



# Positive matters



**En+ Group**  
**Sustainability**  
**Report 2018**

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## GRI

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The 2018 En+ Sustainability Report (hereinafter referred to as the “Sustainability Report” or the “Report”) is a comprehensive review of the Company’s progress and achievements in sustainable development.

Whilst En+ Group included a section on Sustainable Development in its 2018 Annual Report, the Company has now made the decision to publish a separate Report dedicated entirely to sustainability to reflect the Board’s focus on this area.

## About the Report

This is the Company’s first Sustainability Report since listing on the London Stock Exchange which demonstrates En+ Group’s commitment to transparency by providing a comprehensive disclosure of important non-financial information on an annual basis. By publishing this Sustainability Report, En+ Group highlights its commitment to transparency with all its stakeholders and investors around the most material environmental, social and governance (“ESG”) issues.

The Company understands that providing regular information on the economic, governance, social and environmental aspects of its business to internal and external stakeholders, and receiving their feedback, is central to building stable and sustainable relationships based on trust.

The Health, Safety, and Environment Committee (the “HSE Committee”) of the Board and the Board itself have reviewed and approved the Sustainability Report to ensure that all material topics have been covered.

This Sustainability Report covers the period from 1 January 2018 to 31 December 2018 and, in certain instances, discloses significant sustainability events during first six months of 2019. It has been prepared in accordance with the Global Reporting Initiative (“GRI”) Standards: Core option, including the Mining & Metals and Electric Utilities Sector supplements, as this is the most widely used standard for sustainability reports worldwide and the Board considers the GRI standards relevant to the Company’s operations.

## Boundaries of the Report

In this Report the terms “En+”, “En+ Group”, “we”, “the Company” and “the Group” in various forms shall mean EN+ GROUP IPJSC<sup>1</sup> and its subsidiaries, the economic results of which are detailed in the Group’s consolidated financial statements.

The Sustainability Report 2018 discloses information about En+ Group’s two segments<sup>2</sup>: Metals (represented by RUSAL) and Power (represented by the Company’s power assets such as JSC EuroSibEnergO, PJSC Irkutskenergo et al<sup>3</sup>). Unless otherwise indicated, financial information included in the Sustainability

Report 2018 is presented and calculated based on the consolidated financial statements as of 31 December 2018, prepared in accordance with International Financial Reporting Standards (IFRS).

Performance management data covers all En+ Group’s business units, unless stated otherwise.

Due to rounding, some totals in the tables, charts and diagrams in this Report may not correspond with the sum of segmental results.

<sup>1</sup> Before 9 July 2019 – EN+ GROUP PLC.

<sup>2</sup> For more detailed information about En+ Group’s segments please refer to pp.22-23, At a glance

<sup>3</sup> For a list of significant subsidiaries please refer to Consolidated Financial Statements for the year ended 31 December 2018 <https://www.enplusgroup.com/en/investors/results-and-disclosure/>.

## The principles of the Report

We were guided by the following principles during the production of the Report:

<b>Stakeholder Inclusiveness</b>	<b>Sustainability Context</b>
The Company strives to meet or exceed expectations of a wide range of stakeholders who are affected by its operations.	En+ Group's sustainable development activities are based on global best practices in this area, international and Russian standards and principles, including the United Nations Sustainable Development Goals.
<b>Materiality</b>	<b>Completeness</b>
En+ Group assessed material topics based on stakeholders' expectations and management priorities.	The Report reflects the key outcomes of the Company's sustainable development activities and describes its management approaches and measures, as well as the results achieved.

## Principles for defining Report quality

The following principles were used to define the Report's quality.

<b>Principle:</b>	<b>Description:</b>
<b>Balance</b>	The Report reflects positive and negative aspects of the organisation's performance to enable a reasoned assessment of overall performance.
<b>Comparability</b>	The reported information is presented in a manner that enables stakeholders to analyse changes in the organisation's performance over time, and makes comparison to other organisations possible.
<b>Accuracy</b>	The reported information is sufficiently accurate and detailed for stakeholders to assess the organisation's performance.
<b>Timeliness</b>	Starting this year, En+ Group will report on an annual basis so that information is available in time for stakeholders to make informed decisions.
<b>Clarity</b>	The information in this Report is presented in a manner that is comprehensible to stakeholders with a reasonable understanding of the organisation and its activities.
<b>Reliability</b>	Stakeholders should have confidence that the Report can be checked to establish the veracity of its contents and the extent to which it has appropriately applied Reporting Principles.

## Limitation of Liability

Unless otherwise indicated, the information presented in this Sustainability Report only reflects the Company's position during the review period from 1 January 2018 to 31 December 2018 (the "Review Period"). Accordingly, all forward-looking statements, analyses, reviews, commentaries and risks presented in this Sustainability Report (save for this section, or unless otherwise specified) are based upon the information of the Company covering the Reporting Period only and not thereafter. Shareholders and potential investors should be aware that on 6 April 2018, the Office of Foreign Assets Control of the Department of the Treasury of the United States of America (the "U.S. Treasury") designated, amongst others, the Company to be added to its Specially Designated Nationals List (the "OFAC Sanctions"). A press statement issued by the U.S. Treasury in respect of the OFAC Sanctions on 6 April 2018 stated that: "All assets subject to U.S. jurisdiction of the designated individuals and entities, and of any other entities blocked by operation of law

as a result of their ownership by a sanctioned party, are frozen, and U.S. persons are generally prohibited from dealings with them. Additionally, non-U.S. persons could face sanctions for knowingly facilitating significant transactions for or on behalf of the individuals or entities blocked today." Shareholders and potential investors should be aware that the information presented in this Sustainability Report (save for this Warning) does not take into account the OFAC Sanctions or any potential impact, which the OFAC Sanctions may have had on the Company or the Group. Accordingly, the information presented in this Sustainability Report (save for this Warning), including but not limited to all forward-looking statements, analyses, reviews, commentaries and risks, does not necessarily reflect the latest position (financial or otherwise) of the Group. On 27 January 2019, the OFAC Sanctions were lifted. Shareholders and potential investors should exercise caution when making an assessment or dealing in the Company's shares. If in doubt, they are strongly advised to consult their stockbrokers, bank managers, solicitors and/or other professional advisers before dealing in the Shares.

## Continuance

With effect from 9 July 2019 (the "Continuance Date"), the Company has been registered as an international company in the Unified State Register of Legal Entities of the Russian Federation.

With effect from the Continuance Date the Company's memorandum of association and articles of association governed by Jersey laws are superseded by the charter that is available on the Company's website at <https://www.enplusgroup.com/en/investors/corporate-documents/> (the "Charter"). Inter alia, the Charter establishes authority of the General Shareholder Meeting and the board of directors (the "Board") and provides that the CEO<sup>1</sup> has the authority to act on any matters outside the scope of the authority of the General Shareholder Meeting and the Board.

The Company's name was changed as follows:

- The full name in Russian: Международная компания публичное акционерное общество «ЭН+ ГРУП»;
- The short name in Russian: МКПАО «ЭН+ ГРУП»;
- The full name in English: EN+ GROUP International public joint-stock company;
- The short name in English: EN+ GROUP IPJSC.

<sup>1</sup> The Charter uses the term "General Director" which is used interchangeably with the term "CEO" in public disclosures made by the Company.

# Contact information

To provide your feedback, suggest a comment  
or ask a question please contact:

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# Company's overview

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SUSTAINABILITY REPORT 2018

STATEMENTS • ABOUT EN+ GROUP • CORPORATE GOVERNANCE •  
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# Statements

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- Message from the Executive Chairman of the Board
- Message from the CEO
- Message from HSE Committee Chair

## GRI

102-14

## Message from the Executive Chairman of the Board



**Lord Barker of Battle,**  
Executive Chairman of the Board  
of En+ Group

### Dear stakeholders,

A strong commitment to a progressive sustainability agenda and a fierce determination to further drive down the carbon emissions of our Group is central to the aims and priorities of the new independent Board of En+ Group. We are proud of our leading position on these vital issues and proud of our considerable achievements to date. However we are also critically aware that there is much more to do and the challenges ahead are significant. It is in that spirit that I am pleased to present our first Sustainability Report as a London listed company to both shareholders and all interested stakeholders alike.

This Report aims to provide a dramatically improved level of transparency on the Group's governance, environmental and social focus. It will enable our stakeholders to benchmark our progress year on year. Publishing this Report is consistent with our business strategy, which strongly emphasises sustainable development as both intrinsic to our growth and integral to our future.

Our corporate strategies going forward will also include Key Performance Indicators (KPIs) for management (including me!) linked to the sustainability performance of the Company and our progress in further reducing carbon emissions.

This disclosure is consistent with, but goes much further than, the robust commitments on independent governance that we made to the US Treasury when sanctions were lifted on the Group earlier this year.

This Report also builds on the major governance reforms that have further strengthened our business and opened the Group up to new opportunities and new markets. These measures further enhance our ability to help lead our sector in the global transition to a low carbon economy, allowing us to face up to the responsibility we have to help fight dangerous man-made climate change.

But this focus is not a passing fad or a board box ticking exercise. Sustainability is core to what we do as a business. We are the world's largest producer of low carbon aluminium, a material central to the drive for a low carbon global future. It is fully recyclable, and already used extensively in the electric vehicle, aerospace and packaging industries as well as in the development of more energy efficient buildings; all essential building blocks of the low carbon transition.

In 2017, we launched a new market leading brand for low carbon aluminium – ALLOW with a verified low carbon footprint. ALLOW's carbon footprint is lower than 4 t CO<sub>2</sub>e/t of primary aluminium produced at smelters (Scope 1 and 2) which is among the best levels in the world's aluminium industry as verified by KPMG.

Overall, the aluminium industry is currently responsible for approximately 1% of global GHG emissions according to Carbon Trust estimates. But the carbon footprint of our aluminium production is more than three times below the industry average

## "Sustainability is core to what we do as a business. We are the world's largest producer of low carbon aluminium, a material central to the drive for a low carbon global future".

of 12.3 tonnes of CO<sub>2</sub><sup>1</sup> per tonne of aluminium and substantially lower than the typical Chinese produced aluminium which dominates global production. But we recognise that lowest in our sector is not good enough. Our new goal is to lead the industry by example and reduce the carbon content of our products even further.

In Russia, the heart of our operations, we greatly welcome the recent decision by the government to ratify the Paris Agreements and to keep driving the necessary changes to deliver against COP21 targets. It is critical that the global metals and mining industry gets behind this initiative.

However such ambitious progress within En+ will depend most of all on the talent and commitment of our people. Our employees are the driving force of the Group. We invest considerably into the development of our over 98,000 employees across five continents to support their personal growth and their shared success in the business. The health and safety of every employee is our number one priority and our HSE Committee has been considerably enhanced and strengthened by the new Board. It now meets more regularly to review our performance and processes, with world class benchmarks as the norm and a determination to drive up our performance against key health and safety indicators across all of our operations. Through developing a self-enhancing health and safety culture across our global business, we aim to significantly improve our performance in this area.

Growing our business in a responsible way also means enhancing our social and environmental contribution. From Siberia to Africa, from Ireland to Jamaica, we have a global geographical footprint touching diverse communities and ecosystems. Our day-to-day challenge is to understand and address their evolving needs, minimise any negative impact from our operations, where ever possible repair, safeguard and improve the environment we operate in, while still ensuring we generate the returns necessary to continue to invest for a sustainable future.

Our leadership in the development of new technologies is key to our sustainability progress. Innovation is at the centre of everything we do. It is through tireless innovation that we will continue to reduce the environmental impact of our operations and the carbon footprint of our products. Through a scientific approach to evaluating our natural surroundings we will intensify our efforts to sustain and enhance ecosystems, and support our local communities.

As part of our governance reform at the beginning of 2019 we appointed a majority of independent, experienced and high-calibre non-executive directors to the Group's Board. The new Board is working well with senior management and the diversity of talent and experience is a huge strength. However I would particularly like to draw your attention to the role of Joan MacNaughton CB Hon FEI, a highly influential figure in international energy and climate policy. After taking up her appointment as an independent director, she also assumed the role of Chair of

En+ Group's re-invigorated Health, Safety and Environment Committee. As current Chair of The Climate Group and of the Advisory Board of the New Energy Coalition of Europe and with a background in both the private and public sectors, her exceptional experience is invaluable. Ms MacNaughton will help us set an ambitious, but achievable, sustainability course for the business. I would like to take this opportunity to thank her for the invaluable contribution that she has already made to the Group.

Given the nature of our business and the scale of the Board's ambition, En+ Group is determined to play a meaningful role in helping drive a change in business attitudes towards climate change. The Climate crisis is real but so are the solutions. We see the potential in our Group to be a meaningful part of that solution, but there is a long road ahead. This will be a challenging journey but I look forward to sharing our progress with all of our stakeholders.

**Lord Barker of Battle,**  
Executive Chairman of the Board

<sup>1</sup> Smelters' direct emissions (scope 1) and indirect energy emissions (scope 2).

## Message from the CEO

### Dear stakeholders,

I am proud to report that the Group has continued to make material progress on its sustainability objectives and to present our key projects and performance results in this Report. This year we focused on the improvement of our internal sustainability reporting system and therefore, made a strategic decision to obtain independent assurance for the Sustainability Report that will be published for the next reporting period.

As businesses around the world become increasingly conscious of their environmental and social impact, the demand for sustainably sourced and produced materials is growing. Our hydro power assets and low-carbon aluminium mean we are well-placed for this shift. Today, more than 90% of En+ Group's Metals segment's aluminium output uses clean renewable power. However, we recognise there is a lot more that we can do. Therefore, at the moment we are working on a strategy to minimise the impact of our coal assets.

Despite unprecedented headwinds during 2018, I am proud that En+ Group has continued to push forward with both its environmental and social programs. We are increasing the efficiency of our hydro power turbines, substituting condensation mode generation at our CHPs for hydro power output and using energy and fuel more efficiently.

A key part of this achievement has been investment in our HPP modernisation program, which has already enabled us to enhance efficiency and improve cavitation, leading to an almost 20% increase in power. As a result of the program, starting from 2022 our Siberian HPPs are expected to increase their clean electricity generation by 2 TWh, from the same amount of water passing through the turbines. The program will also allow to reduce the Group's greenhouse gas emissions by 2.3 million tonnes per year by 2022 and demonstrates our commitment to continuing to lower the average carbon intensity of electricity.

We continued to transition to Eco-Søderberg cells, enabling us to significantly cut emissions while increasing production efficiency. This important innovation was developed at our Engineering and Technology Centre in Krasnoyarsk, and the Company expects to invest USD 250 million in rolling the technology out between 2018 and 2022. Overall, I am pleased to say that by 2018 we have reduced direct GHG emissions from electrolysis operations by 7.5 percent against a 2014 benchmark. We have used our in-house and external expertise in high-tech engineering to continue progressing the development of inert anode technology and to establish a pilot site for extracting valuable scandium oxide from waste bauxite residue, and continued work on the project aimed at improving the characteristics of perovskite solar cells.

A core focus for the business is our ongoing duty of care for Lake Baikal, the UNESCO

world heritage site that provides water to our hydro operations. In 2018, we continued the success of our Project 360 lake clean-up, which attracted 16,500 volunteers from around Russia. En+ Group continues to push for a multi-stakeholder strategy for addressing the human impact on Lake Baikal and is assembling a multi-disciplined team of scientists to research the key issues facing the lake that will underpin this approach.

Caring for the places in which we operate means supporting communities as well as ecosystems. The Company is proud of the work it has undertaken with communities around its operations in Guinea, which have suffered from the outbreak of the Ebola virus. The business supported the establishment and operation of a specialist centre for treating the disease, developed a modern laboratory complex for combating dangerous infections, and has helped the country's mass vaccination program. The fact that our local communities have had to suffer through this disease is tragic, and I am only glad that as a business we have been able to offer them some meaningful support.

In Siberia, En+ Group succeeded in bringing 30 companies together to establish the Irkutsk branch of the National Council for Corporate Volunteering—an important platform to enhance volunteer efforts across the region – and welcomed the Republic of Buryatia to the Environmental Entrepreneurship School Project – Russia's only scheme for championing regional entrepreneurs with environmental innovations and resource-saving solutions.

The most important community for our business is our employees. Despite an unfaltering focus on high health and safety standards and training, unfortunately, in 2018 there were some injuries at our production facilities. Every one of these workplace accidents has been thoroughly investigated and we are putting in place heightened safety



Vladimir Kiriukhin,  
Chief Executive Officer

measures to ensure that they do not happen again. The safety of everyone at En+ Group is my personal priority and I will personally ensure that we never cease in our efforts to prevent workplace accidents.

Looking ahead, En+ Group remains committed to ensuring we produce the world's most sustainable aluminium. We will achieve this through a commitment to innovation—both in the ways we work every day and in our pursuit of industry changing solutions. I am excited by the expertise and experience offered by our new Board and am confident that, with the enhancements made to our corporate governance over the past year, the Company is in a stronger position to push ahead with both our operational and sustainability strategies. We believe the green economy is one in which En+ Group can thrive and are confident that the path to a more sustainable business will benefit our shareholders, our employees, and the planet.

Vladimir Kiriukhin,  
Chief Executive Officer

**"As businesses around the world become increasingly conscious of their environmental and social impact, the demand for sustainably sourced and produced materials is growing. Our hydro power assets and low-carbon aluminium mean we are well-placed for this shift".**

## Message from HSE Committee Chair



**Joan MacNaughton,**  
Chair of the Health, Safety and  
Environment Committee

### Dear stakeholders,

I was delighted to join the Board of En+ Group earlier this year as an Independent Director and Chair of its Health, Safety and Environment Committee. En+ is one of the select group of companies that have put sustainability at the heart of their business. The Board has ambitious plans to help drive a change in behaviour in both producers and consumers of aluminium to combat climate change, and I feel privileged to be part of this journey.

In the brief period since it was established – as part of our commitment to best in class governance – En+'s HSE Committee has already reviewed all of the key issues within its remit. This is testament to the quality and depth of information we have received from colleagues supporting the work of the committee as well as from staff at the sites we have visited. Employee health and safety and robust environmental protection policies, respect for human rights, and the diversity and inclusion agenda are key priorities for En+ and we are committed to continuous improvement in these areas.

We take extremely seriously our responsibilities in terms of the impact of our business and our crucial stewardship of the unique natural ecosystems in which we operate. Sustainability is at the heart of the En+ strategy and currently the Group's power generation and aluminium production facilities have among the lowest carbon footprints in the world. However, much more work is ahead of us, including targeting a further substantial reduction in a wider range of pollutants, investing into land remediation and state-of-the art waste treatment facilities, moving towards renewable energy where we can and reviewing our asset portfolio to minimise its environmental impact.

En+ Group is totally committed to ensuring the health and safety of its employees and contractors at all stages of its operations. The life of every person must be protected, and the Group strives to prevent all occupational accidents. We deeply regret that in 2018 there were eight fatalities in our Group but we are actively working on improving safety. We have now developed and adopted an HSE Policy and an HSE management system at the Group's production facilities.

**" En+ is one of the select group of companies that have put sustainability at the heart of their business ".**

In 2018, the Group paid close attention to developing a strong safety culture among its employees and introduced a number of standards and procedures, while large-scale training of personnel and top management was organised under the Conscious Safety development program, through the Group's Corporate University and with external consultancy support. In 2018, our LTIFR was 0.14 and our employee occupational illnesses rate per one hundred employees was 0.214. Our work here continues and we continue to improve these and other health and safety indicators.

In terms of environmental performance, the carbon footprint of our operations was further reduced in 2018 with the emissions (Scope 1) of our aluminium smelters 7.5% lower than in 2014. We continue to implement state-of-the-art environmental technology across our operations, some of which have been developed for limiting heat transmission losses from the Power segment and some for introducing a closed water cycle for the Metals segment.

We also have clear targets for the future. Our aim is for hydropower to cover 95% of the Metals segment's aluminium production energy needs by 2025. The Power segment aims to increase power generation from its hydropower assets by 3.4% by 2022<sup>1</sup>, with corresponding reductions in emissions per unit of power produced.

Our sustainability commitments include supporting the communities where En+ and RUSAL have operations and contributing to social and economic life. In this context, our legacy combined heat and power assets in Siberia represent a major challenge, burning coal to provide heat to local communities in a region where no heat alternatives currently exist. We take these responsibilities very seriously and are developing a roadmap on GHG emissions (including Scope 1, 2 and 3) monitoring and reduction as well as the eventual replacement of older equipment and assets, reflecting our commitment to local communities, who rely on us for improving their quality of life. In 2018, En+ reduced water consumption by 36% compared to 2008 level, we aim to reach 100% recycled and reused water supply for the main production processes across the entire Company by 2022.

We are aware of the significant risks posed by our business. We are determined to manage those risks with scrupulous regard for our impact and to ensure a safe and sustainable future for En+, our operations and the people and communities we serve.

**Joan MacNaughton,**  
Chair of the Health, Safety and Environment  
Committee

<sup>1</sup> The "New energy" modernisation program envisages an increase of power generation by 2 TWh annually. Comparison baseline – 2018 HPP output, 58.3 TWh.



Ent+  
GROUP

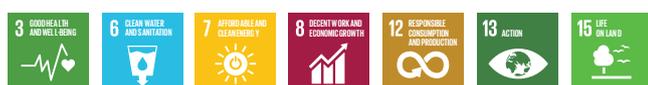
Small logos and text on the back of the red jacket, including a circular logo and some illegible text.

# About En+ Group

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## IN THIS SECTION

- Key highlights
- At a glance
- Group's key economic and financial results
- Market presence
- Corporate overview



## Key highlights

### Key economic and financial results

**USD 12.4 bn**

En+ Group revenue

**▲ 32.7%**

increase in net profit 2018 vs 2017

**▼ 8.8%**

decline in net debt 2018 vs 2017

### Corporate governance

**2**

new committees were created

**The majority of the Board** are independent directors

### Internal control and risk management

**Approach to risk management** was changed

**127**

audit procedures were conducted resulting in dismissals and other disciplinary actions

**Chief Compliance Officer** was appointed

### Sustainability approach

**7**

Key SDGs



**HSE Committee** established in February 2019



## Performance management

**638**

participants in Business System 250 program

**USD 67.3 mn**

total cost saving of the Metals segment since the implementation of Business System measures in 2018

**The Tender Committee** was established

## Scientific and technological development

**▼ 55%**

reduction of estimated cost of scandium oxide production

**>17%**

efficiency factor of the perovskite solar cells test samples

**110 kV**

power line temperature control to increase the reliability of electricity supply

## Employees

**98,401**

people employed

**26%**

female representation in En+ Group in 2018

**93%**

employees have permanent contracts

## Health and safety

**4,000**

flashcards outlining safe working practices were produced

**4,969**

employees completed safety culture trainings

**8**

fatal incidents in 2018

**0.14**

LTIFR in 2018

**0.214**

employee occupational illness rate in 2018, per 100 employees

## Environmental protection

**▼ 7.5%**

reduction of direct GHG emissions of electrolysis operations 2018 vs 2014 (tCO<sub>2</sub>e/tAl)

**▼ 36%**

decline in fresh water consumption by the Metals segment compared to 2008

**1.2 mn**

young peled-fish were released into the Angara river basin over the past five years

**"ALLOW"**

brand of low-carbon footprint aluminium

## Local community development

**21**

regional and federal businesses joined the Irkutsk branch of the National Council for Corporate Volunteering

**~800**

children participated in RoboSib festival

**~16,500**

volunteers took part in the eco-event to clean up Lake Baikal's shoreline

**OVER 650**

young entrepreneurs have participated in the Environmental Entrepreneurship School Project

GRI

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## At a glance

### Al

- Aluminium is a lightweight metal that has good conductivity and is widely used in various industries;
- The oxide membrane formed on the surface of aluminium is strong and durable, making it resistant to corrosion and rusting, even after prolonged contact with moisture.

**3.9 mtpa**  
total aluminium capacity

EN+ GROUP International Public Joint-Stock Company (EN+ GROUP IPJSC) is a global leader in aluminium production and renewable energy generation with a well-established presence across five continents. EN+ Group employs over 98,000 people.

EN+ Group is unique among global natural resources companies. The Group achieves strategic synergies through its complementary Power and Metals segments. The Group's hydro power plants provide clean electricity for its portfolio of world-class aluminium production facilities. The full integration of these two segments is EN+ Group's main business advantage.

The Company moved its registered office from Jersey to Oktyabrsky Island, Kaliningrad, Kaliningrad Region, Russia on 9 July 2019<sup>1</sup>.

## The Metals segment

The Group's Metals segment has a well-diversified sales platform that allows it to efficiently access and operate in all key aluminium markets including the United States, Western Europe, Japan and South East Asia.

EN+ Group's Metals segment is represented by RUSAL. RUSAL is a low cost, vertically integrated aluminium producer with core smelting operations located in Siberia. RUSAL also owns a 27.8% stake in Norilsk Nickel, the world's largest platinum group metals producer, the third largest in nickel output and tenth in copper production.

**EN+ Group international public joint-stock** company is a global leader in aluminium production and renewable energy generation.

**No. 1**  
aluminium producer  
outside China

**5.8%**  
of global aluminium  
production

**No. 1**  
global independent  
hydro power  
producer

<sup>1</sup> On 30 April 2002 the Company was registered as a legal entity under the laws of the British Virgin Islands. On 25 August 2005 the Company was registered as a legal entity under the laws of Jersey. On 9 July 2019 the Company was registered as a legal entity under the laws of the Russian Federation.

#### Our production model:

- Extraction and refinement of bauxites – we mine the key raw materials for alumina production from topsoil in various tropical and subtropical regions. In 2018, the Group was approximately 75% self-sufficient in bauxite and nepheline production;
- Alumina production – we produce alumina (the common name given to aluminium oxide) from bauxite. RUSAL's total attributable alumina output was 7.774 million tonnes in 2018 and 7.773 million tonnes in 2017;
- Aluminium production – we use the process of electrolysis to extract aluminium by dissolving alumina in a molten cryolite electrolyte. The Group increased primary aluminium production by 1.2% in 2018 to 3.753 million tonnes.

## The Power segment

The Power segment is the leading independent power producer in Russia, one of the largest globally in terms of installed power capacity and the biggest independent hydro power generator in the world. The Power segment encompasses the full energy sector value chain: the production and sale of electricity and heat energy, electricity and heat transmission, energy sales to end consumers, and engineering.

The Power segment comprises hydro, heat and solar power generation. Renewable energy sources – five HPPs (hydro power plants) with total capacity of 15.1 GW and one SPP (solar power plant)<sup>2</sup> with installed capacity of 5.2 MW – accounted for 77% of the Group's installed electricity capacity in 2018.

In 2018, En+ Group remained the largest electricity producer in Siberia, contributing 36.4% to the region's total installed capacity. Furthermore, over three quarters of the Group's capacity is hydro power.



- Hydroelectric power generation produces electricity from renewable energy and does not release harmful emissions into the atmosphere;
- Hydroelectric power plants in Russia produce about 18% of all the country's electricity, accounting for virtually all of Russia's renewable electricity generation.

**19.6<sup>3</sup> GW**

total Group's installed electricity capacity

<sup>2</sup> Photovoltaic (PV).

<sup>3</sup> Including Onda HPP, with an installed power capacity of 0.08 GW and a production level of 0.4 TWh in 2018 (located in the European part of Russia, leased to RUSAL); excluding Boguchany HPP (a 50:50 joint venture of RUSAL and RusHydro).

## Group's key economic and financial results

**USD 12.4 bn**

En+ Group revenue

**▲ 2.3%**

Revenue up (USD 284 mn)  
year-on-year

**26.48%**

increase in alumina and bauxite sales  
(by USD 206 mn)

**USD 3.3 bn**

En+ Group adjusted EBITDA, a 2.0%  
year-on-year increase

**▲ 32.7%**

rise in net profit to USD 1.9 bn, driven  
by an increased share of profit from associates  
and joint ventures

**▼ 8.8%**

decline in net debt to USD 11,094 mn as  
of 31 December 2018 (USD 12,164 mn  
as at 31 December 2017)

**▲ 2.5%**

The capital expenditures before intersegmental  
elimination up to USD 1,015 mn  
year-on-year

### Other key economic results in 2017-2018:

USD mn (except%)	2018	2017	Change, %
Revenue	12,378	12,094	+2.3%
Primary aluminium and alloys sales <sup>1</sup>	8,165	8,169	-0.05%
Alumina and bauxite sales	984	778	26.48%
Electricity sales	1,329	1,319	0.80%
Heat sales	461	462	-0.20%
Other	1,439	1,366	5.34%
Adjusted EBITDA	3,287	3,223	2.00%
Adjusted EBITDA margin	26.60%	26.60%	-
Net profit	1,862	1,403	32.70%
Net profit margin	15%	12%	+3pp
Net debt <sup>2</sup>	11,094	12,164	-8.80%
Free cash flow <sup>3</sup>	877	1,258	-30.30%

<sup>1</sup> After consolidation adjustments.

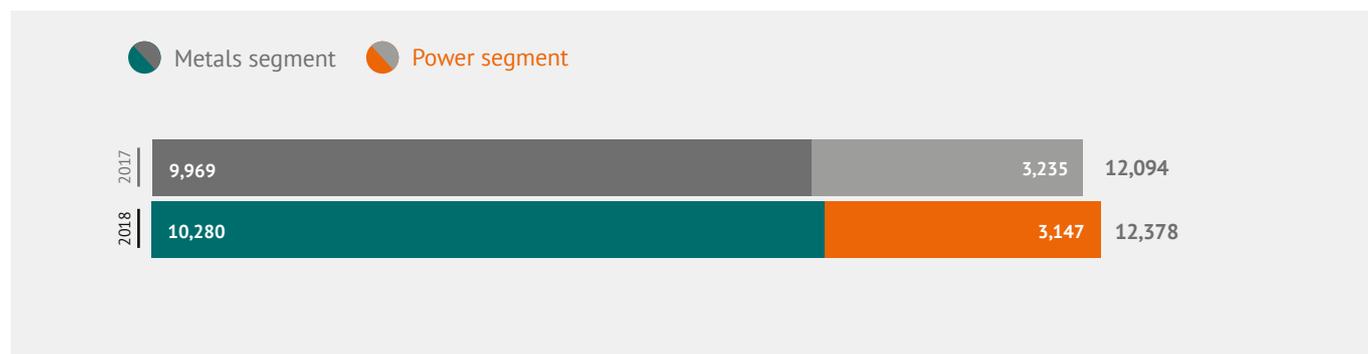
<sup>2</sup> Net debt – the sum of loans and borrowings bonds outstanding and deferred liability for acquisition of PJSC Irkutskenergo (the Group's subsidiary) shares less total cash and cash equivalents as at the end of the relevant period.

<sup>3</sup> Calculated as operating cash flow less net interest paid and less capital expenditure adjusted for payments from settlement of derivative instruments plus dividends from associates and joint ventures.

### Total net sales and capitalisation in 2017-2018, USD mn

	Metals segment		Power segment		Intersegmental adjustments		Total	
	2018	2017	2018	2017	2018	2017	2018	2017
Total net sales for the year	10,280	9,969	3,147	3,235	(1,049)	(1,110)	12,378	12,094
Capitalisation at the end of the year	13,495	12,923	8,792	9,054	(4,608)	(4,563)	17,679	17,414
including borrowed capital (loans and borrowings, including bonds)	8,286	8,479	3,991	4,550	-	-	12,277	13,029
including equity	5,209	4,444	4,801	4,504	(4,608)	(4,563)	5,402	4,385

### Revenue dynamics in 2017-2018, USD mn<sup>4</sup>



<sup>4</sup> After consolidation adjustments.

GRI

- 102-4
- 102-6
- 102-7

## Market presence

**En+ Group** is a vertically integrated aluminium and power producer with core assets in Siberia, Russia. The Company is a global player in the aluminium supply market and a regional leader in the power sector.

The core areas of the Company's Metals segment are aluminium and bauxite production and aluminium sales. The Metals segment has a well-diversified sales platform, which allows it to efficiently access and operate in all key aluminium markets including North America, Western Europe, Japan and South East Asia.

The Power segment focuses on the generation and distribution of electricity and heating to customers primarily located in Siberia, Russia.

Power and aluminium are the Company's core markets. The Metals segment is a key supplier of aluminium to the auto, consumer goods, packaging and construction sectors, as well as to the aviation industry in Europe and North America.

The Company's Power segment generates and distributes electricity and heating in Russia. Industrial enterprises, households and municipalities in regions of presence are the segment's main consumers. The Metals segment is one of the largest consumers of the Power segment's electricity.

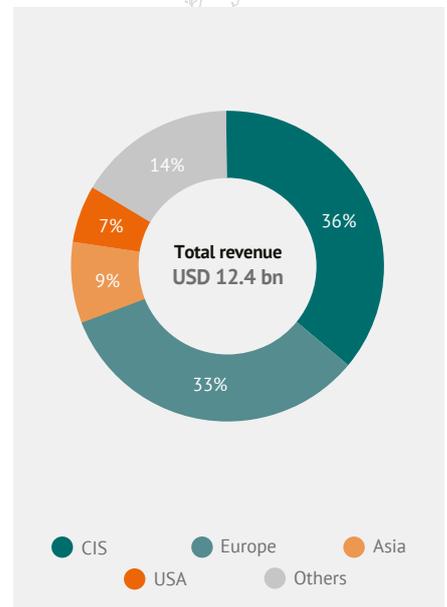
The Metals segment's bauxite mines are located in four countries: Russia (two mines), Jamaica (one mine), Guyana (one mine) and Guinea

(three mines). The Group also has eight alumina refineries in six countries: Ireland (one plant), Jamaica (one plant), Italy (one plant), Ukraine (one plant), Russia (three plants) and Guinea (one plant). In addition, the Company holds a 20% equity stake in Queensland Alumina Limited (QAL), an alumina refinery in Australia. The Metals segment owns 10<sup>1</sup> operational aluminium smelters in two countries: Russia (nine plants) and Sweden (one plant).

