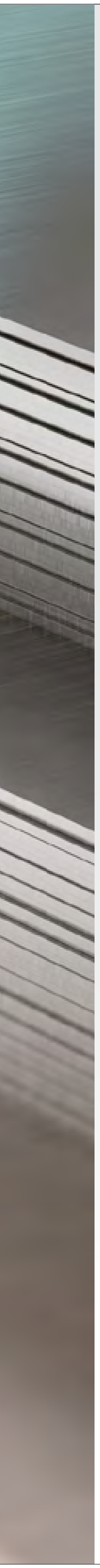
RELIABILITY AS A PRINCIPLE

Annual Report 2021



WARNING

The information presented in this Annual Report only reflects the Company's position during the review period from 1 January 2021 to 31 December 2021 (the "Review Period") pursuant to the requirements of the Listing Rules ("LR") published by the UK's Financial Conduct Authority (the "FCA") in its capacity as competent authority under the Financial Services and Markets Act 2000 (as amended) and the FCA's Disclosure Guidance and Transparency Rules ("DTRs") (the LR and the DTR together being the "Rules") (unless otherwise specified). Accordingly, all forward-looking statements, analyses, reviews, discussions, commentaries and risks presented in this Annual Report (save for this Warning, the sub-section headed "En+ Group's key business risks" in the "Internal Control and Risk Management" section, "Corporate Governance" section and unless otherwise specified) are based upon the financial information of the Company covering the Review Period only and not thereafter.

Shareholders and potential investors should be aware that, as widely reported in the media in late February, March and April 2022, certain countries and multilateral organisations announced new packages of sanctions against the public debt of the Russian Federation, Russia's central bank, a number of Russian banks and certain Russian government-related entities and institutions, as well as personal sanctions against a number of individual as well as certain other restrictions. Due to the growing geopolitical tensions since February 2022, there has been a significant increase in volatility on the securities and currency markets, as well as a significant depreciation of the rouble against the US dollar and the euro. It is expected that these events will affect the activities of Russian enterprises in various sectors of the economy. The quantitative effect of these events cannot be accurately estimated at the moment with any degree of confidence.

Due to all these circumstances, the Company may potentially face difficulties in the supply of equipment, which may lead to the postponement of investment projects. The probable necessity to replace foreign currency credit facilities with debt denominated in RUB may have a negative impact on the financial results of the Company due to high interest rates in the local RUB market caused by general instability and the significant increase of the key rate set by the Bank of Russia (set at 20% in the end of February 2022 and subsequently decreased to 17% in the beginning of April 2022). The recently announced intention by the Russian Government to change the regulation of domestic metals' sales prices affecting En+ Group's metals segment represented by RUSAL may have an adverse effect on the Company's profitability.

On 1 March 2022, the Group has announced that due to unavoidable logistical and transport challenges on the Black Sea and the surrounding area, it has been obliged to temporarily halt production at the Nikolaev Alumina Refinery located in the Nikolaev Region, Ukraine. 2021 output of this refinery amounted to 1.8 mt of alumina. Also, on 20 March 2022, the Australian government imposed an immediate ban on exports of alumina and aluminium ores, including bauxite, to Russia. This action will affect, among other things, the alumina export from Australia. That is almost 20% of RUSAL demand.

Currently, the Company's management is evaluating the effect of all of the above and analysing the possible impact of changing and uncertain micro- and macroeconomic conditions on the Company's future financial position and results of operations in 2022 and onwards, and will make further announcements if and when it is necessary or required.

Shareholders and potential investors should be aware that the information presented in this Annual Report (save for this Warning, the sub-section headed "En+ Group's key business risks" in the "Internal Control and Risk Management" section, and unless otherwise specified) does not take into account all these new developments or any potential impact which these may have on the Company or the Group. Accordingly, the information presented in this Annual Report (save for this Warning, the sub-section headed "En+ Group's key business risks" in the "Internal Control and Risk Management" section, and unless otherwise specified), including but not limited to all forward-looking statements, analyses, reviews, discussions, commentaries and risks, does not reflect the latest position (financial or otherwise) of the Group. Given the global nature of the business of the Group, the international politico-economic dimension of the circumstances indicated above this matter is continually evolving. Shareholders and potential investors are therefore strongly advised to make reference to the latest announcements issued by the Company (i.e. announcements issued by the Company after 24 February 2022) and such other announcement(s) to be issued by the Company in accordance with the applicable laws and regulations as and when appropriate before dealing in the Company's securities.

Shareholders and potential investors should exercise caution when dealing in the Company's securities. If in doubt, recently are advised to consult their stockbrokers, bank managers, solicitors and/or other professional advisers before dealing in the Company's securities.

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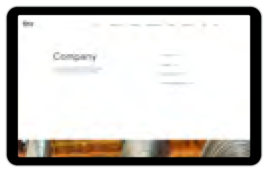
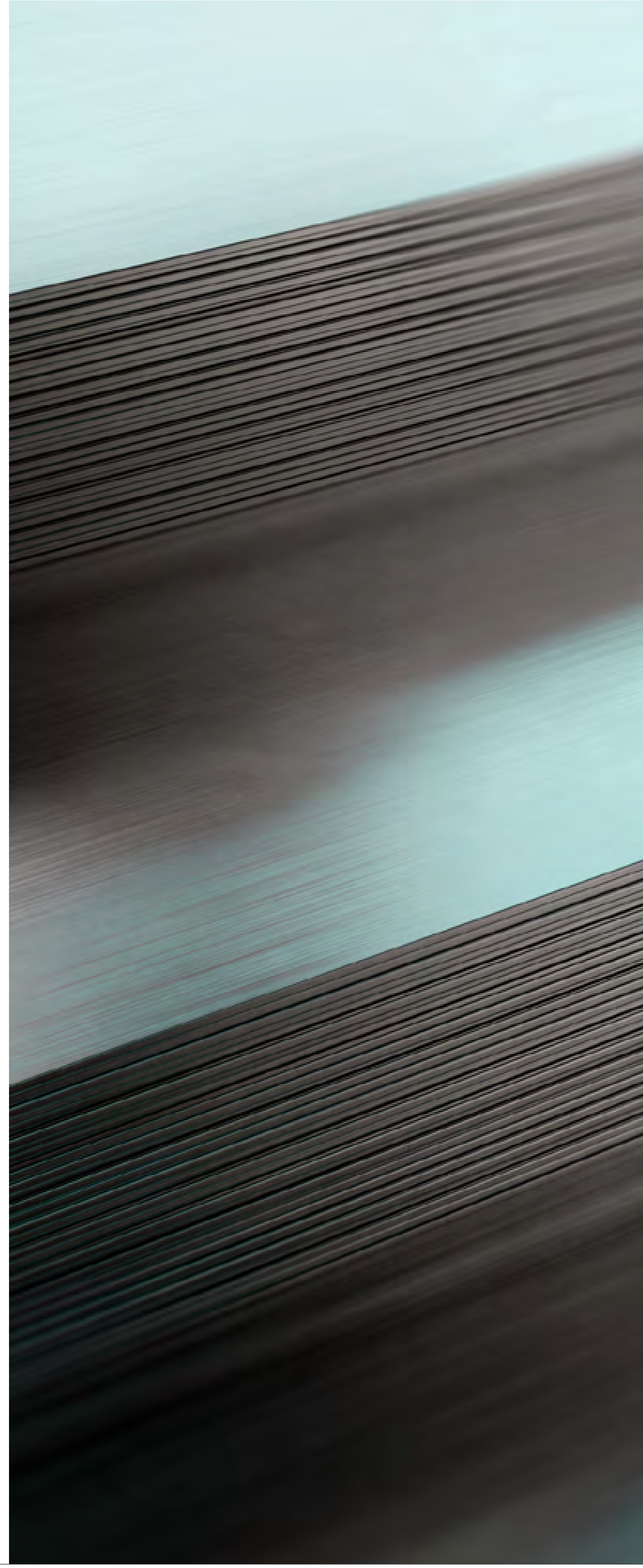


For more on our Company please visit our webpage at www.enplusgroup.com/en/



#1
STRATEGIC REPORT

RELIABILITY AS A PRINCIPLE

For years, En+ has consistently pursued the goal of greener metal. As the largest aluminium producer outside of China and the world's leading independent hydroelectric power producer, the Company has an innovative mindset that enables us to produce low-carbon aluminium, remain a cost leader, and meet all of our operational and financial commitments.

YOU CAN RELY ON US TO...

PRODUCE LOW-CARBON ALUMINIUM AND POWER FOR OUR CUSTOMERS

Read more at p. 6

YOU CAN RELY ON US TO...

MEET OUR COMMITMENTS TO LOCAL COMMUNITIES

Read more at p. 10

YOU CAN RELY ON US

YOU CAN RELY ON US TO...

PROVIDE SUPPORT AND SAFETY FOR OUR STAFF

Read more at p. 8

YOU CAN RELY ON US TO...

CONTINUE ENVIRONMENTALLY FRIENDLY MODERNISATION

Read more at p. 12

YOU CAN RELY ON US TO

PRODUCE LOW-CARBON ALUMINIUM AND POWER FOR OUR CUSTOMERS

En+ is the world leader for the production of low-carbon aluminium, recognised in the market through its leading brand ALLOW.

955 kt ALLOW
sold in 2021

2.4 t CO_2 e/t Al
(Scope 1&2 smelters only)

5+ times
lower emissions than the global industry average

Hydropower produces roughly 70% of all renewable electricity worldwide. Hydropower plants do not emit CO_2 into the atmosphere and help reduce greenhouse emissions, making this a carbon-free energy source. We utilise this clean energy to produce low-carbon and recyclable aluminium – ALLOW – with a certified carbon footprint.

ALLOW enables our customers to reduce the carbon footprint of their products across all major aluminium consuming segments.

Our Power segment operates the largest and most cost-efficient network of power plants in the Siberian Region, allowing us to efficiently and reliably cater to our core clients in Siberia, including the largest smelters operated by En+'s Metals segment.

Combined with renewable hydropower, our inert anode technology will provide an unprecedented near-zero emissions operation at the smelter.

Taishet aluminium smelter

GEOGRAPHY OF PRESENCE

5
Continents

Siberia
strong operational hub

Read more at p. 16–17

WHAT IS ALLOW

low CO_2

Guaranteed low CO_2 footprint: less than 4 t of CO_2e/t of aluminium produced (Scope 1&2 smelters only)

Ensuring transparency and assurance: carbon footprint statement with 3rd party verification, ASI certification, EPDs, ISO and REACH compliance, CDP disclosures

Promotes traceability, enabling attribution to a single smelter and guarantees environmental, health and safety, and other safeguards set out in the producer's policies

In 2021, more than 100 customers of the En+ Group opted for ALLOW, with total sales of 955 kt

Read more at p. 12

YOU CAN RELY ON US TO

PROVIDE SUPPORT AND SAFETY FOR OUR STAFF

0.16
Lost Time Injury Frequency Rate (LTIFR)[1]

13
additional educational programmes were developed for corporate safety culture online portal

En+ Group's top priority of looking after the health and safety of employees is reflected in our corporate Health and Safety (HS) policy, which holds that life and health come before production and profit. It commits us to a culture of individual responsibility to uphold this principle. The responsibility starts at the top, with senior management embodying our strong safety culture and leadership, and extends to every one of our employees, who receive extensive training and are actively encouraged to report any aspects of our operations that do not meet safety standards.

1 Per 200,000 hours worked.

OUR CORPORATE HS PRINCIPLES REPRESENT WHAT WE BELIEVE IN, HOW WE MANAGE OUR BUSINESS, AND WHAT WE EXPECT FROM OUR EMPLOYEES AND CONTRACTORS

- Life and health are more important than production results and economic indicators
- All incidents are preventable
- The safety agenda has to be fully integrated into all business and production operations from daily routine to strategic goals and respective plans
- An unwavering commitment to observing national HS legislation, and a goal to be the best HS performing company among competitors
- Each employee should have the appropriate skills and knowledge to work safely
- Safe behaviour must be supported and motivated by management
- Suppliers and contractors to be chosen based on HS principles and should follow all of the Company's safety requirements

Read more at p. 90–91

YOU CAN RELY ON US TO

MEET OUR COMMITMENTS TO LOCAL COMMUNITIES

more than
USD 55 mn
were allocated for social investments and charitable projects

the
360 Project
won the BRICS International Prize in the "Clean Water" category

more than
100 children
took part in the interregional championship "Get on Your Skis, Everyone!" in 2021

We are sure that the Company can only grow and develop if it cares for the communities in which it operates. We are committed to establishing close cooperation with local communities, government agencies, and non-profit organisations. En+ adheres to best practices in developing infrastructure, promoting education and social entrepreneurship, encouraging a healthy lifestyle and volunteering.

more than
3,000 people
in 2021 took part in an eco-campaign to protect Lake Baikal and other water bodies in 7 cities where the Company operates

AN UNDERSTANDING OF THE INTERESTS AND NEEDS OF LOCAL COMMUNITIES DETERMINES THE PRIORITIES OF OUR SOCIAL INVESTMENT. EN+ GROUP IMPLEMENTS SOCIAL INVESTMENTS IN THE FOLLOWING KEY AREAS:

- Infrastructure development
- Assistance to vulnerable population groups
- Sports and a healthy lifestyle
- Volunteering
- Environmental protection
- Education

Read more at p. 98–101

YOU CAN RELY ON US TO

CONTINUE ENVIRONMENTALLY FRIENDLY MODERNISATION

Our approach to modernisation takes into account industrial and economic feasibility, as well as environmental impact. Our innovative projects use the best available environmental technologies and reduce costs.

