard 11.11

Oil and Gas Sector Standard 11.11.1 **Management of material topics**  
GRI 3-3

[Code of Ethics](#)

Personnel policy (internal document, EST only)

Oil and Gas Sector Standard 11.11.6 **Ratio of basic salary and remuneration of women to men**  
GRI 405-2

[Gross salary](#)

Oil and Gas Sector Standard 11.11.7 **Incidents of discrimination and corrective actions taken**  
GRI 406-1

During the reporting period 3 appeals were received, that's all related to verbal abuse between colleagues. The parties were dealt with conversations leading to forgiveness and reconciliation.

## Forced labour and modern slavery

Oil and Gas Sector Standard 11.12

Oil and Gas Sector Standard 11.12.1 **Management of material topics**  
GRI 3-3

[Our people](#) [Compliance with human rights](#)

## Freedom of association and collective bargaining

Oil and Gas Sector Standard 11.13

Oil and Gas Sector Standard 11.13.1 **Management of material topics**  
GRI 3-3

[Our people](#) [Cooperation with trade union](#)

## Economic impacts

Oil and Gas Sector Standard 11.14

Oil and Gas Sector Standard 11.14.1 **Management of material topics**  
GRI 3-3

[Economic environment and main economic results](#)

Oil and Gas Sector Standard 11.14.2 **Direct economic value generated and distributed**  
GRI 201-1

[The Group's economic results and key indicators](#) [Tax burden](#)

Oil and Gas Sector Standard 11.14.4 **Infrastructure investments and services supported**  
GRI 203-1

[Investments](#)

## Local communities

Oil and Gas Sector Standard 11.15

Oil and Gas Sector Standard 11.15.1 **Management of material topics**  
GRI 3-3

[Cooperation with local communities](#)

Oil and Gas Sector Standard 11.15.2 **Operations with local community engagement, impact assessments, and development programs**  
GRI 413-1

[Mechanisms of cooperation with stakeholder groups](#)

[Developing together with the local community](#)

[Conducting public discussions](#)

[A reliable partner in promoting local life](#)

Oil and Gas Sector Standard 11.15.3 **Operations with significant actual and potential negative impacts on local communities**  
GRI 413-2

[Conducting public discussions](#)

## Conflict and security

Oil and Gas Sector Standard 11.18

Oil and Gas Sector Standard 11.18.1 **Management of material topics**  
GRI 3-3

[Compliance with human rights](#) [Supply chain management](#)

Oil and Gas Sector Standard 11.18.2 **Security personnel trained in human rights policies or procedures**  
GRI 410-1

[Compliance with human rights](#)

## Anti-competitive behaviour

Oil and Gas Sector Standard 11.19

Oil and Gas Sector Standard 11.19.1 **Management of material topics**  
GRI 3-3

[Prevention of possible conflicts of interest](#)  
[Risk management](#) [Code of ethics \(EST only\)](#)

Oil and Gas Sector Standard 11.19.2 **Legal actions for anti-competitive behaviour, anti-trust, and monopoly practices**  
GRI 206-1

[Prevention of possible conflicts of interest](#)  
[Code of ethics \(EST only\)](#)

## Anti-corruption

Oil and Gas Sector Standard 11.20

Oil and Gas Sector Standard 11.20.1 **Management of material topics**  
GRI 3-3

[Combating the risk of corruption](#) Code of ethics (EST only)

Oil and Gas Sector Standard 11.20.2 **Operations assessed for risks related to corruption**  
GRI 205-1

[Combating the risk of corruption](#) Code of ethics (EST only)

Oil and Gas Sector Standard 11.20.3 **Communication and training about anti-corruption policies and procedures**  
GRI 205-2

[Combating the risk of corruption](#) Code of ethics (EST only)

Oil and Gas Sector Standard 11.20.4 **Confirmed incidents of corruption and actions taken**  
GRI 205-3

We practise the zero tolerance to the corruption on all the levels of management. During the reporting period there were no registered incidents if corruption.

## Payments to governments

Oil and Gas Sector Standard 11.21

Oil and Gas Sector Standard 11.21.1 **Management of material topics**  
GRI 3-3

[Economic environment and main economic results](#)

Oil and Gas Sector Standard 11.21.2 **Direct economic value generated and distributed**  
GRI 201-1

[Economic environment](#)

Oil and Gas Sector Standard 11.21.3 **Financial assistance received from government**  
GRI 201-4

In 2022 VKG and Kiviõli Keemiatööstus started to work on a joint project to use the existing shale oil production technology to process plastic waste into oil and gas. The implementation of the project was supported by the resources of the European Regional Development Fund via Enterprise Estonia with a grant of 280,600 euros. VKG part of the grant was 131 663 euros. In 2023, VKG stepped out from a joint project and began to develop the plastic waste pyrolysis project by themselves.

Oil and Gas Sector Standard 11.21.4 **Approach to Tax**  
GRI 207-1

[Tax burden](#)

Oil and Gas Sector Standard 11.21.5 **Tax governance, control and risk management**  
GRI 207-2

[Risk management](#)





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# Contacts and Feedback

Upon publishing our report, we hope to receive feedback. The assessment and proposals of the readers of the report help us improve the quality of non-financial reporting. In order to express your opinion or ask questions, please contact us using the e-mail address or phone numbers provided below. All the received questions and opinions will be taken into account in the preparation of the next Sustainable Development Report.

**Irina Bojenko**

**COMMUNICATIONS AND MARKETING  
MANAGER**

[irina.bojenko@vkg.ee](mailto:irina.bojenko@vkg.ee)

+372 523 2700

+372 334 2702



## Viru Keemia Grupp AS

Chairman of the Board **Ahti Asmann**  
Vice Chairman of the Board **Jaanis Sepp**  
Registration Code 16627014  
Järveküla tee 14  
30198 Kohtla-Järve

Phone: **+372 334 2700**  
Fax: **+372 337 5044**  
Email: [info@vkg.ee](mailto:info@vkg.ee)

### VKG Oil AS

Board Members **Nikolai Petrovitš,**  
**Aleksei Holomejev**  
Järveküla tee 14  
30328 Kohtla-Järve  
Phone: **+372 334 2727**  
Email: [vkgoil@vkg.ee](mailto:vkgoil@vkg.ee)

### VKG Kaevandused OÜ

Board Members **Ervin Küttis, Margus**  
**Loko**  
Järveküla tee 14  
30328 Kohtla-Järve  
Phone: **+372 334 2782**  
Email: [vkgkaevandused@vkg.ee](mailto:vkgkaevandused@vkg.ee)

### VKG Energia OÜ

Board Member **Andry Pärnpuu**  
Järveküla tee 14  
30328 Kohtla-Järve  
Phone: **+372 334 2852**  
Email: [vkgenergia@vkg.ee](mailto:vkgenergia@vkg.ee)

### VKG Logistika OÜ

Board Member **Tarmo Vadi**  
Järveküla tee 14  
30328 Kohtla-Järve  
Phone: **+372 334 2535**  
Fax: **+372 334 2719**  
Email: [vkglogistika@vkg.ee](mailto:vkglogistika@vkg.ee)

### VKG Invest OÜ

Board Member **Sten Pisang**  
Järveküla tee 14  
30328 Kohtla-Järve  
Email: [vkginvest@vkg.ee](mailto:vkginvest@vkg.ee)