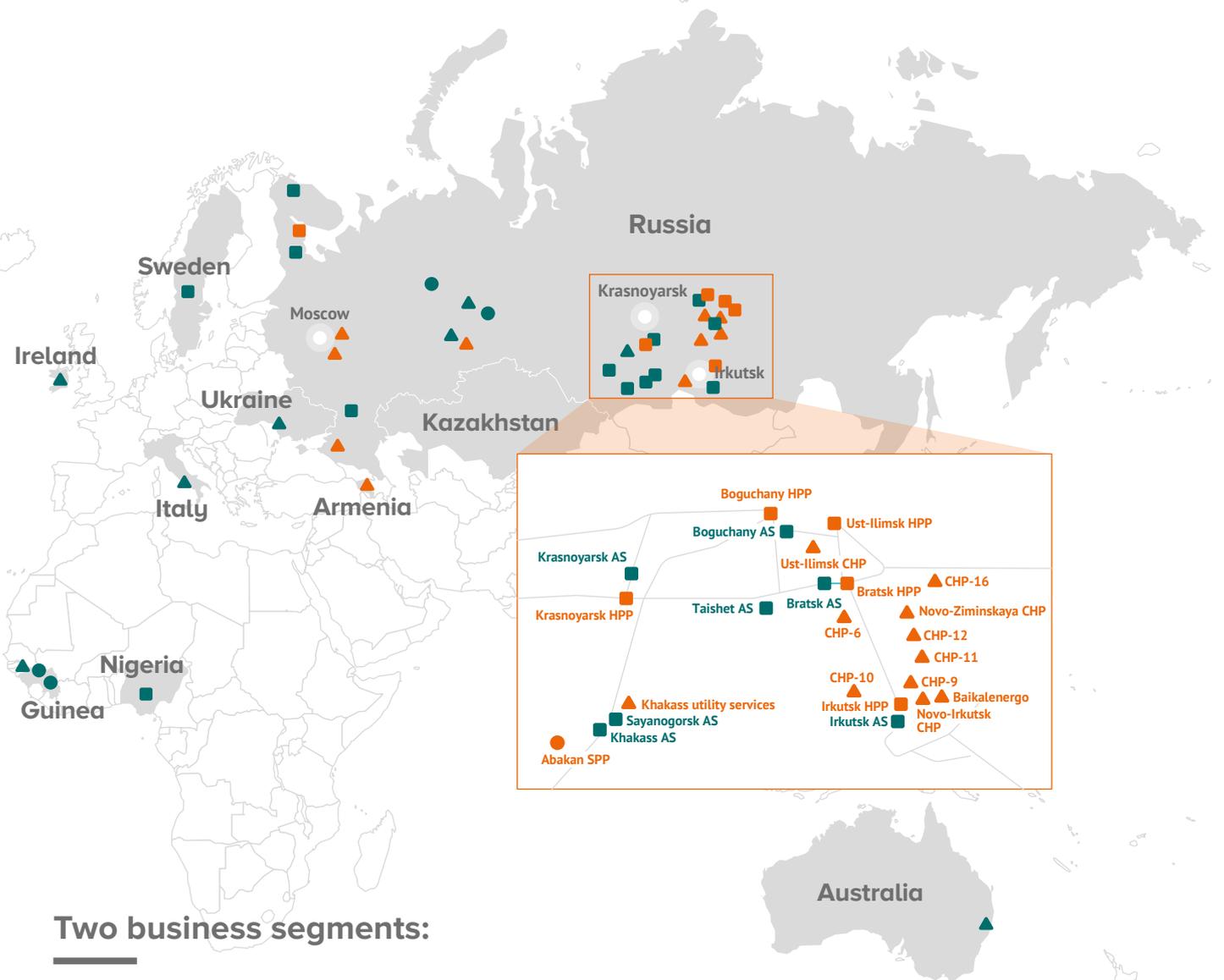
The Group operates foil and packaging assets as well as production facilities for wheels and a wide range of other product lines. The Metals segment established a Downstream division in February 2018 to develop and improve the efficiency of producing value-added products from aluminium and aluminium-based alloys.

The Power segment's assets are located primarily in the East Siberian and Volga regions. Currently, the Company operates five hydro power plants, 16 combined heat and power plants as well as one solar plant and is engaged in all key areas of the Russian power industry: electricity and heat generation, electricity, capacity and heat sales, heat distribution; retail energy trading and supply, engineering services, and electricity distribution and transmission.

En+ Group's revenue split by region in 2018



<sup>1</sup> Ten aluminium smelters currently in operation.



## Two business segments:

### The Metals segment

Total production in 2018

**3.8 mt**  
Aluminium

**7.8 mt**  
Alumina

**13.8 mt**  
Bauxite

### The Power segment

Total production in 2018

**58.3<sup>2</sup> TWh**  
Hydro power

**14.9 TWh**  
Thermal power

**6 GWh**  
Solar

**27.9 mn Gcal**  
Heat production

**En+ Group** is an independent global aluminium and power producer

**12**  
Countries

**60+**  
Sites

<sup>2</sup> Excluding Onda HPP with installed power capacity 0.08 GW and production level of 0.4 TWh in 2018 (Located in European part of Russia, leased to RUSAL).

GRI

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# Corporate overview

Since 9 July 2019, En+ Group has been an international public joint-stock company (EN+ GROUP IPJSC)<sup>1</sup> listed on the London Stock Exchange (LSE) and the Moscow Exchange (MOEX). The Company made substantial

changes to its corporate governance practices throughout 2018, which reflect the Company's strong and ongoing commitment to the highest standards of corporate governance<sup>2</sup>.

## Financial assistance received from the government

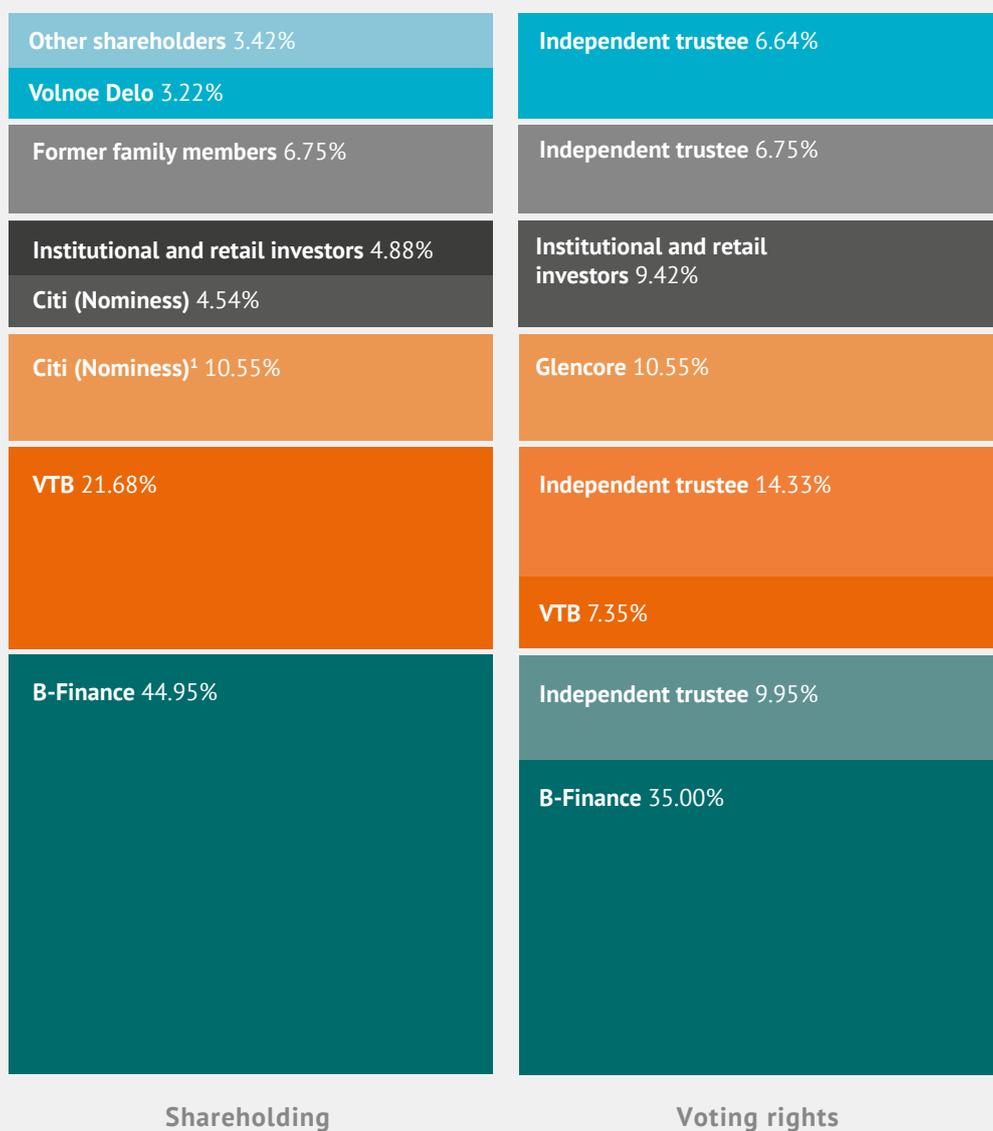
Financial assistance category	Metals segment, USD, mn		Power segment, USD, mn		EN+ Group, USD, mn	
	2018	2017	2018	2017	2018	2017
Tax relief and tax credits	5	19	1	3	6	22
Subsidies, including subsidies for R&D	5	4	3	3	8	7
<b>Total</b>	<b>10</b>	<b>23</b>	<b>4</b>	<b>6</b>	<b>14</b>	<b>29</b>

<sup>1</sup> Before 9 July 2019 – EN+ GROUP PLC.

<sup>2</sup> For more detailed information please refer to pp.33-39, Corporate governance and pp.96-123, Annual Report 2018.



**Voting and shareholder structure  
 as at 26 January 2019**



Note: percentages may not add up to 100% due to rounding.

<sup>1</sup> GDRs issued as part of a Glencore swap transaction.

# Business model

Sustainability at En+ Group is underpinned by its sustainable business model, which, at its core, aims to responsibly boost the production of metals and energy and reduce our environmental impact. We strive to balance short and long-term interests whilst always incorporating economic, environmental and social considerations into our decision-making processes.

The Group has a strategic stake in Norilsk Nickel (27.8%). Norilsk Nickel is the world's largest palladium producer, the second-largest nickel producer and one of the leading producers of platinum and copper. The Group's holding diversifies its revenue streams and broadens its strategic opportunities.

In line with Group's commitment to drive down its carbon footprint with greater urgency and ambition, the Board has commissioned a full review of strategic options with respect to the Group's coal and coal-fired power assets.

## Business model structure<sup>1</sup>

### OUR RESOURCES & INPUTS

#### ASSETS

**3.9 mt**  
Al capacity

**19.6 GW**  
Electricity capacity

**15.1 GW**  
Hydro capacity

#### RAW MATERIALS

**20.6 mtpa**  
Bauxite production capacity

**10.4 mtpa**  
Alumina production capacity

#### PEOPLE

**c. 98,000**  
Employees

### RAW MATERIALS

Bauxites and nephelines are the key raw materials for alumina production. In 2018, the Group was approximately 70% self-sufficient in bauxites and nephelines. The Group uses water for hydro power generation and coal for thermal generation. The Group is fully self-sufficient in coal resources.



#### Bauxite

Aluminium production starts with the raw material bauxite, a clay-like sedimentary rock found in a belt around the equator. The bauxite is mined a few metres below the ground.

**13.8 mt**  
production in 2018



#### Nepheline

Nepheline, a hexagonal mineral that usually presents as a glassy crystalline silicate of sodium, potassium, and aluminium, can also be used as raw material for alumina.

**4.3 mt**  
production in 2018



#### Water

Meticulous calculations of hydro power operations were conducted before creating the Angara and Yenisei hydro power cascade in order to supply cheap electricity to the region with a minimal impact on the hydrological regime of Lake Baikal and the Yenisei River.



#### Coal

Coal is mainly used to power En+ Group's CHPs.

**16.2 mt**  
production in 2018

<sup>1</sup> Table as at 31 December 2018.

**REFINING  
POWER GENERATION**

En+ Group's long position in alumina capacity helps secure ample supply for the prospective expansion of our aluminium production capacity and allows us to take advantage of favourable market conditions through third-party alumina sales.



Alumina, or aluminium oxide, is extracted from the bauxite through refining where alumina is separated from the bauxite by using a hot solution of caustic soda and lime.

Alumina can also be extracted via the nepheline process.

**7.8 mt**  
production in 2018



Hydro power is a key part of the Group's energy business and generates massive amounts of low-carbon energy to power alumina processing facilities.

**58.3 TWh**  
of electricity  
production in 2018



The Group's HPP portfolio is balanced with thermal power generation, which is supplied to the power markets in its regions of operation.

**14.9 TWh**  
of electricity  
production

**27.9 mn Gcal**  
of heat  
production  
in 2018

**PROCESSING/  
GENERATION**



Aluminium is produced through the process of electrolysis, where electricity is run between a negative cathode and a positive anode (both made of carbon), which reacts with the oxygen in alumina and forms CO<sub>2</sub>. Liquid aluminium is cast into extrusion ingots, sheet ingots, or foundry alloys, depending on the intended final product.

**Key products:**

- Primary aluminium
- ALLOW (certified low-carbon aluminium)
- Billets
- Slabs
- Wire rod
- Ingots
- Foil
- Powder

**3.8 mt**  
production in 2018



- Efficient management of investment resources
- Seamlessly connecting new capacity to the grid

**SALES &  
MARKETING**

En+ Group's position as the largest aluminium producer outside of China opens up extensive marketing opportunities. We are aiming to further develop sales to key customers in major growth regions, focusing on value-added products and direct sales to end-users.

**Total sales in 2018**  
**3,671 kt**

**VAP sales in 2018**  
**1,664 kt**



- Capturing additional margin
- Direct access to consumers

**18.6 TWh**  
sales in 2018

**CREATING  
GLOBAL VALUE**

**Low-carbon aluminium**

For more information | please see p. 88 Scientific and technological development. Modernisation. ALLOW brand

**Renewable energy**

For more information | please see p. 90 Scientific and technological development. Modernisation. The New Energy Generation program

**Income and shareholder value**

For more information | please see p. 30 About En+ Group. Corporate overview

**Reducing the carbon footprint of the global aluminium industry**

For more information | please see p. 124 Environmental protection. RUSAL's Climate initiatives

**Environmental conservation**

For more information | please see p. 139 Environmental protection. Biodiversity

**Community engagement**

For more information | please see p. 143 Local community development



**Strategic investment in Nor Nickel (27.8%)**

Nornickel is the world's largest palladium producer, the second nickel producer and one of the leading producers of platinum and copper. The Group's holding allows for significant diversification of earnings as well as broadening of the Group's strategic opportunities.

**USD 8,286 mn**  
Investment market value  
at 31.12.2018



# Corporate governance

En+ Group is a global company with GDRs listed on the London and Moscow Stock Exchanges. The Company is committed to the highest international standards of corporate governance. Adherence to the most rigorous standards of corporate governance standards is the key to attracting fresh investment, strengthening the Group's competitive position, and enhancing shareholder value. Good governance is based on clear roles and responsibilities, and we aim to ensure that our governance procedures cover all areas of decision-making across the Group.

Our corporate governance system outlines the relationship between the Board, the Company's shareholders and the management team, as well as the remit and duties of the Board committees.

The following corporate governance principles are fundamental to our operations:

- Transparency;
- Open and clear decision-making;
- Legal compliance, including clear and robust compliance with the requirements for the Company to be, and remain free from OFAC Sanctions;
- Continuing to grow the Company's value for the benefit of all stakeholders.

## IN THIS SECTION

- Corporate governance system
- The Board's matters
- The management bodies composition highlights
- The Barker Plan
- En+ Group Committees



# 2

new committees were created

## The majority of the Board

are independent directors

## GRI

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102-36	405-1		

## Corporate governance system

We recognise that robust corporate governance is crucial for the long-term success of our Company. The General Shareholder Meeting is the highest management body, which provides shareholders with an opportunity to participate in the management of the Company and make decisions on all key issues related to the Company.

The matters that the Board should be engaged in include, among other things, setting the Company's strategic aims, ensuring that the necessary financial and human resources are in place for the Company to meet its objectives and reviewing the Company's performance. The Board is responsible for providing leadership to the Group and its overall management. The Board also sets the Company's values and standards and ensures that its obligations to shareholders and other stakeholders are understood and met. The Chairman of the Board is responsible for leadership of the Board and for creating the conditions necessary

to allow the Board and individual directors to operate effectively. The CEO is responsible for the day-to-day management of the Company's business and ensuring that the strategic decisions made by the Board are implemented. The day-to-day operation of the Company is performed by executive Directors and Officers (the "Management Team"). The Company implemented a number of strategic changes to its Management Team throughout 2018 following the implementation of the Barker Plan<sup>1</sup>.

RUSAL has its own corporate governance system with a separate board of directors and committees.

**We recognise that robust corporate governance is crucial for the long-term success of our Company.**

<sup>1</sup> For more detailed information please refer to p.38, The Barker Plan.

## The Board's Matters

The matters specifically reserved for the Board under the Charter include, inter alia, the following:

- Determination of priority areas of the Company's activities, including approval of the annual budget, mid-term and long-term budgets, development strategies and programs of the Company, amendment of these documents, consideration of the results of their implementation;
- Approval of the Company's long-term strategy and objectives and its overall management mechanism;
- Day-to-day control over implementation of the Company's long-term strategy and objectives;
- Approval of consolidated annual budgets and material amendments made thereto;
- Control over the Company's core business and regular evaluation of its business in the context of the Company's long-term strategy and objectives and discharge of obligations contemplated by law and the Charter;
- Recommendations to shareholders to approve changes in the structure of the Company's share capital, including reduction in the capital and acquisition of treasury shares to maintain their market value;
- Approval of resolutions to issue securities, approval of resolutions on any additional issue of securities, approval of prospectuses;
- Conducting performance evaluation of the Board, its committees and members of the Board, evaluation of compliance of non-executive members of the Board with independence criteria;
- Approval of items that require Board approval under the Company's Charter.



## The management bodies composition highlights

As of 31 December 2018, there were nine directors on the En+ Group Board, who were elected based on the principles of diversity, independence and their experience in economics, environmental protection and social development. As of the date of this Report, the Board comprises 12 directors: seven independent non-executive directors, four non-executive directors, and one executive director, being the Executive Chairman of the Board.

All of the current directors, with the exception of Lord Barker, were re-appointed/appointed by the Company's shareholders at the Company annual general meeting on 29 May 2019. Lord Barker has served as the Chairman of the Board since October 2017 and as Executive Chairman of the Board since February 2019.

Vladimir Kiriukhin was appointed Chief Executive Officer (CEO) of En+ Group

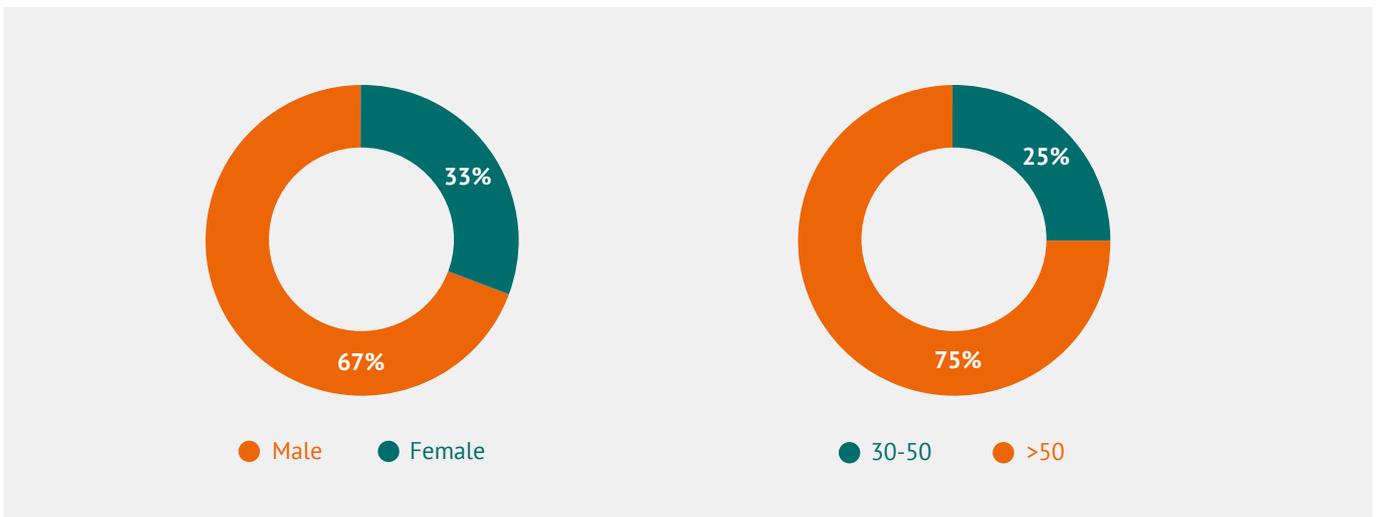
in November 2018. As CEO, he oversees the Company's long-term strategy, business development, and cooperation with key external stakeholders.

### Composition of the Board and its committees<sup>1</sup>

The Rt Hon Lord Barker of Battle PC	Executive Chairman of the Board
Hon Christopher Bancroft Burnham	Independent Non-Executive Director, Senior Independent Director
Alexander Chmel	Independent Non-Executive Director
Carl D. Hughes	Independent Non-Executive Director
Nicholas Jordan	Independent Non-Executive Director
Igor Lojevsky	Independent Non-Executive Director
Joan MacNaughton CB Hon FEI	Independent Non-Executive Director
Andrey Sharonov	Independent Non-Executive Director
Vadim Geraskin	Non-Executive Director
Ekaterina Tomilina	Non-Executive Director
Elena Nesvetaeva	Non-Executive Director
Anastasia Gorbatova	Non-Executive Director

<sup>1</sup> For more detailed information, please follow the link <https://www.enplusgroup.com/en/explore-enplus/board-of-directors/>.

Board diversity by gender  
and age<sup>2</sup>



<sup>2</sup> As of the date of issuance of the Report.



## The Barker Plan

On 18 May 2018 the Board began the implementation of the Barker Plan (also known as the Chairman's plan), a roadmap to lift the OFAC sanctions imposed on the Company on 6 April 2018 by overhauling and strengthening the Company's corporate governance mechanisms. The plan was successful, with sanctions lifted on 27 January 2019. Nonetheless, the Company remains committed to upholding the highest international standards of corporate governance.

Timeline of corporate governance changes:

- 20 June 2018: amendment of the terms of reference of the Board committees;
- 26 July 2018: approval of the division of authorities between the Chief Executive Officer and the Chairman of the Board by the Board;
- 15 November 2018: approval of a Conflict of Interest policy and Risk Management policy by the Board;
- 19 December 2018: fulfilment of the Terms of Removal by En+, RUSAL, JSC EuroSibEnergO, and OFAC, resulting in, inter alia, new requirements for the Board;
- 27 January 2019: appointment of new independent directors following the lifting of OFAC Sanctions from the Company and its subsidiaries, RUSAL and JSC EuroSibEnergO;
- 8 February 2019: establishment of two new Board committees: (i) Health, Safety, and Environment Committee and (ii) Regulation and Compliance Committee.

On 8 February 2019, Lord Barker was appointed as an Executive Chairman of the Board to streamline the Board's control over the corporate governance system and the Company's procedures. The appointment aims to further increase cooperation between the Board and the Company's management and ensure the continued strong performance of En+ Group.

All the newly appointed Non-Executive Directors are now serving on the Board. The Board's composition has been carefully balanced to include the quality and a breadth of experience that will support and promote its effectiveness. The new members include, Cambridge Global Capital co-founder, Hon Christopher Bancroft Burnham and Chair of The Climate Group and the Advisory Board of the New Energy Coalition of Europe, Joan MacNaughton CB Hon FEI, as well as senior executives from leading international energy companies and financial institutions<sup>1</sup>.

## En+ Group Committees

The Board of Directors has established five committees to assist its activities.

All committees perform their duties on behalf of the Board, which is responsible for constituting, assigning, co-opting, and setting the terms of service for committee members. The Board may delegate this function to the Corporate Governance and Nominations Committee.

The composition of the committees has been reorganised following the lifting of sanctions on 27 January 2019. The composition of the Company's existing Board committees was amended on 14 February 2019.

<sup>1</sup> For more detailed information please follow the link <https://www.enplusgroup.com/en/explore-enplus/board-committees/>.

**The Audit and Risk Committee (the "ARC")** comprises at least three members, all of whom are Independent Non-Executive Directors, and meets at least four times a year. The ARC is responsible for considering, inter alia, the integrity of the Group's consolidated financial statements, the terms of appointment and remuneration of the independent auditors, and ongoing monitoring of the effectiveness and objectivity of independent auditors.

**The Corporate Governance and Nominations Committee (the "CGNC")** comprises at least three members, at least half of whom shall be Independent Non-Executive Directors, and meets at least three times a year. The CGNC's primary role is to recommend and annually review the corporate governance guidelines for the Company and its consolidated subsidiaries and to oversee corporate governance matters.

**The Remuneration Committee (the "RemCom")** comprises at least three members, at least half of whom shall be Independent Non-Executive Directors, and meets at least three times a year. The RemCom is responsible, inter alia, for determining and reviewing the Company's remuneration policies, compensation and benefits plans, including incentives and executive compensation and any equity-based plans, having given due consideration to the applicable laws and regulations.

**The Health, Safety, and Environment Committee (the "HSE Committee")** is a newly formed committee, established following the Company's removal from OFAC's SDN List. It comprises at least three members and meets at least three times a year. The primary responsibilities of the HSE Committee include reviewing the effectiveness of the Group's health, safety and environmental strategies, systems, policies, and practices,

as well as the results of any health, safety, and environmental audit; identifying any risks to the aforementioned and whether the appointed executive is managing such risks effectively.

**The Regulation and Compliance Committee (the "RCC")** is a newly formed committee following the Company's removal from OFAC's SDN List. It comprises at least three members and meets at least four times a year. The primary responsibility of the RCC is to establish and maintain transparency, accountability, and good corporate governance, as well as to keep all legislative, regulatory, and Corporate Governance developments under review, and make recommendations to the Board in relation thereto.

The Right Honourable Lord Barker of Battle ("Lord Barker") was the Independent Chairman of the Board for the 2018 financial year.

## Composition of the Board and its committees<sup>1</sup>

Audit and Risk Committee <sup>2</sup>	Corporate Governance and Nominations Committee	Remuneration Committee	Health, Safety, and Environment Committee	Regulation and Compliance Committee
Carl Hughes as Chairman	Andrey Sharonov as Chairman	Nicholas Jordan as Chairman	Joan MacNaughton as Chair	Christopher Bancroft Burnham as Chairman
Christopher Bancroft Burnham	Carl Hughes	Christopher Bancroft Burnham	Lord Barker	Lord Barker
Alexander Chmel	Nicholas Jordan	Alexander Chmel	Alexander Chmel	Carl Hughes
Andrey Sharonov	Joan MacNaughton	Igor Lojevsky	Vadim Geraskin	Igor Lojevsky
				Joan MacNaughton

<sup>1</sup> For more detailed information please follow the link <https://www.enplusgroup.com/en/explore-enplus/board-committees/>.

<sup>2</sup> Philippe Mailfait left the Board and the Audit and Risk Committee in April 2019.



# Internal control and risk management

We have introduced and rigorously maintain an effective system of internal control aimed at protecting our assets, improving the efficiency of business processes and ensuring that our economic and financial activities are fully compliant with the applicable laws and regulations.

## Approach to risk management

was changed

# 127

audit procedures were conducted resulting in dismissals and other disciplinary actions

## Chief Compliance Officer

was appointed

## IN THIS SECTION

- Internal control
- Risk management system
- Ethics and integrity



GRI

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# Internal control

The Board oversees the efficiency of the Company's financial and economic activities. The Board is also responsible for maintaining and reviewing the effectiveness of the Company's Internal Control System (the "ICS") and risk management in accordance with the highest standards of corporate governance.

En+ Group's Board has established the Audit and Risk Committee, which:

- helps the Board independently assess the Company's financial statements;
- supervises the efficiency of the internal control and risk management systems;
- oversees the audit process;
- regulates the performance of other commissions and instructions given to the ARC by the Board.

A total of 127 internal audit procedures were conducted in 2018, resulting in disciplinary actions against 224 employees and 1,011 recommendations, the majority of which have already been put into practice.

The Company's stable and sustainable development depends on its ability to ensure the safety and efficiency of its assets, prevent fraud and maintain compliance with all the applicable laws and regulations. The Directorate for Control and Internal Audit (the "Directorate for Control") is a structure that manages both long and short-term plans to meet the Company's targets. It is independent from management and helps the Board oversee the Company's financial and economic activities, and implement internal control and risk management measures.

The Company has set long and short-term goals aimed at instilling confidence in the Company's internal control processes:

- Forming and implementing annual audit plans for the Company's enterprises and divisions. These plans are to ensure maximum audit coverage of the enterprises and divisions (on-site audits are carried out once or twice per year);
- Executing unscheduled management assignments and analysing current business issues in a given calendar year;
- Supporting risk management activities: drawing up annual risk maps of the Company's enterprises and businesses and conducting quarterly risk monitoring throughout the year;
- Setting up online monitoring of the Company's commercial activities (as a part of activities of the Tender Committee and the tender commissions of enterprises);
- Developing and implementing monitoring projects for commercial activities that are focused on reducing costs and generating additional income (supervising a project to sell the Company's non-core assets, etc.);
- Developing and implementing critical solutions to automate and improve business processes.



The Directorate for Control provides assurance to management and shareholders that the Company's assets are safeguarded and profits are maximised. It employs the following mechanisms to maintain proper accounting records and ensure compliance with the requirements of external regulators, laws and regulations<sup>1</sup>:

- Operational and financial control;
- Risk management;
- Regulation of business process;
- Development and implementation of projects aimed to improve the internal control system;
- Compliance control.

The Company has a comprehensive set of measures in place to prevent bribery and is fundamentally opposed to any form of unethical incentives or payments.

The Chief Compliance Officer, the Directorate for Control and the Directorate for the Protection of Resources play a leading role in preventing corruption.

The following anti-fraud and anti-corruption policies are an integral part of the Company's business processes:

- Government Contracting Procedure;
- Anti-corruption clauses or the "Agreement to observe anti-corruption requirements" annex in every contract with counterparties;
- Full employee training on En+ Group's anti-corruption and anti-fraud procedures.

<sup>1</sup> For more detailed information please refer to p.89, Annual Report 2018.

## GRI

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102-30

## Risk management system

The risk management system is an essential component of the Company's Internal Control System and corporate governance framework. Our risk management system aims to reduce any potential threats to the Company's compliance with its corporate governance standards while consistently applying a risk-based approach to sustainable business development.

### Risk management process

The Directorate for Control reports directly to the ARC, informing the Committee about the results of both scheduled and unscheduled audits on a regular basis. These results are taken into account when developing recommendations and implementing corrective measures. The Directorate for Control also reports on risks, the projected impact of these risks and any flaws detected by the Internal Control System. All identified risks are included in the Group's risk map, which includes a comprehensive list of all the potential risks that could threaten the Company's objectives in the next calendar year. The Company's overall risk management process also covers climate risks. The Group regularly assesses opportunities where it can reduce its impact on climate change.

Risk maps are used to illustrate potential risks to the Group's operating companies and businesses. These maps detail each risk event scenario, estimates the possible impact and assesses mitigation measures.

We employ a multilevel risk management process throughout the Company, which involves:

- Determining risk appetite;
- Identifying risks;
- Risk assessment (probability, financial assessment, potential damage);
- Choosing a risk management approach and developing mitigation measures;
- Mapping potential risks;
- Monitoring risk management results every quarter;
- Informing the management and the Board about the results of quarterly risk monitoring;
- Instructing the Board to evaluate the effectiveness of the risk management process against key performance indicators (KPIs).

To ensure a consistent risk management approach throughout the Group, En+ Group developed an online risk management course in 2018, which is available to all employees as a distance learning course on the Group's Corporate University website.

**The risk management system is an essential component of the Company's Internal Control System and corporate governance framework.**

## Risks assessment

The Group-wide approach to risk management was changed in 2018. The Board approved the Company's first Risk Management Policy in 2018. This is a key document for any public company. It defines the Group's main risk management principles and approaches. We also updated our Risk Management Regulation, setting new ambitious targets and establishing advanced risk assessment methods. Innovative risk assessment tools have been introduced that will help us evaluate potential damage and risk severity. We also introduced risk appetite statements in 2018. The updated version of the Risk Management Regulation provides a detailed classification of risks and risk assessment tools. En+ Group has identified four key risk groups:

- Operational risks;
- Market and financial risks;
- Corporate risks;
- Project risks.

The Company uses the following risk management metrics to assess risk:

- Risk probability;
- Financial risk estimation;
- Probable damage;
- Risk severity (five groups).

Risk analysis is a core element of the Company's risk management system. The Company takes a vertically integrated approach to risk management. Any risks to business operations are assessed at all levels throughout the Group, taking into account procedural documents and the responsibilities of everyone involved in the risk management process.

Updates to the Risk Management Regulation in 2018:

- The structure of risk management regulatory documents was overhauled: all principles, objectives and approaches to risk assessment are laid out in the Risk Management Policy, while all actions and responses come under the Risk Management Regulation with an emphasis on practical issues with a minimum of theoretical questions;

- The Risk Management Regulation had not been updated since 2013 and previously included corporate bodies and procedures that no longer exist or are no longer in use;
- All the Company's risks are now included in risk maps (previously only operational, strategic risks were considered separately);
- Potential risk areas are identified;
- New risk assessment indicators have been introduced: probable damage and risk severity;
- Risk maps for enterprises and the Company have been transformed. A standardised format has been introduced, meaning that changes in risks and possible risk damage can be tracked throughout the year;
- The risk appetite of each unit has been set;
- A seminar was held for unit heads and risk owners in Irkutsk. This meeting boosted communication among participants and helped to define development priorities in risk management processes.

## GRI

102-15

En+ Group's  
key risks

The Company has determined the following key risks<sup>1</sup>:

Risk	Description
Sanctions	There is a risk that the Company and its subsidiaries may be put on the OFAC sanctions list again, or that other sanctions may be imposed with potential damage of similar severity
Interdependence of the Power segment and Metals segment	There is a high level of interdependence between these two segments
Leverage	The Group has high leverage and a substantial amount of its borrowings are secured and subject to covenants
Group dividend structure	The Company's ability to meet its commitments largely depends on receiving sufficient funds from its subsidiaries, and the Company is reliant on the ability of the Group's subsidiaries to distribute dividends to the Company
Foreign currency fluctuations	The Group reports its financial results in USD, while certain subsidiaries denominate their revenues and/or costs in RUB, EUR and/or UAH
Interest rates	A significant amount of the Group's total borrowings have variable interest rates, potentially leading to a large increase in interest cost
Key senior management personnel	The risks that the Group's top management may adopt incorrect and inefficient managerial decisions or leave the Company, affecting business continuity
Operational assets	The Group's assets require regular maintenance and modernisation in order to extend their operating lives
Operational hazards	The Group's power generation, aluminium and other operations are subject to hazards and risks that could lead to property damage or personal injury or death
Environmental and health and safety regulations	This risk includes compliance by the Group's subsidiaries with environmental and health and safety laws and regulations of international and Russian environmental legislation

<sup>1</sup> For more detailed information please refer to p.91, Annual Report 2018.