Environmentally friendly Eco-Soderberg technology helps to a reduction perfluorocarbons (PFCs) emissions due to reduction in anode effect frequency

The implementation of the Group's Siberian HPP modernisation programme ensures one of the best performance indicators of the HPPs in the industry

Read more at p. 43

The Company resolved to upgrade aluminium production by switching from Eco-Soderberg to pre-baked anode technology, which helps massively reduce the smelter's emissions of fluorides and resinous substances, including benzo(a)pyrene

Modernisation of equipment at the CHPs also improves the environmental situation in regions of operation

Read more at p. 44

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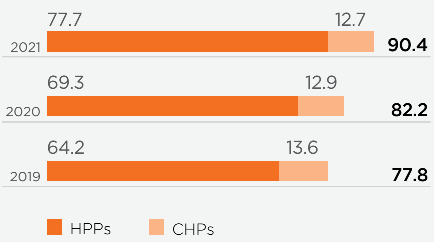
KEY EVENTS AND FIGURES

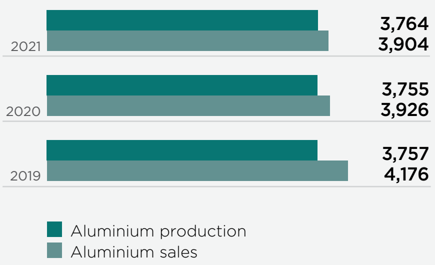
KEY PERFORMANCE INDICATORS

Operating

Total electricity production[1] (TWh)



Aluminium production and sales (kt)

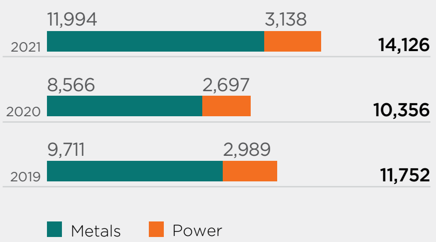


Heat production (mn Gcal)

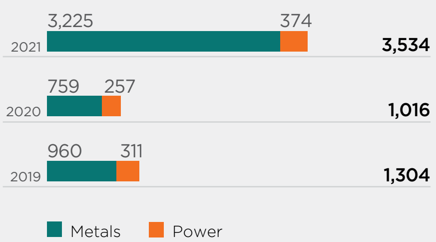
Read more at p. 30–42

Financial

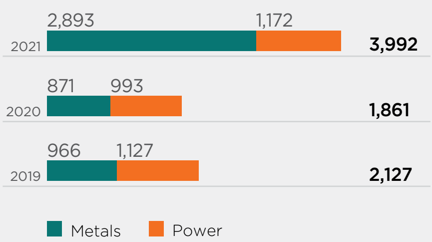
Revenue (USD mn)



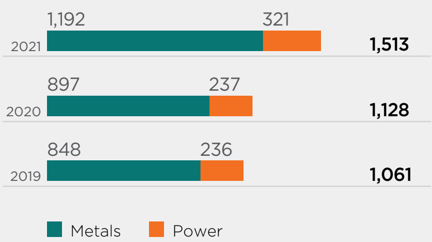
Net profit (USD mn)



Adjusted EBITDA[2] (USD mn)

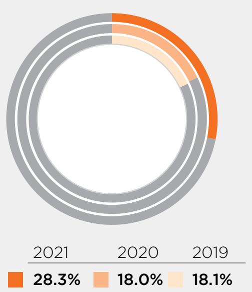


Capital expenditure[2] (USD mn)



Read more at p. 46

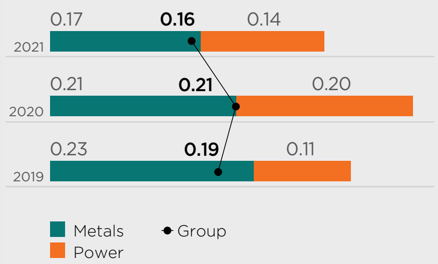
Adjusted EBITDA margin (%)



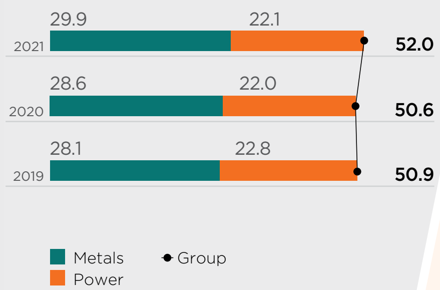
Non-financial

Lost Time Injury Frequency Rate[3]

per 200,000 hours worked



GHG emissions[4] ($mtCO_2e$)



Read more at p. 62

Note: The consolidated financial data is provided after intersegmental elimination.

1. Excluding Onda HPP (installed capacity 0.08 GW), located in the European part of the Russian Federation, leased to RUSAL since October 2014.
2. Adjusted EBITDA for any period represents the results from operating activities adjusted for amortisation and depreciation, impairment charges and loss on disposal of property, plant and equipment for the relevant period.
3. Preliminary data, being verified as part of En+ Group 2021 Sustainability report preparation. KRAMZ and SMR are included in LTIFR of the Metals segment. Figures for 2020 were recalculated because of an improvement in methodology.
4. Preliminary data, being verified as part of the En+ Group 2021 Sustainability Report preparation.

KEY EVENTS 2021

January

18 The Company announced targets of at least a 35% reduction in GHG emissions by 2030 and to be net zero by 2050

28 En+ Group Metals segment raised USD 200 million under new pre-export financing linked to the sustainability performance indicators

February

11 The Metals segment, RUSAL, announced the acquisition of the business and assets of the Aluminium Rheinfelden GmbH

March

18 En+ Group became a partner of the project for the integrated development of the city of Baikalsk and the creation of the International Centre for Water Resources

April

13 En+ Group Metals segment successfully produced aluminium with the industry's lowest carbon footprint – less than 0.01 tonnes of CO_2 equivalent per tonne of metal

May

19 En+ Group Metals segment announced the intention to demerge its high carbon assets

June

2 En+ Group announced it had signed Russia's largest ever 1 million certificates supply deal for international renewable energy certificates (I-RECs)

July

21 En+ Group started construction of the company's head office in Irkutsk

August

16 En+ Group became a full-cycle supplier and trader of I-REC certificates

September

1 En+ Group's 360 Project wins BRICS award for sustainable development

20 En+ Group published its Pathway to Net Zero Report, which comprehensively details the initiatives being undertaken across the Group to achieve its climate targets

October

5 En+ Group and TransContainer agreed on cooperation for sustainable development

22 En+ Group wins 2021 S&P Global Platts Global Metals Award

November

25 En+ Group ranked ESG transparency leader in Expert RA's ESG-transparency rating of Russian companies and banks

December

3 En+ Group becomes the first Russian company with UN recognised Energy Compact

17 En+ Group's Metals segment announced the launch of the Taishet aluminium smelter. Investments in the project amounted to about USD 1.7 billion

27 En+ Group started implementing the concept of "green offices"

KEY EVENTS 2022

March

1 RUSAL announced that due to unavoidable logistical and transport challenges on the Black Sea and surrounding area, it has been obliged to temporarily halt production at the Nikolaev Alumina Refinery located in the Nikolaev Region, Ukraine

3 The London Stock Exchange suspended the admission to trading of the En+ Group's GDRs

21 RUSAL noted that on 20 March 2022 the Australian Government imposed an immediate ban on exports of alumina and aluminium ores, including bauxite, to Russia

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STRATEGIC REPORT

OUR PRESENCE AND SCALE

We are unique among global natural resources companies.

Our business advantage stems from the full integration of world-class hydro power assets that reliably and sustainably supply the energy required to produce aluminium. In turn, our substantial production capabilities make us the largest aluminium producer outside of China.

Metals Segment

	Aluminium smelters[1]	Alumina refineries	Bauxite production sites
Number of facilities	11 aluminium smelters[2]	10 alumina refineries[3]	7 bauxite mines
Total capacity	4.2 mtpa	10.7 mtpa[4]	20.6 mtpa
Production level, 2021	3.8 mt	8.3 mt	15.0 mt

Read more at p. 30 Our Metals segment

No. 1 *aluminium producer excluding China*

5.6% *of the world's alumina production*

77.7 TWh *low-carbon hydropower generation*

19.4 GW *Total installed electricity capacity*

Power Segment

	Hydropower plants	Combined heat and power plant	Solar power plant
Number of facilities	5 hydro power plants[5]	16 combined heat and power plants	Abakan solar power plant
Total installed capacity	15.1 GW[5]	4.3 GW	5.2 MW
Production level, 2021	77.7 TWh[6]	12.7 TWh	6.1 GWh

Read more at p. 38 Our Power segment

Note: As at 31 December 2021.

1. Excluding Boguchany Aluminium Smelter (BoAZ), a joint 50/50 project of RUSAL and RusHydro.
2. Ten aluminium smelters in operation (Alscon in Nigeria is mothballed).
3. Eight alumina refineries in operation (Eurallumina in Italy is mothballed) and QAL, located in Australia, in which RUSAL owns a 20% share.
4. RUSAL attributable capacity.
5. Including Onda HPP.
6. Excluding Onda HPP with an installed power capacity of 0.08 GW and production level of 0.5 TWh in 2021 (located in the European part of Russia, leased to RUSAL).

Taishet Aluminium Smelter
In December 2021, the first phase of the world's most advanced low-carbon aluminium production plant, Taishet Aluminium Smelter, was launched. The state-of-the-art smelter is one of the greenest in the world, operating on clean energy from Siberian hydroelectric power plants, which together with modern gas cleaning equipment and a closed water circulation system, has a low level impact on the environment. Full scope CO_2 emissions will be one of the lowest in the industry. Once fully operational, the smelter is expected to produce 428.5 thousand tons of low-carbon aluminium per year during its first phase and will play a critical role in the town's overall social and economic development.

Metals Segment
- □ Aluminium smelters
- △ Alumina refineries
- ○ Bauxite production sites

Power Segment
- □ Hydropower plants
- △ Combined heat and power plant
- ○ Solar power plant

FY 2021 Revenue by region[1]

Read more at p. 46

FY 2021 Revenue by product[1]

1. From external customers.

WE KNOW THAT LOW-CARBON ALUMINIUM IS THE FUTURE."

Hon Christopher Bancroft Burnham,
Chairman of the Board

Dear shareholders,

It has been an extremely challenging past two years. The tragic images we see daily from Ukraine, where En+ Group supports 4,500 employees, contractors, and their families, affect all of us. We've also had our share of tragedy from COVID across our employees and their families. Our deepest sympathy and prayers go out to those families who have lost a loved one. The leadership and management of the Company at all levels have reacted swiftly with efforts that started in 2020 to alleviate these tribulations. Their efforts included successfully constructing seven health clinics to provide relief to existing healthcare facilities overwhelmed with COVID-related caseloads and provide for our greater global En+ community.

Against this backdrop, particularly with the ongoing situation in Ukraine, it is challenging to bring focus to the En+ Group's achievements in 2021. But the Group has had significant success in all aspects of our businesses. We have reduced debt by over 12% year over year, benefiting from a more than 45% increase in the price of aluminium during 2021, which also offset the impact of inflation on raw materials. While aluminium production was broadly unchanged year on year, totalling 3,764 kt in the same period, sales of value-added products (VAPs) increased by 18.1%; electricity production increased by 10%; and hydropower output increased by 12.1%. In 2021, the Group produced approximately 5.6% of global aluminium output and around 6.3% of the world's alumina.

Recognising our responsibility and commitment to a cleaner and more sustainable world, and in fulfillment of our pursuit to be the lowest carbon aluminium producer in the world, in 2021 we announced our commitment to transition to net zero by 2050 with a 35% reduction in emissions by 2030. We know that low-carbon aluminium is the future. In 2021, more than 100 customers of the En+ Group opted for our low carbon brand ALLOW, with final sales of 955 kt out of total sales of 3,904 kt. We also continue to pursue cutting-edge technological innovations, such as Rusal's development of inert anodes for use in the production of aluminium, which massively reduces carbon emissions during the smelting process.

With eleven aluminium smelters, ten alumina refineries, seven bauxite mines, and four foil rolling mills across a dozen countries and five continents, we are proud to be the largest producer of aluminium outside of China, accounting for 13% of the global aluminium supply ex-China, and the third-largest in the world. We are equally proud to be the largest independent hydro power company in the world, with a dozen hydropower and combined heat and power plants. We produced 90 TWh of electricity last year. We could not have achieved this leadership position without the almost 100,000 dedicated men and women who are part of our global team across five continents and in more than a dozen countries. On behalf of the leadership and management of our Group, we thank them for their hard work and dedication to our shared future.

Stewardship and Corporate Governance

We strive not to be just world-class in our corporate governance: we pursue every day to set the example and be the leader within our peer group. Our commitment to net zero carbon emissions by 2050 took a giant step forward in 2021 with the success of our next-generation inert anode electrolysers, allowing us to produce the lowest carbon aluminium ever created. Our proprietary technology eliminates emissions of greenhouse gases (GHG) from the reduction process while reducing the cost of production by saving anodes. Another breakthrough benefit of this technology is the release of oxygen during aluminium production, with one inert anode cell generating the same volume of oxygen as 70 hectares of forest.

One of the significant successes of the past year was the completion of the construction of the world's most advanced low-carbon aluminium plant, the Taishet Aluminium Smelter (TaAZ) in Siberia, which is the third low-carbon aluminium smelter to be built by Rusal, creating more than 1,000 local jobs. Once fully operational, the smelter is expected to produce 428.5 kt of low-carbon aluminium per year during its first phase. This development further demonstrates our Metals segment's commitment to the decarbonisation of its operations and consumer supply chains.

Key Partnerships

Last year saw many other new projects come online. We partnered in a pilot project to produce an aluminium can with the lowest-ever carbon footprint of any beer can in Europe. We also announced another inert anode partnership to produce aerosol containers and other containers to reduce the environmental footprint of these products significantly. We forged partnerships that will see ALLOW, our low carbon aluminium brand, delivered to new partners who will collaborate on research and development to produce innovative alloys. We also secured a partnership to use our low-carbon aluminium in custom-made products to enable end users to evaluate and trace the metal's carbon footprint and energy source.

Committed to the Low Carbon Economy

We are proud that our colleague, Alexey Spirin, the En+ Group's Director of Climate Risk and Environmental Risk Management Department, joined the Aluminium Stewardship Initiative (ASI) board. Lord Barker, then Group Executive Chairman, was appointed in 2021 as co-chairman of the Carbon Pricing Leadership Coalition, a World Bank Group administered partnership working to implement universal carbon pricing to limit atmospheric carbon emissions. In the second half of 2021, the En+ decarbonisation pathway was submitted to, and is currently undergoing verification by, the Science Based Targets initiative (SBTi). Together with our operations, these appointments help our Company sit at the heart of the action on climate change.

Lord Barker stepped down as Executive Chairman of the En+ Group in March after leading us through sanctions removal and instilling a new corporate focus on sustainability, profitability, and stewardship. I cannot thank him enough for his exceptional leadership over the past four years and his unwavering dedication to our shareholders and employees.

The challenges ahead of us this year are significant. Chief among them is the ongoing situation in Ukraine, which has affected markets worldwide, and our company directly. We are doing our utmost to support our more than 4,500 employees and contractors in Ukraine and their families and pray for a swift and peaceful resolution.

Again, I want to thank Lord Barker and our exceptional leadership and management team and employees who have persevered through the challenges of 2021 and the first quarter of 2022 to produce electricity to heat and run millions of homes and businesses, as well as the finest aluminium products for our global customers. Finally, to you, our shareholders, thank you for sticking with us through thick and thin.

Hon Christopher Bancroft Burnham,
Chairman of the Board

3,904 kt
total sales of aluminium

52%
share of VAPs in total sales

STRATEGY

GROWTH AND LEADERSHIP

The Group's strategy aims to lead the Company towards becoming the world's largest vertically integrated producer of high value added products from low-carbon aluminium using our own renewable energy and raw materials.

We adhere to the Group's "green" development strategy through improving production technology and asset modernisation in both the Metal and Power segments, at the same time complying with the international sustainability agenda, increasing the output of low-cost aluminium, which positively affects margins, financial stability and deleveraging.

STRATEGIC OBJECTIVES

En+ Group's strategy aligns strongly with the ambitions of the United Nations' (UN) Sustainable Development Goals (SDGs)

Read more on Most Relevant UN SDGs at p.64

Vertical integration for maximum efficiency

Almost 100% of the electricity supply to our aluminium smelters is provided by the Group's own hydropower plants. This ensures revenues for the Power segment by creating basic demand for electricity and reduces the carbon footprint of the primary aluminium production as almost 100% of the energy used for smelting is renewable.

Read more at p. 26

\>98%

of aluminium smelting is supplied by hydropower

SDGs: 7 Affordable and clean energy; 13 Climate action

Aluminium production capacity ramp-up

The first phase of the Taishet aluminium smelter was opened in December 2021 to produce 428.5 kt of aluminium per year and to become the Group's most technologically advanced aluminium smelter equipped with cutting-edge electrolysis facilities.

Read more at p. 36

2021

the year when the first phase of the Taishet aluminium smelter with nameplate capacity of 428.5 kt of aluminium per year was launched

SDGs: 8 Decent work and economic growth

Production cost saving

We pursue cost-cutting initiatives across the Group. In the Metals segment it is achieved by the almost 100% self-reliance in bauxite, nepheline and alumina supply, and long-term supply contracts for other feedstock, including anodes, coke and pitch. The second phase of the Taishet anode plant is currently under construction.

Position in the second quartile on the global aluminium production cost curve

SDGs: 8 Decent work and economic growth

Higher profitability

The Metals segment's development priority is raising the VAP production capacity. To achieve this, the Aluminium division is expanding its value-added product manufacturing facilities. A new metal casting facility is being launched at the Taishet smelter to manufacture large (double length) slabs, which positions the Taishet products among the world's best. The Downstream division produced 242 kt of products in 2021, including foil, extrusion, and car wheels, which sell at a high premium.

52%

the share of VAP in aluminium sales in 2021

SDGs: 8 Decent work and economic growth

Closed loop economy development

The Metals segment is developing pilot projects that will bring low carbon primary billets with recycled content to the market. This comes as a response to the Group's clients declaring their own Scope 3 reduction goals. Three of the Group's plants have recycling projects underway, with a substantial share of production to involve recycled aluminium in the future.

More than 10 kt

of secondary aluminium were used in recycling operations to produce low-carbon aluminium in 2021

SDGs: 12 Responsible consumption and production; 13 Climate action

Innovations

The Metals segment aims to introduce inert anode technology on an industrial scale, which is a key technological development vector for the segment. What makes inert anode technology different from the conventional technology is that electrolytic smelting of one tonne of aluminium produces 2 tonnes of oxygen instead of CO_2 emissions. Tests on inert anode electrolysis cells are underway at the Krasnoyarsk aluminium smelter; the electrolytic cells should emit no GHG upon the transition.

Read more at p. 67

0.01 tonnes

of CO_2e per tonne of aluminium produced with inert anode in accordance with Scope 1 and Scope 2

SDGs: 13 Climate action

Read more on Most Relevant UN SDGs at p.64

Net zero transition

In early 2021, the Company announced its ambition to achieve net zero GHG emissions by 2050 and reduce its GHG emissions by at least 35% by 2030 (Scope 1 and 2 vs. the 2018 baseline).

11%

reduction of direct GHG emissions per tonne of aluminium produced by the Company's smelters in 2021 vs. 2014

SDGs: 13 Climate action

Development of hydropower generating capacity

The Company continues to develop new hydropower generation capacity. The project portfolio includes four HPPs, i.e. Nizhneboguchanskaya, Motyginskaya, Telmamskaya and Krapivinskaya, with a 2.5 GW aggregate capacity.

Read more at p. 44

2.5 GW

the aggregate capacity of the new hydropower projects

SDGs: 7 Affordable and clean energy

Expansion of green energy

The Power segment's R&D projects involve research into and development of solar and wind energy, transportation of green hydrogen and a small-capacity nuclear reactor.

Read more at p. 69

6.1 GWh

electricity produced at Abakan solar plant in 2021

SDGs: 7 Affordable and clean energy; 13 Climate action; 17 Partnerships for the goals

Deleveraging and ensuring high dividend payments through stable FCF

En+ allocates capital conservatively and aims at deleveraging. In making recommendations to the general shareholders meeting on dividend payments, the Board takes into account current market situation and economic conditions and subject to the declared dividend policy.

Net debt is USD 1.2 bn

lower vs. 2020

SDGs: 8 Decent work and economic growth

Commitment to sustainability principles

The Group's sustainability focus extends to climate leadership, environmental stewardship, human development, and collaboration with stakeholders in support of the sustainability principles both nationally and internationally. From programmes aimed at reducing the Group's environmental impact, such as the HPP New Energy modernisation programme, to research around ecosystem impact in our regions of operation, to social initiatives supporting healthcare and education, the Group's operations align with the Group's priority SDGs.

Read more at p. 62

LTIFR is 24%

lower compared to 2020[1]

SDGs: 3 Good health and well-being; 6 Clean water and sanitation; 7 Affordable and clean energy; 8 Decent work and economic growth; 12 Responsible consumption and production; 13 Climate action; 15 Life on land; 17 Partnerships for the goals

[1] LTIFR is calculated per 200,000 hours worked.

STRATEGIC REPORT

CHIEF EXECUTIVE OFFICER'S STATEMENT

"OUR COMMITMENT TO THE HIGHEST STANDARDS OF CORPORATE GOVERNANCE AND SOCIAL RESPONSIBILITY SUPPORTS OUR STRATEGY."

Vladimir Kiriukhin,
Chief Executive Officer

The recent developments have created a wide range of uncertainty; the management is deeply concerned about everyone who has been impacted in this difficult situation. The management is reviewing all of the Company's activities to assess the possible impact of imposed restrictions on our business. It is our intention to continue our operations and support our employees in this volatile environment.

Notwithstanding these challenges, I would like to report on the business performance in 2021 amid another year of global uncertainty from the continuing COVID-19 pandemic.

En+ Group once again demonstrated the resilience of our people, our business model, and our strategy to deliver low-carbon aluminium to support a sustainable economy.

Throughout this period, we continued to put the safety of our people first and were pleased to support the federal vaccination programme. By the end of the year, the collective immunity among our employees reached an impressive 94%. In addition to previously built medical centres, we went on supplying regional hospitals with modern medical vehicles and equipment.

Thanks to solutions put in place in 2020 to mitigate the impact of the pandemic on our business, we were able to maintain uninterrupted operations throughout 2021. Critically, we maintained a world-class customer service to our aluminium customers around the globe. We also continued to upgrade our assets, delivered new innovations and set out an industry-leading decarbonisation strategy and ensured the supply of energy to homes across Siberia.

The year of stable operational performance

Our aluminium production remained stable, and we increased sales of value-added products (VAPs) by 18.1% to 2,034 kt reaching 52% of total output (vs 44% in 2020). Our Power segment increased electricity output by 10.0% y-o-y and our HPP output increased by 12.1%, reflecting favourable hydrological conditions and progress on our capacity modernisation programme. We continued to benefit from the combination of our unique assets and operational excellence, and we maintained our leading position as the world's largest producer of low-carbon aluminium.

Our fully vertically-integrated model helped us offset the inflationary pressures on raw materials prices seen across the world and we managed our cost base effectively. The Russian metal industry as a whole was impacted by the announcement at the end of June that the Russian government has approved a temporary export tax on ferrous and base metals, valid until 31 December 2021.

Overall, our strong financial performance was supported by higher aluminium prices, which rose during the year driven by economic recovery from the early impacts of the COVID pandemic.

12.1%
increase in our HPP output

18.1%
increase in VAP sales

Leading on decarbonisation

We made important announcements in relation to our long-term strategy to lead the aluminium industry into the low-carbon economy.

In January, we announced the most ambitious decarbonisation targets our industry has ever seen, and in September we disclosed the detailed roadmap of initiatives that will enable our Group to reduce its greenhouse gas emissions by at least 35% by 2030, and to be net zero by 2050 (Scope 1 and 2 as benchmarked against the Group's 2018 GHG emissions).

Our Pathway to Net zero includes emissions abatement, avoided emissions solutions, and compensation and neutralisation.

In our Metals segment, this will involve initiatives such as optimising our raw materials supplying system, implementing Eco-Søderberg technology at our plants, converting smelters to pre-baked anode technology, and launching large-scale production of our ground-breaking inert anode technology. In the future, we will also look to improve our energy efficiency in alumina refineries and capitalise on the greater availability of green hydrogen. We will also increase the amount of recycled aluminium we use. In our Power segment, we will increase renewable power generation by the development and construction of new renewable power and heat generation: hydropower, biofuels and hydrogen production and by the implementation of the New Energy programme.

Continuous improvement and innovation

In 2021, we continued to make progress on the Group's New Energy Programme, which will enable us to achieve industry-leading efficiency metrics at our hydropower stations while contributing to our emissions reduction. Upgraded equipment at the Group's Bratsk, Ust-Ilimsk, Irkutsk and Krasnoyarsk HPPs supported an increase in hydropower production during the year.

Last year we replaced one runner at one of the Bratsk Hydropower Station's hydraulic units. This is one of 18 hydro-turbine runners, which have been undergoing a three-stage modernisation programme. The Company also launched a new the second in a row hydroelectric unit at the Irkutsk HPP. So far, increased efficiency will be provided by the new runners, with an efficiency rate increase of up to 8% depending on the runner. In 2021, the Group'shydropower stations generated an additional 2.1 billion kWh of energy from the same volume of water, helping to prevent greenhouse gas emissions by approximately 2.4 kt of CO_2e.

The ongoing modernisation of our HPPs' equipment will increase their efficiency, reduce the cost of repair work, and improve the performance of the units and stations in general. As we expand hydropower production, we have been pleased to support the development of Russia's renewable energy certificate market. In 2021, we announced Russia's largest-ever supply deal for I-RECs, issuing over one million certificates corresponding to the electric energy produced by En+ Group companies such as JSC EuroSibEnergo (Krasnoyarsk HPP) and LLC Abakan SPP (Abakansk Solar Plant). I-RECs certificates adhere to major international sustainability and carbon accountability standards including the GHGP, CDP and RE100. Energy consumers can use renewable energy certificates to meet their carbon targets within 'scope 2', and to support their internal corporate social responsibility policies. We were delighted in 2021 to receive confirmation from UN Energy that the Group's commitments to expanding clean energy generation and access have been officially recognised within the Energy Compact.

In our Metals segment we continued to focus on further reducing the carbon footprint of our aluminium products through the upgrading of equipment and developing new technology, and on expanding consumer markets for our low-carbon aluminium brand, ALLOW.