Risk	Description
Reliance on licences and permits	The operational licences and permits that the Group's subsidiaries require from various government entities and agencies may be invalidated, suspended, or may not be issued or renewed, or may contain onerous terms and conditions that restrict the Group's ability to conduct operations or lead to substantial compliance costs or administrative penalties
Labour disruptions, skilled labour shortages, and labour cost inflation	The Group is exposed to any changes in the cost and availability of skilled labour
Competition	The Group may become subject to increased competition in every industry of operation
Adverse media	Adverse media speculation, claims, and other public statements could adversely affect the Company's reputation and the value of its GDRs
Countries of operation	The Group is exposed to risks relating to the multi-jurisdictional regulatory, social, legal, tax, and political environment in all countries where it operates
Regulatory reform of the power market	Authorities continue to reform rules related to, in particular: (i) capacity modernisation and decommissioning; (ii) transmission and distribution tariffs; and (iii) capacity prices for certain types of power generators, and may, in the future, impose unforeseen, additional new rules and regulations in any area
Natural monopolies	A number of the Group's companies have natural monopoly status under the Russian law. There is a risk of compliance with regulations imposed on such companies
Tariff regulation and price fluctuations	The Group's power subsidiaries are currently required to sell certain amounts of their planned electricity output (primarily to households) under regulated contracts at tariffs set by the relevant regulator, which are therefore outside the Group's control

Risk	Description
Relations with third parties	The Group's power operations are dependent on third parties that provide services in the wholesale electricity market, such as the System Operator
Power output	The Group's hydropower generation facilities are subject to fluctuations in water flows, which could result in decreased power generation and subsequent lower revenues than planned from electricity and capacity sales
Fluctuations in demand for electricity and heat	The demand for electricity and heat varies seasonally and from year to year
Fuel supply	A portion of the Group's power operations require gas and fuel oil in their operations, and the Group is therefore exposed to any disruptions in supply or increases in prices
Technological advances	The energy market is subject to far-reaching technological change, both on the supply side and on the demand side, which could in turn lead to structural changes in the market
Customer default	If a customer is unable to pay for the power supplied to them, the Group may not be able to terminate the contract or suspend the supply unilaterally under the applicable regulations
Risks of Metals segment	The Metals segment operates in a cyclical industry that has recently experienced price and demand volatility, which has had, and may continue to have, a material adverse effect on the Group's performance and financial results
Anti-monopoly laws	The Group is subject to certain requirements under Russian anti-monopoly laws
Ore Reserves and Mineral Resources	Ore Reserves and Mineral Resources data are only estimates and are therefore inherently uncertain

## GRI

102-16	102-17	102-25
103-1	103-2	205-2

## Ethics and integrity

Our commitment to upholding the highest legal and ethical standards is the foundation of how we do business. Corruption wastes valuable resources, undermines trust and harms communities. We therefore see full compliance with anti-bribery laws and regulations as absolutely essential to our survival and success as a sustainable company. The Group strictly adheres to the regulations of its countries of operation, including the Russian Law "On Preventing Corruption", the UK Bribery Act, US Foreign Corrupt Practices Act, and where possible, the Group endeavours to go above and beyond the requirements of the law to be a global leader in the fight against corruption. We respect individual freedoms and human rights, provide equal opportunities to all employees and do not tolerate any form of discrimination or child labour. To this end, the Company respects all labour laws and contractual obligations to its employees. En+ Group adheres to the Russian Labour Code and the Russian Constitution and pledges to combat child labour and provide human rights protections to all. The Company has drawn up a comprehensive set of corporate documents to regulate ethical compliance.

Key documents include:

- Conflicts of Interest Policy;
- Code of Corporate Ethics;
- Code of Ethical Standards;
- Share Dealing Code.

In 2018, En+ Group updated its Code of Corporate Ethics and Code of Ethical Standards, drafted and approved its Conflict of Interest Policy and developed recommendations for disciplinary measures against non-compliant employees. The Company also updated its procurement regulations for the entire Group.

The Code of Corporate Ethics and Code of Ethical Standards are the main documents that regulate corporate ethics at En+ Group and have been approved by the Board.

The Code of Corporate Ethics strives to ensure that business is conducted in compliance with the highest possible legal and ethical standards by designating dedicated specialists to monitor employee conduct, consult employees about

cases of unethical behaviour and manage internal communications. Employees are made fully aware of the critical importance of raising concerns and consulting with compliance specialists if they have any doubts about ethical behaviour within the Company.

All employees of En+ Group's companies commit to the key ethical values outlined in the Code:

- Respect for the individual rights and interests of all employees;
- Accountability;
- Trust in employees;
- Honesty and transparency;
- Drive to achieve maximum results in all that we do;
- Fairness and impartiality;
- Care;
- Commitment to ongoing development.

We educate our employees about various aspects of business ethics, including labour regulations, the allocation of duties, remuneration procedures and leave provision.

Any major violations of corporate ethics principles are identified, investigated and followed up with the appropriate remedial measures. En+ Group encourages all stakeholders to report any issue they find suspicious, disturbing or unethical.

Ethics Officers oversee compliance with our Code of Corporate Ethics at each operating asset.

Ethics Officers' main role involves communicating directly with employees about any concerns they may find and implementing solutions. If employees feel unhappy or mistreated during their employment at the Company, corporate Ethics Officers quickly initiate interaction with the head of the enterprise, the Labour Dispute Committee and trade unions to deescalate and resolve the situation in collaboration with management. Ethics Officers also handle Ethics Code violations and use their experience of working closely with employees on the ground to provide targeted, innovative solutions.

In 2018, 16 ethics violations were reported to Ethics Officers. Stakeholders can also report ethical misconduct via the dedicated hotline:

- Calls can be made via the hotline number: 8-800-250-10-58. All calls are free of charge;
- E-mails can be sent to the address: [doverie@enplus.ru](mailto:doverie@enplus.ru).

The hotline operates at all times and is a channel for both internal and external stakeholders to report any concerns.

**Our commitment to upholding the highest legal and ethical standards is the foundation of how we do business.**

The hotline promotes a culture of transparency among employees and makes everyone accountable for reporting violations. Reports to the hotline can be made anonymously and the Company guarantees the confidentiality of all information received. All cases are registered in the system and are handled by specialists assigned to a particular case. In 2018, the hotline received 21 messages about cases of fraud and corruption, employee conflicts of interest, abuse of power and violations during tender procedures. No complaints of human rights violations or offences against local communities were reported.

The Company analyses, and where necessary investigates, all incoming reports and develops appropriate responses and solutions. The Group informs individuals who leave their contact details about the status of their report and any actions taken.

The Directorate for Control ensures that all incidents are added to the system and investigated to determine the root causes, develop the appropriate remedial measures and ensure a best-in-class approach to resolving ethics and compliance issues.





# Our sustainability approach

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SUSTAINABILITY REPORT 2018

STRATEGY AND SUSTAINABILITY MANAGEMENT • OUR CHALLENGES  
AND ALIGNMENT WITH THE SDGS • IDENTIFICATION OF MATERIAL  
TOPICS • STAKEHOLDER ENGAGEMENT • ASSOCIATION MEMBERSHIP



# Our sustainability approach

As a global producer of aluminium and renewable power, we are committed to integrating the sustainable development principles and values into our daily operations.

# 7

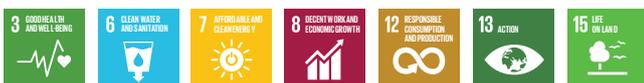
key SDGs

## HSE Committee

established in  
February 2019

## IN THIS SECTION

- Strategy and sustainability management
- Our challenges and alignment with the SDGs
- Identification of material topics
- Stakeholder engagement
- Association membership



GRI

102-11    102-29  
102-16

## Strategy and sustainability management

As part of En+ Group’s strategy, we aim to achieve vertical integration and self-sufficiency across the entire aluminium value chain (energy, raw materials and finished products), maintain and expand the Company’s high margin and low-risk production capacity, preserve its strong financial position and boost overall shareholder returns by paying out sustainable and attractive dividends.

The Group’s objectives are the following<sup>1</sup>:

- Optimise the electricity supply-demand balance by integrating the Metals and Power segments;
- Focus on cost control below inflation;
- Reinforce the Group’s leadership in the global aluminium industry by raising production efficiency and operating margins;
- Actively explore power industry development opportunities;
- Ensure continuous improvement of the Group’s environmental performance;
- Deleverage and support solid dividend payments through strong free cash flow generation;

- Operate sustainably;
- Constantly introduce new technologies to the Group through research and development projects.

En+ Group’s top sustainable development priorities are:

- Economic efficiency (please refer to pp. 19-31, About En+ Group);
- Responsibility for employees (please refer to pp. 91-105, Employees and pp. 107-117, Health and Safety);
- Environmental protection (please refer to pp. 119-139, Environmental protection);
- Contribution to local communities development (please refer to pp. 141-149, Local community development).

### Employees’ involvement in sustainable development

Staff category	Function
Top management	<ul style="list-style-type: none"> <li>● Define sustainability targets and goals for the Group;</li> <li>● Seek new growth opportunities through sustainability initiatives;</li> <li>● Ensure that corporate sustainability objectives are met.</li> </ul>
Management	<ul style="list-style-type: none"> <li>● Implement sustainability initiatives;</li> <li>● Adopt concepts of sustainability development;</li> <li>● Build a sustainable workforce;</li> <li>● Provide guidance and consultation on sustainability activities;</li> <li>● Ensure compliance with all applicable laws and regulations;</li> <li>● Collect feedback and analyse it.</li> </ul>
Employees	<ul style="list-style-type: none"> <li>● Take an active part in implementing sustainability initiatives;</li> <li>● Provide feedback on sustainability issues;</li> <li>● Operate in line with all applicable laws and regulations.</li> </ul>

<sup>1</sup> For more detailed information please refer to pp.14-15, Annual Report 2018.

## Our challenges and alignment with the SDGs

Due to significant changes that have taken place within the Company's management bodies as part of the Barker Plan, the strategies for key focus areas (personnel, employee training, labour protection and industrial safety and climate) are still at various stages of development.

A Company-wide corporate strategy is currently being overhauled according to the new Board's instructions.

The Group strives to implement the precautionary principle for all the operations on En+ Group's assets by supporting the UN Global Compact – the Metals segment represented by RUSAL has been a participant since 2002, while the Group joined this initiative in 2019.

En+ Group recognises the many challenges facing the world to ensure that, as a global community, we are able to combat climate change, preserve our ecosystems, provide a healthy environment and make communities sustainable for generations to come.

As it explores new opportunities to increase the sustainability of its activities, En+ faces various challenges in meeting sustainable development targets. The Company is aware that its Metals and Power segments are both resource and energy intensive, and takes this into consideration when developing sustainability objectives.

En+ aims to address the issues and challenges that are essential to its stakeholders. These

challenges concern the Company's day-to-day business operations, especially with regards to employees and the Company's social impact, as well as general potential economic threats. The main challenges are summarised below and further details on how En+ manages these challenges can be found throughout this Report.

The United Nations Sustainable Development Goals provide a framework for governments, companies, civil society organisations and communities to help them drive genuine improvements for the future. We are currently working towards our contribution to seven of these vital goals to manage the identified challenges.

**En+ Group recognises the many challenges** facing the world to ensure that we are able to combat climate change, preserve our ecosystems, provide a healthy environment and make communities sustainable.



Environmental impact of operations

UN SDG	Challenge	Our commitment	Our focus areas	Disclosure in the Report
	<b>Climate change</b>	En+ Group's primary sustainability goal is to decrease the 'carbon footprint' of its metal and energy production facilities, thereby contributing to the aims of the Paris Agreement to limit the rise of global temperatures.	<ul style="list-style-type: none"> <li>● Corporate carbon footprint – GHG emissions</li> </ul>	Environmental protection, Climate change
	<b>Air quality</b>		<ul style="list-style-type: none"> <li>● Total emissions of pollutants</li> <li>● Nitrogen and sulphur oxides</li> <li>● Gaseous and solid fluorine</li> </ul>	Environmental protection, Air emissions
	<b>Energy</b>	We are working to ensure an ongoing supply of renewable (emission-free) energy to power our aluminium plants and to provide the residents and businesses of Siberia with low-cost, sustainable energy.	<ul style="list-style-type: none"> <li>● Total energy consumption</li> <li>● Energy saving technologies</li> <li>● Hydroelectric power stations</li> <li>● Use of other renewable energy sources</li> <li>● Coal-fired generation</li> </ul>	Environmental protection, Energy
	<b>Water and waste water management</b>	Our goal is to preserve the quality of water in Lake Baikal and the rivers that flow into and out of it.	<ul style="list-style-type: none"> <li>● Total water consumption</li> <li>● Total fresh water consumption during production</li> <li>● Impact on natural water bodies and freshwater ecosystems</li> <li>● Treatment of used water and waste discharge</li> </ul>	Environmental protection, Water resources conservation

Like for many other organisations, En+ Group's activities and sustainability initiatives do not fully align with all the aspects of any given Sustainable Development Goal (SDG). The UN goals are inter-related and, as a consequence, we are working towards some of them in different ways – for example through changes to our operations and by implementing community improvement projects.

We address our challenges in three broad areas:

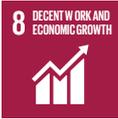
- Minimising the impact of our operations and protecting the environment;
- Improving the lives and well-being of our employees and the communities that we affect;
- Developing and upholding world-class standards in governance.

In each of these areas, we have set ourselves stretching goals.

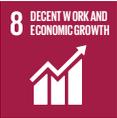
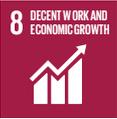
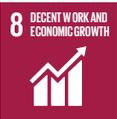
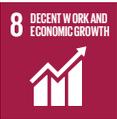
UN SDG	Challenge	Our commitment	Our focus areas	Disclosure in the Report
	<b>Waste and safe tailings</b>	We are committed to reducing all waste by cutting back on what we use, and recycling and reusing wherever possible.	<ul style="list-style-type: none"> <li>● Emergency preparedness</li> <li>● Overburden</li> <li>● Tailings disposal and storage</li> <li>● Closure and rehabilitation of tailings</li> <li>● Monitoring and risk analysis</li> </ul>	Environmental protection, Waste and safe tailings management
 	<b>Biodiversity</b>	<p>The Company's goal is to develop programs for land restoration and biodiversity conservation in the regions where the Company is present.</p> <p>En+ Group focuses on the controlled, rational and effective use of natural resources.</p>	<ul style="list-style-type: none"> <li>● Disturbed land</li> <li>● Rehabilitation</li> <li>● Waste disposal landfills</li> <li>● Protected areas</li> <li>● Biodiversity conservation</li> <li>● Impact on natural habitats</li> </ul>	Environmental protection, Land rehabilitation, Biodiversity

**En+ Group focuses on the controlled, rational and effective use of natural resources.**

Our people and communities

UN SDG	Challenge	Our commitment	Our focus areas	Disclosure in the Report
	<p><b>Health and safety</b></p>	<p>At En+ Group, we are focused on the well-being of our people and have implemented a number of programs to maintain and improve the health of our workers and local communities.</p>	<ul style="list-style-type: none"> <li>● Occupational H&amp;S management system</li> <li>● Monitoring compliance with occupational H&amp;S</li> <li>● Occupational H&amp;S training</li> <li>● Preventative measures</li> <li>● Information and advice on occupational H&amp;S</li> <li>● Occupational diseases</li> <li>● Incident investigation</li> <li>● Knowledge and expertise management</li> </ul>	<p>Health and safety</p>
 	<p><b>Local communities</b></p>	<p>We are working to create a positive environment for local communities and cooperate with them.</p>	<ul style="list-style-type: none"> <li>● Social development programs</li> <li>● Ensuring the wellbeing of local communities</li> <li>● Interaction with local communities</li> <li>● Minimising the potential impact of operations on local communities</li> <li>● Supporting communities after project completion</li> <li>● Complaints procedure</li> <li>● National and regional socio-economic development planning</li> </ul>	<p>Local community development</p>
	<p><b>Employee management and engagement</b></p>	<p>En+ Group is focused on increasing the economic productivity of the areas where it operates, to reduce unemployment levels and to provide safe, fulfilling careers for its people.</p>	<ul style="list-style-type: none"> <li>● Employee training</li> <li>● Programs to upgrade employee skills</li> <li>● Employee performance measurement systems</li> <li>● Salaries</li> <li>● Employee incentive system</li> <li>● Fair recruitment</li> <li>● Employee turnover</li> <li>● Social support</li> <li>● Diversity</li> </ul>	<p>Employees</p>

## Our governance

UN SDG	Challenge	Our commitment	Our focus areas	Disclosure in the Report
	<b>Economic results</b>	We are committed to ensure sustainable economic performance to support future success and progress, including social and environmental aspects.	<ul style="list-style-type: none"> <li>● Direct economic value generated</li> <li>● Indirect economic value generated</li> <li>● Economic opportunities for stakeholders</li> <li>● Operational efficiency</li> </ul>	Performance management, Scientific and technological development, Local community development, Additional information
	<b>Business ethics</b>	We focus on implementing best business practices and ethics.	<ul style="list-style-type: none"> <li>● Company values</li> <li>● Non-discrimination and equal opportunities</li> <li>● Combatting anti-competitive practices</li> <li>● Corporate Code of Conduct</li> <li>● Right for trade unions, collective bargaining &amp; freedom of association</li> <li>● Respect for local cultures</li> </ul>	Internal control and risk management, Ethics and integrity
	<b>Compliance</b>	We are committed to ensuring compliance in all areas.	<ul style="list-style-type: none"> <li>● Policies and procedures to ensure regulatory compliance</li> <li>● Improving employees' legal awareness</li> <li>● Helping employees fulfil regulatory compliance responsibilities</li> <li>● Social compliance</li> <li>● Environmental compliance</li> <li>● Anti-corruption</li> <li>● Internal control system</li> </ul>	Internal control and risk management, Employees, Environmental protection
	<b>Corporate governance</b>	We are working to implement corporate governance practices that support the achievement of sustainable development principles.	<ul style="list-style-type: none"> <li>● Transparency</li> <li>● Institutional strengthening</li> <li>● Diversity in governance bodies</li> <li>● Governance structure</li> <li>● Governance documents</li> <li>● Strategic approach</li> <li>● Role of the Board of Directors in sustainability performance</li> </ul>	Corporate governance, Our sustainability approach

## GRI

102-29	102-44	102-46
102-47	103-1	

In order to identify and evaluate the material topics that the Company has the most significant impact on and that substantively influences decisions of stakeholders, the following processes were conducted:

**1. A complete list of topics to be covered in the Report was compiled and assessed based on:**

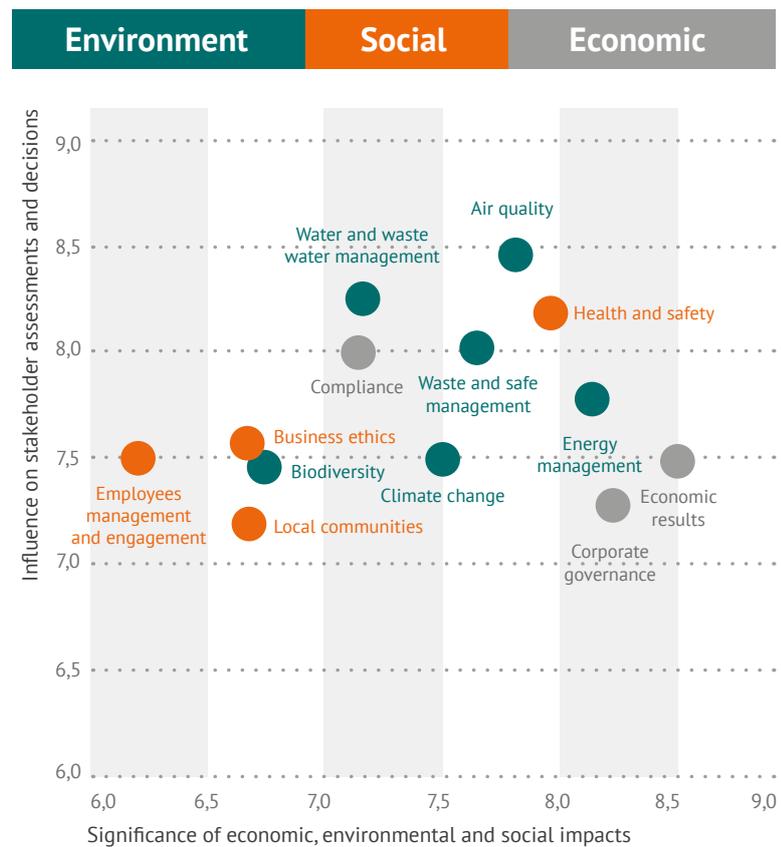
- International standards and recommendations for reporting (including GRI Standards, Sustainability Accounting Standards Board (SASB);
- Industry benchmark analysis;
- Review of publicly available open sources and global trends;
- Interviews with the Company employees responsible for ESG issues and stakeholders engagement.

**2. Sustainable development topics were ranked by:**

- Surveying of external and internal stakeholders;
- Reviewing the material topics identified by international and Russian metals & mining and power companies;
- Factoring in topics recognised as material by industry associations (including the ASI Standard);
- Analysis of the key sustainable development rating systems (including RobecoSAM);
- Review by executive officers of the Group.

## Identification of material topics

### Materiality matrix



**3. Thirteen topics were recognised as material and were collated in a materiality matrix.**

Our key stakeholders contributed to material topics identification process by filling in an online form. Results of this survey were later used by the Group for analysis. Based on the responses, 13 topics were identified as material. We are thankful to all the stakeholders who took part and hope for further cooperation.

The matrix represents the key material topics. Depending on the survey results, a significant topic may be in different areas of importance; the most significant topics are located in the upper right part of the matrix. In order to weight the results for the Metals and the Power segments, the employee breakdown is used.

The Company determines, lists and ranks material topics in line with its strategy, risk assessments and management foresights using the scale from 1 to 10, where 1 stands for “the topic does not appear material/significant to the respondent” and 10 – “the topic is very significant”.

## GRI

102-21	102-40	102-42
102-43	102-44	

# Stakeholder engagement

En+ Group strives to retain an effective sustainable development system and build a mutually beneficial partnership with our stakeholders. The Company's communication and engagement with stakeholders is based on the principles of respect, business cooperation and delivery on commitments.

Stakeholder groups were identified and selected based on their significance to En+ Group, the frequency of their involvement and their impact on the Company's processes. The key stakeholder significance criterion is the influence stakeholders and the Group have on each other.

To ensure that all groups are covered by our stakeholder engagement approach and can give feedback, En+ Group uses various communication channels, including annual reports, financial results presentations, the media, official website, corporate newspapers, face-to-face communication with employees, customers, suppliers, investors and local community leaders, and a corporate hotline<sup>1</sup>.

Making recommendations to the Board regarding possible participation, co-operation and consultation on HSE issues with governments, NGOs, other companies

and/or employee organisations is part of the consultation process between stakeholders and the highest governance body.

The key principles of stakeholder engagement are set out in the Company's internal corporate documents. These include the Conflicts of Interest Policy, Code of Conduct, Code of Corporate Ethics, Code of Ethical Standards, Anti-Bribery and Corruption Policy.

### Key stakeholder groups

Stakeholder groups	Stakeholder engagement
Clients and suppliers	Long-term trade relations, transparent pricing, improvement of customer service and quality of the supplied products/services, equal participation in competitive tenders, timely fulfilment of mutual obligations, anti-corruption activities, compliance with ethical standards.
Employees and labour unions	Workplace safety, improvement of social and living conditions, improvement of the remuneration system, the social partnership system, education and training.
Local communities	Employment, community programs and social initiatives, sponsoring sports and cultural events.
National and regional authorities	Strategic development, construction of public facilities, compliance with all applicable regulations including environmental protection legislation, occupational health and safety, fulfilment of tax obligations.
Non-Governmental Organisation	Development of joint solutions and documents that provide increased transparency, consumer confidence in the industry, preparation and implementation of initiatives, development of programs aimed at improving the industry environment.
Shareholders, investors and analysts	Improving financial performance, strategy implementation measures, the setting of key performance indicators, corporate governance, risk management system.

<sup>1</sup> For more detailed information please refer to pp. 49-51, Ethics and integrity.

## GRI

102-12

102-13

# Association membership

## En+ Group is a strategic partner of the World Economic Forum (“WEF”)

En+ Group has become a strategic and industry affiliation partner of the World Economic Forum (“WEF”), the International Organization for Public-Private Cooperation that supports for the UN Climate Action Summit’s (UNCAS) Industry Transition track and has launched its Mission Possible campaign to give industries a platform to showcase what they are doing to ensure long-term emission cuts.

Various aluminium associations have been at the forefront of industry-wide efforts to combat climate change, improve production processes and increase recycling. However, we still need to do much more if we are going to meet our climate targets. This includes reducing the environmental impact of aluminium production and cutting GHG emissions in line with the Paris Agreement and the latest IPCC findings.

## En+ Group joined the Energy Transitions Commission (“ETC”)

In July 2019, as a part of its strategy to lead a global shift towards low carbon aluminium, En+ Group joined the Energy Transitions Commission (“ETC”).

The ETC is an alliance of global leaders from the business world, NGOs and academia working to provide decisionmakers with research, analytics and policy insights, and encourages public and private stakeholders to advocate ambitious energy transition strategies.

By joining the ETC, En+ Group aims to draw on the international expertise of its members to identify new ways it can work towards its greenhouse gas reduction targets. It will also use its experience from ongoing sustainability programs to support research and initiatives that drive a global shift towards low carbon materials.

En+ Group recognises the importance of collaboration and partnership – with peers, associations and global bodies – to achieve our own sustainability objectives and to drive real change across the sectors in which we operate. We are active partners of local and international industry organisations and work closely with representatives of the Russian government, Russian business, academia and the civil society. En+ Group is a regular participant in international conferences, including the UN forums on Climate Change and Sustainable Development.

En+ Group and RUSAL, which represents the Group’s Metals segment, have joined other Russian companies in the Climate Partnership of Russia, an initiative that encourages companies to launch low carbon production processes and promote a greener economy.

En+ Group is studying worldwide efforts to combat environmental pollution in the following areas: environmental legislative initiatives, emissions trading systems and enforcement of environmental regulation.

En+ Group interacts with the embassies of different countries on the issues relating to low-carbon economy and energy efficiency, also within the framework of climate-related events organised by the Climate Partnership of Russia.

## Membership of associations

Association/Initiative	Engagement activity
<b>En+ Group</b>	
World Economic Forum (WEF)	En+ Group became a partner of the World Economic Forum to accelerate the net zero transition in the aluminium sector.
Business 20 (B20)	<p>En+ Group and RUSAL are among companies preparing policy recommendations on climate change, carbon pricing, sustainable development and green energy transition for the leaders of the Group of 20 (G20), an international forum for 19 countries and the European Union.</p> <p>In 2018, En+ Group's proposals on low-carbon development and climate change were included in the Energy Efficiency and Climate Change Adaptation sections of the Final B20 Communiqué Policy Recommendations to the G20.</p>
Business and Advisory Committee to the Organisation for Economic Cooperation and Development (BIAC at OECD)	<p>En+ Group and RUSAL are members of the Business and Industry Advisory Committee to the OECD (BIAC).</p> <p>En+ Group and other BIAC members contribute to the OECD work on environmental policy design, including climate change, circular economy, resource efficiency and sustainable materials management.</p>
Carbon Pricing Leadership Coalition (CPLC)	En+ Group and RUSAL are the only two Russian members of CPLC, a voluntary partnership under the auspices of the World Bank initiated to advance carbon pricing on the global scale.
BRICS Business Council	En+ Group chairs the Russian part of the Energy and Green Economy Working Group at the BRICS Business Council. As a council member, En+ Group shares its expertise on energy efficiency and reduction of GHG emissions. The position of En+ Group on low-carbon production and green energy transition is reflected in BRICS Business Council Recommendations for BRICS leaders.

## En+ Group joined the United Nations Global Compact

In August 2019, En+ Group joined the United Nations Global Compact, demonstrating its commitment to the 10 principles on human rights, labour, environment and anti-corruption.

In a letter to UN Secretary-General António Guterres, En+ Group stressed its determination to continue reducing its environmental impact by achieving

the Company's 2025 sustainability commitments and engaging in collaborative efforts to create a more sustainable aluminium industry.

We have pledged to publish annual reports on our ongoing efforts to implement the 10 Principles of the Global Compact and collaborate with industry peers and stakeholders to drive progress towards these fundamental values.

En+ Group will focus on reducing carbon emissions from aluminium production. This can be achieved due to the vast amount of clean, renewable energy generated by our hydro power plants, which is then used to power aluminium production.

## OUR SUSTAINABILITY APPROACH

Canada Eurasia Russia Business Association (CERBA)	En+ Group is a member of the Canada Eurasia Russia Business Association (CERBA). En+ Group regularly submits information to the CERBA Newsletter to share its achievements in sustainable development and climate change with the international business community. In 2018, the CERBA Newsletter published information about En+ Group's New Energy Hydropower Plants modernisation program.
Conferences of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC)	En+ Group and RUSAL regularly attend UN Climate Change Conferences. In 2018, En+ Group made several presentations on climate and sustainable development strategies in the Russian pavilion of the 24th Conference of the Parties to the UNFCCC (COP24) in Katowice, Poland.
United Nations Global Compact (UNGC)	In August 2019, En+ Group joined UNGC to promote its commitment to 10 principles on human rights, labour, environment and anti-corruption.
Energy Transitions Commission (ETC)	In July 2019, En+ Group joined ETC to identify new ways towards achieving its greenhouse gas reduction targets.

### The Metals segment (represented by RUSAL)

International Aluminium Institute	RUSAL has been exchanging best practices and developing methodologies to be applied in the aluminium sector as a member of the International Aluminium Institute since 2002.
United Nations Global Compact (UNGC)	RUSAL became a member of the United Nations Global Compact, Caring for Climate: The Business Leadership Platform initiative in 2008. To support the 21st session of the Conference of the Parties to the UNFCCC in Paris.  In 2018, RUSAL advocated for the UN Global Compact's Business Leadership Criteria on Carbon Pricing by promoting a price on carbon (including internal) as a necessary and effective measure to tackle climate change.
The China Nonferrous Metals Industry Association (CNIA)	In 2012, RUSAL became a member of the China Non-Ferrous Metal Industry Association to work in the field of a long-term strategy for the aluminium industry, environmental protection and other issues.
Carbon Disclosure Project (CDP)	RUSAL has been involved in the Carbon Disclosure Project since 2015 and informs stakeholders about implementation of its climate agenda (carbon footprint, climate risks assessments, climate targets). It has also committed itself to fully disclosing its greenhouse gas emissions from its aluminium, alumina, bauxite and other facilities.
Aluminium Stewardship Initiative (ASI)	RUSAL joined the Aluminium Stewardship Initiative (ASI) to work with producers, customers and other stakeholders in the aluminium value chain to maximise the sector's contribution to building a sustainable society by taking part in the development and launch of the ASI standards (ASI Performance Standard and ASI Chain of Custody Standard), which is now applied across the aluminium manufacturing and supply chain all over the world. Certification against ASI standards of RUSAL's Headquarters and its three facilities within the value chain, which focused on responsible production, sourcing and stewardship, was conducted in 2019. Members of RUSAL's Technical Directorate are involved in the Working Groups, which are taking part in preparation of the ASI standards.

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Intergovernmental Panel on Climate Change (IPCC)	The Group's expert representatives participate in the IPCC on various issues, e.g. on update of the IPCC guidelines for GHGs evaluation for the period of 2017-2019.
Task Force on Climate-related Financial Disclosures (TCFD)	Up until 2019, RUSAL was the only company in Russia that supported TCFD Recommendations. Since 2017, RUSAL has been voluntarily working on building up an effective system to disclose decision useful information to the stakeholders.
International Chamber of Commerce, ICC-Russia	As a member of the Commission on Economics of Climate Change and Sustainable Development of ICC-Russia, RUSAL provides recommendations on sustainable development, low carbon growth and green financing to the chamber members and policy makers.

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#### **The Power segment (represented by JSC EuroSibEnergO)**

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The International Hydropower Association (IHA)	As an IHA member, JSC EuroSibEnergO helps to shape the sustainable development strategy for the global hydro power industry. IHA projects are generally aimed at ensuring the sustainable development of hydropower projects and environmental protection, as well as developing methodologies to estimate greenhouse gas emissions from reservoir surfaces.
The Global Sustainable Electricity Partnership (GSEP)	JSC EuroSibEnergO has been a member of the Global Sustainable Electricity Partnership (GSEP) since June 2015.

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## **RUSAL (En+ Group's Metals segment) is a member of the Aluminium Stewardship Initiative (ASI)**

As En+ Group aspires to be a leader in sustainability, it has joined several global sustainability organisations<sup>1</sup>. In 2015, RUSAL joined The Aluminium Stewardship Initiative (ASI), which focuses on responsible aluminium production, cooperation between aluminium companies worldwide and global efforts to mitigate climate change, corresponds with En+ Group's line of business. The ASI Performance Standard requires organisations to operate in accordance with principals of Sustainable development and best practices

for aluminium industry. RUSAL Headquarters have recently been certified as compliant with ASI standards, including in its three plants: Timan Bauxite (bauxite mining), Urals Aluminium Smelter (alumina refining) and Irkutsk Aluminium Smelter (primary aluminium, wire rod, aluminium alloys, bars and strips), which have met the requirements of ASI Performance Standard and ASI Chain of Custody Standard. A Norwegian company, DNV GL, conducted an independent external audit. In the future, RUSAL plans to obtain ASI certification for its other operations.



# 2018 Performance

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SUSTAINABILITY REPORT 2018

PERFORMANCE MANAGEMENT • SCIENTIFIC AND TECHNOLOGICAL  
DEVELOPMENT • EMPLOYEES • HEALTH AND SAFETY •  
ENVIRONMENTAL PROTECTION • LOCAL COMMUNITY DEVELOPMENT

360

**BEING  
A SUPERHERO  
IS EASY!**



Ent  
GROUP

360



# Performance management

At En+, we are always looking to boost the performance of our people and our operations. To properly reward outstanding results, and identify areas for improvement, our Company has introduced a robust Performance Management system that assesses our business from every angle and at all levels.

## 638

participants in the Business System 250 program

## USD 67.3 mn

total cost saving of the Metals segment since the implementation of Business System measures in 2018

## The Tender Committee

was established

## IN THIS SECTION

- Business System
- Supply chain
- Quality



## Business System

Business System is an environment for developing personnel and creating a culture of continual improvement within En+. It ensures a systematic approach to efficiency optimisation and promotes the implementation of a coherent production system throughout the Company. The Toyota Production System (TPS), which encourages continuous operational improvement, promotes a rapid response to customer needs and strives to maintain optimal efficiency, serves as the blueprint for Business System. TPS offers the unique advantage of integrating production management and logistics with processes for interacting with customers and suppliers.

Business System in the Company's Metals segment works together with En+ Group's Business System department.

The Power segment only started introducing Business System into its business processes in 2018, following the Metals segment's lead. Each business unit has similar Business System departments, all of which are supervised by En+ Management LLC's Business System department and groups responsible for Business System development. The highest governing body is the Management Business System Committee, which is chaired by the CEO. Business System does not include suppliers as they account for less than 20% of the Group's activity.

A total of 15 management committees were launched in 2018 to improve the Group's Business System. Their achievements include:

- Conducting expert reviews of the decision-making process;
- Creating new approaches and the exchange of best practices between Group companies;
- Involving managers in decision-making throughout the process flow.