We are constantly innovating to reduce the carbon footprint of our aluminium further, and in April 2021, we announced that our Metals segment had produced the lowest carbon aluminium ever seen, with a carbon footprint of less than 0.01 tonnes of CO_2 equivalent per tonne of metal (Scope 1, Scope 2 – direct and indirect energy emissions).

2.1 TWh
of additional power from the same volume of water as a result from New Energy programme

2.4 kt of CO_2
New Enregy programme helped to prevent GHG emissions in 2021

It was achieved by using breakthrough technology, a revolutionary environmental solution in metallurgy, driving the emissions-intensive production of aluminium towards net zero. Inert anodes replace standard carbon anodes with inert, metal-ceramic materials, which results in a reduction of emissions from the smelting process. In comparison to full-scope industry average emissions, metal produced with inert anodes has an 85% lower carbon footprint.

In our bid to ensure we are the most responsible and efficient major aluminium producer, we continue to upgrade our assets. In June 2021, we announced the intention to refurbish the largest aluminium smelters in Krasnoyarsk, Bratsk, Irkutsk and Novokuznetsk. The programme involves constructing new facilities using the most modern and environmentally friendly technology whilst simultaneously dismantling or modernising the old workshops. Together with the expansion of the capacity of the Taishet Anode Plant, the cost of the programme is estimated at USD 4,900 million until 2030.

The year 2022 has already brought new challenges. Due to the tragic developments in Ukraine, we have had to temporarily halt the production at the Nikolaev Alumina Refinery. Our priority is to ensure the safety of all our employees there and around the world. Meanwhile we will continue to secure stability of supply for our customers and to support our employees and their families.

In March 2022, the Australian Government imposed an immediate ban on exports of alumina and aluminium ores, including bauxite, to Russia. This action will affect, among other things, the alumina export from Australia that comprises almost 20% of RUSAL's total alumina demand.

Currently, we are evaluating the effect of all of the recent developments and analysing the possible impact of a variety of micro- and macroeconomic conditions on the Company's future financial position and results of operations in 2022 and onwards.

We look forward to updating our stakeholders on our progress on delivering the key elements of our climate strategy, which is core to our overall business strategy.

Vladimir Kiriukhin,
Chief Executive Officer

En+ Group and the Victoria and Albert Museum partnered to produce an immersive pavilion "Between Forests and Skies" for the London Design Festival.

The pavilion was made from aluminium with the world's lowest carbon footprint, produced using En+ Group's unique inert anode technology.

BUSINESS MODEL

THE POWER OF OUR INTEGRATED AND SUSTAINABLE BUSINESS

En+ Group benefits from its unique base of tightly-integrated assets that results in a fully integrated and highly self-sufficient green business model. A substantial degree of vertical integration provides the Group with significant advantages and additional sources of growth.

Hydropower from the Power segment is used to refine raw materials and produce aluminium by the Metals segment in Siberia. More than 98% of aluminium production energy needs are met by carbon-free power sources.

INPUTS

Assets

We have a total installed electricity capacity of 19.4 GW (15.1 GW from low-carbon hydropower generation and 4.3 GW from thermal power). Our aluminium production capacity is 4.2 mtpa.

Research and development

The Company performs vast research and development activities to introduce environmentally friendly technologies into production cycles to save resources and reduce costs.

Raw materials

Bauxite production capacity of 20.6 mtpa and alumina production capacity of 10.7 mtpa. The Group is c.77% self-sufficient in bauxites and nephelines. More than 98% of aluminium production energy needs are met by hydro and other carbon-free power sources.

People

We have c.90,000 employees across over 60 sites in 12 countries, and are considered one of the largest employers in Russia.

Financial

Strong and resilient cash flow with industry-leading EBITDA margins.

26.25%
Strategic investment in Norilsk Nickel (USD 12.4 bn)

POWER SEGMENT

Water

5[1]
hydropower plants

Coal

14.4 mt
coal production in 2021

16
combined heat and power plants

Hydropower

77.7 TWh
of electricity production in 2021

Thermal power

12.7 TWh
of electricity production in 2021

28.5 mn
Gcal of heat production in 2021

Electricity transmission and distribution

+41,000 km
of power lines in our networks

50.5 TWh
of electricity distributed

Electricity trading and retail

– Capturing additional margin
– Direct access to consumers

20.3 TWh
sales in 2021

– USD 1,525 mn electricity
– USD 465 mn heat

Read more at p. 41

METALS SEGMENT

Bauxite

15.0 mt
production in 2021

Nepheline

4.4 mt
production in 2021

Alumina

8.3 mt
production in 2021

>100%
% self-sufficiency in alumina

Primary aluminium production

3.8 mt
production in 2021[2]

Sales volumes

3.9 mt
aluminium sales

2.0 mt
VAP sales

– USD 9,966 mn primary aluminium and alloys
– USD 610 mn alumina
– USD 515 mn semi-finished products and foil

Read more at p. 32

OUTPUTS

Social

The Group remained focused on ensuring the health and safety of its employees, maintaining stable operations and providing support to the regions of operations. The Lost Time Injury Frequency Rate of the Group showed a reduction compared to 2021 due to successful prevention of group injury cases.

c. USD 55 mn
total social investments and charitable projects in 2021

Environmental

In 2021, En+ Group announced ambitious decarbonisation targets and disclosed the detailed roadmap of initiatives that will enable the Group to reduce its greenhouse gas emissions by at least 30% by 2030, and to be net zero by 2050.

11%
reduction in GHG emissions at smelter in 2021 compared to 2014[1]

Financial

Reflecting the improved pricing environment, adjusted EBITDA increased to USD 3,992 million from USD 1,861 million, driven by a 45.4% y-o-y increase in London Metal Exchange aluminium prices, as well as an increase in electricity production y-o-y of 10.0%. EBITDA margin reached 28.3% compared to 18.0% in 2020.

USD 14.1 bn
revenue

A commitment to high international standards of corporate governance and social responsibility underpins our business model and strategy.

1. Including Onda HPP.

1. Preliminary data, being verified as part of En+ Group 2021 Sustainability report preparation.
2. Excluding Boguchany Aluminium Smelter (BoAZ), a joint 50/50 project of RUSAL and RusHydro.

BUSINESS REVIEW

INDUSTRY POSITIONING

En+ Group is a market-leading, vertically integrated low-carbon aluminium and hydroelectric power producer.

The composition of the Group's assets and operations, both in terms of industries and geographies, enables it to achieve strategic synergies. En+ Group's scale allows it to actively manage the flow of aluminium products, alumina and other raw materials within the Company and proactively plan electricity production and consumption targets. This allows the Group to optimise capacity utilisation and maximise efficiency at smelters, refineries and generating assets.

Based on the current management structure and internal reporting system, the Group has defined two business segments:

Metals segment: *Comprising RUSAL, including the power assets of RUSAL*

Power segment: *Mainly comprising power assets*

Metals segment

En+ Group's Metals segment, represented by RUSAL, produced approximately 5.6% of global aluminium output in 2021, and around 6.3% of the world's alumina. In 2021, RUSAL remained among the largest producers of primary aluminium and alloys globally.

RUSAL is fully self-sufficient in alumina capacity (with potential to supply more to third parties) and about 77% self-sufficient in bauxites and nephelines.

RUSAL's production chain includes bauxite and nepheline ore mines, alumina refineries, aluminium smelters and casting houses, foil mills, and packaging and wheel production centres.

RUSAL has a diversified product mix with a strong share of VAP in the portfolio (2.03 mtpa out of 3.90 mt of total sales).

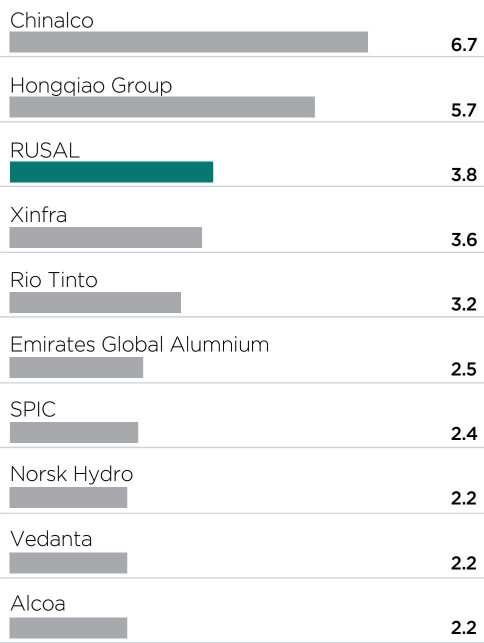
RUSAL's sales geography is represented by a diversified portfolio of regions, enabling it to deliver aluminium products to the domestic market and across all key global consuming regions (Europe, America and South East Asia).

To achieve the Group's ambitious net zero commitment, RUSAL is going to upgrade all of its production facilities, and introduce innovative technologies throughout the production chain. This involves the projects on conversion to pre-baked anode technology. Converting half of the capacity at Krasnoyarsk, Bratsk, Irkutsk, and Novokuznetsk smelters to pre-baked anode technology is planned for the period between 2025 and 2030. Once implemented, the programme will also help massively reduce the smelters' emissions of fluorides and resinous substances, including benzo(a) pyrene. This will also reduce energy consumption by 11–18%.

RUSAL is actively developing a groundbreaking inert anode technology. This technology will allow the significant reduction of GHG emissions from primary aluminium production. Only a few Scope 3 emissions will remain related to indirect emissions from the production of raw materials used for the making of inert anodes.

The efficient smelting technologies together with low-cost input material and utilities mix secure the Company's global leadership on the cost curve.

Top aluminium producers globally (mt)[1]



1. Based on the Company's internal data and peer companies' publicly available results, announcements, reports and other information.

With a well-established presence across five continents and a strong operational hub in Siberia, combining the assets of both our Metals and Power segments, the Group is able to capture commercial opportunities arising from its world-class assets and scale.

Power segment

En+ Group's Power segment is the largest independent power producer in Russia by installed capacity and the largest independent hydropower generator globally.

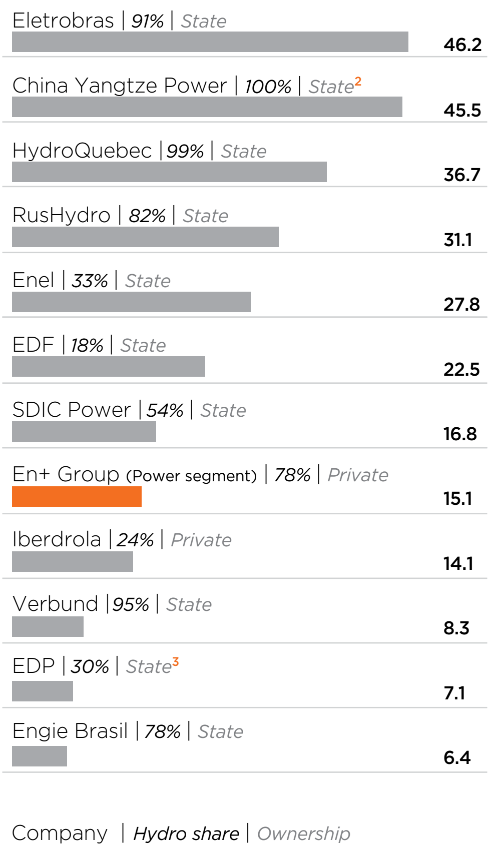
Russia has a well-developed power sector, which is essential for the country's high-energy-consuming economy. The total installed capacity of the Unified Energy System of Russia was 246.6 GW in 2021, with total electricity production of 1,114.55 TWh. The Russian electricity market is dominated by thermal assets, which represent 66% of the total installed capacity in Russia, while the Siberian region's capacity is roughly equally split between hydro (48.5%) and thermal (50.9%), with a minor share of solar (0.7%). The Group's power generation assets are located in the Eastern Siberia and Volga Regions, and the Company is engaged in all of the major areas of the power industry in Russia: electricity and heat generation; electricity, capacity and heat sales; heat distribution; retail energy trading and supply; engineering services; and electricity distribution and transmission.

Hydropower generation is a key area of the Power segment's business, with the majority of its assets located in Siberia. In 2021, En+ Group remained the largest producer in Siberia, with a 36% share of installed capacity. Furthermore, 78% of its total capacity is represented by hydropower assets, and it enjoys utilisation priority over the regulatory range of thermal power plants.

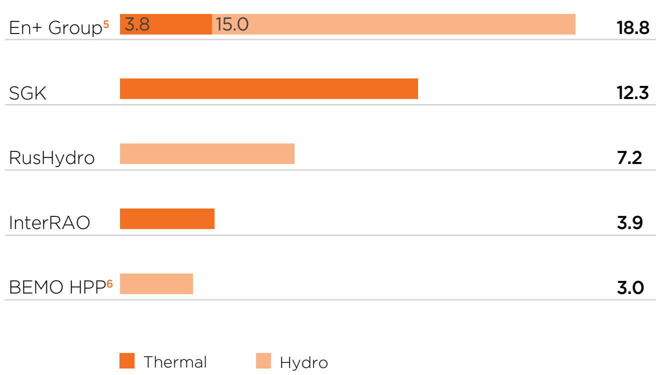
Coal prices are the main driver of day-ahead market prices since CHPs are the marginal producers. The output of HPPs, driven by weather conditions, is also relevant, as it affects the production volumes required from CHPs.

The Group's key priority in its Power segment is to provide a low-carbon hydropower supply to further reduce our overall carbon footprint and to achieve carbon neutrality by 2050. As part of this, the Group is planning to construct new power stations such as Nizhneboguchany HPP and Telmamskaya HPP for third-party sales. En+ is also continuing its New Energy programme for HPPs modernisation, as well as the modernisation programme for its CHPs.