En+ Group's key policy documents regulating the implementation of Business System include:

- The Operational Development Regulation;
- The Submission of Kaizen (from the Japanese – Principle of Continuous Improvement) Proposals Regulation;
- Regulation for interactions in the "Operational Development" function.

Business System targets align with En+ Group's general business development objectives, including the following:

- Increasing the efficiency of equipment;
- Decreasing the use of raw materials;
- Reducing electricity and heat loss.

**Business System is an environment for developing personnel and creating a culture of continual improvement within En+.**

## Results in 2018

In 2018, the Metals segment launched a project to reduce the production cycle (Lead Time – LT) and create a backup supply chain, as part of which the Company conducted an experimental transshipment at the sea port of Zarubino in the south of Primorsky Krai, Russia (north-western part of the Sea of Japan). The project successfully shipped and handled nearly 3,000 tonnes of slabs and cut LT from 90 to 63 days. The Metals segment also held joint training initiatives with the Sea Port of Saint Petersburg JSC to share its expertise on Business System implementation.

The Metals segment achieved a total cost saving of USD 67.3 million from the implementation of Business System measures in 2018.

The Power segment's key Business System goal in 2018 was to make a cost saving of at least USD 32 mn (USD 22 mn excluding LLC Krasnoyarsk Metallurgical Plant (KraMZ), LLC Sorsk Mining and Metallurgical Complex, and logistics). The actual cost saving in 2018 was USD 27 mn.

Russian Railways (RZD) is one of the Power segment's external Business System development partners. The joint project "Implementation of an effective engagement process for all participants in the transportation process" involves companies belonging to En+ Group and Russian Railways. En+ Group initiated this project to identify and eliminate inefficiencies in the Group's transportation processes. En+ Group is also providing methodological support to RZD employees.

One of the Group's key Business System development initiatives is close cooperation with higher and vocational educational institutions. Working with universities in our regions of operation ensures that they produce talent with the skills and knowledge that we need to drive our business forward. We launched an educational program for two streams of students at Irkutsk Energy College in 2017, covering both theoretical and practical courses, and taught 267 students in total. The Irkutskenergo Corporate Research Centre trained 31 students in 2018. In 2019, we will focus on training and developing students studying in energy, geology and metallurgy faculties. The Company is also looking into establishing a separate department at INRTU (Irkutsk National Research Technical University) that will specialise in teaching the skills that we look for in future employees.

En+ is constantly working to develop the best programs and initiatives to help our employees unlock their full potential. Business System is central to employee development, delivering increased productivity, upgraded skills and employee fulfilment. Our programs include:

### 1. Business System 250 (both segments)

The Business System 250 program is a crucial element of the Company's performance management strategy. The Metals segment launched the program in 2015, followed by the Power segment in 2018. Business System 250 aims to train employees and motivate them to seek out and resolve inefficiencies throughout the production chain. The program is designed to train and teach employees about Business System and identify future industry leaders. The program has four stages, lasts for two and a half years and covers five model platforms. Knowledge and experience is then transferred to other business sectors (model grounds). The program usually has 230-260 participants at one time. The program had 230 participants in 2018 in the Power segment and 408 participants in the Metals segment.

**2. Kaizen workshops  
(the Metals segment)**

Kaizen workshops are an effective tool for optimising production processes, standardising technological operations and giving employees the capabilities they need to implement proposed improvements. Kaizen workshops operate at 10 production facilities of the Metals segment in the Aluminium, Alumina and Downstream Divisions, as well as the New Projects Directorate.

**3. Technical Academy  
(the Power segment)**

This is a fast-track development program to train members of the candidate pool for positions such as station directors, managers and chief engineers. The program has worked with 32 employees in total. It consists of seven modules such as Outlook, Training, Change, Quality, People and TRIZ (Theory of Inventive Problem Solving), and lasts for two to three years. The program's participants must implement personal Business System and TRIZ projects.

**4. Kommersant  
(the Power segment)**

This program was developed for employees engaged in the procurement process, including specialists, economists and managers. It aims to develop management skills and identify leaders who will be able to handle business problems beyond manufacturing and technological processes, such as procurement, logistics and economics. The program has been available for employees of JSC EuroSibEnergо and LLC VostSibUgol. We had 28 participants at the end of 2018 with another 40 joining in March 2019.

**Business System  
development plans  
2019**

The Metals segment has the following initiatives planned for 2019:

- Organising and conducting the Improvements of the Year 2019 contest at individual plants and at the corporate level;
- Organising and conducting audits of Business System implementation at the Company's production facilities in line with the 2019 schedule;
- Implementing a training program for procurement personnel in 2019. The program aims to train at least 500 employees by the end of the year and will be delivered in conjunction with the Directorate for Control, Internal Audit and Business Coordination (DCIABC);
- Launching a project at RUSAL-Achinsk JSC to improve equipment operability and boost operational efficiency;

- Organising the Fundamentals of Industrial Design program (opening the SFU department), Business Systems training in collaboration with the Human Resources Directorate (HRD), as well as a joint program with the RUSAL Laboratory youth initiatives centre;
- Organising methodological support for interdivisional internships program for the candidate pool in 2019.

The Power segment's plans for Business System development for 2019 include:

- Coordinating training for the 388 participants of the Transformation program and candidate pool members to fast track them for management positions;
- Implementing and launching a Production Systems department at INRTU (Irkutsk National Research Technical University);
- Conducting a Business System training course for 68 En+ commercial service employees;
- Launching six Business System projects in the Group.

## GRI

102-9	102-10	204-1
308-1	414-1	

# Supply chain

En+ Group comprises multiple companies that work with a large number of contractors and suppliers. Promoting an effective and responsible supply chain is a crucial step towards achieving sustainability. To ensure this, the Group needs all its contractors to comply with international and Russian environmental, health and safety requirements that are set out in our agreements. The agreements are drawn up according to worldwide best practices and include HSE requirements as well as social obligations. The Group has set

itself the following key goals to further boost responsible sourcing in its supply chain:

- Maximising transparency;
- Expanding competition;
- Attracting alternatives, broadening the supplier base;
- Optimising inventory.

The Company's key principles are to provide transparent and equal competitive opportunities for all potential suppliers. The procurement process has been enhanced to ensure strict adherence to these principles.

The percentage of the 2018 procurement budget sourced from local suppliers and companies registered in En + Group's regions of presence (Krasnoyarsk, Irkutsk, Nizhny Novgorod regions and the Republic of Khakassia):

### Percentage of the procurement budget used for significant locations of operation that is spent on suppliers local to that operation in 2018

	Metals segment	Power segment <sup>1</sup>	Total
Total purchases, USD mn	8,827.94	491.48	9,319.42
Percentage of products and services sourced locally	68%	70%	68%

<sup>1</sup> Excluding LLC Krasnoyarsk Metallurgical Plant (KraMZ) and Strikeforce Mining and Resources PLC (SMR).



## The Metals segment

As one of the world's largest producers of aluminium, En+ Group's Metals segment works with a large number of suppliers of electricity and fuel products, raw materials and feedstock, equipment and technology, as well as services, including contractors that operate at the Company's production facilities. Complex production processes require seamless collaboration: we cannot afford to have any weak links in our supply chain.

The Metals segment's management approach to sustainability and ESG issues is governed by corporate codes and policies, including the Business Partner Code, which establishes the principles that the Company must observe when interacting with suppliers.

The CEO's role is to oversee the implementation of the supply chain policies approved by the Board.

To ensure a comprehensive, vertically integrated supply chain management system, each individual business unit is also responsible for checking its own suppliers and contracts. In RUSAL, for instance, supply chain management has been

delegated to a number of business units including, but not limited to:

- Business Support Directorate;
- Commercial Department of the Aluminium Division;
- Procurement Units of Aluminium Smelters.

The Company's procurement department conducts supplier audits to ensure that all entities in the Group's supply chain are compliant with all corporate and legal regulations. The audits also assess compliance with the ESG standards set out in the Business Partner Code.

The Health, Safety and Environmental Committee is heavily involved in supply chain management. It oversees the Environmental Policy, Health and Safety Policy, environmental and climate change risk management, as well as the implementation of health and safety programs and risk management across the supply chain.

The Compliance Department verifies the reliability of suppliers as part of compliance procedures and checks for adherence with human rights and anti-corruption laws

during contract reviews. The Department monitors all the Company's transactions by reviewing the counterparty's documents and conducts an in-depth analysis of their profile from publicly-available information.

The Metals segment subjects all suppliers of raw materials and feedstock for core products to a rigorous system of requirements. The framework consists of the following main documents:

- Quality agreement;
- Procurement regulations;
- Regulation for the Quality Certification of Suppliers of Raw Materials;
- Regulation for Auditing Manufacturers of Raw Materials and Feedstock;
- Regulation on Supplier Accreditation;
- Supplier rating assessment method;
- Guidelines for the development of QMS of suppliers;
- Accounting methods for non-compliant raw materials and feedstock;

**Promoting an effective and responsible supply chain is a crucial step towards achieving sustainability. To ensure this, the Group needs all its contractors to comply with international and Russian environmental, health and safety requirements that are set out in our agreements.**

- Regulation on Contractor Management in the area of Health and Safety, Fire and Environmental Safety;
- Regulation on the Supplier Accreditation System.

The Company considers maintaining a close working relationship with suppliers as a critical factor in successful long-term cooperation. En+ Group strives to help suppliers develop sustainable and ethical practices. A number of suppliers use our system of requirements as a benchmark and see supplier audits as a useful tool for identifying their development priorities.

Interaction with contractors is another important element of supply chain management. The Metals segment hold both contractors and employees to the same strict requirements.

The main criteria for the assessment of contractors are professional qualifications, the provision of personal protective equipment and the ability to work safely.

The Company not only investigates all incidents, but also makes concerted efforts to manage risks proactively.

The vertical management system for health, industrial and fire safety covers all employees and contractors in its core processes and reinforces a safety culture by encouraging all employees and contractors to lead by example.

## The Power segment

Procurement in the En+ Power Segment is fully centralised at EuroSibEnergo Trading House LLC (hereinafter referred to as the "Trading House"). At the moment, the Trading House is the main centralised supplier of material resources, equipment and contractors for all companies in the Power segment.

All of the Group's companies in the Power segment must comply with a standardised procurement policy that covers purchases of all goods and services, as well as the assessment of incoming commercial proposals. The Company's procurement process aims to ensure compliance with state legislation and the Federal Act on the Procurement of Goods, Construction and Services in particular. Extensive improvement efforts are continuously ongoing, focusing on the digitalisation of the procurement process. We use the following key internal documents to regulate and standardise procurement in the Power segment:

- The Procurement Process Policy (publicly-available on the corporate website and state procurement website);
- Internal procurement standards for supplier selection, contractor selection, surplus management;

- Tender and Competition Committee Regulation;
- Collegiate Bodies Regulation.

The Company is introducing additional principles to guide its commercial activities and develop an efficient supplier selection procedure for goods and services (including construction and installation works). The ultimate goal is to maximise cost savings (including by participating in the Tender Committee and supervising the work of business units' Tender Committees).

The Department for Price and Commercial Operations control was launched in 2018 as a part of the Audit and Risk Committee (the "ARC"). It is responsible for:

- Implementing new procurement approaches within the Group;
- Providing methodological support for the procurement process;
- Monitoring and optimising supply chains;
- Initiating the procurement process for goods and services;
- Working with illiquid items and assets.

Moreover, the Tender Committee was established in 2018 to coordinate

the decision-making process for the most important purchases of materials, services and construction work.

Around 95% of all procurements were processed through the centralised procurement unit, which has its own KPIs. The Company has hit all its targets in 2018 with high KPI rates (for both business units and managers). Managers' remuneration is tied to the achievement of KPIs such as:

- Providing materials and equipment on time;
- Incorporating feedback from suppliers into the procurement process;
- Consolidating procurement processes.

The Power segment's quantitative KPIs include:

- Net working capital no lower than USD -7.6 mn;
- Completing at least 90% of maintenance and investment programs;
- The share of manufacturers among suppliers for at least 59%;
- Achieving a delivery volume from China of USD 3 mn;
- Increasing the supplier base, increasing the average number of suppliers for each procurement process by 10%;
- Implementing the Speeding Up the Supplier Selection Process project and meeting the approved deadline;
- Launching employee training programs.

The Regulations for Auditing Suppliers describe the requirements for suppliers and

contractors. All new suppliers are audited and existing partners may also be audited if their technological processes change, the amount of materials supplied increases, or inconsistencies are found. An obligatory check is held every three years.

According to the Company's regulations, there are three types of materials and equipment in the Company's procurement processes:

- Simple;
- Complex;
- Unique (extra complex).

Complex products, products that have not been purchased before, potentially dangerous goods and other specified goods are also subject to preliminary assessments.

Suppliers and contractors will be fined if they fail to comply with the health and safety requirements that are usually set out in contracts. The transparency of the procurement process means that there is no need for a rating system; however, suppliers can receive negative reviews and be included in the Federal Antimonopoly Service's black list.

En+ Group set up this three-tier procurement system to:

- Standardise the membership, remit and procedural requirements of all procurement bodies and collegial bodies;
- Separate decision-making stages, making different people responsible for different processes to reduce corruption risks.

To boost transparency, standardise practices and ensure quality control, we have centralised

our contractor and service provider selection processes in the Trading House. We created an additional centralised unit to focus on the disposal of non-core and illiquid assets. Most procurement activity in the Power segments is connected to repair and maintenance services. The Company does not generally select the same suppliers (except for rolled products, which is a very unique industry).

Data confidentiality and security of suppliers and contractors is ensured by:

- Requiring employees to sign NDA documents;
- Engaging the cybersecurity department to protect data about procurements;
- Restricting access to folders containing sensitive data by the tender has been closed.

## Quality

Ensuring and delivering the consistent quality our customers have come to expect from us is crucial to our business and is a priority across our various assets and industries.

To ensure best practices and offer concrete guarantees to clients, we have made sure that our companies have obtained quality management systems certification. This certification guarantees that these companies adhere to international standards and that their quality management systems are properly integrated. RUSAL and KraMZ are both compliant with ISO 9001 – Quality Management System.

A quality management system (QMS) has been implemented in the Metals segment to create efficient, standardised business processes and operations. In 2018, the Company successfully completed the transition to the new IATF 16949 version of the standard for the automotive industry. We regulate the compliance of our production facilities with standards, regulations and guidelines using the quality management policy, which is supported by regular quality management meetings and internal audits (QMS, process and product).

The Metals segment launched the Perfect Process initiative with the aim of developing

production processes that focus on meeting basic customer requirements. The Focus Improvement Program aims to improve communication with key customers with the goal of expanding cooperation and strengthening relationships.

The Metals segment also formed a Variability Reduction Team (VRT) to monitor the problem-solving process and the results of remedial measures. The segment also launched a Digital Quality project and competency management processes.

**Ensuring and delivering the consistent quality** our customers have come to expect from us is crucial to our business and is a priority across our various assets and industries.





# Scientific and technological development

Research and technology advancement is the backbone of continued growth and improving efficiency and aims to implement the best-available technologies on an ongoing basis. The Company conducts wide-ranging research and development activities to harness cutting-edge resource-saving and cost-cutting technologies into its production cycles. We focus our efforts on creating innovative long and short-term solutions for the challenges our Company faces.

**55%** ▼

reduction of estimated scandium oxide production costs

**>17%**

efficiency factor of the perovskite solar cells test samples

**110 kV**

power line temperature control to increase the reliability of electricity supply

## IN THIS SECTION

- Research and development
- Modernisation



## Research and development

The Metals segment's Engineering and Technology Centre is the Company's main business unit focusing on scientific and technological development. The Centre conducts research and development (R&D) and has successfully created and implemented new technologies. The Regulations for planning, implementing and monitoring of R&D projects were updated in 2018 to improve planning, implementation effectiveness and the quality of final products.

The Committee for Strategic Development was launched in En+ Group's Power segment in 2018 as an all-new structure to ensure the responsible selection and assessment of projects and better define technological approaches to energy efficiency, digitalisation, renewables, robotics, automation, smart grids and others. The committee is made up of the Company's project leaders, experienced engineers and industry professionals.

The Company also has an in-house R&D department, which specialises in tech scouting, energy-related applied research and intellectual property (IP) management. Ongoing research initiatives include photovoltaic technologies, condition monitoring, big data and machine learning.

The R&D department conducts targeted projects requested by subsidiary enterprises to quickly resolve efficiency issue or strategic projects that serve the Company's long-term innovation priorities. The Company mostly focuses on targeted projects to quickly resolve efficiency issues, while strategic projects are developed for long-term solutions. En+ Group currently conducts projects with technology readiness level (TRL) 4 indexes and higher, meaning that there are already laboratory samples or prototypes that will be scaled up over the next few years.

The Company has established a Technology Council responsible for approving R&D projects and assessing their results.

The council's members include representatives from the Company's business units and industry experts from research institutes.

In terms of cooperation, En+ Group works with the Russian Ministry of Industry and Trade and the Ministry of Energy as part of the Innovation Group, which was founded as a platform for knowledge sharing between the most technologically advanced companies and the Russian state research institutes and universities<sup>1</sup>.

R&D is coordinated across the Company by dedicated regulatory documents:

- The Scientific and Applied Research Procedure;
- The IP Management Standard;
- Regulations issued by the Committee for Strategic Development;
- The Patent Policy.



<sup>1</sup> For more detailed information on the collaboration with the Corporate University, please refer to pp. 100-102, Learning and development, Employees.

## The Metals segment projects

### Waste project

The Metals segment is testing a technology to process red mud, a waste product generated by alumina production, which contains valuable metal oxides, including scandium. Red mud processing technologies at alumina production facilities were modified in 2018 to increase the extraction of scandium oxide (Sc<sub>2</sub>O<sub>3</sub>) and reduce the consumption of critical reagents. As a result, the estimated cost of producing scandium oxide was reduced by an impressive 55% to USD 480/kg. These results were confirmed by a pilot project at RUSAL Kamensk-Uralsky. The technology is still being enhanced to create additional improvements and cut costs even further. The findings from laboratory testing will be verified throughout 2019.

### Aluminium casting alloys

The development of innovative aluminium casting alloys is another key focus area, spurring the Metals segment to continue testing new casting alloys on the Asian market. The Metals segment is also implementing a project in collaboration with major European car makers and parts manufacturers to create aluminium materials for large and critical automobile parts that do not require heat treatment. The proposed solutions will produce strong, lightweight structures at a significantly reduced cost by simplifying the production cycle of the finished product.

### Value-Added Products

The Metals segment's innovative development strategy and R&D have driven the following breakthroughs in the production of value-added products (VAP):

- development of a line of casting alloys that do not require heat treatment;
- development and launch of new aluminium materials for railway equipment;
- creation and launch of new aluminium-based materials for additive technologies and the development of 3D printing technologies;

- expansion of the product line and development of new types of wire rod for electrical products and welding wire;
- development of new cost-effective uses for innovative scandium-containing aluminium alloys.

One of the Metals segment's key strategic objectives is increasing the share of VAP at its Russian production facilities to 55% by 2020. However, the sanctions prevented the Metals segment from achieving its target VAP of 50-52% in 2018 (VAP was 45% of total sales vs 47% in 2017).

### Innovations in aluminium production

The Metals segment conducts R&D to harness new technologies and processes that give it a competitive edge in the aluminium industry. At the same time, the Metals segment's specialists are guided by the precautionary principle, comprehensively assessing any potential danger an innovation may pose to the environment or human health.

## The Power segment projects

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### 110 kV power line temperature control

This project aims to find the best diagnostics equipment to optimize network load balancing. During the preliminary stage, a test section of 220 kV power line (Novo-Irkutsk CHP to Irkutskaya No. 1) was equipped with passive maintenance-free wireless sensors. The second part of the project focused on monitoring the temperature and collecting data in real time. Analytical work is now underway to identify existing vulnerabilities. The project will increase the reliability of electricity supply and extend the operational life of primary electric grid equipment.

### Extracting commercial products from ash and slag waste

The project has been implemented at facilities in Irkutsk and Angarsk. The economic benefits of using the technology to extract iron-containing concentrate from ash and slag waste have already been shown at the CHP-9 coal plant.

### Improving the efficiency of measures influencing defaulting power resource users

The project involves the extensive use of big data and machine learning. Among the 2018 achievements were the completion of pre-project planning, the conceptualisation of machine-learning model architecture, the development of a request for proposal and the selection of a contractor to perform the work.

### User profiling

En+ launched a project in 2018 that uses big data and machine learning to profile users based on an electricity consumption scenario. The aim is to forecast consumption levels for every user depending on their characteristics and profile. With this forecast, we will be able to develop recommendations on conscious electricity consumption. Three user-clustering algorithms were tested and four

regression algorithms were assessed in 2018. The models selected were shown to work, a request for proposal was developed and a contractor was selected to perform the next stage. The project will continue in 2019-2020.

### Solar cells technology

Using the financial backing of En+ Group, researchers from Lomonosov Moscow State University continued the development of next-gen perovskite solar panels. The Russian scientists proposed a unique method for producing perovskite solar cells of a potentially unlimited size; the test samples of solar cells showed an efficiency of more than 17%. The research results were published in Nature Nanotechnology and other scientific journals.

En+ Group's action plan for 2019 includes a number of new and ongoing R&D projects:

#### **Russian Federal Best Available Technologies distribution program**

The program aims to increase the efficiency of existing production facilities, upgrade equipment, reduce environmental impact and improve the sustainability of power-generating facilities and, in particular, coal-fired power plants. The Company is proactively involved in the program, the first stage of which (2019-2024) implies the reconstruction of Ust-Ilimsk CHP's ash handling system.

#### **Long-term forecasting of Lake Baikal's water levels**

The research project makes use of machine learning and predictive analytics to calculate the operating schedules of HPPs in advance and optimise their main production processes.

## Perovskite Solar Cell project



The Power segment continued to work on a hybrid perovskite solar module for the distributed generation project realized as part of the Russian Education and Science Ministry's Federal Target Program "R&D in Priority Areas of the Russian Science and Tech Sector".

The Perovskite Solar Cell project aims to create a new type of photovoltaic modules with hybrid perovskite as an active component. A unique method of producing a perovskite layer of a potentially unlimited area has been developed and a laboratory prototype has been created. Laboratory tests on the laboratory sample have demonstrated efficiency factors as high as 17%. Three Russian patent applications and three international PCT patent applications

were filed as part of the project in 2018. The research results were published in Nature Nanotechnology, one of the world's leading journals in the area of nanoscience.

The project will be continued over the next few years after it successfully hit all its targets in the first stage. Research will concentrate on raising the efficiency and lifespan of perovskite cells. The project is generating significant interest and has received support from the Russian Science Foundation. Partners will be engaged while research is still ongoing to facilitate the creation of a commercial prototype and help bring the technology to market.

## Modernisation

### ALLOW brand



The Metals segment launched its ALLOW brand of low-carbon footprint aluminium in 2017 as part of its low-carbon production strategy. The brand generates less than four tonnes of greenhouse gas emissions in CO<sub>2</sub> equivalent<sup>1</sup> for every tonne of aluminium, which is considered one of the best levels in the global aluminium industry. The ALLOW brand offers independently verified carbon footprint statements and ships worldwide.

### The Metals segment's modernisation

En+ Group is making every effort to boost the efficiency of its operational assets through its modernisation programs.

#### RA-400 and RA-550 potcells

The Company is continuously looking for opportunities to improve the efficiency of processes that help reduce its environmental impact. One of the Metals segment's main initiatives was the installation of an automated alumina feeding system and a central distribution system. The next step in the development of the automated production system is the rollout of next-generation potcells with high-energy efficiency (RA-400 and RA-550). Potcells that operate on inert anodes are being developed and tested at pilot sites. The creation of the RA-550 electrolyte potcells aims to further cut the cost of aluminium production and boost its environmental credentials. The new equipment will be 50-80% more productive than the previous model (RA-300) and will be able to process more than four tonnes of metal per day. A new technical solution to remove gas from the electrolyte potcells will further improve environmental safety.

<sup>1</sup> Smelters' direct emissions (scope 1) and indirect energy emissions (scope 2).

### **Eco-Söderberg technology program**

The full-scale implementation the Eco-Söderberg technology program at the Metals segment's aluminium smelters is ongoing. A total of 254 potcells were upgraded at the KrAZ smelter and another 66 potcells at the BrAZ smelter. The pilot project was expanded to 20 potcells to adapt the technology for the NkAZ smelter. The gas ducts under five potrooms at KrAZ have been fitted with state-of-the-art automated pneumatic impulse cleaners. The deployment of the Eco-Söderberg process reduces pollutant emissions to levels that comply with environmental regulations while also reducing electricity consumption and significantly increasing the service life of reduction cells.

### **Smelter electrical equipment reliability improvement**

In August 2017, a high-voltage transformer was installed and tested on the main stepdown substation 2 at the Bratsk smelter. For the first time, high-voltage aluminium wiring was used in its design to ensure a stable power supply to potrooms 1, 2, 3 and 4 of the Bratsk smelter. In 2018, two such high-voltage transformers were installed at the Bratsk and Krasnoyarsk smelters.

Every year, including in 2019, we plan to replace two old-style transformers of such a design at aluminium smelters. In June 2018, the Bratsk and Krasnoyarsk branches of RUS-Engineering Ltd purchased and commissioned

new low loaders with a carrying capacity of 160 tonnes to transport transformers. In 2018, the 'Separation of the needs of the Sayanogorsk Aluminium Smelter' project, the goal of which was to increase power supply reliability, was completed. The expert opinion received about the project was positive and a tender procedure was started to purchase the required equipment.

In 2019, equipment purchases and construction and assembly works are scheduled. In 2018, the Bratsk centre of competencies launched a project to increase maintenance efficiency and optimise costs by achieving shorter maintenance time for transformers and better use of in-house resources.

### **Krasnoyarsk pot rebuilding department development**

In 2018, the Krasnoyarsk pot-rebuilding department developed, manufactured and installed the following pieces of equipment:

- A gantry cathode relining and metal structure assembly machine to improve labour conditions and manufacturing quality (as a result, spending on metal structures from third-party suppliers declined), shorten pot rebuild periods, optimise production areas and the number of auxiliary equipment.
- A batching hopper for BROCHOT ramming machine to improve the quality of operations (to maintain a controllable set material temperature and to batch ramming paste automatically) while ramming cathode bottom seams and to avoid hazardous impact on the personnel.

Plans to install these pieces of equipment at all ECD branches are in place, provided that industrial tests and operational trials are a success. In 2018, 42 out of 1,191 pots were disconnected for relining with their lifetime of up to 36 months, the lowest number on record.

### **Self-propelled pot treatment vehicles production**

In 2018, the Krasnoyarsk branch of RUS-Engineering Ltd continued to mass produce special self-propelled pot treatment vehicles as part of the 'RUSAL Treatment Vehicles' project, which helped reduce the number of vehicles needed to be purchased from abroad. In 2018, 43 treatment vehicles were manufactured and put into operation.

Since the beginning of the project, 173 vehicles have been put into operation and the design of 34 vehicles has been developed. The Group has made 52 patent applications to protect its intellectual property, including five in 2018. A total of 42 patents were obtained in Russia, including four in 2018.

One of the main aims of the 'RUSAL Treatment Vehicles' project in 2019 is to design and manufacture environmentally-friendly locally-produced diesel treatment vehicles to ensure reliable operation with a service life of at least 15,000 machine-hours.

## The Power segment's modernisation

### The Thermal Power Plants modernisation program

The Company supports the State Program to Modernise Thermal Power Plants, whose aim is to increase the operating efficiency of thermal power plants connected to the Russian Wholesale Electricity Market (WEM). The program's first selection round took place in March – April 2019 for the modernisation projects with the start of capacity supply in 2022-2024. According to its results, the Group will improve reliability and safety of 795 MW of its CHP capacity (17.7% of the total) with total expected CAPEX for CHPs of USD 130 mn. The last round of modernisation projects is scheduled to start by 1 October 2025, with the start of capacity supply in 2031. The program aims to modernise 39 GW of capacity in total. Each project has a capacity supply period of 16 years with the price methodology that provides the return on investment with a certain rate of return.

En+ Group has set the following targets as part of the program:

- Improving the efficiency of existing equipment;
- Boosting the reliability of existing equipment by replacing the components of turbines, boiler equipment, and generators that have exceeded their normal lifecycle;
- Improving environmental performance by modernising and increasing the efficiency of boilers, turbines and ash removal equipment. This should cut greenhouse gas emissions by 69,000 tonnes of CO<sub>2</sub> per year and reduce emissions of other pollutants by 9,300 tonnes per year.

### The New Energy modernisation program

The program is primarily focused on modernising the Group's HPPs. Its aim is to raise the efficiency of turbines to world-leading levels, provide improved power supply quality and boost the reliability without increasing water flow rates. The New Energy program is one of the Group's key investment projects that aims to improve the reliability and safety of all its HPPs.

The program was launched to modernise hydroelectric turbines and replace runners, transformers and open-type switchgear. Four out of Irkutsk HPP's eight hydro power units will be replaced by 2023. As a result,

the capacity of each unit is expected to increase from 82.8 MW to 105.7 MW.

The hydraulic profile of the new impeller offers improved efficiency and better cavitation and increases power capacity by almost 20%. These results have been confirmed by profile acceptance tests performed by the water turbines laboratory of ČKD Blansko Holding (Czech Republic), a subsidiary of Tyazhmash JSC (Russia).

The modernisation is also aimed at reducing the Company's environmental impact and mitigating related cavitation risks. The program will cut GHG emissions by partially replacing energy from coal-fired power plants with HPP output.

The upgrades of HPP equipment will make it possible to boost electricity generation by 2 TWh by 2022 from the same volume of water.

Future plans for The New Energy modernisation program include:

- Replacing four hydro power generating units at Irkutsk HPP in 2019-2023 to increase installed capacity by 91.6 MW;
- Replacing the next six runners at the Krasnoyarsk HPP.

### Other projects

The Company is also continuing its modernisation efforts to improve the efficiency of operations at plants across the Group to decrease costs and achieve better production quality.

- Dry ash handling systems were modernised to increase the volume of dry ash extracted at the Novo-Irkutsk CHP.
- Automated systems were introduced into the operational processes of all CHPs to reduce fuel consumption and increase operational efficiency.
- En+ Group is planning to change how it regulates temperature fluctuations in water networks in 2019. The hydraulic testing method will also be changed in 2019 to troubleshoot possible malfunctions over the summer, which should ensure a reduced number of failures in winter.

**En+ Group is making every effort to boost the efficiency of its operational assets through its modernisation programs.**





# Employees

Our global workforce is at the heart of what we do. As well as being a global leader in aluminium production, En+ Group is also one of the largest employers in Russia as well as in other countries where the Group operates large industrial complexes, including Jamaica, Ireland and Guinea. The Company currently employs over 98,000 people across two business segments in 12 countries and we recognise the importance of providing our people with a safe working environment and supporting their well-being. Therefore, our people and human resources are among the Company's top priorities. Our success depends on building an inclusive and diverse environment where our employees can thrive.

**98,401**  
employees

**26%**  
female representation  
in En+ Group in 2018

**93%**  
of employees have  
permanent contracts

## IN THIS SECTION

- Management approach
- Personnel structure
- Talent acquisition
- Learning and development
- Social benefits
- Goals for 2019 and midterm period



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# Management approach

The Company aims to provide all its employees with favourable employment conditions that advance their professional development, support the well-being of their families and encourage their active involvement in the Group's social and operational activities. The Group's HR policies are aimed at recruiting and retaining highly skilled personnel.

The five-year HR management strategy was drawn up and launched in 2018 and the results are now being reviewed. The strategy aims to develop people and their skills, enhance the quality of training, encourage innovative thinking, and increase the integration and standardisation of all processes, including recruitment and business processes. The strategy also outlines the Company's unwavering commitment to upholding human rights, diversity and inclusion throughout its corporate environment.

En+ Group has a vertically integrated personnel management function, which is regulated by the Remuneration Committee (the "RemCom") and the Corporate Governance and Nominations Committee (the "CGNC"). The RemCom's role is to determine and review the Company's remuneration policies, compensation and benefits plans, including incentive and executive compensation and any equity-based plans. The CGNC committee is responsible for reviewing the corporate governance guidelines for the Company and its consolidated subsidiaries. It also oversees corporate governance matters and provides recommendations.

Our achievements in 2018:

- Developing transformation program to establish a unique approach to employee development across the Company and develop additional technical competence training modules;

- Integrating the Business System 250 program, a continuous employee development process, to improve employees' skills and knowledge on industrial processes. In 2018, this program trained 439 employees in the Metals segment and 230 employees in the Power segment;
- Introducing Theory of Inventive Problem Solving (TRIZ) methods and tools to pioneer more organised and efficient solutions to complex problems in various business segments. The Metals segment trained 147 employees on TRIZ in 2018, and 128 employees in the Power segment have completed the TRIZ online course;
- Launching the Technical Academy program, which focuses on developing senior engineers and station managers. A total of 100 candidates were whittled down to 30 participants who started on-site internships in 2018;



## GRI

102-8

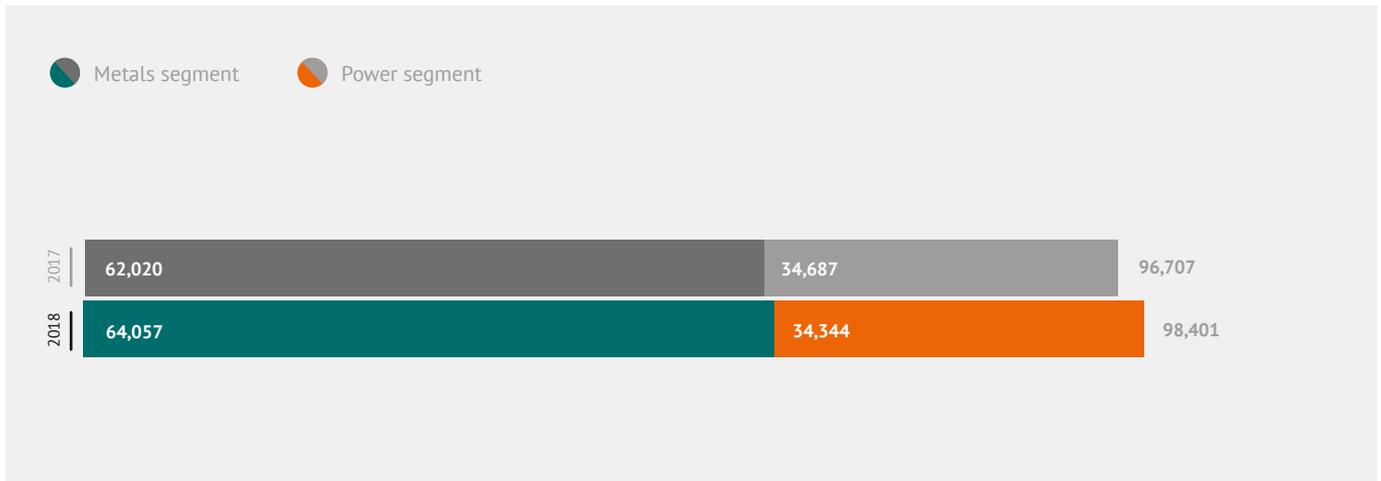
# Personnel structure

- Redesigning all talent pool coaching programs and relaunching the integrated talent pool development program under the name Transformation. The revamped program is based on the best practices in employee development and brings together the resources and expertise of the Corporate University, Business System Development department, TRIZ department and technical specialists. The pilot group has 68 participants and will be expanded to 300 people in 2019;
  - Launching the Metals segment General Service Centre (GSC) in April 2019, which provides recruitment services for the Company's production facilities and centralises all relevant functions into a single service organisation.
- The Company's main personnel management goal is human development, with eight out of 10 KPIs connected with professional advancement. The Company hit all its targets in 2018 and is determined to achieve all its stated KPIs over the coming years.