Power companies by installed hydro capacity globally, 2021 (GW)[1]



Competitive landscape in Siberia by installed capacity, 2021 (GW)[4]



1. Based on latest filings.
2. Subsidiary of China Three Gorges Corporation.
3. State owned China Three Gorges Corporation owns 20.22% stake.
4. Based on the Company's internal data and peer companies' publicly available results, announcements, reports and other information.
5. The Company's assets capacity provided for Siberia only. The Company's total capacity is 19.4 GW, including 15.1 GW in hydropower.
6. BEMO (Boguchany HPP) is a 50:50 JV between UC RUSAL and RusHydro. It is operated by RusHydro.

BUSINESS REVIEW

METALS SEGMENT REVIEW

69.0 mt
global primary aluminium demand grew by 8.8% y-o-y

Market overview

Current situation on the market is largely affected by various sanctions imposed. In present circumstances any forecast or outlook made or previously made may very rapidly become irrelevant due to ongoing developments on the market and therefore the stakeholders should exercise due caution when making their analysis or decision.

The analysis below is referring to the situation as of the end of 2021.

Global aluminium demand

In 2021, global primary aluminium demand grew by 8.8% y-o-y to 69.0 mt. In the Rest of the World ex-China ("RoW") demand increased by 12.8% to 28.6 mt, while demand in China increased by 6.1% to 40.4 mt. Demand in China was suppressed throughout the August-November period due to power rationing policy but rebounded strongly in December with the normalisation of power supply.

Regardless, the global manufacturing sector ended 2021 on a positive note. The global manufacturing PMI rose for three consecutive months and, in December, settled at a respectable 54.2.

Global aluminium demand in construction, the largest segment of aluminium end-use, grew by 5% in 2021 compared to the previous year, and by 3% compared to pre-COVID 2019. The European construction sector has been supported by government stimulus packages and showed strength in late 2021 despite material supply issues. The US construction sector was supported by low mortgage rates, driving demand across the residential sector. In June, President Joe Biden signed a USD 1.2 trillion infrastructure bill, to be invested over the next eight years. China's construction sector showed a sharp decline in the second half of 2021. Pressure on developers to de-leverage—particularly from the government's Three Red Lines policy—has led to serious financial problems at Evergrande and other development companies.

Aluminium demand in the transportation sector, the second largest end-consuming segment, grew by 10% compared to 2020 levels, but at the same time remained 4% lower in comparison with 2019. Global semiconductor shortage forced OEMs to reduce their planned vehicle output in 2021. As per analyst consensus, approximately 8 million cars have either not been produced or were deferred in 2021 due to the semiconductor chip shortage. Many OEMs prioritised production of more expensive models, including EVs, in order to make up for material shortages and secure revenue. Global sales of BEVs and plug-in hybrids grew over 70% in 2021, while in China electric vehicle sales surged 154%. The majority of global OEMs have committed to achieving carbon neutrality, increasing BEVs and hybrids in their portfolios. This trend reinforces aluminium usage in the automotive sector, boosting further lightweighting and implementing new applications such as the battery tray.

The aerospace sector has also shown clear signs of a recovery. Key aircraft manufacturers, namely Airbus and Boeing, released their annual orders and deliveries for 2021, showing strong growth in aircraft deliveries of 8% and 117%, respectively.

The packaging sector remains a bright spot in aluminium demand growth. Having not contracted in demand in 2020, the segment grew another 9% in 2021. Beverage brands continue to position new drinks in aluminium cans as environmentally friendly, targeting sustainability-conscious consumers as well as carbon neutrality. The growing demand in the aluminium packaging segment is also evidenced by the fact that the largest can manufacturers are actively investing in expanding production capacities across the world.

Finally, aluminium demand in the power sector grew by 7% compared to 2020. Global trends in decarbonisation and the green energy transition have stimulated investment into renewable energy to address climate change. According to preliminary IEA data, additions of renewable power capacity set another annual record in 2021, with almost 290 GW added, driven by solar PV. This is 3% higher than 2020's already exceptional growth. Solar PV alone accounts for more than half of all renewable power expansion in 2021, followed by wind and hydropower. The majority of solar panels are fitted with aluminium frames, which provide mounting attachment points and protection for the edges of the glass laminate. In rooftop and commercial applications, mounting systems for PV panels are also made of aluminium to ensure lightweight and durability.

Overall, the global market recorded a deficit of 1.2 mt in 2021 compared to the 1.9 mt of surplus observed during the same period of 2020

Global aluminium supply, inventories and premiums

The worldwide supply of primary aluminium continued to grow in 2021, increasing by 3.9% y-o-y to 67.8 mt. At the same time, RoW production increased up by only 2.8% to 28.9 mt. High gas prices in Europe have caused significant disruption to the aluminium smelting production due to smelters' negative cash margins. Nine European smelters with 1.46 mtpa capacity executed or announced c. 720 ktpa of operating aluminium capacity cuts starting from 4Q 2021, which is equal to c. 14.4% of the total installed aluminium capacity in the region (c.5.02 mtpa). This has triggered a strong growth in EU aluminium ingot premiums, which rose by 33% on average over November—December 2021 period.

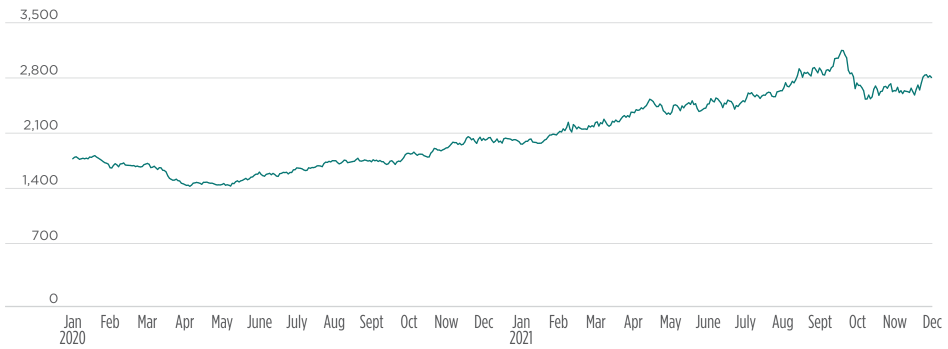
Regional premiums remained strong and elevated with Midwest Al premium reaching levels above 27.6 cents/ lb and EU DU premium – above USD 250 tonne. This growth occurred against the backdrop of sellers raising quotations on expectations that the premium will continue to climb in line with strong physical demand, and in anticipation of possible further smelting disruptions in Europe following a significant rise in the cost of power.

Supply growth in China slowed significantly from 7.4% in 9M 2021 to 4.7% for FY 2021 and the resulting supply in China was 39.0 mt. Despite easing of power supply tightness in China and a drop in domestic thermal coal prices, significant smelting capacity cuts are still in place due to power constraints in some provinces and dual control for decarbonisation targets. Chinese primary aluminium production has therefore fell steadily since July 2021.

Chinese unwrought aluminium and semis exports continued to recover during 4Q 2021 and numbers for the full year 2021 demonstrate strong growth of 15.6% y-o-y to 5.6 mt. This result was largely due to attractive export arbitrage and rising overseas demand. At the same time, Chinese import of unwrought aluminium and products, which include primary metal and unwrought, alloyed aluminium, was 3.2 mt in 2021, a new record high and up from 2.7 mt in 2020.

During 2021, aluminium inventories were mostly falling, starting from March, with total LME stocks remaining below 0.9 mt at the end of the year. Metal held outside of LME warehouses (off-warrant reported stocks) fell to 447 kt by the end of November 2021.

LME aluminium price dynamics (USD/t)[1]



[1] Bloomberg data.

67.8 mt
worldwide supply of primary aluminium increased by 3.9% y-o-y

The Company owns
11
aluminium smelters

In 2021, VAP sales increased
18.1%
y-o-y

Operational performance

Aluminium

RUSAL owns eleven[1] aluminium smelters, which are located in three countries: Russia (nine plants), Sweden (one plant) and Nigeria (one plant). The Company's core asset base is located in Siberia, Russia and accounts for approximately 93% of the Company's aluminium output in 2021. Among those, BrAZ and KrAZ together account for more than half of RUSAL's aluminium production. The Company also owns an 85% stake in a smelter located in Nigeria.

During 2021, RUSAL continued to implement the comprehensive programme designed to control costs and optimise the production process to strengthen the Company's position as one of the world's most cost-efficient aluminium producers.

The Group's primary aluminium production for the year ended 31 December 2021 was stable as compared to the previous year and totalled 3,764 kt. In line with its strategy, the Group continued to grow the share of VAPs in total sales. During 2021, VAP sales increased 18.1% y-o-y to 2,034 kt, with VAP share in total sales mix at 52%, compared to 44% in 2020.

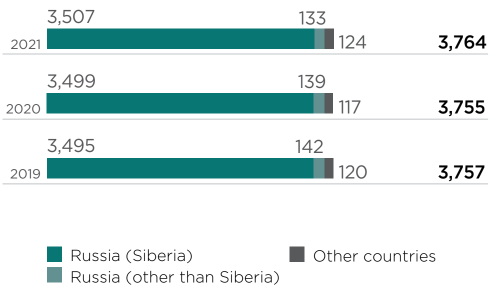
Alumina

The Group owns nine[2] alumina refineries as of the end of 2021. RUSAL's alumina refineries are located in six countries: Ireland (one plant), Jamaica (two plants, one legal entity), Ukraine (one plant), Italy (one plant), Russia (four plants), and Guinea (one plant). In addition, the Company holds a 20% equity stake in QAL, an alumina refinery located in Australia.

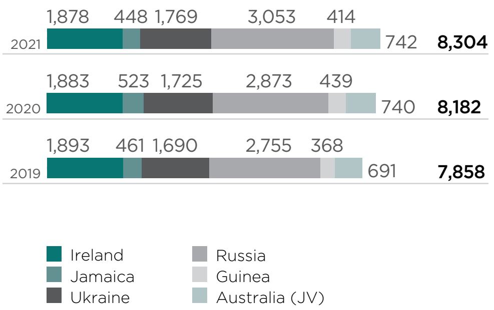
The Company's long position in alumina capacity secures sufficient supply for existing production and the prospective expansion of the Company's aluminium production capacity, and allows the Company to take advantage of favourable market conditions through third-party alumina sales.

RUSAL's total attributable alumina output increased 1.5% y-o-y to 8,304 kt in 2021 due to PGLZ becoming a part of RUSAL and being in operation for the entire reporting period, an increase in production capacities at Nikolaev Alumina Refinery, and normalisation of production processes at Achinsk Alumina Refinery, Urals Alumina Refinery and Queensland Alumina.

Aluminium production (kt)



Alumina production (kt)[3]



1. Aluminium operation is mothballed at the Alscon smelter, located in Nigeria.
2. Alumina operation is mothballed at the Eurallumina, located in Italy.
3. Pro-rata share of production attributable to the Group.

The Company operates
7
bauxite mines

Bauxites and nephelines

Bauxites and nephelines are key raw materials for alumina production. In 2021, the Group was approximately 77% self-sufficient in bauxites and nephelines.

Bauxites

The Group operates seven bauxite mines. RUSAL's bauxite mines are located in four countries: Russia (two mines), Jamaica (one mine), Guyana (one mine), and Guinea (three mines). The Company's long position in bauxite capacity helps secure sufficient supply for existing operations and the prospective expansion of the Company's alumina production capacity. In addition, the Group sells low volumes of bauxite to third parties.

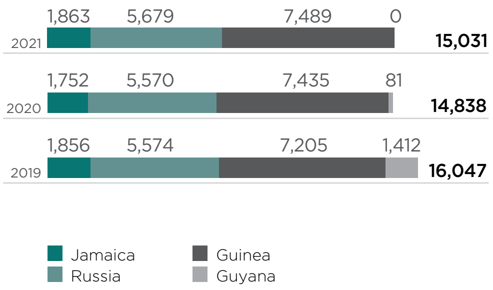
The Group's total attributable bauxite output[1] was 15,031 kt in 2021, as compared to 14,838 kt in 2020. An increase in mining of own bauxites occurred due to the increased demand of end-users. The most notable increase in bauxite mining volumes occurred at the Friguia and Dian-Dian mines.

Nephelines

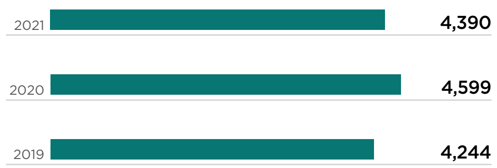
RUSAL's nepheline syenite production was 4,390 kt in 2021, as compared to 4,599 kt in 2020.

The reduction in mining volumes by 4.6% occurred due to the need to stabilise the quality of ore shipped to the plant.

Bauxite production (kt)[2]



Nepheline mines (Achinsk) (kt Wet)



1. Bauxite output data was:
   - Calculated based on a pro-rata share of the Company's ownership in the corresponding bauxite mines and mining complexes. The total production of the Company's fully consolidated subsidiary, Bauxite Company of Guyana Inc., is included in the production figures, notwithstanding that minority interests in each of these subsidiaries are held by third parties
   - Reported as wet weight (including moisture)
2. Pro-rata share of production attributable to the Group.