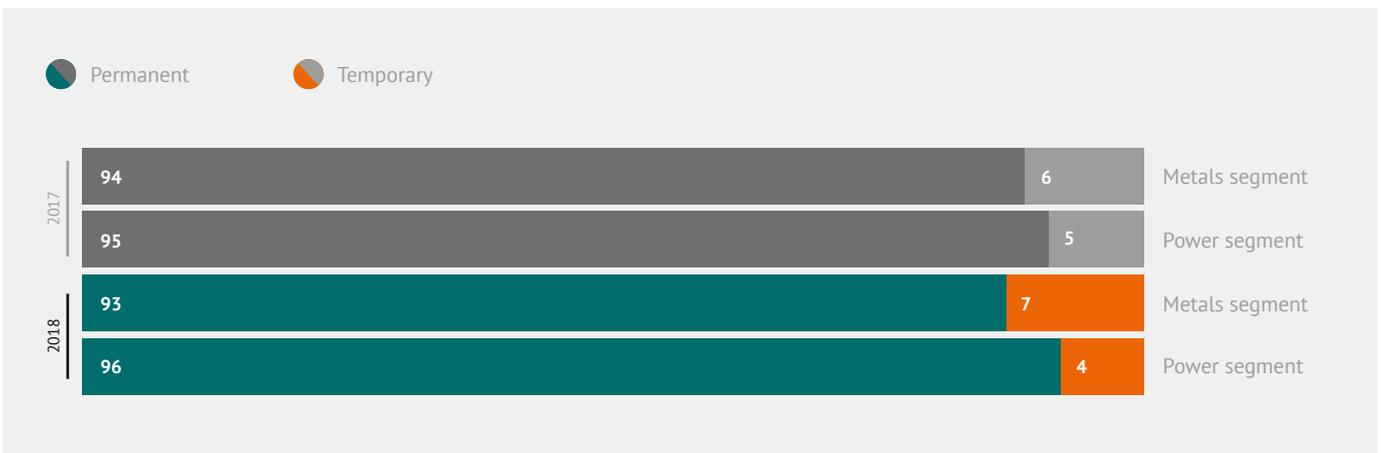
En+ Group is one of the biggest employers in multiple Russian regions and other countries, providing jobs for over 98,000 people across all its regions of operation. The personnel structure remained almost unchanged in 2018. Most employees are male due to the nature of the Company's operations. The percentage of workers with full-time employment type was 99.53% in 2018.

**The Company aims to provide all its employees with favourable employment conditions that advance their professional development, support the well-being of their families and encourage their active involvement in the Group's social and operational activities.**

**Average number of employees in the Metals and Power segments in 2017-2018<sup>1</sup>**



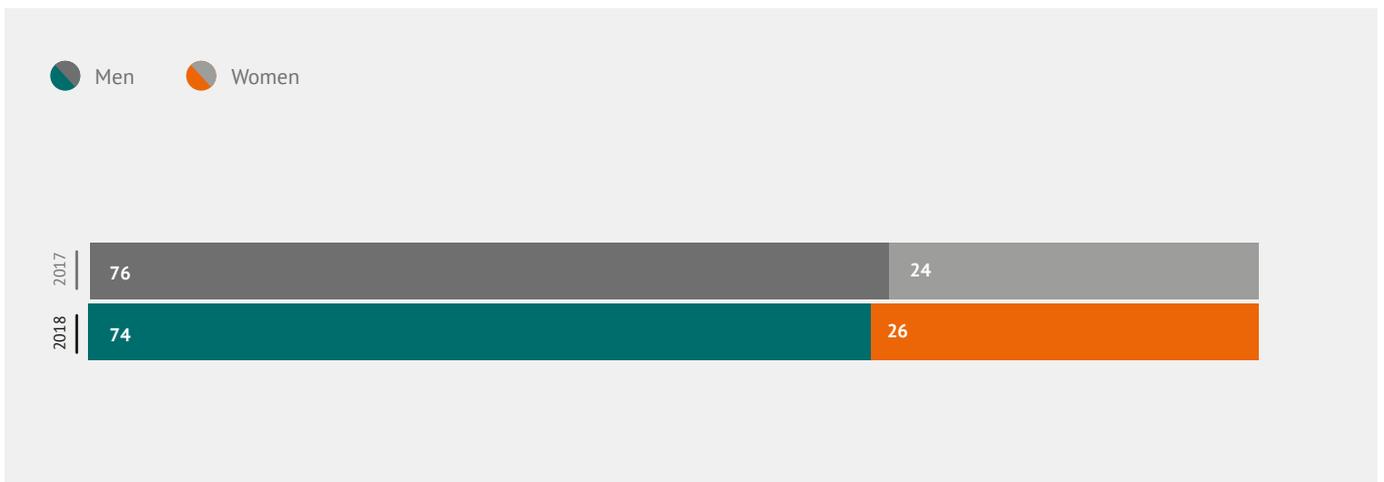
**Percentage of employees by employment contract (permanent and temporary) in 2017-2018<sup>2</sup>**



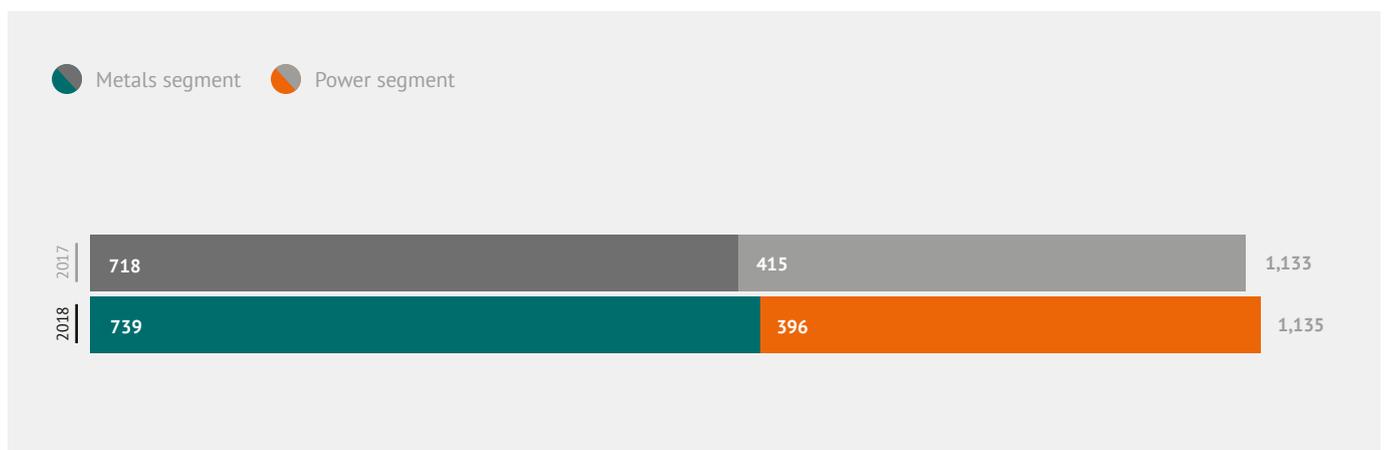
<sup>1</sup> The difference in the number of employees in the Metals segment in 2017 in comparison with its value disclosed in the Annual report 2018 is due to the clarification of the number of employees in Guyana.

<sup>2</sup> Hereinafter in the section "Employees - Personnel structure" the Power segment is represented by: JSC EuroSibEnerg, PJSC Irkutskenergo, EnSer, OJSC Irkutsk Electric Grid Company, Volgaenergo, Baikalenergo, LLC EuroSibEnerg-engineering, LLC En+ Digital, LLC Accounting Service Center EuroSibEnerg, LLC EuroSibEnerg Trading House, LLC EuroSibEnerg – Hydrogeneration, ANO CPD Corporate University EuroSibEnerg, En+ Holding Limited (ex. EuroSibEnerg Plc), CJSC MAREM +.

### Gender diversity of employees in 2017-2018, %



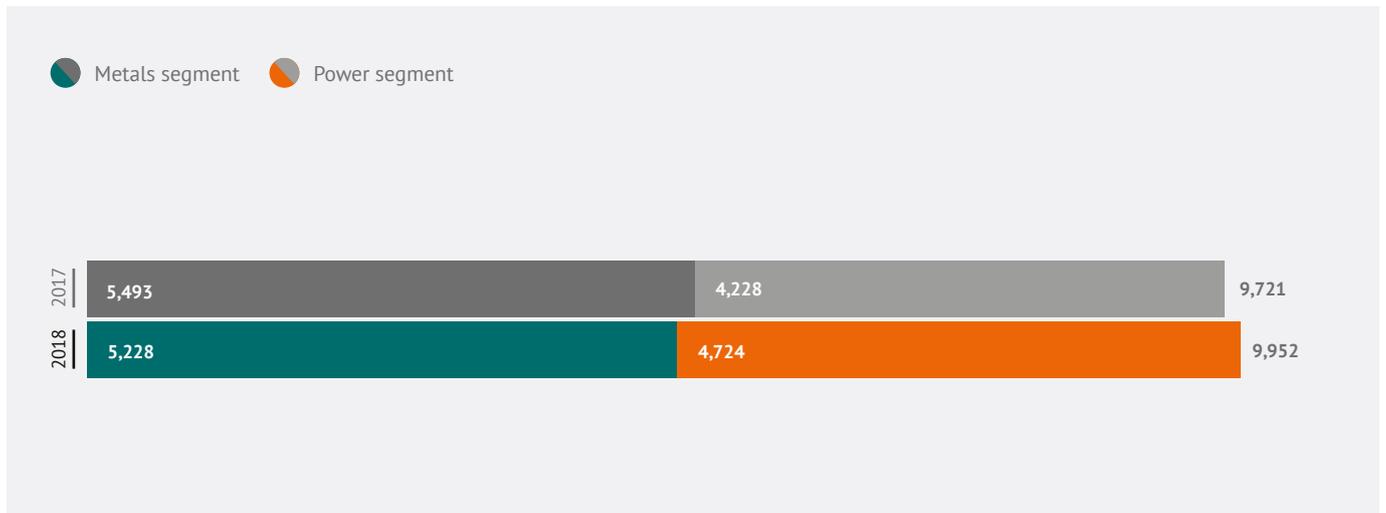
### Employee wages in 2017-2018, USD mn



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New hires by segment in 2017-2018



In February 2019, workers at the Metals segment facility Bauxite Company of Guyana Inc. (BCGI) protested to demand higher wages. The Company negotiated with the protest organisers, the Guyana Bauxite and General Workers Union (GB&GWU), in a concerted effort to swiftly deescalate and resolve the conflict. After reaching a renewal agreement with the union, BCGI reinstated the workers.

The Company took the protests and workers' concerns extremely seriously, basing decisions on global best practices and remaining faithful to the principles of human rights. This approach led to the fast and amicable resolution of the conflict and the swift return of BCGI to business as usual. There were no strikes or lockouts in the Power segment within the reporting period.

### Outgoing employees by segment in 2017-2018



**The Group's HR policies** are aimed at recruiting and retaining highly skilled personnel.

## Diversity and inclusion

We seek to build a diverse workforce and are constantly striving to build an inclusive environment. The Company has defined the following priorities:

- Workplace safety and equal opportunities;
- Guarantee of equal pay;
- Socio-economic diversity;
- Human rights;
- Attraction and retention of proactive and ambitious staff and interns;
- Development of career growth opportunities;
- Enhanced employee engagement;
- Improvement of training programs.

We make every effort to create a fair working environment, provide equal employment opportunities and reward excellent performance. By developing the competencies and leadership skills of our employees, we are creating leaders of the future.

We comply with relevant legal obligations across host jurisdictions for people with disabilities, providing all our employees with the appropriate working conditions.

Our employees must be familiar with the Code of Ethics and follow its principles at all times. The Code sets out our ethical conduct standards, and how we expect employees to interact with each other, our business partners, government authorities and society in general.

The Company sees the complete elimination of all forms of discrimination, persecution or bullying on the basis of race, skin colour, religion, sex, age, ethnicity or nationality, sexual orientation or disability as essential to its success.

The Company complies with all the obligations of labour laws and employment contracts in its relations with employees, respects personal freedoms and human rights, grants equal opportunities to all and does not tolerate any form of labour discrimination.

**In its relations with employees, the Company complies with all the requirements of labour legislation and employment contracts, respects personal freedom and human rights, grants equal opportunities to everyone and does not allow any labour discrimination.**

## Talent acquisition

As talented and highly skilled professionals are essential for our continued success, we invest significant time and resources into talent acquisition and development programs. We make every effort to find and retain the people who will drive our business forward.

The Metals segment runs the following joint programs and initiatives with specialised mining and metallurgical institutions, which helps the Company source promising candidates for its talent pool:

- Targeted selection and scholarships for students to encourage skilled young engineers to apply for and study university courses that will set them up for a career at En+;
- Educational programs for international students;
- The "RUSAL to the Russian Schools" project, which facilitates students' progression from school to vocational college and ultimately to employment in our industrial production facilities;

- The Internal Talent Pool program, which aims to create a group of promising employees for all types of managerial positions;
- Recruitment outside of Russia.

The Power segment works closely with government-run training centres. The Company has two main higher education partners: the faculty of Power Engineering and Automation at Bratsk State University (BrSU), which provides about 45-50 new employees per year, and Irkutsk State University. We are also partnered with a vocational college in Irkutsk.

We are constantly striving to find new ways of inspiring the next generation of En+ employees and attracting the best local talent:

- The Power segment has developed a special course for high school students about its operations and potential career pathways;
- The Company has organised an exam preparation program for final year high

school students to guide them through the Energy University Irkutsk National Technical University (INRTU) application process. The program includes additional courses for physics, maths and Russian along with workplace learning and excursions to power facilities;

- Competitions for young people, challenging them to create innovative and effective projects in a range of fields. There have been five contests in the last three years involving more than 3,500 entrants. The Laboratory of the Power Industry competition was held in 2018, and will be transformed into a corporate accelerator for innovative projects in 2019;
- The New Generation program is another major initiative for 2019 that aims to attract talented young specialists to the Company by offering paid internships. The program has already taken on 142 interns.



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## Learning and development

En+ Group's entire training system focuses on the development of professional skills, meeting high standards, ensuring safety and pioneering long-term technological development in the industry. The development and training of employees is of paramount importance to En+ Group. The Company aspires to attract the best talent, enhance their professional skills and provide them with a variety of high-quality training tools and programs. It provides various types of training and courses, including sessions required by law in the countries where the Company operates.

Both En+ segments have a Corporate University created to provide comprehensive training programs and reinforce the Company's commitment to professional development. The educational and training system is constantly developing with the addition of new programs, specially tailored to achieve the Company's objectives.

### The Metals segment

The Company uses a variety of training tools and programs for all types of positions to achieve its goal of driving the development and growth of all its employees, emphasising values and ethical principles.

The Metals segment's personnel training and development activities are regulated by:

- Regulation on the training and education of Company personnel;
- Provision on the Corporate Ethics System;
- Regulation on non-monetary (non-material) motivation.

The Metals segment has its own Corporate University, which directs the comprehensive training system and covers:

- Talent pool (training programs);
- Corporate culture (industrial competition and the Institute of Corporate Ethics Officers);
- Professional academies (training programs for professions and trades);
- Training centres at production facilities;
- Distance learning system;
- Youth education;

- Collaboration with educational institutions;
- Professional guidance;
- Assessment of staff knowledge.

Below are some examples of specific projects in the Metals segment:

- Modular vocational training system (including the Business System 250+ program, an add-on to the Business System 250 program, which aims to enhance the professional skills and expertise of high-potential candidates for future relocation and rotation within the Company);
- Technological Minimum Project (aims to provide employees with the fundamental technological knowledge and skills required for particular divisions and trades, such as the aluminium, alumina and packaging divisions);
- Functional academies, which focus on upgrading practical and technical skills with courses in various formats, including on-site and online training, group and one-on-one sessions, etc.;
- Distance Learning System (DSL) with more than 300 e-courses (topics include management, logistics, foreign languages, time planning, presentations, stress management and office management).

A competency assessment centre was established alongside the university, allowing personal qualities, leadership skills and professional knowledge to be assessed remotely. We started using a personal questionnaire with cognitive tests as an assessment tool in 2018. We provide all employees with internal and vocational training, and even offer full funding for advanced training courses provided by third-party organisations.

The Metals segment's key training and development achievements in 2018:

- Training 1,923 people in its professional academies;
- Opening its first centre focused on initiatives for young people, RUSAL Laboratory, at Siberian Federal University;
- Accepting 142 new interns onto the New Generation program;
- Opening a special department in Sayanogorsk for working with talented students;
- Training 147 employees on TRIZ;
- Launching the Training 100 Guinean Students program.

## The Power segment

All Power segment employees can take advantage of multiple training programs, which are primarily focused on developing professional skills, improving health and safety, quality control and long-term industry development.

The Power segment's employee training and education is directed by the following bodies:

- Corporate University;
- Business System Development Department;
- TRIZ (Theory of Inventive Problem Solving)/ TRIZ Department;
- Corporate Research Centre at INRTU and BrSU;
- External vocational training centres (if the required programs are not available at the Corporate University).

The Power segment's Corporate University was created by centralising its educational resources, teachers, professors and psychologists in one place. The Irkutsk-based institution is treated as a separate organisation and is mainly geared towards servicing the internal client. The university's mission is to drive up employees' skills and qualifications by promoting an integrated approach to learning and spreading world-class educational practices.

The key aims of the Power segment's Corporate University are:

- Running core curriculum courses;
- Ensuring the professional development of existing staff members, including project management and hard skills training;
- Training new staff members and forming a candidate pool;
- Developing a corporate research centre;
- Conducting regular psychophysiological check-ups of relevant staff to prevent health and safety risks.

The Company has training and development programs for all levels of experience, ranging from high school students to technical managers. The university has around 150 training programs, has a license to issue nationally recognised certificates and possesses an unlimited license for providing training services.

Developing a safety-oriented culture is one of the Company's top priorities. A number of standards and procedures have been developed and implemented to raise employees' safety awareness and Company-wide trainings have been organised for personnel and top management as part of the Conscious Safety development program, led by the Group's Corporate University and a consulting company.

Several educational courses based on the NEBOSH (a global organisation, which provides health, safety and environmental qualifications) methodology are being conducted for employees of all levels as part of a major initiative to develop a safety-oriented culture: “Cognitive safety” for operational employees, and “Leadership in safety” and “Efficient safety management” for technical managers. These courses aim to change employee attitudes towards health and safety and help them understand that everyone is responsible for reducing industrial accidents.

The Power segment’s Corporate University also has its own internal online portal called Virtual University with more than 100 video lectures and online courses. Most of the courses have been created with the help of the Company’s specialists who have practical experience in particular areas of study. New courses added in 2018 include:

- TRIZ;
- Investment project management;
- Risk management;
- Production analysis;
- Standardised work;
- Total Productive Maintenance (TPM).

Another update in 2018 was the introduction of a mandatory induction system for new employees, covering topics such as the fundamentals of the modern Power industry, information security and the Corporate Code of Conduct. A total of 2,970 Power segment employees completed these courses in 2018. The platform also hosts online competitions. For example in 2018, 450 people submitted short films that encourage a safety-orientated culture for a video competition.

The Company also attends various conferences that promote employee wellbeing. This included a roundtable on protecting the health of night shift employees in March 2018, hosted by the Civic Chamber of Russian Federation, which brought together more than 50 experts from various industries.

En+ presented their BioMouse technology and discussed how it works at the “Comprehensive approaches to ensure employee wellbeing: technologies and solutions” conference in May 2018. BioMouse is a computer mouse that measures employees’ general health and stress levels by monitoring their heart rate variability. Around 1,000 employees can be assessed at any one time.

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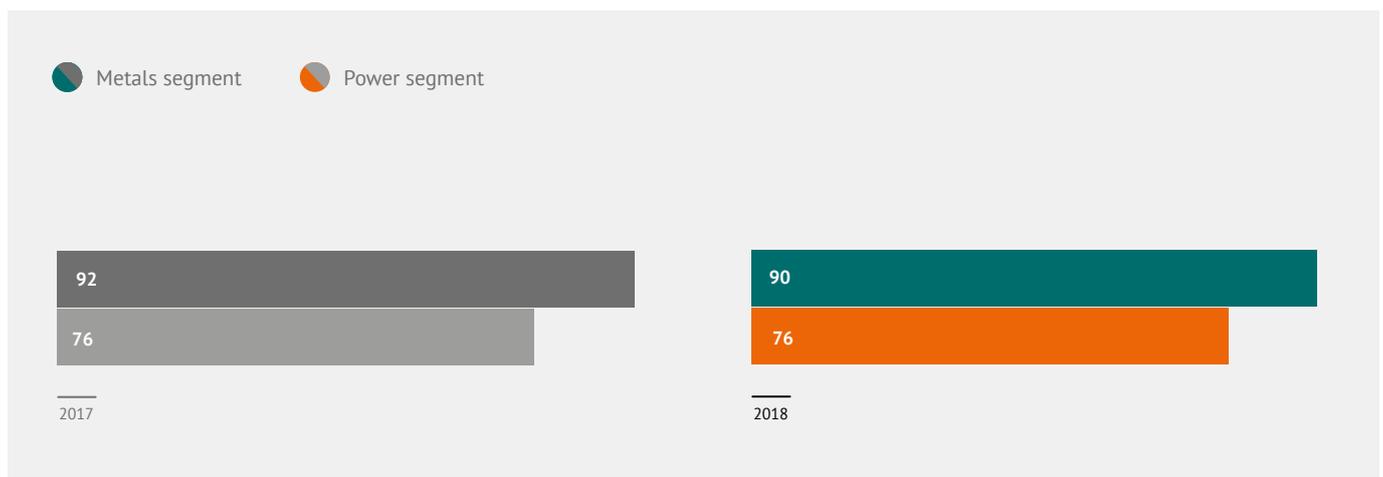
# Social benefits

Beyond offering employees opportunities to develop and learn new skills, En+ is also committed to providing its workers with the best social benefits to help improve the quality of their working and living conditions. These benefits aim to create and maintain long-term employee motivation and are provided equally to all full-time and part-time En+ employees. We strive to improve relations with our employees and see trade unions as key partners, striking collective bargaining agreements at all of our businesses, with the sole exception of small service structures.

Negotiations and dialogue with labour unions have resulted in collective bargaining agreements for social support packages that enhance the welfare of our employees. These include a childcare program (vacation programs and benefits for children), sports events, training facilities and healthcare programs. Although the Company is mainly focused on social programs such as health resorts and treatment centres, we also provide leisure activities for children, the full list of key social benefits includes:

- Financial aid;
- Recreation at health resorts;
- Retirement planning;
- Medical services (including voluntary medical insurance);
- Sports activities;
- Free meals at work;
- Subsidised housing;
- Social security services for employees' children;
- Support for pensioners;
- Other social expenses (subsidised transport, additional paid social vacation under the collective bargaining agreement and local regulations, and compensation for workplace accidents).

### Employees covered by collective agreements, %



Compensation is also available to employees who:

- Have just had a child;
- Have an income below the regional minimum wage;
- Have three or more children under 18;
- Are on parental leave until the child reaches six months.

The Company recognises that shortages of skilled and professional labour, strikes and labour cost inflation are major risks. En+ Group's specific operational processes mean that it is dependent on a skilled workforce, and therefore vulnerable to any changes in the cost and availability of this kind of labour. As many workers are unionised, the Company is exposed to the threat of strikes, lockouts and stoppages.

The Company's employee turnover rate is about 7%, which puts it on par with other industry players. The Company is implementing or has already launched employee retention strategies, such as specialised training facilities, seminars, indexation of salaries and regular meetings with employees.

En+ Group provides a stable competitive salary and comprehensive social benefits for its employees as well as remuneration based on skills, performance and grade. The remuneration and motivation system also includes multiple wage and salary benefits (time-based bonus system), incentive programs and other additional benefits (free meals, financial assistance and benefits for employees' children).

RUSAL, as a part of En+ Group, is a member of the Industry Tariff Agreement (ITA) for the Russian mining and metallurgical

industry in which employers are represented by the Association of Industrialists of the Mining and Metallurgical Complex of Russia (AMROS), and employees are represented by the Mining and Metallurgical Trade Union of Russia (MMTUR). RUSAL adheres to all the requirements of the ITA and is constantly improving its internal regulations for benefits, guarantees and remuneration.

**Beyond offering employees opportunities to develop and learn new skills, En+ is also committed to providing its workers with the best social benefits to help improve the quality of their working and living conditions.**

## Goals for 2019 and midterm period

The Group's key goals for the next year and the mid-term are:

- Analysing employee satisfaction levels by running a comprehensive online survey about their overall contentment and involvement in upcoming training programs;
- Expanding existing programs and those launched in 2018, as well as creating new programs such as the School for Safety Managers and the Financial Director School;
- Fully implementing the New Generation program, an initiative created to attract talented young specialists to the Company by offering paid internships;
- Holding training seminars that use real life operational cases and TRIZ instruments with at least 16 teachers and 200 participants;
- Increasing the Metals segment's social programs budget for 2019 by 4% to fund various kinds of social support that are affected by inflation, such as the cost of medical services, compensation for travel and vacations and the maintenance of social housing facilities;
- Discussing the conditions of the Industry Tariff Agreement (ITA) with the Mining and Metallurgical Trade Union of Russia (MMTUR) and signing it again in December 2019;
- Improving interaction with the Siberian Federal University, Irkutsk National Research Technical University and Siberian State Industrial University by opening specialised departments and including TRIZ Business System and QMS programs at the universities (the Metals segment);
- Implementing the Business System 250+ modular training program for selected employees in the Metals segment;
- Introducing the 1C reporting system for the Power segment's Corporate University in 2019-2020 to automate processes such as the management of the candidate pool and generate operational reports that can track how the Corporate University changes over time;
- Implementing a range of commercial training and procurement programs in the Metals segment (in conjunction with the Sales Directorate, Quality Assurance Department, Directorate for Control, Internal Audit and Business Coordination (DCIABC) and other departments).

These goals will uphold the Company's social corporate values and commitment to develop its employees.



Ent+

Ent+  
GROUP

# Health and safety

Safeguarding the health and safety of our employees and contractors has always taken top priority at En+ Group and is the primary focus at every facility. The Company is committed to constantly improving its health and safety system and ensuring a safe and comfortable workplace for its employees.

En+ Group strives to be an Occupational Health and Safety leader in its industry. To this end, we are constantly overhauling our existing OHS management system and are continuously developing new, innovative ways of promoting safe working conditions among our employees.

## IN THIS SECTION

- Management approach
- Monitoring program
- Health and safety performance
- Safety culture development
- Prevention of occupational injuries and diseases
- Goals for 2019 and midterm period



# 4,000

flashcards outlining safe working practices were produced

# 4,969

employees completed safety culture trainings

# 8

fatal incidents in 2018

# 0.14

LTIFR in 2018

# 0.214

employee occupational illnesses rate in 2018, per 100 employees

## GRI

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The Company pays particular attention to strong executive leadership and improving the occupational safety culture, building a foundation for a safe production cycle that safeguards all employees and contractors.

An HSE Policy and an HSE management system have been introduced at all the Group's production facilities. Our occupational, health and safety (OHS) management system of the Metals segment is certified by Det Norske Veritas, while the OHS management system of the Power segment is certified by Bureau Veritas as compliant with OHSAS 18001. The Group is committed to further improving its health and safety management system and securing employee safety. To this end, in 2018, the Group initiated plans to update its OHS management system and review its OHS procedures and documents to align them with the requirements of the new ISO 45001 standard.

## Management approach

We are committed to conducting regular internal and external audits to monitor the effectiveness of our OHS measures. Eight external audits were carried out in 2018: four audits at units in the Metals segment and four at units in the Power segment. State OHS supervisory authorities conducted 251 inspections in the enterprises of the Metals segment. We are continuously seeking to drive up OHS and fire safety standards and carry out scheduled and spot audits, inspections and behavioural safety check to leave no stone unturned.

The Company's OHS and fire safety activities are underpinned by the following principles:

- Human life and health are more important than production results and economic performance;
- Any incident can be prevented;
- Safety management should be fully integrated into all business and production operations;
- An unwavering commitment to comply with OHS legislation, and where possible be best in class;
- Each employee (must have) has the necessary skills and training to work safely;
- Safe behaviour must be supported and encouraged;
- Suppliers and contractors must commit to our standards of safety.

En+ Group strives to comply with all local OHS and fire safety legislation, its internal policies and all corporate policy principles.

En+ Group is regulated by the following OHS and fire safety document framework:

- OHS and Fire Safety Policy Statement;
- OHS and Fire Safety Management System Guidelines;
- HSE and Fire Safety Role Matrix;
- Core occupational safety rules and values;
- Policy for the Prompt Communication of Incidents and their Consequences;
- Regulation for the Reporting, Investigation and Analysis of Occupational Safety Incidents.

En+ Group regularly amends its corporate documents to keep them in line with the legislation of its regions of operation.

The Company is currently updating the Policy regulating the occupational safety reporting process for all its business units. Our joint ventures (JVs) and subsidiaries will use this Policy to prepare and submit the latest health and safety information, as well as monthly and annual reports on their performance to the Occupational Safety Department.

## Monitoring program

In 2018, the Company developed a regulation to create flashcards outlining safe working practices. En+ Group created more than 4,000 flashcards with workflow descriptions in 2018. En+ is continuing these efforts in 2019. We also have plans to reform the incident investigation Policy to establish a standardised procedure for the swift reporting of accidents, minor injuries, illnesses and potentially dangerous incidents that could have resulted in injury, as well as a procedure for investigating these incidents and communicating the lessons learned to employees.

The Company has a rigid safety monitoring framework in place, which includes a number of key performance indicators and assesses OHS performance in the following key areas:

- Communication with employees. Inductions, knowledge tests, trainings, etc.;
- OHS and fire safety compliance assessments;
- Compliance with regulations;
- Swift investigation of incidents;
- Employee engagement and participation in risk minimisation;
- Risk assessments, as well as the quick identification and elimination of issues;
- Prevention of occupational illnesses.

We have been installing closed-circuit television (CCTV) systems at our facilities since 2017 in order to monitor employee compliance with OHS rules. CCTV systems are used to check worksite preparation and access authorisation for work on electrical systems. We are continuously monitoring how well our employees have been inducted, how quickly risks are identified and how well risk minimisation is implemented.

Video recordings are used to manage risks and educate employees when investigating the causes of incidents and accidents. This risk-based approach is fundamental to safety management at En+ Group. Business unit heads play an active role in identifying potential health and safety risks and promoting employee engagement in the risk management process.

As for other initiatives within the monitoring program, the Metals segment launched an initiative to create a comprehensive automated information system "Automated information system of production safety", in 2018. One of its key objectives is to create an integrated information system between all departments, to handle issues related to Occupational and Industrial Safety measures. The system enables remote monitoring and integrates a single end-to-end methodology for all core business processes.

En+ employees can use several communication channels to highlight operational hazards and minimise risks:

- Ethics Officers;
- Incident alert system for executives;
- Hotlines;
- Problem-Solving Boards.
- Problem-Solving Boards that are an effective way of collecting feedback from employees on the ground and ensuring a rapid response from management to their concerns.

A response is considered rapid if the issue is resolved or a decision is made within a week. This process is designed to capture information on potential risks and ensure that employees have a voice in OHS risk management.

GRI

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# Health and safety performance

We keep comprehensive records of all accidents, including those involving external contractors. En+ Group thoroughly investigates every incident involving both employees and contractors. Our LTIFR figures do not include data for contractor injuries.

All contractors we work with are required to adhere to our rules and standards. Compliance with these rules and standards form an integral part of our oversight of contractor performance.

## Fatalities

We regret to report that eight of our colleagues died at work in 2018. Every incident is unacceptable and is thoroughly investigated by a dedicated team of experts. En+ Group provides all the necessary support to the families of the victims and takes every possible step to prevent similar events from occurring again.

We remain unwavering in our commitment to achieving our goal of zero fatal incidents. To this end, En+ group investigates each accident, conducting a risk assessment and implementing health and safety initiatives across the company and in individual business units.

Eliminating fatal incidents is a priority for En+ Group. The HSE Committee considers a detailed report on any incident that has involved a fatality.

We also share our findings with all our employees so that everyone can reflect on the lessons from such incidents. Key findings

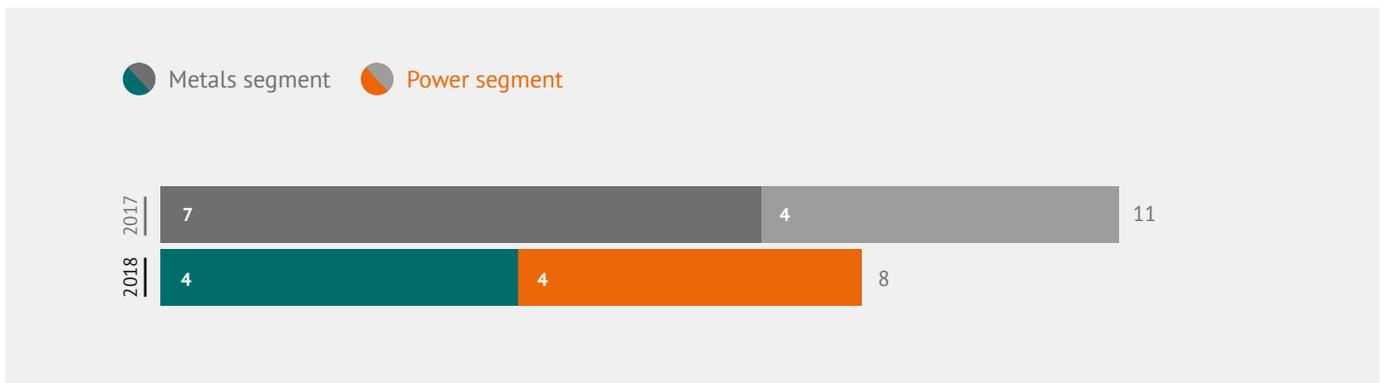
from fatal incidents are reviewed and discussed with the Board and HSE Committee.

The major risks that contributed to the accidents included:

- Inadequate leadership in production safety issues;
- Inadequate assessment of industrial risks and hazardous factors by staff;
- Personal negligence;
- Unsatisfactory organisation of safe work environment;
- Unauthorised expansion of work scope by employees and the performance of unassigned work.

We strengthened our safety culture throughout 2018 by focusing on all the measures needed to prevent these fatalities happening again. This includes investigating each accident, conducting a risk assessment and implementing health and safety initiatives across the Company and in individual business units.

### Work-related employee fatalities in the Metals and Power segments in 2017-2018



## Work-related injuries

En+ Group reduced LTIFR to 0.14 in 2018 from 0.16 in 2015. The Company has set ambitious KPIs for OHS and fire safety to drive further improvements. Zero fatalities, zero serious injuries related to technological process and lower LTIFR are goals for executive management across all our enterprises, making OHS a primary concern for management at all levels of the group. The Group has developed an action plan to further reduce LTIFR:

- Zero tolerance by management to health and safety violations;
- Investigations into all injuries, root cause analysis and corrective actions;

- Targeted programs and initiatives for potentially dangerous areas;
- Extended safety training for personnel, including remote training on the Company's new system;
- Exchanging best safe working practices with other industry leaders.

In 2018, our LTIFR remained almost at the same level as in 2017. A slight increase is associated with a small rise of both man-hours and work-related injuries.

We are aware that our operations can affect the health of our employees and take every possible precaution to protect their current and future well-being.

## Occupational diseases

The number of occupational diseases increased to 184 in 2018 from 173 in 2017. This was mainly due to increased detection following a series of high-quality medical check-ups at facilities of the Metals segment, conducted in partnership with the Moscow Scientific and Research Institute of Occupational Medicine, as well as the hospitalisation of miners to the occupational disease clinic for in-depth examinations and treatment.

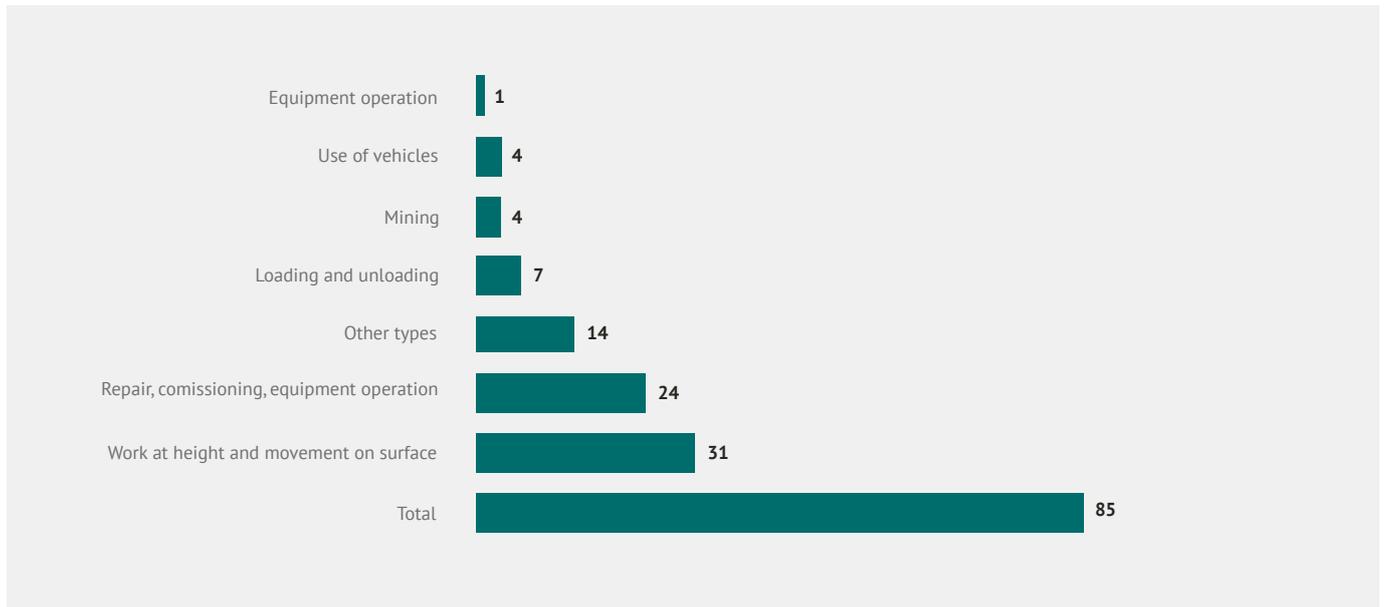
We take a proactive approach to managing health risk by continuously improving our occupational disease prevention programs. As a result, there were no employee or contractor fatalities because of work-related ill health in 2018.

### Lost time injury frequency rates per 200,000 hours worked in 2017-2018<sup>1</sup>

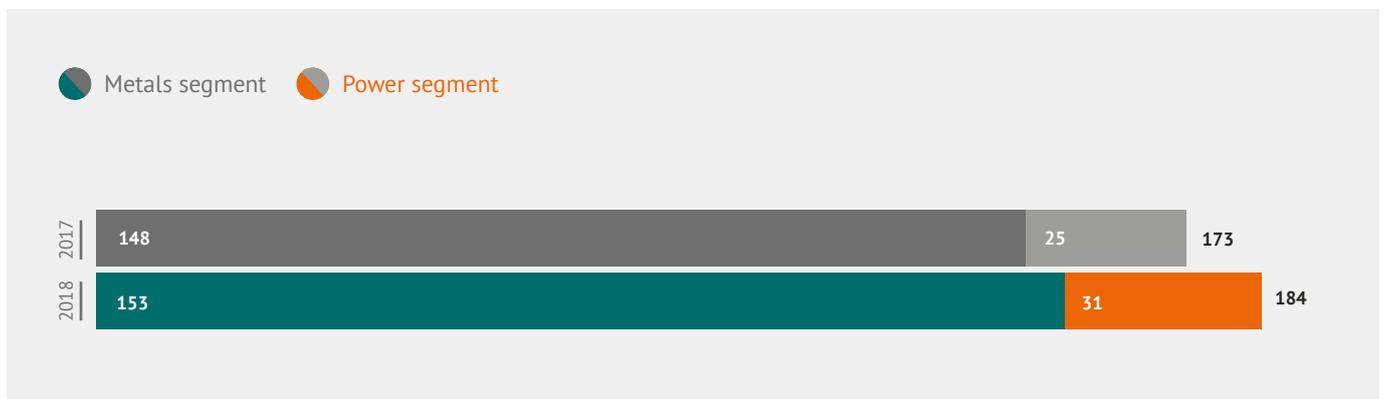


<sup>1</sup> The Lost Time Injury Frequency Rate, calculated by the Group as lost time injuries per 200,000 man-hours.

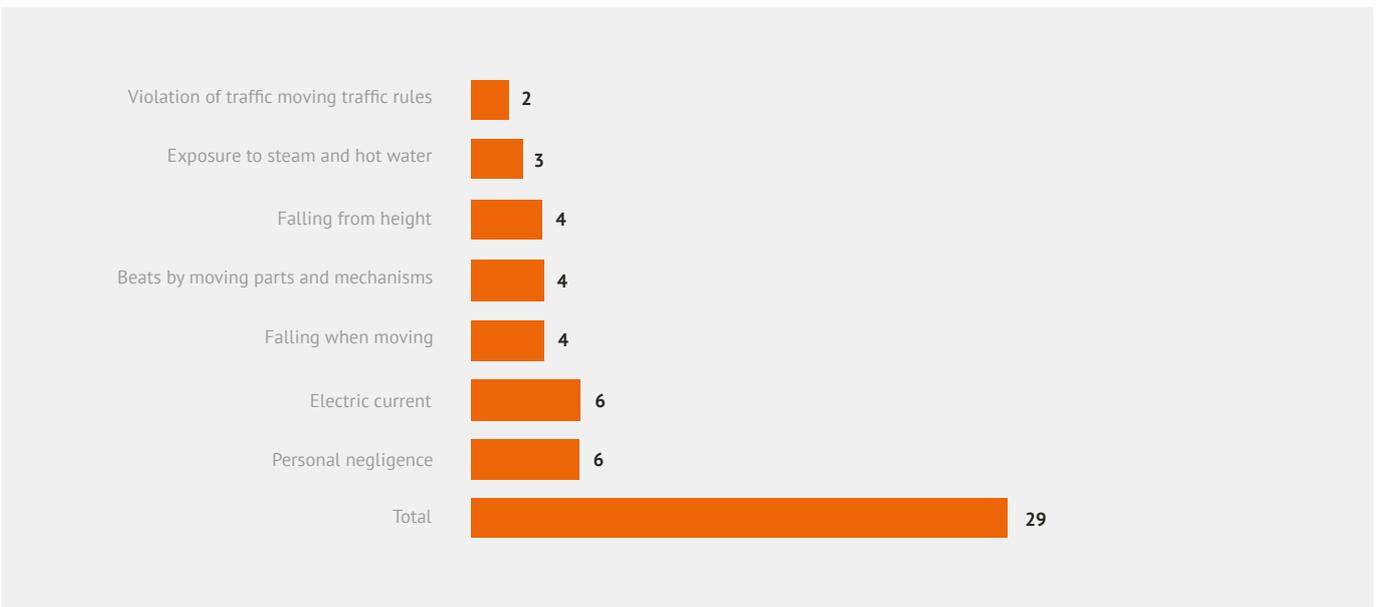
**Lost-time accidents' types of work distribution in the Metals segment, 2018**



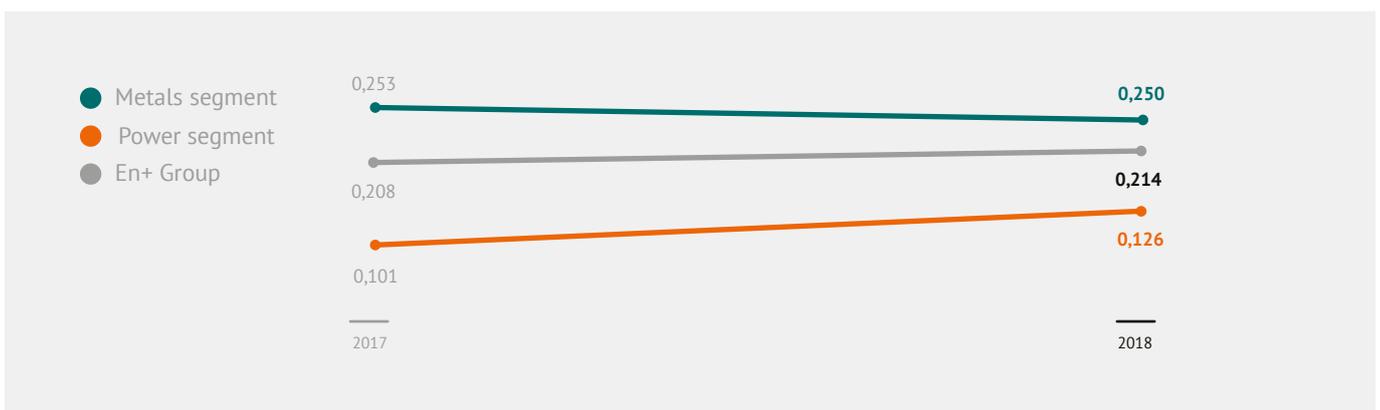
**Employee occupational diseases in 2017-2018**



### Lost-time accidents' types of work distribution in the Power segment, 2018



### Occupational disease rate (per 100 employees) in 2017-2018



## GRI

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## Safety culture development

The Company devotes considerable effort towards building a resilient safety culture to embed robust practices at every level within the Group. These programs were launched in collaboration with the Corporate University and included training for the NEBOSH International General Certificate (ICG).

We improved the Safety Culture program in 2018, an initiative aimed at building a stronger safety culture and better employee engagement in the safety management process. The program is to promote the highest possible OHS management approach across the board. We have implemented a Self-Suspension program, which grants each employee the guaranteed right to refuse work that poses the risk of injury. Each self-suspension is analysed in detail to minimise the risk of injury in the future. This program has been running since 2016. There were 226 self-suspensions in 2018. Safety Culture program defines the Company's five key culture values:

- Safety;
- Leadership;

- Risk-based approach;
- Professionalism;
- Engagement.

These values serve as the foundation for the core safety rules and provide employees with easy-to-understand information on the requirements for safe behaviour. Our core safety rules make all employees keenly aware of what they need to do reduce and prevent workplace accidents.

To ensure further declines in accident numbers, we have implemented health and safety KPIs for senior executives as part of our safety culture initiatives. These KPIs include a target 10% year-on-year reduction in LTIFR across the Group and compliance with the requirements of performance monitoring. Performance monitoring tracks how well the following measures are being implemented: inductions, knowledge testing, risk assessments, workplace inspections, investigations, staff engagement in risk management and injury prevention initiatives.

## OHS training

Our employees are given safety inductions and complete introductory/refresher/targeted/unscheduled training sessions. As a part of the induction process, each employee must complete OHS training. Employees must regularly pass knowledge tests for occupational and industrial safety. The Company offers regular professional development programs. These programs include both online self-study materials provided as part of the distance learning system and courses offered by the Corporate University. Both En+ Group's business segments provide employees with the opportunity to train in multi-functional training centres and acquire practical skills and methods for working at height, using personal protective equipment and teamwork for specific tasks.

## GRI

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# Prevention of occupational injuries and diseases

We are constantly working to decrease risk of occupational diseases. Our initiatives are aimed at prevention and diagnosis, as well as providing rehabilitation services for all our employees should they require them.

The most commonly reported occupational illnesses were vibration disease and sensorineural hearing loss. En+ Group specifically targets these occupational illnesses in its health risk assessments and health management plans. The Metals segment has developed a highly effective approach to protect workers from vibration risks and has reduced vibration-related illnesses by educating workers on how to select and use anti-vibration personal protective equipment (PPE).

To reduce the impact of potentially harmful operations on employees, the Company equips them with PPE. For example, the Company has identified workplaces where employees require noise protection and has provided employees with state-of-the-art communication headsets.

En+ Group launched a program to monitor the alcohol levels of employees as they enter power facilities at two combined heat and power plants. The Company is planning to roll out this system at all high-pressure thermal stations and hydroelectric power stations.

The Power segment has health centres that are equipped to provide employees with outstanding treatment and preventive care. They are staffed by top medical professionals who provide first aid, pre-shift and post-shift medical check-ups, alcohol tests and preventive medical examinations. All employees must undergo the mandatory medical examinations to diagnose any undetected conditions and treat them quickly. The Company offers vaccinations against flu and tick-borne encephalitis every year.

En+ cares deeply about the general health of its employees. In 2018, the Company organised a diabetes awareness day where employees learned about diabetes situation at industrial sites. Awareness events about HIV prevention are

also held every year to mark World AIDS Day.

Psychologists work with employees to alleviate stress and other mental health issues. Our employees can rest in special relaxation rooms that are fitted with massage chairs and other calming devices to help them unwind.

Our safety culture program provides employees with health resorts, voluntary health insurance and corporate discounts at fitness centres. The Group also covers expenses for surgeries and other medical procedures.

**We are constantly working to decrease risk of occupational diseases.** Our initiatives are aimed at prevention and diagnosis, as well as providing rehabilitation services for all our employees should they require them.

## Goals for 2019 and midterm period

In 2019, the Group seeks to further improve its health and safety performance. En+ Group has set the following occupational health and safety and fire safety objectives:

- Achieving zero fatalities, zero serious work-related injuries related to technological process;
- Reducing LTIFR;
- Reducing occupational diseases;
- Exceeding regulatory OHS requirements to ensure the most robust safety environment;
- Providing health and safety trainings for employees on a regular basis;
- Ensuring that all employees understand that they have the right to refuse to perform work posing an injury risk (self-suspension);

- Continuously improving the OHS management system, guided by international best practices.

The Metals segment has set the following key objectives for 2019:

- Introducing an “Automated information system of production safety”;
- Repairing the spillway at Achinsk Alumina Refinery’s hydro chemical treatment facility;
- Implementation of the safe potline project at Krasnoyarsk Aluminium Smelter;
- Continuation of the program to ensure better industrial safety and stronger employee motivation to reduce injuries and promote safety culture at the North Urals Bauxite Mine;
- Introducing a training using simulators and training environments;

- Developing a VR-based training;
- Launching the Diagnosing Dangerous Behaviour project and developing related training programs.

The Power segment is planning the following initiatives for 2019:

- Implementing core rules for occupational safety;
- Implementing toolbox meetings at the start of each work shift;
- Continuing to improve the centralised information portal for occupational safety;
- Continuing to improve the occupational safety monitoring system;
- Ensuring the bottom-up resolution of safety issues by using problem-solving boards across the Group;



- Adding visualisations of risk factors to safety guidelines;
- Monitoring the use of safety flashcards for potentially dangerous operations and changeovers;
- Introducing a company-wide colour system to designate dangerous areas and equipment parts.

New technologies are also helping to reduce the risk of occupational illnesses. En+ Group is constantly implementing technical measures aimed to eliminate (where possible) or reduce such risks. In cases when such risks cannot be fully eliminated, state of the art personal protective equipment is provided to workers.

**In 2019, the Group seeks to further improve its health and safety performance. En+ Group has set a set of occupational health and safety and fire safety objectives.**



# Environmental protection

Our sustainable development focus is set on environmental protection and climate change. We understand that our operations inevitably have an impact on water, land, air quality and biodiversity, and we therefore strive to mitigate and minimise our footprint in everything we do.

We will achieve this by adhering to and surpassing basic legal requirements and taking the initiative to launch our own environmental protection projects.

## IN THIS SECTION

- Management approach
- Climate change
- Energy
- Air emissions
- Water resources conservation
- Waste and safe tailings management
- Land rehabilitation
- Biodiversity
- Goals for 2019 and midterm period



### 7.5%▼

reduction of direct GHG emissions of electrolysis operations 2018 vs 2014 (tCO<sub>2</sub>e/tAl)

### 36%▼

decline in fresh water consumption by the Metals segment compared to 2008

### 1.2 mn

young peled-fish were released into the Angara river basin over the past five years

### "ALLOW"

brand of low-carbon footprint aluminium

GRI

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# Management approach

En+ Group's commitment to being a world leader in addressing climate change and environmental issues means that it surpasses its legal obligations, running many voluntary projects on environmental protection. The Company is investing in the development of new technologies and the modernisation of equipment to enhance production efficiency and reduce the environmental impact of its operations. We are continuously increasing the use of renewable power resources, and improving waste recycling and processing processes.

The Company's primary environmental protection goals are:

- Enhancing the environment surrounding the Company's production facilities;
- Conserving biodiversity in places where En+ Group operates and participating in programs aimed at protecting threatened species;
- Developing programs to protect Lake Baikal, its unique ecosystem and cultural heritage.

The Group's decision-making process is guided by the following principles:

- The swift and comprehensive identification and assessment of environmental and climate risks;
- Compliance with all the necessary laws of the countries where En+ Group operates and best practices;
- A commitment to minimising and preventing risks that may affect environment and climate;
- Regular interaction with stakeholders and measured consideration of their opinions.

While adhering to all state legislation, the Company has also adopted its own voluntary internal policies regulating environment protection. The company has rigorous policies and procedures in place that govern environmental risk management. Any issues identified by government agencies and independent audit checks are quickly resolved and followed up with corrective measures.

Sharing knowledge, skills and resources among departments are essential elements of our approach to environmental management. As member of the Aluminium Stewardship Initiative (ASI), RUSAL played a role in the rollout of the ASI Performance Standard, which aims to support responsible management of aluminium production to mitigate climate change. JSC EuroSibEnerg is a member of the International Hydropower Association (IHA). The Company's main areas of cooperation with the IHA involve projects aimed at ensuring the sustainable development of hydroelectric facilities and developing methodologies to assess GHG emissions from reservoir water surfaces.

Communicating with stakeholders and respecting their opinions are among the guiding principles of the Group's decision-making process. Environmental Managers of the Group's business units are in regular direct contact with the Federal Service for Supervision of Natural Resources. We also use public hearings to communicate with a wide range of stakeholders, all of which comply with local state legislation and take

<sup>1</sup> For more detailed information, please refer to pp. 82-85, Scientific and technological development.

place under the supervision of a government body such as the Main Department of State Expertise.

En+ Group sets specific environmental goals for itself each year. The reporting period saw many changes, including the restructuring of En+ Group's corporate governance system and the formation of the Health, Safety and Environment (HSE) Committee. The Committee, together with managers companywide, has been tasked with ensuring sustainable growth, decreasing the Company's environmental impact and developing a comprehensive sustainability strategy and targets.

There are a number of ongoing R&D projects<sup>1</sup>, such as testing red mud (alumina waste) treatment technologies, developing new value-added products, researching innovations in aluminium production and other initiatives aimed to facilitate more rational use of natural resources and improved environmental safety.

**En+ Group's commitment to being a world leader in addressing climate change and environmental issues means that it surpasses its legal obligations, running many voluntary projects on environmental protection.**



GRI

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# Climate change

Climate change is one of the greatest challenges facing our planet. We are constantly looking for ways to reduce our carbon footprint and are working with a wide range of partners to enhance global policy and the industry’s response.

Due to the energy-intensive nature of our businesses, minimising the impact production processes have on climate is one of our most important strategic aims. As detailed below, RUSAL already has an established GHG reduction strategy, including seven targets to be achieved by 2025. The En+ Group’s other companies are in the process of drawing up detailed and ambitious climate policies of their own.

## RUSAL’s climate initiatives



Various activities in the production of primary aluminium generate greenhouse gases. These include stationary and mobile combustion, anode production, aluminium smelting, alumina production and other downstream processes.

RUSAL was the first company in the Group to implement climate mitigation schemes and launched its Safe Future Strategy Initiative, which focuses on minimising the Company’s impact on the environment, air quality and climate change. In 2016, RUSAL introduced seven strategic targets for greenhouse gas emissions to be achieved by 2025:

- To ensure that at least 95% of electricity purchased by aluminium smelters comes from hydroelectric power plants and other carbon-free power generating;
- To reduce direct specific greenhouse gas emissions by 15% compared to 2014 at reduction processes at the existing aluminium smelters;

- To reduce direct specific greenhouse gas emissions by 10% compared to 2014 at the existing alumina refineries;
- To reduce the specific aluminium smelters power consumption by 7% as compared to 2011;
- To achieve the average level of specific direct and indirect energy related greenhouse gas emissions from reduction processes at the aluminium smelters not exceeding 2.7 t of CO<sub>2</sub>e/t Al<sup>1</sup>;
- To use internal carbon prices when making strategic and investment decisions starting from 2017;
- To support Russian and international initiatives and associations advocating active actions to prevent climate change and supporting carbon prices as long as they are aligned with the strategic goals of the company.

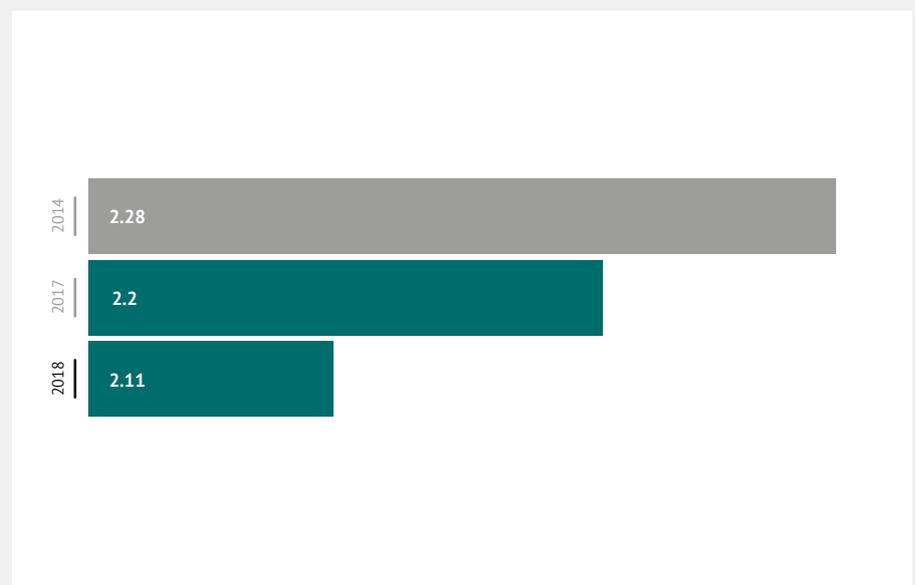
One of the Metals segment's strategic goals is to achieve a 15% reduction in direct greenhouse gas emissions at its existing aluminium smelters by 2025 compared to 2014 levels. Direct GHG emissions from aluminium smelters fell by 7.5% in 2018 compared to 2014 (down to 2.11 from 2.28 tCO<sub>2</sub>e/tAl).

In 2018, RUSAL's greenhouse gas emissions (Scope 1, 2, 3) were subjected to an independently verified certification by KPMG according to the requirements of ISO 14064-2016, the Aluminium Carbon Footprint Technical Support Document and 2016 IPCC Guidelines For National Greenhouse Gas Inventories. Previously, RUSAL's greenhouse gas emissions (Scope 1, 2, 3) had been verified by QUANTIS and BSI.

En+ Group companies are striving to comply with both national and international climate change regulations. En+ Group and RUSAL have joined the Climate Partnership of Russia, an initiative that aims to help Russian businesses mitigate climate change and become more environmentally responsible. The Climate Partnership encourages companies to launch low carbon production processes and promote a greener economy. <http://climatepartners.ru/en/>

Both En+ Group and RUSAL are members of the Carbon Pricing Leadership Coalition (CPLC), a World Bank initiative aimed at facilitating private sector collaboration on reducing carbon emissions (<https://www.carbonpricingleadership.org/partners>). Since 2015, RUSAL has also been involved in the global Carbon Disclosure Project (CDP) initiative that helps companies and cities disclose their environmental impact. RUSAL, along with other participants

### Dynamics of GHG emissions reduction in the Metals segment, tCO<sub>2</sub>e/tAl



of the initiative, aims to be transparent about its GHG emissions and plans to release a report on its environmental performance according to the CDP guidelines in the nearest future.

In 2017, RUSAL launched its ALLOW brand of low-carbon footprint aluminium as part of its carbon-free production strategy. The brand produces less than four tonnes of greenhouse gas emissions in CO<sub>2</sub> equivalent

for every tonne of aluminium<sup>2</sup>, which is one of the best levels in the global aluminium industry. The ALLOW brand comes with independently verified carbon footprint statements and ships worldwide.

<sup>1</sup> Smelters' direct emissions (scope 1) and indirect energy emissions (scope 2).

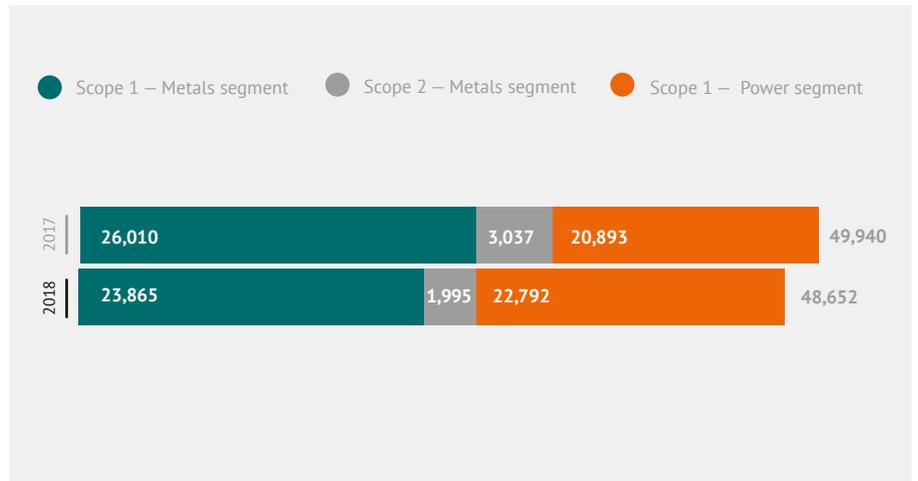
<sup>2</sup> Smelters' direct (scope 1) and indirect energy emissions (scope 2).

En+ Group's four HPPs, located in Bratsk, Irkutsk, Krasnoyarsk and Ust-Ilimsk, are continuously improving the efficiency of their turbines, boosting the amount of electricity generated without increasing the water flow.

The upgrades of HPP equipment will make it possible to increase electricity generation from the same volume of water by 2 TWh by 2022.<sup>1</sup> In addition, thermal Power Plants modernisation envisages higher efficiency of boilers, turbines and ash removal equipment. These measures should cut greenhouse gas emissions by 69,000 tonnes of CO<sub>2</sub> per year and reduce emissions of other pollutants by 9,300 tonnes per year.

The modernisation of our Siberian HPPs increases generation efficiency, allowing us to substitute coal-powered generation in the region (and thereby reduce GHG emissions). 1.8 mn tonnes of CO<sub>2</sub>e were avoided in 2018.

**Total direct and indirect emissions of greenhouse gases in kt CO<sub>2</sub>e<sup>2</sup> in 2017-2018<sup>3</sup>**



**We are constantly looking for ways to reduce our carbon footprint and are working with a wide range of partners to enhance global policy and the industry response.**

<sup>1</sup> For more detailed information, please refer to p.88, Scientific and technological development.  
<sup>2</sup> Metals segment: Aluminium smelters, alumina refineries, bauxite and nepheline mines, silicon production. Power segment: Enser, PJSC Irkutskenergo, LLC EuroSibEnergo – Hydrogeneration, Krasnoyarsk Hydro-Power Plant, Volgaenergo, Baikalenergo.  
<sup>3</sup> Scope 2 in Power segment is not applicable.

## Forestry projects

En+ Group has started to implement a new forest conservation and restoration project in 2018. As the leading global aluminium producer, En+ Group's Metals segment requires large amounts of energy and water. The production of aluminium, which involves carbon anode production, fuel combustion and the anode effect, releases a substantial amount of GHGs. Decreasing GHG emissions is one of the Company's main priorities. However, due to the physical and chemical processes required to produce aluminium, GHG emissions cannot be fully eliminated. Therefore, the Company has decided to introduce several carbon offset projects, with a particular focus on reforestation, to compensate for the unavoidable GHG emitted during production.

The Company consistently implements best available technologies and governance practices aimed at preventing and reducing greenhouse gas emission. To set off residual negative impact, the Metals segment of the Group implements forest ecosystem conservation and restoration projects in conjunction with academic and public organisations, and representatives of NGOs and local communities. The forest projects make a significant contribution to the development and preservation of boreal forests, natural complexes that play a critical role in atmospheric CO<sub>2</sub> balancing and which are 6 to 7 times more effective in binding atmospheric carbon.

As part of its contribution to the UN Sustainable Development Goals related to terrestrial ecosystem preservation and climate change, RUSAL is launching two pilot projects in 2019: tree planting and aerial forest protection. Absorption will be primarily calculated on the basis of 2006 IPCC Guidelines for National Greenhouse Gas Inventories methodology and recorded in the Russian National Cadastre of Anthropogenic Emissions by Sources and Removals by Sinks of all Greenhouse Gases not controlled by the Montreal Protocol, and other reporting documents submitted by Russia to the UNFCCC.

**To set off residual negative impact, the Metals segment of the Group implements forest ecosystem conservation and restoration projects in conjunction with academic and public organisations, and representatives of NGOs and local communities.**

GRI

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Energy

The Group's power generation and energy efficiency strategy aims to increase output from hydro power plants, minimise electricity transmission loss and use more energy generated on-site. Target programs and energy efficiency projects are underway at all the Company's power generation facilities. These include implementing energy-saving technologies, optimising energy usage, improving equipment design and technological processes (reducing heat loss, for example) and updating regulations.

En+ Group plans to produce at least 95% of its aluminium using renewable hydropower by 2025, which coupled with other energy-saving measures, will cut its GHG emissions to industry lows. Aluminium production requires vast amounts of electricity. For this reason, hydropower plays the crucial role in our plans to produce our aluminium in the cleanest way possible.

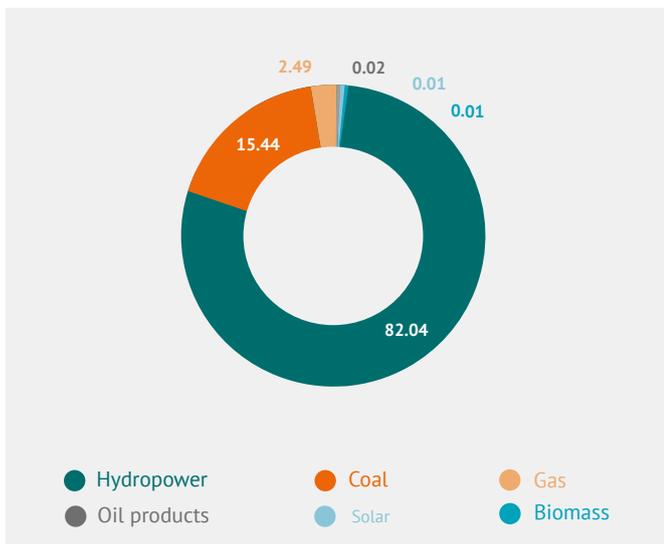
The main fuel source for the Company's combined heat and power plants (CHPs) is coal from the Group's coal segment, which fully covers internal coal demand and sells to third parties. In 2018, total coal production reached 16.2 mt while the Group's thermal power plants generated 14.9 TWh of electricity.

Non-renewable sources

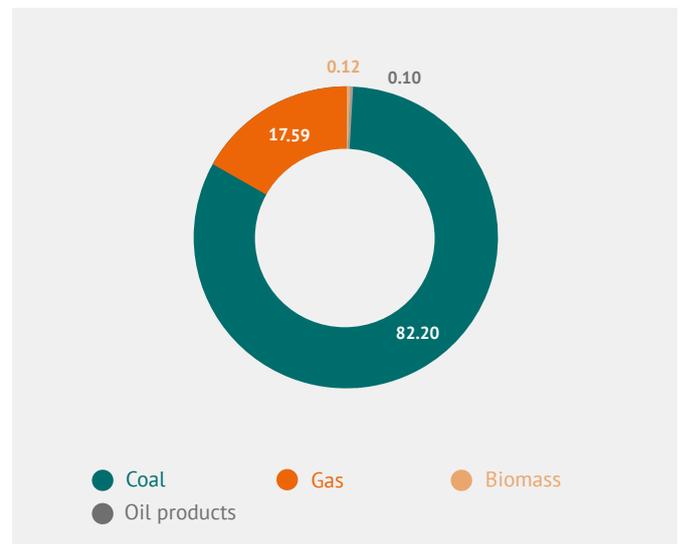
Additional capacity, added in mid-2017, boosted electricity consumption in the Metals segment in 2018. The Metals segment is constantly developing and introducing new energy efficiency innovations to ensure a sustained reduction in energy consumption. The most important efficiency initiative in 2018 was the installation of 626 energy-saving electrolysers at our plants, saving a substantial 160.3 million kWh of electricity per year.

Energy consumption at aluminium production reduced by 86,911,354 kWh as a result of implementation of policies and initiatives in the field of energy efficiency, namely due to technological measures in 2018. The average specific energy consumption at the aluminium production decreased by 23 kWh per a tonne of aluminium produced and amounted to 16,211 kWh per a tonne of aluminium produced.