42%
increase in wheels production

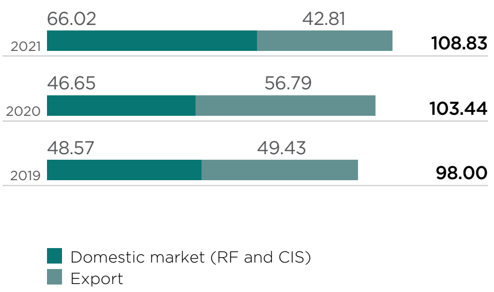
Downstream projects

Foil and packaging
The volume of foil produced by the Group's facilities in 2021 amounted to 108.83 kt, which was a 5.39 kt or 5.2% increase from 2020. The domestic supply of plain foil, converted foil and tape increased by 19.37 kt or 41.5% due to the increased demand. At the same time, the output of plain foil for export fell by 13.98 kt or 24.6% compared with 2020, due to the redistribution of production capacities towards the domestic market.

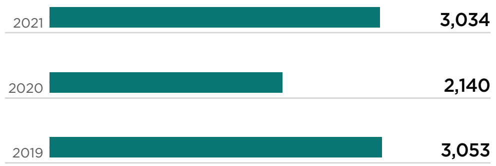
Wheel business
The output of wheels in 2021 increased by 42% due to a gradual recovery in new car production and sales, as well as recovery in after-market demand for aluminium wheels.

However, the impact of the COVID-19 pandemic on the industry remains significant, the global shortage of semiconductors led to temporary shutdowns of the main original equipment manufacturer-customers in Russia and the redistribution of the wheels production facilities towards after-market segment.

Foil production
(kt)



Aluminium wheels production
(ths pcs)



Other business

Powders
Powder production volumes in 2021 increased by 7.9 kt or 34.9% compared to 2020 due to the recovery of the European economy after the recession due to COVID-19 restrictions in 2020, as well as the increased use of aerated concrete in residential construction.

Secondary alloys
The amount of dross and aluminium-containing waste converted into secondary aluminium increased in 2021 by 1.4 kt or 10.0% to 15.3 kt compared to the previous year due to the growth of the volume of waste received for processing from the Company's enterprises.

Other mining assets
RUSAL owns and operates 15 mines and mine complexes, including bauxite mines (the resources of which are described above), two quartzite mines, one fluorite mine, two coal mines, one nepheline syenite mine and two limestone mines.

The long position in alumina capacity is supported by RUSAL's bauxite and nepheline syenite resource base.

RUSAL jointly operates two coal mines with SamrukEnergo, the energy division of Samruk-Kazyna through a 50/50 joint venture, Bogatyr Coal LLP.

26.25%
Rusal's shareholding stake in Norilsk Nickel

Bogatyr Coal LLP
Bogatyr Coal LLP, located in Kazakhstan, is a 50/50 joint venture between RUSAL and Samruk-Energo.

Bogatyr Coal LLP, which produced approximately 44.63 mt of coal in 2021, has approximately 1.61 billion tonnes of Proved and Probable Ore Reserves and has Measured Mineral Resources and Indicated Mineral Resources totalling approximately 1.96 billion tonnes as of 31 December 2021 (reported on under JORC by SRK). Bogatyr Coal LLP generated sales of approximately USD 243 million in 2020 and USD 241 million in 2021. Russian and Kazakh customers contribute to approximately 30% and 70% of sales respectively.

Investment in Norilsk Nickel

Norilsk Nickel is the world's largest palladium producer, the largest high-grade nickel producer, and one of the leading producers of platinum, copper, and cobalt. RUSAL held a 26.25% shareholding (nominal) stake in Norilsk Nickel as at the latest practicable date.

RUSAL's shareholding in Norilsk Nickel allows for significant diversification of earnings through Norilsk Nickel's exposure to PGMs[1] and non-ferrous metals (nickel, copper, cobalt), and broadens RUSAL's strategic opportunities. The Company's objective is to maximise the value of this investment for all shareholders.

Norilsk Nickel's profile and financial results[2]
As of 31 December 2020, Norilsk Nickel's resource base on the Taimyr and Kola Peninsulas consisted of 743 mt of Proven and Probable Ore Reserves and 2,019 mt of Measured and Indicated Mineral Resources. Its key assets are located in the Norilsk Region, the Kola Peninsula, and the Trans-Baikal Territory in Russia, and in Finland.

In 2021, Norilsk Nickel produced 193 kt of nickel (down 18% compared to 2020), 407 kt of copper (down 16% compared to 2020), 2,616 koz of palladium (down 7% compared to 2020) and 641 koz of platinum (down 8% compared to 2020).

Metals production in 2021, compared to 2020, decreased mainly due to the temporary suspension of mining operations at the Oktyabrsky mine (recovered to full capacity in May 2021) and Taimyrsky mine (recovered to full capacity in December 2021) after flooding caused by an inflow of underground water, as well as the temporary suspension of the Norilsk Concentrator and consequent repairs (fully recovered in December 2021). The production figures above do not include the production results of Nkomati. In 2Q 2021, Nkomati was placed on limited care and maintenance due to the cessation of production activity.

Norilsk Nickel's metal sales are highly diversified by region: Europe, Asia, North and South America, Russia and the CIS; and by product: nickel, copper, palladium, platinum, semi-products and other metals.

The market value of RUSAL's investment in Norilsk Nickel amounted to USD 12,395 million as of 31 December 2021, which decreased in comparison with the market value as at 31 December 2020 (USD 14,123 million). The positive effect from the increase in metal prices was offset by: (1) flooding of the Oktyabrsky and Taimyrsky mines and an accident at Norilsk Concentrator, and (2) changes in legislation (temporary export duties and an increase in mineral extraction tax).
In addition, in 2021, as part of the Norilsk Nickel buyback programme, RUSAL disposed of approximately 2.33% of the issued share capital of Norilsk Nickel for a total consideration of (approximately) USD 1.4 billion. After cancelation of repurchased (treasury) shares by Norilsk Nickel, RUSAL's stake in Norilsk Nickel decreased from 27.82% to 26.25% of the total issued share capital of Norilsk Nickel.

1 PGMs are platinum group metals.
2 Production and operational data in this section are derived from www.nornik.ru/en/.

Taishet aluminium smelter was opened in December 2021 to produce aluminium

428.5 kt

per year

Projects

BEMO project

The Boguchany (BEMO) project involves the construction of the 3,000 MW Boguchany HPP (average annual electricity output: 17.6 billion kWh) and the Boguchany Aluminium Smelter capable of producing 600 kt of metal per annum in the Krasnoyarsk Territory in Siberia.

The construction of the Boguchany Aluminium Smelter is divided into two stages (each stage with capacity for 298 kt of aluminium per annum). The first part of the first stage (149 kt of aluminium per annum, 168 pots) was launched in 2015, and the second part of the first stage was launched in March 2019. In May 2019, the first stage of the smelter reached its design capacity. In 2021, 292 kt of aluminium and alloys was produced, which is 2 kt more than in 2020.

The second stage of the Boguchany Aluminium Smelter is to be considered with a strategic partner, RusHydro, subject to the state of the market and the availability of project financing.

Boguchany HPP is the fourth step in the Angara Hydroelectric Power Chain, the largest hydropower plant project ever completed in Russia. Construction of the power plant was suspended in Soviet times due to the lack of financing, but was resumed in May 2006 by RUSAL and RusHydro, after they jointly agreed to complete it.

The project's 79-metre-high and 2,587-metre-long composite gravity, rock-fill dam was completed at the end of 2011, and nine 333 MW hydropower units of the Boguchany HPP commenced operation between 2012 and 2014. The total installed capacity of all nine hydro units in operation amounts to 2,997 MW.

The hydropower plant started the commercial supply of electricity to the wholesale electricity and capacity market on 1 December 2012. In 2021, the hydropower plant produced and delivered 17.238 TWh to the wholesale electricity and capacity market, which is 2.3%, or 0.4 TWh lower than in 2020.

Taishet

Construction of the Taishet aluminium smelter in Taishet, in the Irkutsk Region (Eastern Siberia), was started in 2006. Due to unfavourable market conditions, RUSAL decided to suspend the project in 2009. After the economic recovery and improvement in market conditions in 2016, the Board of Directors of RUSAL decided to resume the construction of LC-1 (first series) of the Taishet smelter and approved the start of preliminary work. Actual construction of the Taishet Aluminium Smelter resumed in 2017.

LC-1 (first series) has a design production capacity of 352 pots, or 428.5 ktpa. Electricity consumption by LC-1 (first series) amounts to 6,370 million kWh. On 16 December 2021, the first electrolyzers were put into trial operation.

Taishet aluminium smelter

Assets overview

	Location	Installed capacity	2020 production	2021 production	Capacity utilisation rate
ALUMINIUM SMELTERS					
Bratsk aluminium smelter	Russia (Irkutsk Region)	1,009 ktpa	1,004 kt	**1,009 kt**	100%
Krasnoyarsk aluminium smelter	Russia (Krasnoyarsk Territory)	1,019 ktpa	1,020 kt	**1,019 kt**	100%
Sayanogorsk aluminium smelter	Russia (Republic of Khakassia)	542 ktpa	529 kt	**536 kt**	99%
Novokuznetsk aluminium smelter	Russia (Kemerovo Region)	215 ktpa	215 kt	**215 kt**	100%
Khakas aluminium smelter	Russia (Republic of Khakassia)	297 ktpa	308 kt	**303 kt**	102%
Irkutsk aluminium smelter	Russia (Irkutsk Region)	422 ktpa	422 kt	**424 kt**	100%
Taishet Aluminium Smelter[1]	Russia (Irkutsk Region)	428.5 ktpa	-	**0**	0%
Kandalaksha aluminium smelter	Russia (Murmansk Region)	76 ktpa	70 kt	**63 kt**	83%
Volgograd aluminium smelter	Russia (Volgograd Region)	69 ktpa	70 kt	**70 kt**	102%
KUBAL	Sweden	128 ktpa	117 kt	**124 kt**	97%
ALSCON[2]	Nigeria	-	-	**-**	0%
Boguchany aluminium smelter[3]	Russia (Krasnoyarsk Territory)	298 ktpa	290 kt	**292 kt**	98%
ALUMINA REFINERIES					
Achinsk Alumina Refinery	Russia (Krasnoyarsk Territory)	1,069 ktpa	900 kt	**907 kt**	85%
Bogoslovsk Alumina Refinery	Russia (Sverdlovsk Region)	1,030 ktpa	990 kt	**977 kt**	95%
Urals Alumina Refinery	Russia (Sverdlovsk Region)	900 ktpa	916 kt	**917 kt**	102%
PGLZ Alumina Refinery	Russia (Leningrad Region)	265 ktpa	67 kt	**253 kt**	95%
Friguia Alumina Refinery	Guinea	650 ktpa	439 kt	**414 kt**	64%
Queensland Alumina Ltd.[4]	Australia	3,950 ktpa	740 kt	**742 kt**	94%
Eurallumina	Italy	1,085 ktpa	-	**-**	0%
Aughinish Alumina Refinery	Ireland	1,990 ktpa	1,883 kt	**1,878 kt**	94%
Windalco	Jamaica	1,210 ktpa	523 kt	**448 kt**	37%
Nikolaev Alumina Refinery	Ukraine	1,759 ktpa	1,725 kt	**1,769 kt**	101%
BAUXITE MINES					
Timan Bauxite	Russia (Republic of Komi)	3,300 ktpa	3,310 kt	**3,405 kt**	103%
North Urals Bauxite Mine	Russia (Sverdlovsk Region)	3,000 ktpa	2,260 kt	**2,274 kt**	76%
Compagnie des Bauxites de Kindia	Guinea	3,500 ktpa	2,941 kt	**2,652 kt**	76%
Friguia Bauxite and Alumina Complex	Guinea	2,100 ktpa	1,423 kt	**1,544 kt**	74%
Bauxite Company of Guyana Inc.[5]	Guyana	1,700 ktpa	81 kt	**0 kt**	0%
Windalco	Jamaica	4,000 ktpa	1,752 kt	**1,863 kt**	47%
Bauxite Company of Dian-Dian	Guinea	3,000 ktpa	3,071 kt	**3,293 kt**	110%

1. Pre-operation verifications and testing began in December 2021.
2. Alscon aluminium production is mothballed.
3. A 50/50 joint venture of RUSAL and RusHydro. Capacity and production volumes of the BEMO project are not included to the Company's consolidated operating data.
4. Pro-rata share of capacity and production attributable to RUSAL.
5. Mothballed in February 2020.

POWER SEGMENT REVIEW

3.8%
increase in electricity consumption in the Siberian IES

Market overview[1]

Overview of the Russian power sector

The Russian Federation's power sector is among the largest in the world, with installed electricity capacity of the Unified Energy System (UES) of Russia of 246.6 GW in 2021, and electricity output of 1,114.55 TWh. The UES of Russia covers the most populated areas of Russia. Grid interconnections between different energy systems are limited by long distances, with the Russian wholesale power and capacity market split into two market pricing and four non-market pricing zones. The first pricing zone (European-Ural)[2] includes the integrated energy systems (IES) of the North-West, Centre, Middle Volga, Urals and South in the European part of Russia.

The second pricing zone, the Siberian IES, encompasses Siberia. The electricity prices of the two market price zones are driven by the differences in capacity and fuel mix in the respective price zones, while grid limitations are yet another factor affecting prices in the second pricing zone. The zones where special rules are used to set prices instead of the market environment, include the Kaliningrad and Arkhangelsk Regions, Komi Republic and the Russian Far East.

The Group's power generation facilities are mostly located in the second price zone, the Siberian IES, which covers 4,944,300 km^2 and has a population of c. 19 million. The Siberian IES includes 118 power plants with an aggregate installed capacity of 52.3 GW, with 25.3 GW (48.4%) provided by HPPs, 26.6 GW (50.9%) by CHPs and 350.2 MW (0.7%) by SPPs (solar). The backbone grids of the Siberian IES consist of 102,807 km^2 of HV power lines of 110, 220, 500 and 1,150 kV[3].