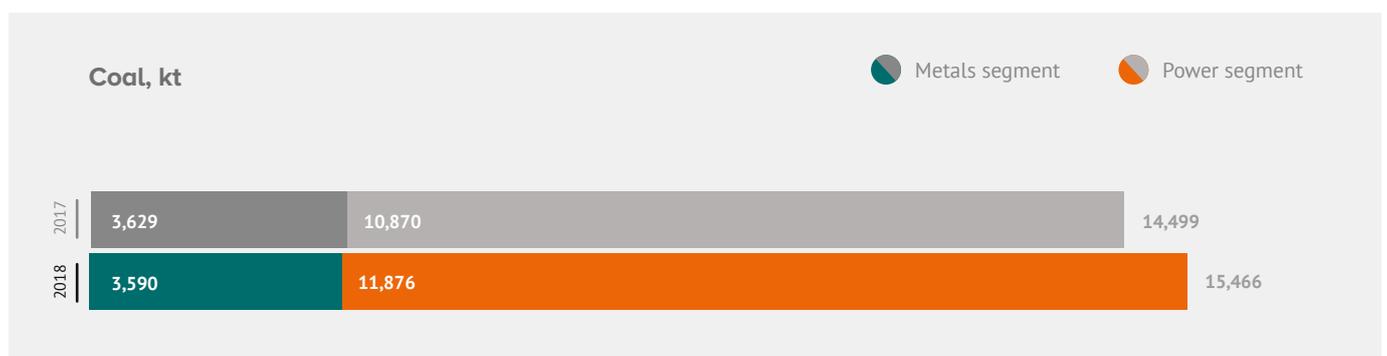
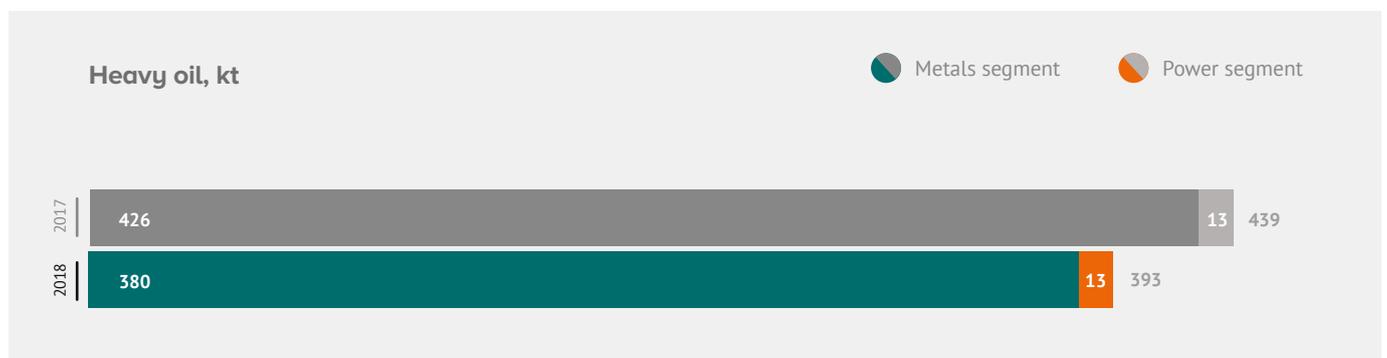
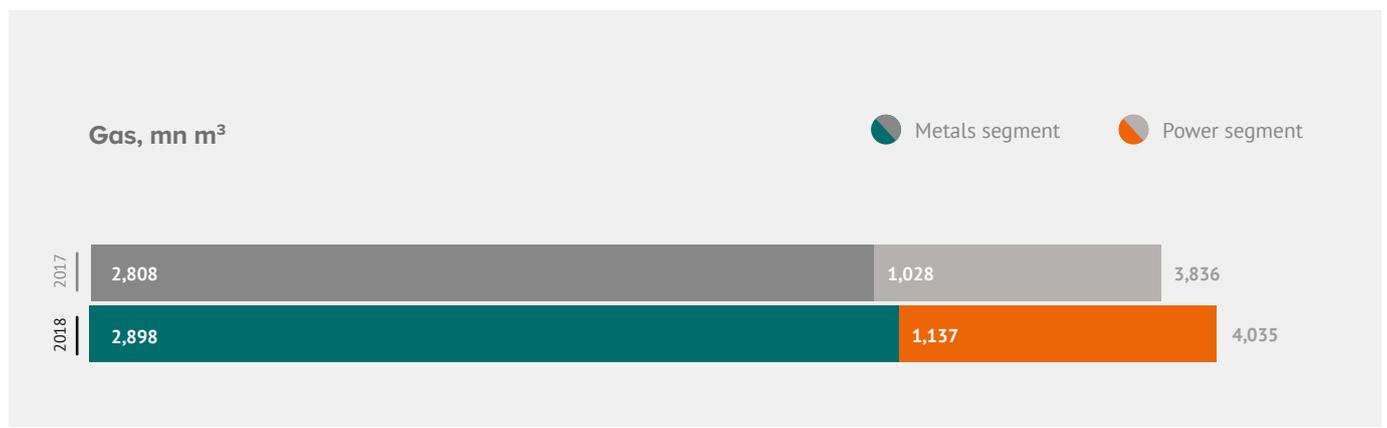
Electric power output by energy source in 2018<sup>1</sup>,%



Thermal energy output by energy source in 2018<sup>2</sup>,%



**Fuel consumption from non-renewable sources by type of fuel<sup>1</sup> in 2017-2018**



<sup>1</sup> LLC KraMZ, Enser, Volgaenergo, Baikalenergo, PJSC Irkutskenergo, LLC Eurosibenergo – Hydrogeneration, Baikalenergo, JSC Krasnoyarsk Hydro-Power Plant.  
<sup>2</sup> LLC KraMZ, Enser, Volgaenergo, Baikalenergo, PJSC Irkutskenergo, LLC Eurosibenergo – Hydrogeneration, Baikalenergo, JSC Krasnoyarsk Hydro-Power Plant.  
<sup>3</sup> Power segment: PJSC Irkutskenergo, Enser, Volgaenergo, Baikalenergo.

GRI

305-7

# Air emissions

As a major industrial holding with various businesses spread across five continents, En+ Group is constantly working to reduce its operational emissions. We are committed to complying with all the necessary internal and government regulations in all countries where we have a presence. RUSAL and PJSC Irkutskenergo, which are part of En+ Group, are responsible for the majority of En+ Group's pollutant emissions.

The Metals segment's key emissions reduction initiatives in 2018:

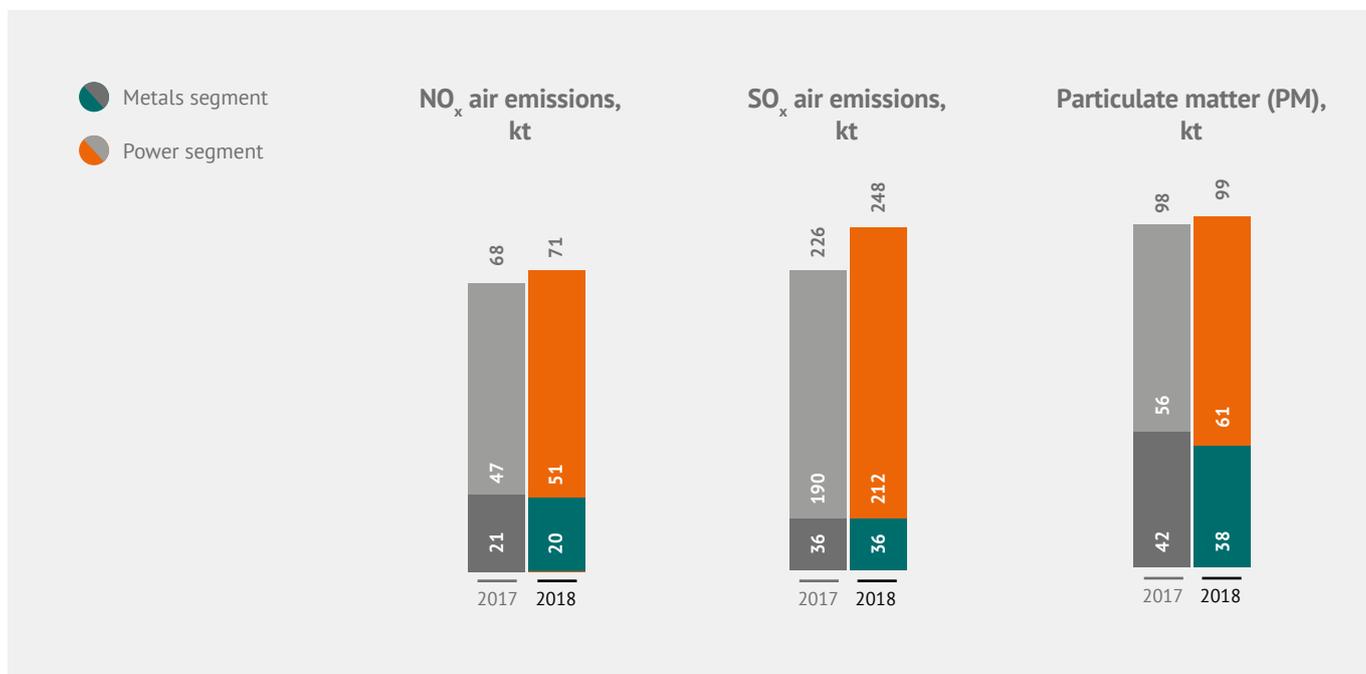
- Implementing the Eco-Søderberg technology at KrAZ, BrAZ, IrkAZ, and NkAZ;
- Building and modernising gas treatment plants at BrAZ, IrkAZ, NkAZ, KUBAL, UAZ, Silicon, RUSAL Silicon Urals, and Achinsk Alumina Refinery).

Since 2018, En+ Group's Metals and Power segments have been implementing

a comprehensive plan to reduce emissions in 12 Russian cities, including Krasnoyarsk, Bratsk and Novokuznetsk, as a part of the National Ecology Project and Clean Air Federal Program. This program aims to reduce air pollutant emissions in these cities by at least 20% in 2024 compared to 2017. Selected some of the biggest polluters in the cities shall develop programs with a common 20% reduction target.

Emissions growth in the Power segment is due to increasing power and heat generation in 2018 in comparison with 2017.

## Nitrogen oxides (NO<sub>x</sub>), sulphur oxides (SO<sub>x</sub>), and other significant air emissions (excluding greenhouse gases emissions and carbon monoxide emissions), tonnes<sup>1</sup> in 2017-2018<sup>2</sup>



<sup>1</sup> Power segment: Enser, PJSC Irkutskenergo, LLC EuroSibEnergo – Hydrogeneration, JSC Krasnoyarsk Hydro-Power Plant, Volgaenergo, Baikalenergo, OJSC Irkutsk Electric Grid Company.  
<sup>2</sup> For more detailed information on air emissions, please refer to p.151 Appendices.

## GRI

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Minimising the Company's impact on water resources is one of the main focuses of En+ Group's environmental protection strategy that envisages:

- Decreasing the amount of fresh water used in operational processes;
- Decreasing the amount of waste water produced and the concentration of hazardous substances in it;
- Increasing water recycling.

En+ Group facilities retrieve water from both surface and underground sources for its operational and production needs. Alumina refineries and power facilities are the Group's biggest water consumers due to their technological requirements and processes. The Company rarely suffers from water shortages at its facilities and there are currently no critical water-related risks (water consumption and disposal) in place.

In the Power segment the En+ Group's key water saving initiatives in 2018 were:

- Installing a water recycling system at CHP-16 plant, reducing water consumption by 171 m<sup>3</sup> per year;
- Installing a mist eliminator at Novo-Irkutskaya CHP, reducing water consumption by 170 m<sup>3</sup> per year;
- Technical upgrades to Irkutskenergo facilities, reducing water consumption by 212.2 m<sup>3</sup> per year.

## Water resources conservation

### The Metals segment

The Group's Metals segment annually evaluates the impact of its activities on water resources through industrial environmental monitoring. In 2018, RUSAL used water resources for its production needs in the Aluminium Division, Alumina Division, New Projects Directorate and Downstream Division. The Company does not consume water from high-water-risk regions.

### The Power segment

We recognise the impact the operations of our Power segment have on water resources. In response, we are reducing our water intake, implementing water loss reduction processes, working closely with local and federal water management agencies to improve the quality of wastewater treatment and installing new water-efficient equipment.

Two of our business units - EnSer and Volgaenergo - operate in high-water-risk regions. Key performance indicators (KPIs) for branch directors in those units include "avoiding penalties for negative environmental impact". We are currently conducting a comprehensive program to boost the resource and water efficiency of the equipment and operational processes at PJSC Irkutskenergo.

### Water withdrawal

In the Metals segment, only the Aluminium Division uses seawater. Total intake was 22.9 mn m<sup>3</sup> in 2017 and 25.5 mn m<sup>3</sup> in 2018.

The main sources of water intake in the Metals segment are: surface water, underground sources, public water systems and seawater (only at the KUBAL production facility for cooling castings and air emissions treatment discharges).

The main sources of water intake in the Power segment are: surface water, underground sources, and public water systems.

## Water consumption

In 2018, The Metals segment cut fresh water consumption to 82.6 mn m<sup>3</sup>, which is 36% less than in 2008. The Company is striving to achieve its strategic goal of reaching 100% recycled and reused water supply for the main production processes across the entire Company by 2022.

RUSAL only discharges waste water to surface bodies of water. The Metals segment increased water discharge of industrial waste water by 0.6 mn m<sup>3</sup>, or 2%,

in 2018 compared to 2017. Water discharge has been lowered by 62%, or 55 mn m<sup>3</sup>, since 2008.

The Metals segment only collects data on unplanned discharges due to accidents. RUSAL recorded no such cases in 2018.

There were no significant spills during the reporting period in the Group. The Metals segment ensures that risk management

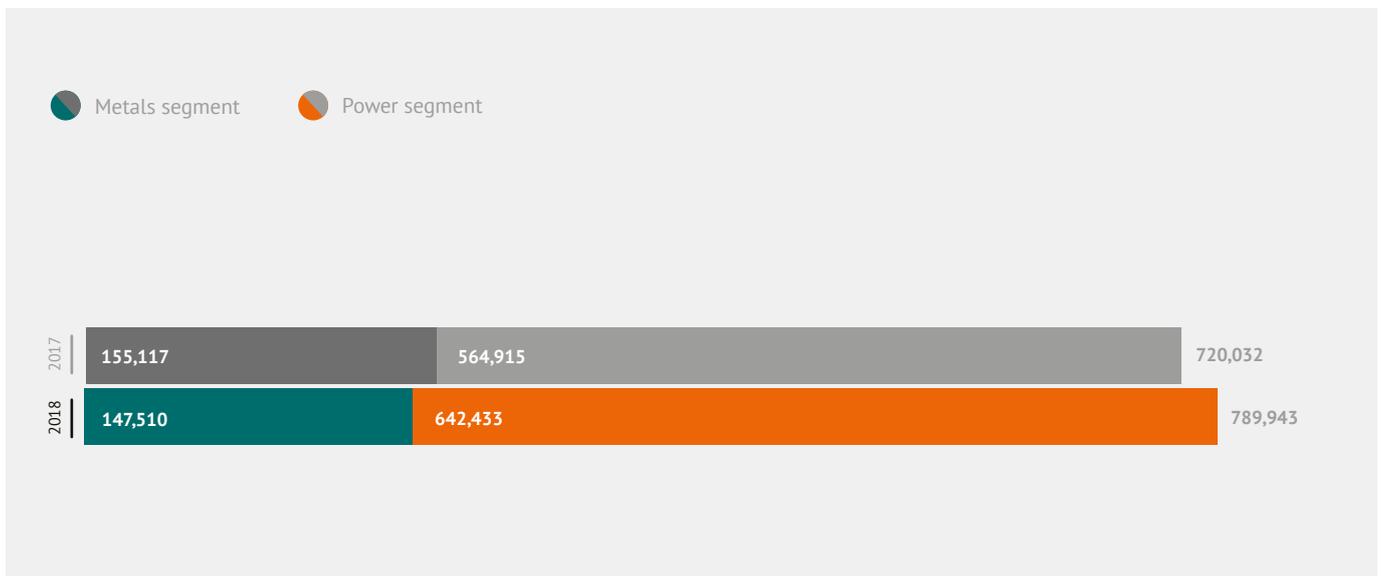
processes are in place to minimise spill risks and manage their consequences.

Water consumption growth in the Power segment is due to increasing power and heat generation in 2018 in comparison with 2017.

**Minimising the Company's impact on water resources** is one of the main focuses of En+ Group's environmental protection strategy.



**Total water consumption from all sources  
 in 2017-2018, thousand m<sup>3</sup><sup>1</sup>**



**In 2018, The Metals segment cut fresh water consumption to 82.6 mn m<sup>3</sup>, which is 36% less than in 2008. The Company is striving to achieve its strategic goal of reaching 100% recycled and reused water supply for the main production processes across the entire Company by 2022.**

<sup>1</sup> Power segment: Enser, PJSC Irkutskenergo, LLC  
 EuroSibEnergo – Hydrogeneration, Volgaenergo,  
 Baikalergero, OJSC Irkutsk Electric Grid Company.

## Lake Baikal

Lake Baikal is the world's deepest and largest freshwater body. The lake was declared a UNESCO World Heritage Site in 1996. We are passionate about its environmental protection. The Group has led initiatives to minimise the impact of humans on the lake and help conserve its habitats. The Angara River, the only river that flows from Lake Baikal, drives power generation at some of the Group's HPPs. The Group focuses on the following areas when directing its efforts to conserve Baikal's unique ecosystem:

- Hydropower plants (HPPs). The combined capacity of the Group's cascade of three HPPs (Irkutsk, Bratsk and Ust-Ilimsk), whose construction began in 1958, is now 9 GW with annual electricity output of 36.8 TWh. In addition to Baikal, the HPPs are also fed by the Bratsk and Ust-Ilimsk reservoirs (30-50%), which receive their water from other rivers;
- Water resource regulation at Baikal. The Federal Water Resources Agency (FWRA) regulates the use of all water bodies, including the Angara River, where the Group's HPPs operate. The FWRA regulates and strictly monitors the HPP cascade's daily operational mode. Below is a list of the FWRA's regulatory priorities:
  - Safety of the local population (flood control);
  - Support the well-being of the local population (water supply, irrigation);
  - Water transportation;
  - Environmental conservation;
  - Electricity generation.



The Company has pledged to meet all the regulatory requirements and laws set by the Russian government and local authorities. The Group carefully monitors the maximum permissible limits set for fluctuations in Lake Baikal's water levels. Under the current government decree, which is valid until 2020, the lake's water level is allowed to fluctuate within a one metre range. This limit was set following extensive research conducted by the Water Problems Institute of the Russian Academy of Sciences (RAS) in 2016 to assess the impact of water level changes on the ecosystem.

The Company is committed to using Baikal's waters in a sustainable and responsible way. The Group's HPPs constantly monitor their influence on Baikal's hydrological regime, tracks flooding and the safety of waterfront settlements.

- Commitment to conservation of the natural environment. Volunteering initiatives involving local communities, including a major annual clean-up of the lake's shoreline; the creation of environmental awareness campaigns to promote responsible behaviour and consideration for nature and cooperation with NGOs to proactively address the main issues affecting the lake;
- Joint research conducted with the Moscow State University (MSU). In 2016, En+ Group and MSU initiated a series of studies on the key issues facing Baikal's ecosystem. It was a massive bloom of filamentous algae on the lake's surface that initially caught the researchers' attention. While the algae themselves are not harmful, their presence indicates that Baikal's ecosystem is reacting to pollution (eutrophication). Research found that the algae blooming was occurring



all over the lake. The research project will continue in order to uncover the reasons behind this flare-up of algae. We have also studied synthetic polymer contamination by measuring the microplastic content of Lake Baikal's water and looking into its effect on aquatic ecosystems. In 2016, we sampled the surface layer of water by trawling along Baikal's western and eastern shores. We are still analysing the samples and are continuing to monitor the lake's water to identify the causes of pollution and develop ways to mitigate its negative impact.

- Measuring GHG emissions from reservoirs. Rising concerns about climate change have prompted new initiatives to assess the impact of HPP reservoirs as sources of GHG emissions. In 2017, the Limnological Institute, the Institute of Atmospheric Optics and the Matrosov Institute

for System Dynamics and Control Theory (all three of the Siberian Branch of the RAS) jointly carried out laboratory and field research to assess the GHG emissions and absorption of the Irkutsk and Krasnoyarsk HPP reservoirs. The analysis was also used to develop a method for calculating reservoir GHG emissions in collaboration with researchers from the MSU.

A scientific research and a monitoring expedition aimed at protecting Baikal's unique ecosystem will be launched in 2019. The expedition will monitor Lake Baikal over a three-year period, and will include historical data.

In addition, En+ Group cooperates with its stakeholders on environmental protection issues through joint environmental projects. For instance, Project 360 (a program to protect the ecosystem around Lake Baikal) allows EN+ Group to implement many

environmental initiatives together with NGOs. We are also collaborating with a local organisation, "Protect Baikal Together", which helps the Company educate children about the Irkutsk Region's unique ecosystems and inspire a new generation of nature lovers. En+ Group is partners with the "Great Baikal Trail" organisation and the "Revival of the Siberian Land" Youth Charitable Foundation. RUSAL organises and participates in events such as the Yenisei Day environmental clean-up marathon and the Green Wave grant contest, which are outstanding opportunities for En+ Group to engage with a wide range of its stakeholders<sup>1</sup>.

<sup>1</sup> For more detailed information please refer to pp. 146-147, Local community development and p.83, Annual Report 2018

GRI

306-2

MM3

## Waste and safe tailings management

En+ Group's main strategic waste management target is to increase its share of recycling, safe disposal and storage. To achieve this, the Group is actively developing new waste management sites, as well as renovating and modernising existing facilities to make sure waste is disposed of and stored safely. All our waste management sites are compliant with the necessary regulations. To minimise the amount of waste stored in these facilities, we are also working to reduce how much bauxite and nepheline residue (alumina waste) our Metals segment generates and the amount of ash and slag waste produced by the Power segment.

### Alumina and aluminium production waste

The most substantial types of waste generated by RUSAL are bauxite and nepheline residue, which account for around 87% of all the waste created from alumina and aluminium production. RUSAL is working with R&D centres to develop and implement innovative methods to cut waste generated during smelting and refining, even though it is considered non-toxic.

The Company is investing significant resources in the construction of new waste disposal facilities as well as the reconstruction and retrofitting of existing sites. In addition, the Group's companies are making every effort to reduce their impact on the environment by decreasing the number of landfills and using an ash and slag waste mixture to fill-in unused mining areas for subsequent land reclamation.

The Group's waste management priorities are to reduce the amount of waste generated at its production facilities, which is directly influenced by the amount of coal extracted and environmentally safe waste disposal methods.

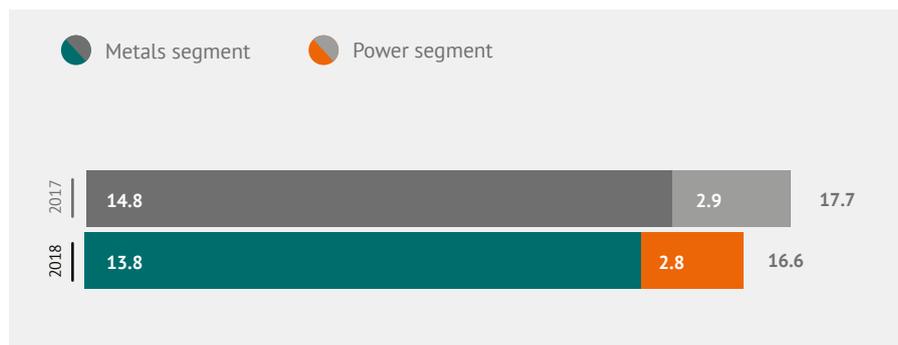
### Ash and slag waste

Ash and slag waste, generated by coal burning, account for the vast majority of the Power segment's waste. The Group is working intensively to improve its ash and slag disposal and recycling processes and to reduce the amount of land used for waste disposal management. The Company is cooperating with leading research centres and manufacturing companies to develop and implement waste management technologies and solutions.

The implementation of new technologies in coal refining processes reduced the waste generated at coal facilities, such as the Cheremukhovskaya-Glubokaya mine, by up to 60%.

The total amount of formed overburden in the Metals segment was 28,658,486 tonnes in 2018. In the Power segment<sup>1</sup>, there were 114,404,232 tonnes of overburden generated in 2018.

### Non-hazardous waste generated by each segment in 2017-2018, excluding overburden (from mining), mt<sup>2</sup>



<sup>1</sup> Power segment: Enser, PJSC Irkutskenergo, LLC EuroSibEnergo – Hydrogeneration, Volgaenergo, OJSC Irkutsk Electric Grid Company, Baikalenergo.

<sup>2</sup> Power segment: Enser.

## Tailing dams

As part of its efforts to reduce its environmental impact, the Company conducts regular inspections, makes sure all the staff operating tailing dams are certified, gives technicians specialised training and studies the dry bauxite and nepheline residue stacking process to avoid the potentially harmful liquid phase at mud disposal areas.

The Company's business units use a highly systematic approach to ensure the safety of tailing dams at all the stages of their life cycle. En+ Group constantly strives to reduce the environmental impact of tailing dams throughout the life cycle and monitors their safety on a regular basis.

The monitoring process involves the identification of any violations of bauxite mud and ash disposal procedures. All tailing dams undergo annual internal technical and environmental audits to identify potential safety risks.

The Company is working on strategic plans for the future development of mud and ash dumps in order to maintain safe storage while expanding production levels. Studies have been carried out to prove the effectiveness of the dry mud disposal process, which uses press filters to eliminate the liquid phase, significantly reducing the impact of mud disposal areas. We are already implementing projects to improve our waste treatment processes by:

- Modernising the dry ash discharge plant at Novo-Irkutsk CHP to increase the volume of fly ash disposal;
- Installing a pilot plant to extract iron concentrate at CHP-9;
- Selling ash waste to manufacturers of construction materials.

## Persistent organic pollutants

In line with the government's commitments under the Stockholm Convention on Persistent Organic Pollutants (POPs), En+ has developed a long-term plan to manage polychlorinated biphenyl-containing waste by 2022.

The Group's Metals segment waste management activities are designed to achieve specific key strategic goals: increasing the share of recycling and reuse of waste, safe storage and disposal of waste, completely eliminating the use of PCB (polychlorinated biphenyl) equipment and the safe disposal of PCB waste.

**En+ Group's main strategic waste management target is to increase its share of recycling, safe disposal and storage.**

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## Land rehabilitation

### Aughinish Alumina Ltd waste management initiatives



One example of En+ Group's best practices in waste management and land rehabilitation is the management of the Bauxite Residue Disposal Area (BRDA) at Aughinish, Ireland. Aughinish has implemented best available technology to treat the residue by using industrial mud farming process. Vegetation and screening programs have been

in place for many years to improve visual perspectives. One of the Company's priorities is to develop ways to re-use the bauxite residue. Aughinish is actively participating in European projects to develop and test technology to prepare bauxite residue's re-use, for example as an engineered inorganic polymer for construction materials.

One of our most important responsibilities is the rehabilitation of the land we use in our operations. We ensure the safety of tailings dams by developing comprehensive land reclamation schemes as tailings approach the end of their service lives and when decommissioning ash and mud dumps.

Mining, refining and smelting disturb land and we recognise our legal and social responsibility to restore and rehabilitate. We develop detailed individual rehabilitation plans for each site to identify their specific risks, scope and resource requirements.

En+ Group aims to rehabilitate any contaminated or disturbed land resulting from its operations. The Company's mainly focuses its rehabilitation efforts on disturbed land after open-pit mining activities are finished and waste disposal facilities such as ash dumps and landfills.<sup>1</sup>

<sup>1</sup> For more detailed information about the land disturbed and rehabilitated, please refer to p.151, Appendices.

## Biodiversity

En+ Group's production facilities are located across Russia and the world. However, the Group's main assets are located in Siberia, a unique ecoregion with rare plant and animal species only found in this area. Conserving biodiversity is a key principle of sustainability, which is why En+ Group is leading long-term regional projects aimed at achieving this goal.

### The Metals segment

During the reporting year, we conducted a wide range of long-term projects aimed at maintaining and preserving the biological diversity of the Stolby Nature Reserve near Krasnoyarsk. Since signing an agreement in 2014, the Stolby Nature Reserve and KrAZ have been jointly monitoring pollution levels in snow, water bodies and vegetation at the reserve. This monitoring program also surveys the quality and condition of local soils, plants, water, bed sediments and snow cover.

We use a comprehensive approach to analyse the chemical composition of various substances and identify potential extrinsic pollutants (industrial air pollution, exhaust fumes, burning fossil fuels), allowing us to distinguish them from the natural chemicals endemic to the Reserve.

For many years, the Company has been an active member of the Environmental Monitoring project, which monitors specially protected areas located near the Group's industrial facilities. Monitoring activities are conducted in partnership with the Strana Zapovednaya National Foundation, the Shushensky Bor National Park, and the Khakassky and Sayano-Shushensky natural reserves in several administrative districts (Shushensky, Yermakovskiy, Kuraginsky, Karatuzskiy, and Minusinsky) of the Krasnoyarsk Territory and southern regions of the Republic of Khakassia. Field studies were conducted in 18 pine forests located within the emission impact area of our aluminium smelters and beyond. Our research findings have shown that fluorine concentrations in the vegetation cover and soil do not exceed permitted levels.

Scientists at the Komi Research Centre's Biology Institute (Ural Branch of the Russian Academy of Sciences) monitor fish populations in the Vym River around the Timan bauxite deposit development area. The resulting data shows that the quality of water and the natural environment have not been exposed to significant industrial pollution. However, the research did uncover a sustained decline in the populations of the main commercial fish species, although this is unrelated to the operation of the Group's mines. Monitoring provides data that can be used to assess

the current condition of the environment, adjust our environmental protection activities and design solutions to reduce the potential impact of the region's industrial development. Moreover, the research results represent a unique and regularly-updated scientific database on the ecosystems of Russia's northern regions.

### The Power segment

Over the past five years, the Power segment has been running a successful program to restore aquatic biological resources, artificially reproducing and releasing more than 1.2 million young peled (a type of northern whitefish) into the Belaya River, a tributary of the Angara River, and the Bratsk Reservoir. The peled were released from the Belsky Fishery Plant in 2018 as part of the Baikal Interregional Environmental Prosecutor's Office's Filling Reservoirs with Life event. This initiative aimed to raise awareness among the public, organisations and industrial facilities about the importance of conserving and replenishing fish populations in Lake Baikal and rivers of the Angara and Yenisei water basins.

In 2018, we focused on breeding ecologically important fish species with almost 290 thousand juvenile fish due to be released in 2019.

## Goals for 2019 and midterm period

While the Group has already introduced new environmental policies across its various units, it is also planning to draw up an integrated environmental and climate strategy that will cover the whole of En+ Group.

Environmental risk assessments are considered a risk management priority. The company is currently working on an environmental risk strategy and a standardised approach to environmental and climate risk assessments.

The Company's legal documents are regularly updated to reflect any legislative changes or government instructions. Process improvement reviews and other essential policy developments can also prompt changes.

In 2018, there were no major amendments to environmental legislation in the Group's countries of operation or in its internal policies, nor were there any environmental violations that could lead to subsequent risks.

En+ Group is planning to set sustainability targets and long-term strategy for the Group's companies to give them a clear framework for reducing their environmental impact. Our main focus and improvement areas in 2019 include:

- Implementation of Best Available Techniques (BATs) related to the emissions of air pollutants, easing burden on fresh water sources and increasing the share of waste utilisation/recycling;
- Easing the effect waste disposal sites and mines have on the environment, including on land rehabilitation;

- Removal and recycling of all PCB-containing equipment;
- Standardisation of corporate and public environmental reporting;
- Inventory of greenhouse gas emissions for the group and standardised public reporting on climate change;
- Verification of the carbon footprint of the Group's products and services;
- Expansion of the target market for ALLOW and ASI aluminium;
- Improvement of the performance of hydro power turbines.

Specific KPIs have also been established from 2019 onwards to further reduce the Company's impact on the environment.





**While the Group has already introduced new environmental policies across its various units, it is also planning to draw up an integrated environmental and climate strategy that will cover the whole of En+ Group.**



360

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ПО БАИ

# Local community development

En+ Group aims to improve cooperation and partnership across community groups, local authorities and non-profit organisations. The Company strives to provide social support and implement a wide range of initiatives in areas such as infrastructure and social development, volunteering, sports and healthy living, culture and arts, education, and social entrepreneurship.

## 21

regional and federal businesses joined the Irkutsk branch of the National Council for Corporate Volunteering

## ~800

children participated in the RoboSib festival

## ~16,500

volunteers took part in the eco-event to clean up Baikal's shoreline

## over 650

young entrepreneurs have participated in the Environmental Entrepreneurship School Project

## IN THIS SECTION

- Management approach
- Socio-economic contribution
- Goals for 2019 and midterm period



GRI

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## Management approach

We are dedicated to the development of local communities and aspire to make a positive contribution to the well-being and social life of all the regions where we operate. The Company is focused on maximising the impact and reach of its social projects to offer local communities a wide spectrum of support and assistance. Local communities are the people who live near our company's sites and are affected in some way by our activities. Their main concerns are about the state of the environment and the influence of our production facilities, economic situation in the region, tax contributions to local budgets, the availability of jobs and decent wages, social guarantees, access to good education and future employment prospects. These are the crucial factors people take into account when deciding where to live, work and raise their children.

Our commitment to supporting the quality of life and resilience of local communities builds a positive social climate and relationships based on respect, understanding and trust.

The Board and the Management team of En+ Group play essential roles in determining our overall strategic approach to working with communities, overseeing annual results and discussing future development plans. The Executive function is performed through the Social Policy Committees created in both segments. The Social Policy Committee of each segment meets monthly and consists of experts from the Financial, PR, GR, HR and Security Service departments. The Committee determines social investment priorities and financing areas, approves budgets and funding applications sent by the social project committees of production facilities, and determines strategies to position social projects within a specific region of operation.

The social project committees of our production facilities are collegial bodies that review all requests for charitable assistance from local communities and make recommendations to The Social Policy Committee.

The Metals segment community initiatives are formalised by the Social Policy of RUSAL and managed by:

- The Centre for Social Programs (CSP) corporate charity fund;
- The Centre for Innovations in Social Sphere, an autonomous non-profit organisation that runs the educational programs for development of social entrepreneurship.

The Power segment has developed a Social Investment Regulation. It came into effect in 2019 with the aim to build a more robust governance framework for its social investments.

The Company's community development programs are based on the needs of the local communities and focus on the following key areas:

- social infrastructure and urban environment;
- education;
- sports, healthy lifestyles and recreation;
- social entrepreneurship;
- volunteering, including corporate volunteering;
- assistance to socially vulnerable population groups;
- healthcare.

## Socio-economic contribution

The Metals segment carries out an impact assessment of the community programs executed. A number of indicators are used to determine their relevance and sustainability. In the reporting period, RUSAL developed an internal monitoring system of implemented RUSAL Territory competition winning projects. This monitoring system was integrated and tested, and includes methodological recommendations and regulatory documents, including a checklist for managers and instructions to grantees on how to provide reports on project realisation.

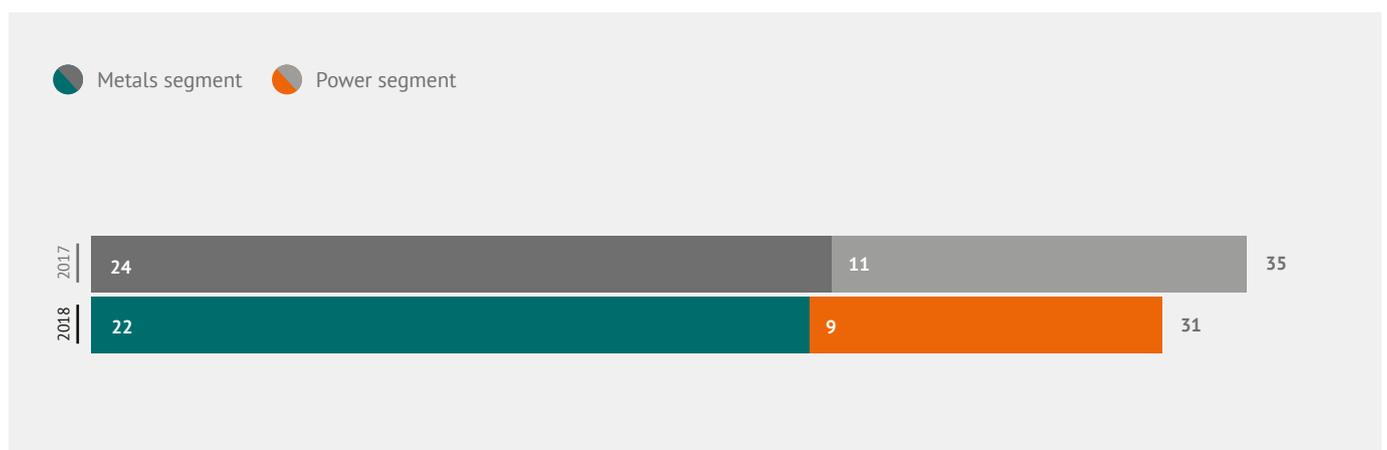
The Company plans to continue enhancing its community initiatives, assessing their impact and launching new programs to maximise the positive impact they have on the regions of presence.

Despite significant external challenges in 2018, most notably the inclusion of En+ Group on the US Treasury's sanction list, our social programs kept on functioning in full accordance with our obligations to our stakeholders. Although unavoidable budget cuts put some of our projects on hold, we will

work to improve and resume these projects in the future. The chart below represents data on En+ Group community investment in the Metals and Power segments.

**We are dedicated to the development of local communities and aspire to make a positive contribution to the well-being and social life of all the regions where we operate.**

Community investment in 2017-2018, USD mn



## Projects of the Metals segment

### Infrastructure projects

The RUSAL Territory program is primarily focused on improving the quality of life in the regions where the Metal segment operates by supporting urban development, creating new public and cultural spaces, renovating social infrastructure facilities and organising cultural, educational and sports events.

Starting in 2011, the program has supported 636 social and infrastructure projects in 22 cities and small towns. It has helped build and renovate 230 social facilities, enhancing the quality of social infrastructure for more than half a million local residents. We closely collaborated with partners on the ground and invested a total of USD 11,928 mn to support the implementation of these projects.

In 2018, a number of public spaces in the historical centre of Krasnoyarsk were renewed, creating a modern, comfortable and safe environment for the city's residents and visitors alike. This initiative will continue in 2019 with the addition of modern architectural design to city centre spaces and the construction of a new playground.

### RUSAL FestivAL project

RUSAL FestivAL is a major social and cultural project encompassing a wide range of events across the towns where the Company operates. The event aims to stimulate interest in local art and culture and inspire the next generation of scientists and innovators.

In 2018, students and graduates of the Moscow Art Theatre Studio School toured seven Russian cities (Sayanogorsk, Bratsk, Achinsk, Shelekhov, Ukhta, Syktyvkar and Krasnoyarsk) with RUSAL's support. In addition to assistance with events and workshops, the Company helped the school to hold auditions for young people and select future students in four Siberian cities (Krasnoyarsk, Irkutsk, Abakan, and Bratsk).

### The 'Helping is Easy' program

We launched our 'Helping is Easy' program to encourage volunteering. We held a competition in 16 cities and regions where we operate to allow entrants to bid for grants for a wide range of community and charitable projects. Following the competition, we gave out 55 grants to volunteer initiatives totalling USD 41,461 and provided another USD 23,920 in co-financing.

The 'Helping is Easy' program features other major events, such as The New Year Marathon, which involved more than 1,100 volunteers, and Yenisei Day, which includes adventure games, lectures, creative workshops and seminars on environmental issues. The Company is currently moving away from small events hosted by individual institutions to larger, city-wide formats done in collaboration with partners.

Despite significant external challenges in 2018 **our social programs kept on functioning** in full accordance with our obligations to our stakeholders.

## School of Urban Change

The School of Urban Change was created in 2017 as part of the RUSAL Territory competition to form and train action teams focused on tackling pressing social issues. In 2018, the School of Urban Change became a separate independent social and educational program, providing training to target groups on all the social programs of the Company.

In 2018, the program held 119 events costing a total of USD 61,872 and involving 3,128 participants, 79 experts from St Petersburg, Moscow, Tyumen, Novosibirsk, Yekaterinburg, Barnaul, and 66 partners.

## Combating highly infectious diseases (Guinea)



We conducted one of our most important initiatives in the Republic of Guinea, where RUSAL is not just one of the largest foreign investors in bauxite mining, but also a leading supporter of social development. The Company helped fight the spread of the Ebola virus by quickly organising the construction of medical infrastructure and providing funding to develop the GamEvac-Combi vaccine. The launch of a vaccination program in Guinea, starting

with local volunteers, gave hope to people across West Africa that a long-term solution to the deadly threat of the Ebola virus can be found. As part of the RUSAL-funded testing program, 2,000 people in the Republic of Guinea have been vaccinated.

## Mounting the Skies Everyone! A collaborative two-segment project



One of the Company's largest projects supporting sports and healthy lifestyles is 'Mounting the Skies Everyone!'. The main goals of the project, jointly run by En+ Group, RUSAL, and the Russian Cross Country Ski Federation, are to promote skiing and nurture talent in youth and junior ski teams. Under the project, the Company formed partnerships with regional sports administrations, provided 940 units of skiing equipment to junior ski teams, and supported the preparation and launch of educational courses which were taken by 402 skiing coaches working with junior teams and children. In the past three years, about 50,000 winter sports fans in 15 Russian cities have been involved in the initiative.

In 2018, En+ Group upgraded tracks at the Angarsky skiing and biathlon centre. The centre now has the only floodlit skiing and roller ski track in the region and can host summer biathlon competitions. In 2018, the Group developed and launched an online distance-learning platform to promote the project's educational course. It has also supported the development and pilot launch in Russia of snow-sealing machines to prepare rolling tracks for cross country skiing. En+ Group intends to continue projects developing winter sports infrastructure in the regions where it operates.

En+ Group is the general sponsor of the Baikal-Energy hockey club and its youth development program.

## Projects of the Power segment

### Project 360

En+ continues to conduct Project 360, an eco-event to clean up Lake Baikal's shoreline, as part of its conservation efforts to protect the world's largest freshwater lake. The project brought together about 16,500 volunteers, including participants from 30 international and regional companies such as Nestle, Philip Morris, Alfa Bank, and Tele2, in addition to ordinary people from across the Irkutsk Region and Buryatia. There were 328 clean-up sites all around the lake. As part of the project, environmental awareness campaigns were launched in Irkutsk and Bratsk with the full backing and support of city authorities.

Project 360 brings together En+ Group's other environmental initiatives that are jointly undertaken with NGOs. Cooperation with a local organisation, Protect Baikal Together, enables the Company to educate children about the Irkutsk Region and its unique ecosystems. Children are taught to observe nature, understand environmental processes, and assess the impact of humans on the world around us. Through its partnership with Great Baikal Trail, an organisation focused on environmental education and sustainable development, En+ Group supports responsible eco-tourism in the region, creating safe tourist trails and reducing the impact of human activity on the fragile Baikal ecosystem.

### **The Environmental Entrepreneurship School Project (EESP)**

The Environmental Entrepreneurship School Project (EESP) is a partnership between En+ Group and the Revival of the Siberian Land Youth Charitable Foundation. It is the first and only educational Russian project to develop environmental entrepreneurship. Its main goal is to identify new ideas and support small businesses in Irkutsk and the Irkutsk Region that enhance resource saving and are environmentally responsible.

The School met for the 14th semester in autumn 2018. Experts in environmental protection, business, finance, consulting, marketing and socio-economic development helped students organise their ideas into a real business plan by showing how green technologies could make any business more profitable. Over the course of the partnership since 2012, more than 650 young entrepreneurs have participated in the project and pitched over 250 new business ideas.

### **The "Made in Baikal" eco-fair**

The project is a continuation of the EESP project that has been supported by the Company for many years. On the New Year's eve, 30 eco-entrepreneurs were provided with a platform to sell their goods to the public in Ulan-Ude. Their produce included taiga berry juice, fruit chips, herbal tea, wooden handicrafts, knitted toys, traditional Buryat boots and dolls in national Buryat costumes. In addition to an interesting shopping experience,

the project educated people about eco-friendly living. Local shoppers could also meet artisans, ask questions and learn new skills. The project gave locals residents a chance to make a real contribution to the conservation of the Baikal Nature Reserve.

### **RoboSib festival**

In 2018, En+ Group held the sixth RoboSib festival, main Siberian event, in Irkutsk. For the first time that year, competitions were not limited to robotics, but also included other professional contests, united by the Professionals of the Future program. Competitions were set up to allow participants to envisage the trajectory of their professional advancement: from the early stages to the development of projects that have the potential to be implemented in real life.

The program creates a system of targeted training for young people considering a career in engineering by encouraging the development of key competencies of the future and immersing the participants in real business environment and identifying priority regional development areas.

The festival was attended by schoolchildren and preschoolers, as well as students of technical schools and colleges from the Irkutsk, Kemerovo, Leningrad, Samara and Sverdlovsk regions, the Krasnoyarsk and Transbaikal territories, the republics of Buryatia, Khakassia and Tyva. A total of about 800 people attended the event, representing 212 teams from 20 cities.

### **Irkutsk branch of the National Council for Corporate Volunteering**

En+ founded the Irkutsk branch of the National Council for Corporate Volunteering (NCCV), an association that brings together 21 national and regional companies to promote corporate volunteering as a key channel for building sustainable relationships with local communities. The member companies represent a variety of sectors, including FMCG, energy, NGOs, telecommunication, oil, retail, transport etc.

We are proud that the experience we have accumulated since 2011 by implementing volunteer programs can be useful to other participants of NCCV's Irkutsk branch. This means that by joining our forces we can do even more for the region and the local community.

In 2019, the council plans to organise joint volunteer actions, which we will cover in the next report.

## Goals for 2019 and midterm period

In 2019, En+ Group plans to finalise the new corporate social strategy and define the projects that will have the biggest impact on the development of the regions of Company's presence. The key aim of the Company is to focus on large-scale projects that have long-term impact and benefit for society.

The main 2019 goals for the Metals sector are:

- Participation in creating a comfortable urban environment by supporting the construction and reconstruction of social infrastructure facilities and modern public and recreational spaces;
- Development of corporate volunteering, broad involvement in volunteer activities of employees of enterprises and residents of the regions of operation.

The main 2019 goals for the Power sector are:

- Review the current social projects and assess their efficiency to define new community strategy and targets;
- Enhance management approach to community investment, including the creation of more robust internal regulation mechanisms;
- Implement a new community program for urban infrastructure projects in the regions of operation.

**In 2019, En+ Group plans to finalise the new corporate social strategy and define the projects that will have the biggest impact on the regions of Company's presence development.**



## GRI

MM1

201-1

Additional  
information

305-7

Direct economic value generated  
and distributed, USD mn

	Metals		Power		Total	
	2018	2017	2018	2017	2018	2017
	USD mn		USD mn		USD mn	
i. Direct economic value generated	11,267	10,606	3,151	3,241	13,368	12,736
Revenue	10,280	9,969	3,147	3,235	12,378	12,094
Share of profits of associates and joint ventures	955	620	(7)	1	948	621
Interest income on loans	32	17	11	5	42	21
ii. Economic value distributed	(9,234)	(9,053)	(2,609)	(3,138)	(10,795)	(10,938)
Operating costs	(8,202)	(7,766)	(1,806)	(1,915)	(8,959)	(8,571)
including employee wages	(739)	(718)	(396)	(415)	(1,135)	(1,133)
Retirement costs	(173)	(197)	(75)	(80)	(248)	(277)
Community investments	(22)	(24)	(9)	(11)	(31)	(35)
Payments to providers of capital	(501)	(886)	(483)	(879)	(985)	(1,622)
including dividends paid	0	(299)	(68)	(350)	(68)	(505)
including financial expenses	(501)	(587)	(415)	(529)	(917)	(1,117)
Payments to government by country	(336)	(180)	(236)	(253)	(572)	(433)
including income tax	(305)	(140)	(157)	(179)	(462)	(319)
iii. Economic value retained: 'direct economic value generated' less 'economic value distributed'	2,033	1,553	542	103	2,573	1,798

### Amount of land disturbed or rehabilitated, hectares

	Total land disturbed and not yet rehabilitated as of 01.01.2018	Total amount of land newly disturbed during 2018	Total amount of land newly rehabilitated during 2018 to the agreed end use	Total land disturbed and not yet rehabilitated as of 31.12.2018 <sup>1</sup>
Metals segment	2,742.55	204.63	(53.47)	2,893.71
Power segment <sup>2</sup>	9,533.72	244.10	(0.00)	9,777.82
Total	12,276.27	448.73	(53.47)	12,671.53

### Nitrogen oxides (NO<sub>x</sub>), sulphur oxides (SO<sub>x</sub>), and other significant air emissions (excluding greenhouse gas and carbon monoxide emissions), kt

	Metals segment		Power segment <sup>3</sup>		Total	
	2018	2017	2018	2017	2018	2017
NO <sub>x</sub>	20	21	51	47	71	68
SO <sub>x</sub>	36	36	212	190	248	226
Total fluoride (gaseous and solid fluoride)	7	7			7	7
Particulate matter (PM)	38	42	61	56	99	98
Other standard categories of emissions into the atmosphere	10	10	7	7	17	17

<sup>1</sup> Total land disturbed and not yet rehabilitated as of 31.12.2018 = Total land disturbed and not yet rehabilitated as of 01.01.2018 + Total amount of land newly disturbed during 2018 - Total amount of land newly rehabilitated during 2018 to the agreed end use.

<sup>2</sup> Power segment: Enser, PJSC Irkutskenergo.

<sup>3</sup> Power segment is represented by Enser, PJSC Irkutskenergo, LLC EuroSibEnergo – Hydrogeneration, JSC Krasnoyarsk Hydro-Power Plant, Volgaenergo, Baikalenergo, OJSC Irkutsk Electric Grid Company.

# GRI Content Index

GRI Indicator	Disclosure	Page number (or link)	Comments
<b>GRI 102 General disclosures</b>			
<b>1. Organisational profile</b>			
102-1	Name of the organisation	At a glance, p. 22	
102-2	Activities, brands, products, and services	About the Report, p. 2 At a glance, p. 22	
102-3	Location of headquarters	At a glance, p. 22	
102-4	Location of operations	Market presence, p.26	
102-5	Ownership and legal form	About the Report, p. 2 Corporate overview, p. 28	
102-6	Markets served	Market presence, p. 26	
102-7	Scale of the organisation	At a glance, p. 22 Personnel structure, p. 93 Market presence, p. 26	For a list of significant subsidiaries, please refer to Consolidated Financial Statements for the year ended 31 December 2018 <a href="https://www.enplusgroup.com/en/investors/results-and-disclosure/">https://www.enplusgroup.com/en/investors/results-and-disclosure/</a>
102-8	Information on employees and other workers	Personnel structure, p. 93	Partially disclosed due to data collection processes not standardised in the Company as the Report is issued for the first time. Disclosure of this indicators is to be improved in the next reporting period.
102-9	Supply chain	Supply chain, p. 75	
102-10	Significant changes to the organisation and its supply chain	Supply chain, p. 75	
102-11	Precautionary Principle or approach	Risk management system, p. 44 Strategy and sustainability management, p. 57	
102-12	External initiatives	Association membership, p. 64	
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GRI Indicator	Disclosure	Page number (or link)	Comments
<b>2. Strategy</b>			
102-14	Statement from senior decision-maker	Message from Executive Chairman of the Board, p. 12	
102-15	Key impacts, risks, and opportunities	Risk management system, p. 44	
<b>3. Ethics and integrity</b>			
102-16	Values, principles, standards, and norms of behaviour	Strategy and sustainability management, p. 56 Ethics and integrity, p. 49	
102-17	Mechanisms for advice and concerns about ethics	Ethics and integrity, p. 49	
<b>4. Governance</b>			
102-18	Governance structure	Corporate governance system, p. 34	
102-19	Delegating authority	Corporate governance system, p. 34	
102-20	Executive-level responsibility for economic, environmental, and social topics	Corporate governance system, p. 34	
102-21	Consulting stakeholders on economic, environmental, and social topics	Stakeholder engagement, p. 63	
102-22	Composition of the highest governance body and its committees	Corporate governance system, p. 34	
102-23	Chair of the highest governance body	Corporate governance system, p. 34	
102-24	Nominating and selecting the highest governance body	Corporate governance system, p. 34	

GRI Indicator	Disclosure	Page number (or link)	Comments
102-25	Conflicts of interest	Ethics and integrity, p. 49	Partially disclosed
102-26	Role of highest governance body in setting purpose, values, and strategy	Corporate governance system, p. 34	
102-27	Collective knowledge of highest governance body	Corporate governance system, p. 34	
102-29	Identifying and managing economic, environmental and social impacts	Strategy and sustainability management, p. 56 Internal control, p. 42 Identification of material topics, p. 62	
102-30	Effectiveness of risk management processes	Risk management system, p. 44 Internal control, p. 42	
102-32	Highest governance body's role in sustainability reporting	About the Report, p. 2	
102-36	Process for determining remuneration	Corporate governance system, p. 34	
<b>5. Stakeholder engagement</b>			
102-40	List of stakeholder groups	Stakeholder engagement, p. 63	
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102-42	Identifying and selecting stakeholders	Stakeholder engagement, p. 63	
102-43	Approach to stakeholder engagement	Stakeholder engagement, p. 63	
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GRI Indicator	Disclosure	Page number (or link)	Comments
<b>6. Reporting practice</b>			
102-45	Entities included in the consolidated financial statements	Boundaries of the Report, p. 2	
102-46	Defining report content and topic Boundaries	Identification of material topics, p. 62	
102-47	List of material topics	Identification of material topics, p. 62	
102-48	Restatements of information	About the Report, p. 2	This is the Company's first Sustainability Report since listing on the London Stock Exchange
102-49	Changes in reporting	About the Report, p. 2	This is the Company's first Sustainability Report since listing on the London Stock Exchange
102-50	Reporting period	About the Report, p. 2	Significant events (excluding numeric indicators) disclosed until 1 July 2019
102-51	Date of most recent report	About the Report, p. 2	This is the Company's first Sustainability Report since listing on the London Stock Exchange
102-52	Reporting cycle	About the Report, p. 2	Annually
102-53	Contact point for questions regarding the report	Contact information, p. 5	
102-54	Claims of reporting in accordance with the GRI Standards	About the Report, p. 2	
102-55	GRI content index	GRI Content Index, p. 152	
102-56	External assurance	–	For the reporting period (2018), external assurance was not carried out. This year En+ Group focused on improvement of internal sustainability reporting system. The Group made a strategic decision to obtain independent assurance for the Report for the next reporting period.

GRI Indicator	Disclosure	Page number (or link)	Comments
<b>GRI 103 Management approach</b>			
103-1	Explanation of the material topic and its boundary	<p>Identification of material topics, p. 62</p> <p>Ethics and integrity, p. 49</p> <p>Employees – Management Approach, p. 92</p> <p>Health and safety – Management approach, p. 108</p> <p>Environmental protection – Management approach, p. 120</p> <p>Local community development – Management approach, p. 142</p>	
103-2	The management approach and its components	<p>Ethics and integrity, p. 49</p> <p>Employees – Management Approach, p. 92</p> <p>Health and safety – Management approach, p. 108</p> <p>Environmental protection – Management approach, p. 120</p> <p>Local community development – Management approach, p. 142</p>	
103-3	Evaluation of the management approach	<p>Risk management system, p. 46</p> <p>Ethics and integrity, p. 49</p> <p>Employees – Management Approach, p. 92</p> <p>Health and safety – Management approach, p. 108</p> <p>Environmental protection – Management approach, p. 120</p> <p>Local community development – Management approach, p. 142</p>	

GRI Indicator	Disclosure	Page number (or link)	Comments
<b>GRI 200 Economic</b>			
<b>GRI 201 Economic performance</b>			
201-1	Direct economic value generated and distributed	Additional information, p. 150	
201-4	Financial assistance received from government	Corporate overview, p. 28	Partially disclosed
<b>GRI 204 Procurement practices</b>			
204-1	Proportion of spending on local suppliers	Supply chain, p. 75	
<b>GRI 205 Anti-corruption</b>			
205-2	Communication and training about anti-corruption policies and procedures	Ethics and integrity, p. 44	
<b>GRI 300 Environmental</b>			
<b>GRI 302 Energy</b>			
302-1	Energy consumption within the organisation	Energy, p. 126	Partially disclosed
302-4	Reduction of energy consumption	Energy, p. 126	Partially disclosed
<b>GRI 303 Water and effluents</b>			
303-1	Interactions with water as a shared resource	Water resources conservation, p. 129	Partially disclosed
303-3	Water withdrawal	Water resources conservation, p. 129	Partially disclosed
303-5	Water consumption	Water resources conservation, p. 129	

GRI Indicator	Disclosure	Page number (or link)	Comments		
<b>GRI 305 Emissions</b>					
305-1	Direct (Scope 1) GHG emissions	Climate change, p.122	Partially disclosed		
305-2	Energy indirect (Scope 2) GHG emissions	Climate change, p.122	Partially disclosed		
305-5	Reduction of GHG emissions	Climate change, p.122	Partially disclosed		
305-7	Nitrogen oxides (NO <sub>x</sub> ), sulphur oxides (SO <sub>x</sub> ), and other significant air emissions	Air emissions, p.128 Additional information, p. 151	Partially disclosed		
<b>GRI 306 Effluents and waste</b>					
306-1	Water discharge by quality and destination	Water resources conservation, p. 129	Partially disclosed		
306-2	Waste by type and disposal method	Waste and safe tailings management, p. 134	Partially disclosed		
306-3	Significant spills	Water resources conservation, p. 129	Partially disclosed		
<b>GRI 307 Environmental compliance</b>					
307-1	Non-compliance with environmental laws and regulations		<b>Segment</b>	<b>2018</b>	<b>2017</b>
			Metals (USD)	17,582	35,920
			Power (USD)	3,700	685
			Total (USD)	21,283	36,605
<b>GRI 308 Supplier environmental assessment</b>					
308-1	New suppliers that were screened using environmental criteria	Supply chain, p. 75	Partially disclosed		

GRI Indicator	Disclosure	Page number (or link)	Comments
<b>GRI 400 Social</b>			
<b>GRI 401 Employment</b>			
401-1	New employee hires and employee turnover	Personnel structure, p. 93	Partially disclosed
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	Social benefits, p. 103	Partially disclosed
<b>GRI 403 Occupational health and safety</b>			
403-1	Occupational health and safety management system	Health and safety – Management approach, p. 108	
403-2	Hazard identification, risk assessment, and incident investigation	Health and safety performance, p. 105 Health and safety – Management approach, p. 108 Safety culture development, p. 114	
403-3	Occupational health services	Health and safety – Management approach, p. 108	
403-5	Worker training on occupational health and safety	Safety culture development, p. 114	

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GRI Indicator	Disclosure	Page number (or link)	Comments
403-6	Promotion of worker health	Learning and development, p. 100 Prevention of occupational injuries and diseases, p. 115 Social benefits, p. 103, Health and safety – Management approach, p. 108, Health and safety performance, p. 105	
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	Health and safety – Management approach, p. 108 Safety culture development, p. 114	
403-8	Workers covered by an occupational health and safety management system	Safety culture development, p. 114	
403-9	Work-related injuries	Health and safety performance, p. 110 Prevention of occupational injuries and diseases, p. 115	Partially disclosed
403-10	Work-related ill health	Health and safety performance, p. 110 Prevention of occupational injuries and diseases, p. 117	
<b>GRI 404 Training and education</b>			
404-2	Programs for upgrading employee skills and transition assistance programs	Safety culture development, p. 114 Learning and development, p. 100	

GRI Indicator	Disclosure	Page number (or link)	Comments
<b>GRI 405 Diversity and equal opportunity</b>			
405-1	Diversity of governance bodies and employees	Corporate governance system, p. 34 Employees – Management Approach, p. 92	Partially disclosed
<b>GRI 413 Local communities</b>			
413-1	Operations with local community engagement, impact assessments, and development programs	Local community development, p. 141	
<b>GRI 414 Supplier social assessment</b>			
414-1	New suppliers that were screened using social criteria	Supply chain, p. 79	Partially disclosed
<b>GRI Metals and Mining Supplement Indicators</b>			
MM1	Amount of land disturbed of rehabilitated	Land rehabilitation, p. 136 Additional information, p.151	
MM3	Total amounts of overburden, rock, tailings, and sludges and their associated risks	Waste and safe tailings management, p. 134	
MM4	Number of strikes and lock-outs exceeding one week's duration, by country	Personnel structure, p. 93	Partially disclosed
<b>GRI Electric Utilities Supplement Indicators</b>			
EU1	Installed capacity, broken down by primary energy source and by regulatory regime	Energy, p. 126	Installed capacity in the Power segment was 32,253 MW in 2017 and 31,229 MW in 2018
EU2	Net energy output broken down by primary energy source and by regulatory regime	Energy, p. 126	

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# Glossary

## Units of measurement

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bn	Billion
Gcal	Gigacalorie, a unit of measurement for heating energy
GW	Gigawatt (one million kilowatts)
GWh	Gigawatt-hour (one million kilowatt-hours)
kt	Thousand metric tonnes
kV	Kilovolt
kWh	Kilowatt-hour, a unit of measurement for produced electricity
m <sup>3</sup>	Cubic metre
mn	Million
mt	Million metric tonnes
mtpa	Million tonnes per annum
MW	Megawatt (one thousand kilowatt), a unit of measurement for electrical power capacity
RUB	Rouble
t, tonne	One metric tonne (one thousand kilograms)
TWh	Terawatt-hour (one billion kilowatt-hours)
USD	United States dollar
UAH	Ukrainian hryvnia

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## Terms and abbreviations

Al	Aluminium
ARC	Audit and Risk Committee
ASI	Aluminium Stewardship Initiative (ASI)
Aughinish	Aughinish Alumina Refinery, Aughinish Alumina, or Aughinish Alumina Limited, a wholly owned subsidiary of RUSAL incorporated in Ireland
BCGI	Bauxite Company of Guyana, founded in December 2004 under an agreement between RUSAL (90%) and the Government of Guyana (10%)
Board	Board of Directors of the Company
BrAZ	Bratsk Aluminium Smelter or PJSC RUSAL Bratsk, a wholly owned subsidiary of RUSAL incorporated under the laws of the Russian Federation
BS	Business System
CEO	Chief Executive Officer
CDP	Carbon Disclosure Project
CGNC	Corporate Governance and Nominations Committee
CHP	Combined heat and power plant
CPLC	Carbon Pricing Leadership Coalition
CO <sub>2</sub>	Carbon dioxide
CO <sub>2</sub> e	CO <sub>2</sub> equivalent
Directorate for Control	The Directorate for Control and Internal Audit
EN+ GROUP, En+, En+ Group, we, the Company, the Group	EN+ GROUP IPJSC and its subsidiaries, whose results are included in the consolidated financial statements prepared in accordance with the International Financial Reporting Standards
EuroSibEnerg	JSC EuroSibEnerg, a 100% subsidiary of En+ Group managing its power assets
GDR	Global depository receipt

## APPENDICES

GHG	Greenhouse gas emissions
GHG emissions Scope 1	Direct greenhouse gas emissions from sources owned or controlled by the Company, e.g., emissions from combustion in owned or controlled boilers, furnaces, vehicles, etc.; emissions from chemical production in owned or controlled process equipment. Direct CO <sub>2</sub> emissions from the combustion of biomass are not included in Scope 1, as they are reported separately. GHG emissions not covered by the Kyoto Protocol, such as CFCs, NO <sub>x</sub> , etc., are not included in Scope 1 and may be reported separately
GHG emissions Scope 2	Indirect energy greenhouse gas emissions. Scope 2 accounts for GHG emissions resulting from the generation of purchased heat and electricity consumed by a company. Purchased heat and electricity is defined as electricity that is purchased or otherwise brought into the organisational boundary of the company. Scope 2 emissions physically occur at the facility where heat and electricity are generated
HPP	Hydro power plant
HSE	Health, safety and environment
HSE Committee	The Health, Safety and Environment Committee
IPCC	Intergovernmental Panel on Climate Change
Irkutskenergo	Irkutsk Public Joint Stock Company of Energetics and Electrification, a power generating company controlled by En+ by more than 30% of Irkutskenergo's issued share capital
IrkAZ	Irkutsk aluminium smelter, a branch of RUSAL Bratsk in Shelekhov, Russia
ISO 9001	ISO 9001:2015, an international "Quality management systems – Requirements" standard developed by the International Organisation for Standardisation setting the criteria for quality management systems and the only standard in the family that can be certified to
ISO 45001	ISO 45001:2018, an international "Occupational health and safety management systems – Requirements with guidance for use" standard developed by the International Organisation for Standardisation setting the criteria for health and safety management systems and can be certified to
KrAZ	Krasnoyarsk aluminium smelter or JSC RUSAL Krasnoyarsk, a wholly owned subsidiary of RUSAL incorporated under the laws of the Russian Federation
KUBAL	Kubikenborg Aluminium AB, a wholly owned subsidiary of RUSAL incorporated in Sweden
LTIFR	The Lost Time Injury Frequency Rate, calculated by the Group as the sum of fatalities and lost time injuries per 200,000 man-hours
Metals segment	The segment comprising of RUSAL (50.1% owned by En+ Group). RUSAL's power assets are included into the Metals segment

Mineral Resource	A concentration or occurrence of material of intrinsic economic interest in or on the earth's crust in such form, quality, and quantity, that there are reasonable prospects for eventual economic extraction. The location, quantity, grade, geological characteristics and continuity of a mineral resource are known, estimated or interpreted from specific geological evidence and knowledge. Mineral resources are subdivided, in order of increasing geological confidence, into inferred, indicated and measured categories
Management Team	Executive Directors and Officers of the Company
National Examination Board in Occupational Safety and Health (NEBOSH)	A global organisation, which provides health, safety and environmental qualifications
Net debt	The sum of loans, borrowings, and bonds outstanding as well as deferred liability for the acquisition of PJSC Irkutskenergo (the Group's subsidiary) shares less total cash and cash equivalents as at the end of the relevant period
Norilsk Nickel	PJSC MMC NORILSK NICKEL, incorporated under the laws of the Russian Federation
NkAZ	Novokuznetsk Aluminium Smelter or JSC RUSAL Novokuznetsk, a wholly owned subsidiary of RUSAL incorporated under the laws of the Russian Federation
OFAC	The Office of Foreign Assets Control (OFAC) of the US Department of the Treasury
OFAC Sanctions	The designation by OFAC of certain persons and certain companies which are controlled or deemed to be controlled by some of these persons into the Specially Designated Nationals List
OHSAS 18001	Occupational Health and Safety Specification (OHSAS) 18001
Ore Reserves	The economically mineable part of a measured and/or indicated mineral Resource. It includes diluting materials and allowances for losses, which may occur when the material is mined. Appropriate assessments and studies have been carried out, and include consideration of and modification by realistically assumed mining, metallurgical, economic, marketing, legal, environmental, social, and governmental factors. These assessments demonstrate at the time of reporting that extraction could reasonably be justified. Ore reserves are sub-divided in order of increasing confidence into probable and proved
PCB	Polychlorinated biphenyl
PCT	Patent Cooperation Treaty
Power segment	The segment predominantly comprising of power assets owned by En+ Group. The Power segment engages in all aspects of the power industry, including electric power generation, power trading, and supply
PV	Photovoltaic

## APPENDICES

QAL	Queensland Alumina Limited, a company incorporated in Queensland, Australia, in which RUSAL indirectly holds a 20% equity stake
QMS	Quality management system
R&D	Research and Development
RCC	Regulation and Compliance Committee
RemCom	Remuneration Committee
RUSAL, the Metals segment	United Company RUSAL Plc, incorporated under the laws of Jersey with limited liability (50.1% owned by En+ Group)
RUSAL Silicon Urals	LLC RUSAL Silicon Urals (formerly LLC SU-Silicon), an indirect, non-wholly-owned subsidiary of RUSAL
RusHydro	PJSC RusHydro (Public Joint-Stock Company Federal Hydro-Generating Company – RusHydro), organised under the laws of the Russian Federation, an independent third party
SDN List, Specially Designated Nationals List	The List of Specially Designated Nationals and Blocked Persons, published by the OFAC. U.S. persons are generally prohibited from dealing with the assets of persons designated in the SDN List which are subject to the U.S. jurisdiction, subject to certain exemptions and exclusions set out in licenses issued by OFAC
SDGs	Sustainable Development Goals
Timan Bauxite	Joint Stock Company “Boksit Timana”, a non-wholly owned subsidiary of RUSAL incorporated under the laws of the Russian Federation
TRIZ	Theory of Inventive Problem Solving
UAZ	Urals Aluminium Smelter, a branch of JSC RUSAL Ural
UNFCCC	United Nations Framework Convention on Climate Change
VAP	Value-added products. Includes wire rod, foundry alloys, billets, slabs, high purity, and others
WEM (the Russian Wholesale Electricity Market)	Market for the turnover of electric energy and capacity within Russia’s Unified Energy System and unified economic space, with the participation of large electricity producers and consumers that have the status of wholesale market objects, confirmed in full accordance with the Russian Federal Law “On the Electric Power Industry”. The criteria for determining large electricity producers and consumers are also established by the Russian Government
WINDALCO	West Indies Alumina Company, a company incorporated in Jamaica, in which RUSAL indirectly holds a 100% stake