A unique feature of the Siberian IES is the significant role of HPPs in both the installed electricity capacity mix and electricity output. Thermal power in the Siberian IES is generated mostly through coal-fired power plants, which are primarily located near regions where the coal is mined.

Electricity demand

Electricity consumption in the UES of Russia in 2021 increased by 5.5% y-o-y to 1,090.4 TWh. Electricity consumption in the European-Ural zone grew 5.9% to 830.2 TWh, and by 3.8% to 217.3 TWh in the Siberian IES.

Electricity supply

The total installed electricity capacity of the UES of Russia as of 1 January 2022 amounted to 246.6 GW and increased by 1.3 GW in 2021. The increase can be explained by the commissioning of 2.7 GW of new capacity, decommissioning of 1.9 GW of old capacity, and a 0.5 GW capacity increase linked to remarking, corrections, etc. In the second pricing zone, 60 MW was commissioned, no capacity was decommissioned and there was an increase in capacity as a result of 51 MW being remarked.

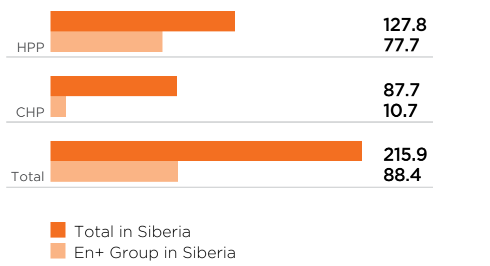
In 2021, electricity output in the UES of Russia increased by 6.4% y-o-y to 1,114.55 TWh. Electricity output in the European-Ural pricing zone increased by 7.0% to 851.7 TWh.

Electricity output within the Siberian IES in 2021 was 215.9 TWh, up 4.3% y-o-y. Output from HPPs in Siberia increased by 8.5% y-o-y to 127.8 TWh. In 2021, the Group's HPPs generated approximately 60.8% of the total electricity produced by hydropower stations in the Siberian IES. At the same time, thermal power plants decreased their electricity production by 1.4% y-o-y to 87.7 TWh. In 2021, combined heat and power (CHP) plants accounted for 40.6% of full-year electricity output within the Siberian IES, while HPPs accounted for 59.2% and SPPs contributed 0.2%.

1. Unless otherwise stated, data for the Power segment's "Market overview" section is sourced from ATS, Association "NP Market Council", System Operator of the Unified Energy System of the Russian Federation.
2. Comprises the Central, Central Volga, Urals, North-West and South Energy systems.
3. According to the System Operator of the Unified Energy System of the Russian Federation (www.so-ups.ru/).

4.3%
increase in electricity output within the Siberian IES

Electricity output in Siberian IES in 2021 (TWh)



Electricity and capacity prices

In the Siberian IES, electricity spot prices are effectively determined by the production costs of the least efficient coal-fired generation plants, with HPPs acting as price takers. Over the long term, electricity prices tend to move with prices of thermal coal. A significant proportion of the power generated by Siberian CHPs is produced using locally sourced brown coal.

Due to seasonality in demand and the intermittency of hydropower, the price of electricity can exhibit significant fluctuations throughout the course of the year.

One of the major factors exerting significant influence in the medium term is the water inflow to and water volumes in the reservoirs of Siberian HPPs, which determines the availability of low-cost hydropower for the wholesale market.

Reflecting the long-term nature of these decisions, the capacity market functions rather differently to the electricity market, with annual auctions carried out to determine the price and select an optimal set of generating facilities to meet the forecast demand in each pricing zone. Capacity prices are currently determined through to 2026, and prices are indexed annually at the previous year's Consumer Price Index (CPI) minus 0.1% – the indexation is applied starting from 1 January of the year when the auction was conducted, until 1 January of the year when the capacity is supplied. On 10 October 2021, the Russian Government issued Order No. 1852, changing the length of the period for which the results of the long-term auctions apply; effective from 2022, it is now 3 years instead of the previous 6 years. The same Government Order sets a deadline of 15 November 2023 for a capacity auction for the period till 2027. The shorter horizon is to ensure planning flexibility and better accommodate investment decisions taken in the electric energy industry.

7.1%
increase in the average electricity spot price on the day-ahead market in the 2nd price zone

Capacity prices

Price determined in capacity auctions (excl. CPI, '000 RUB/MW/month):

	2020	2021	2022	2023	2024	2025	2026
Second price zone	191	**225**	264	267	279	303	299

		2021	2020	Change, %
CAPACITY PRICE (INCL. CPI MINUS 0.1% INDEXATION):				
First price zone	'000 RUB/MW/month	**151.0**	126.5	+19.4%
Second price zone	'000 RUB/MW/month	**253.2**	209.2	+21.0%

The CCO price for the European-Ural (first) pricing zone grew by 19.4% year-on-year in 2021 (including CPI minus 0.1% indexation). The capacity price for the Siberian IES (second) zone increased by 21.0% y-o-y in 2021 (including CPI minus 0.1% indexation).

An increase in demand (+4.5%), considered for CCO procedure, was the key factor of the CCO price growth y-o-y in 2021.

Electricity prices

		2021	2020	Change, %
ELECTRICITY SPOT PRICES[1]:				
First price zone	RUB/MWh	**1,406**	1,211	+16.1%
Second price zone	RUB/MWh	**934**	872	+7.1%
Nizhny Novgorod Region	RUB/MWh	**1,454**	1,259	+15.5%
Irkutsk Region	RUB/MWh	**807**	793	+1.8%
Krasnoyarsk Territory	RUB/MWh	**857**	789	+8.6%

In 2021, the average electricity spot price on the day-ahead market in the second price zone increased by 7.1% to 934 RUB/MWh y-o-y. This dynamic was driven by fewer low-price periods compared to 2020, when there were transmission constraints on the transit between East and West Siberia on the back of high HPP generation. These factors predominantly affected prices in 4Q 2021. Higher coal prices, which affected the CHPs' price bids levels on the market, and change in market demand structures also contributed to the price increases.

In 2021, average electricity spot prices in the Irkutsk Region and Krasnoyarsk Territory increased by 1.8% to 807 RUB/MWh and by 8.6% to 857 RUB MWh, respectively. The lower prices in the Irkutsk Region reflected ongoing transmission constraints on the transit between East and West Siberia in the period from October to December.

1. Day ahead market prices, data from ATS and Association "NP Market Council".

90.4 TWh
The Group's total electricity production in 2021

Operational performance

As at 31 December 2021, the total installed electricity capacity of the Group's power assets amounted to 19.4 GW[1], while its total installed heat capacity amounted to 15.0 Gcal/h. As at 31 December 2021, 77.8% of the installed electricity capacity was represented by HPPs, with the remaining 22.2% accounted for by CHPs (which are predominantly coal-fired) and one solar plant.

The Company produced 90.4 TWh[2] of electricity in 2021, which represented 8.0% of Russia's total electricity generation and 41.9% of the Siberian IES's total electricity generation for the period.

Hydropower generation

Hydropower generation is the main focus of the Group's Power segment. The Group operates five HPPs[3], including three of the five largest HPPs in Russia and of the twenty largest HPPs globally, in each case in terms of installed electricity capacity. In 2021, the Power segment's HPPs produced 77.7 TWh of electricity, which accounted for 85.9% of the total electricity generated by the Group.

Total electricity output by the Angara cascade HPPs (Irkutsk, Bratsk and Ust-Ilimsk HPPs) increased by 12.1% y-o-y to 53.0 TWh in 2021, due to increased water reserves in the reservoirs. Water levels in Lake Baikal reached 457.23 metres in 2021 vs. 457.12 metres in 2020. Water levels in the Bratsk reservoir reached 402.03 metres in 2021 vs. 400.60 metres in 2020.

In 2021, Krasnoyarsk HPP's total power generation increased by 12.3%, from 22.0 TWh in 2020 to 24.7 TWh. The increase was the result of a more intensive state-regulated drawdown in the Krasnoyarsk reservoir due to high water reserves which resulted from abnormally high water inflows in 2Q 2021. The maximum mark of the headwater level of the Krasnoyarsk reservoir was 242.60 metres (1.5 metres higher than last year).

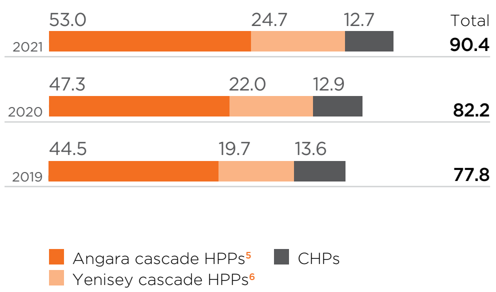
In 2021, Bratsk HPP and Krasnoyarsk HPP generated their highest ever annual power volumes.

Combined heat and power plants

The Group's CHPs decreased electricity output in 2021 by 1.6% y-o-y to 12.7 TWh, mainly due to increased generation by the Angara cascade HPPs in 2021. Heat generation amounted to 28.5 million Gcal (up 5.9% y-o-y) reflecting weather conditions – the average temperature during 2021 was 1.7°C lower than during the last year.

Abakan Solar Power Plant generated 6.1 GWh in 2021 (up 10.9% y-o-y) due to a higher number of sunny days during the reporting period.

Total Electricity Production[4] (TWh)



Heat generation (mn Gcal)

1. Including Onda HPP, with installed power capacity of 0.08 GW (located in the European part of Russia, leased to UC RUSAL); excluding Boguchany HPP with installed power capacity of 3,000 MW (50/50 JV between UC RUSAL and RusHydro).
2. Excluding Onda HPP, with installed power capacity of 0.08 GW (located in the European part of Russia, leased to UC RUSAL); excluding Boguchany HPP (50/50 JV between UC RUSAL and RusHydro).
3. Including Onda HPP.
4. Excluding Onda HPP, with installed power capacity 0.08 GW (located in European part of Russia, leased to UC RUSAL); excluding Boguchany HPP, with installed power capacity of 3,000 MW (50%/50% JV of UC RUSAL and RusHydro).
5. Includes Irkutsk, Bratsk, Ust-Ilimsk HPPs.
6. Krasnoyarsk HPP.

The Group is involved in heat and electricity sales directly to end-users

Retail

The Company, through its subsidiaries LLC Irkutskenergosbyt, JSC Volgaenergosbyt and LLC MAREM+, purchases electricity on the wholesale market (from both the generating facilities of the Group and third parties) and then resells it on the retail market to both industrial consumers that do not have access to the wholesale market and residential consumers. The Group is involved in heat and electricity sales directly to end-users.

In 2007, the Group's subsidiaries in the Irkutsk and Nizhny Novgorod Regions were granted the status of guaranteeing suppliers within these regions. In accordance with this status, the Group is under an obligation to conclude an electricity supply contract with any consumer located within the boundaries of these operational areas that applies for such a contract.

Electricity transmission and distribution

As at 31 December 2021, the Group operated a transmission and distribution system of approximately 41,600 km of high and low voltage lines with an annual output of approximately 50.5 TWh. Through this system the Group transmits electricity generated at the Angara cascade HPPs to wholesale and retail consumers, including RUSAL's aluminium smelters. Other generation facilities of the Group, such as Krasnoyarsk HPP and Avtozavodskaya CHP, do not use this transmission network, as they are not located within close geographical proximity to the network.

Coal production

The Coal segment provides the Group's CHPs with a self-sufficient coal resource base and covers En+ Group's internal coal demand. A portion of the coal production is sold to third parties both in Russia and abroad.

Coal prices in the domestic market are determined based on the level of competition and demand from various categories of consumers in the region (energy, utilities, other industrial enterprises, and the general population).

2.1 TWh

Additional hydropower output enabled by the New Energy programme

Projects

The New Energy modernisation programme

New Energy is a programme aimed at modernising the power plants of the Angara and Yenisei HPP cascade with a view to ramping up the energy output from the same volume of water passing through the hydropower turbines. Another objective is to reduce the Company's carbon footprint by curbing the greenhouse gas emissions of the Company's coal-fired power plants. In 2021, the programme has enabled En+ Group to increase its power output by 2.1 TWh.

The programme assumes a large-scale overhaul and replacement of the core equipment of the Company's largest Siberian HPPs, i.e. the Krasnoyarsk, Bratsk, Irkutsk and Ust-Ilimsk HPPs. The programme envisages modernisation of hydroelectric generation units and the replacement of runners. Increased efficiency will be provided by the new runners' improved blades and by utilising new materials, with an efficiency rate increase of up to 8% depending on the runner. Higher safety and better reliability of the HPPs is another priority of the modernisation programme, which will mitigate the risks associated with cavitation and address the HPP generator wear problem.

The modernisation programme investment is expected to total RUB 21 billion in the period to 2026 (around USD 282.7 million as at 31 December 2021[1]), including funds already invested in the project (RUB 13 billion as at 31 December 2021).

The HPP efficiency will match that of the world's best performers after the New Energy programme is completed, providing for better reliability and a higher quality power supply to our Siberian consumers. On top of the expected economic improvement, the New Energy programme will positively impact the environment of the Siberian regions in which we operate. Hydroelectric energy is used to partially replace the energy generated by coal-fired power plants and thus prevent GHG emissions of 2.44 mt of CO_2e in 2021. The modernised turbines also incorporate an up-to-date runner design that prevents the leakage of turbine oil into water.

In 2021, the Company launched a new, the second in a row hydroelectric unit at the Irkutsk HPP and began works on the next hydroelectric unit replacement. The Company replaced one runner and started works for the replacement of another runner at the Bratsk HPP. Two new runners were delivered to the Krasnoyarsk HPP and technical re-equipment works began.

Bratsk HPP (18 generation units)	**Ust-Ilimsk HPP** (16 generation units)	**Krasnoyarsk HPP** (12 generation units)	**Irkutsk HPP** (8 generation units)
PROJECTS COMPLETED AND UNDERWAY			
13 of 18 runners replaced (2007–2021)	4 of 16 runners replaced (2014–2018)	2 of 12 runners replaced (2016–2019)	2 generation units replaced in 2020–2021
5 remaining runners to be replaced by 2026		6 of 12 runners to be replaced by 2025	2 of 8 generation units to be replaced by 2023

[1] Calculated based on USD/RUB exchange rate of 74.29 as at 31 December 2021.

The Group will improve the reliability and safety of

33.7%

of total CHP capacity

CHP modernisation programme
The Group participated in the state programmes for CHP modernisation, providing us with a guaranteed return on investment. The Capacity Allocation Contracts (CAC) will be signed between buyers, market regulator (ATS) and generating companies in the wholesale market, setting the key criteria for modernisation, parameters of capacity supply after the modernisation and return on investment.

Through this programme the Group will improve the reliability and safety of 1,445 MW of its CHP capacity (33.7% of total CHP capacity). Total expected CAPEX for CHPs is USD 266 million[1] (RUB 19.7 billion) in 2020–2026. The current approved generating facilities should be completed and launched by 2026, with the project's internal rate of return at around 14%.

In 2021, the Company delivered equipment and started construction and installation work under the CAC projects at CHP-6 in Bratsk and, at Novo-Irkutsk CHP, equipment was supplied to replace three turbo generators for CHP-10. In 2022, the Company is planning to complete the replacement of the main equipment at CHP-6 in Bratsk and at the Novo-Irkutsk CHP.

Small HPP project
As part of the state programme backed by the CAC mechanism for renewable projects, En+ Group is implementing the small-scale Segozerskaya HPP (8.1 MW) in Karelia (Russia). Total expected CAPEX for small HPP construction is approximately USD 22 million[1] (RUB 1.6 billion).

In 2021, the Group completed preparatory work at the construction site and began construction and installation work on the Segozerskaya HPP, and in 2022, the Company is planning to complete construction work, supply and installation of three turbine units.

En+ Group has formed a portfolio of projects with a total installed capacity of about 200 MW. Depending on the results of the project feasibility studies, a decision will be made on when these projects will be implemented.

Segozerskaya HPP project

[1] Calculated based on USD/RUB exchange rate of 74.29 as at 31 December 2021.

Assets overview

	Location	Installed capacity	2020 production	2021 production
HYDROPOWER PLANTS				
Irkutsk HPP	Russia (Irkutsk Region)	687.1 MW	4.1 TWh	**4.8 TWh**
Bratsk HPP	Russia (Irkutsk Region)	4,500 MW	22.4 TWh	**28.5 TWh**
Ust-Ilimsk HPP	Russia (Irkutsk Region)	3,840 MW	20.8 TWh	**19.6 TWh**
Krasnoyarsk HPP	Russia (Krasnoyarsk Territory)	6,000 MW	22.0 TWh	**24.7 TWh**
COMBINED HEAT AND POWER PLANTS				
CHP-10	Russia (Irkutsk Region)			
• Electricity		1,110 MW	3.1 TWh	**3.0 TWh**
• Heat		563 Gcal/h	0.4 mn Gcal	**0.3 mn Gcal**
CHP-9	Russia (Irkutsk Region)			
• Electricity		540.0 MW	1.9 TWh	**1.8 TWh**
• Heat		2 401.8 Gcal/h	6.0 mn Gcal	**6.2 mn Gcal**
Novo-Irkutsk CHP	Russia (Irkutsk Region)			
• Electricity		726 MW	2.7 TWh	**2.7 TWh**
• Heat		2,075.8 Gcal/h	5.5 mn Gcal	**5.8 mn Gcal**
Ust-Ilimsk CHP	Russia (Irkutsk Region)			
• Electricity		515 MW	0.7 TWh	**0.8 TWh**
• Heat		1,015.0 Gcal/h	1.6 mn Gcal	**1.8 mn Gcal**
CHP-11	Russia (Irkutsk Region)			
• Electricity		320.3 MW	0.7 TWh	**0.5 TWh**
• Heat		1,056.9 Gcal/h	0.9 mn Gcal	**1.0 mn Gcal**
CHP-6	Russia (Irkutsk Region)			
• Electricity		282 MW	0.7 TWh	**0.7 TWh**
• Heat		2,071.2 Gcal/h	3.6 mn Gcal	**3.7 mn Gcal**
Novo-Ziminskaya CHP	Russia (Irkutsk Region)			
• Electricity		260 MW	1.1 TWh	**1.1 TWh**
• Heat		818.7 Gcal/h	1.5 mn Gcal	**1.6 mn Gcal**
Avtozavodskaya CHP	Russia (Nizhny Novgorod Region)			
• Electricity		480 MW	1.7 TWh	**1.8 TWh**
• Heat		2,172.0 Gcal/h	3.3 mn Gcal	**3.7 mn Gcal**
SOLAR POWER PLANT				
Abakan solar power plant	Russia (Republic of Khakassia)	5.2 MW	5.5 mn kWh	**6.1 mn kWh**
OTHER ASSETS[1]				
• Electricity		142.4 MW	0.8 TWh	**0.7 TWh**
• Heat		2,802.9 Gcal/h	4.2 mn Gcal	**4.5 mn Gcal**

[1] Other assets include Onda HPP and small scale generators and heat producers.

FINANCIAL REVIEW

KEY HIGHLIGHTS

Financial review

The following table sets forth selected data from the Group's key financial information:

	As at or year ended 31 December	
(USD mn)	2021	2020
Revenues	**14,126**	10,356
Gross profit	**4,952**	2,548
Gross profit margin	**35.1%**	24.6%
Results from operating activities (EBIT)	**2,898**	1,010
Operating profit margin	**20.5%**	9.8%
Pre-tax profit	**4,138**	1,125
Profit for the year	**3,534**	1,016
Net profit margin[1]	**25.0%**	9.8%
Adjusted EBITDA2	**3,992**	1,861
Adjusted EBITDA margin[3]	**28.3%**	18.0%
Net debt[4]	**8,581**	9,826
Net working capital[5]	**2,753**	1,614
Free cash flow[6]	**1,705**	968
Basic earnings per share[7]	**4.264**	1.320
Equity attributable to shareholders of the Company	**5,775**	3,156

1. Net profit margin for any period represents net profit or loss for the relevant period divided by total revenues for the relevant period and expressed as a percentage, in each case attributable to the Group, Power or Metals segment, as the case may be.
2. Adjusted EBITDA for any period represents the results from operating activities adjusted for amortisation and depreciation, impairment of noncurrent assets and gain/loss on disposal of property, plant and equipment for the relevant period, in each case attributable to the Group, Power or Metals segment, as the case may be.
3. Adjusted EBITDA margin for any period represents adjusted EBITDA for the relevant period divided by total revenues for the relevant period and expressed as a percentage, in each case attributable to the Group, Power or Metals segment, as the case may be.
4. Net debt represents the sum of loans and borrowings and bonds outstanding less total cash and cash equivalents as at the end of the relevant period, in each case attributable to the Group, Power or Metals segment, as the case may be.
5. Net working capital represents inventories plus shortterm trade and other receivables (excluding dividend receivables from related parties) less trade and other payables as at the end of the relevant period, in each case attributable to the Group, Power or Metals segment, as the case may be.
6. Free cash flow means, for any period, the cash flows generated from operating activities less net interest paid, capital expenditures, restructuring fees and other payments related to issuance of shares, adjusted for payments from settlement of derivative instruments plus dividends from associates and joint ventures.
7. The earnings per share calculation is based on a 502 million and 518 million weighted average number of shares in 2021 and 2020, respectively.

FINANCIAL OVERVIEW

The results of the Group's operations are divided into the Power and Metals segments. The Power segment comprises the power industry, including power generation, power trading and supply. It also includes supporting operations engaged in the supply of coal resources to the Group. The Metals segment consists of RUSAL, which includes RUSAL's equity investment in Norilsk Nickel.

In 2021, RUSAL accounted for approximately 5.6% of the world's aluminium output and about 6.3% of the world's alumina production. RUSAL's offices are operating in 20 countries all over the world and across five continents.

The Company's management believes that the division of the results of the Group's operations into the Power and Metals segments enables investors and analysts to assess the parts of the Group's business which are under the Company's direct day-to-day operational management.

In its comparison of period to period results of operations, the Group presents its results of operations on a consolidated basis after intersegmental eliminations, in order to analyse changes, developments and trends by reference to the individual segment's results of operations (the Power and Metals segments). Amounts attributable to the segments are presented prior to intersegmental eliminations between them.

Revenues

The following table sets forth the Group's revenue from sales, broken down by each product sold by the Group, for the years indicated:

	Year ended 31 December	
(USD mn)	2021	2020
Sales of primary aluminium and alloys	**9,766**	6,969
Sales of electricity	**1,525**	1,169
Sales of alumina and bauxite	**612**	534
Sales of semifinished products and foil	**767**	547
Sales of heat	**465**	426
Other revenues	**991**	711
Total revenues	**14,126**	**10,356**

The following table sets forth the Group's revenue by business segment for the years indicated:

	Year ended 31 December	
(USD mn)	2021	2020
Metals segment	**11,994**	8,566
Power segment	**3,138**	2,697
Business segment revenues	**15,132**	**11,263**
Elimination of intersegmental revenues	**(1,006)**	(907)
Total revenues	**14,126**	**10,356**

The Group's revenue is mainly attributable to the Metals segment's operations. In 2021 and 2020, its revenue (before intersegmental elimination) accounted for 79.3% and 76.1% of the Group's revenue, respectively. In 2021 and 2020, the Power segment's revenue (before intersegmental elimination) accounted for 20.7% and 23.9% of the Group's revenue, respectively.

The Group's revenue increased by USD 3,770 million, or 36.4%, from USD 10,356 million in 2020 to USD 14,126 million in 2021. This increase was primarily due to a rise in RUSAL's revenue, following a 45.5% increase in the LME aluminium price to an average of USD 2,475 per tonne in 2021, from USD 1,702 per tonne in 2020, and sales of primary aluminium growth by 18.1% to 2,034 kt. The Group's revenue was also affected by an increase in the Power segment's revenue, mainly following the increase in electricity generation volumes.

The Group's cost of sales increased by USD 1,366 mn or 17.5%, from USD 7,808 mn in 2020 to

USD 9,174 mn
in 2021

Cost of sales

The following table sets forth the Group's cost of sales by business segment for the years indicated:

(USD mn)	Year ended 31 December 2021	2020
Metals segment	**8,273**	7,112
Power segment	**1,821**	1,582
Business segment cost of sales	**10,094**	**8,694**
Elimination of intersegmental cost of sales	**(920)**	(886)
Total cost of sales	**9,174**	**7,808**

The cost of sales in the Power and Metals segments reflect costs incurred directly by the sale and production of the principal products and services of both groups of companies. For the Power segment, the cost of sales primarily includes costs for electricity and capacity purchased for resale, the cost of raw materials, fuel, personnel expenses, depreciation and amortisation. For Metals segment, the cost of sales mainly consists of the cost of energy, alumina, bauxite, other raw materials, personnel expenses, depreciation and amortisation.

The Group's cost of sales increased by USD 1,366 million or 17.5%, from USD 7,808 million in 2020 to USD 9,174 million in 2021.

The increase was primarily attributable to the increase in the cost of sales of RUSAL by USD 1,161 million, or by 16.3%, to USD 8,273 million for the year ended 31 December 2021, as compared to USD 7,112 million for the year ended 31 December 2020. The increase was primarily driven by sharp rise in raw materials prices, and 18.1% increase in primary aluminium sales volumes (share in total sales in 2021 is 52% vs 44% in 2020).

In addition, En+ Group raised salaries for its employees in Siberian and other regions on two steps during 2021, leading to an average overall increase in personnel costs.

Gross profit

The Group's gross profit for 2021 increased by USD 2,404 million, or 94.3%, to USD 4,952 million from USD 2,548 million in 2020.

The Group's gross profit margin increased from 24.6% in 2020 to 35.1% in 2021.

Distribution, general and administrative expenses

The Group's distribution, general and administrative expenses for 2021 increased by USD 249 million, or 18.9%, to USD 1,569 million from USD 1,320 million in 2020 following the growth of export customs duties, the significant increase in transport tariffs, as well as increase in personnel costs.

Adjusted EBITDA, adjusted EBITDA margin and results from operating activities

The following table sets forth a reconciliation of the Group's adjusted EBITDA to the Group's results from operating activities for the periods indicated:

(USD mn)	Year ended 31 December 2021	2020
Reconciliation of adjusted EBITDA		
Results from operating activities	**2,898**	1,010
Add:		
Amortisation and depreciation	**822**	781
Loss on disposal of property, plant and equipment	**5**	12
Impairment of noncurrent assets	**267**	58
Adjusted EBITDA	**3,992**	**1,861**

The Group's results from operating activities for 2021 increased by USD 1,888 million, or 186.9%, to USD 2,898 million from USD 1,010 million for 2020.

Results from operating activities attributable to Metals segment increased by USD 1,800 million, or 645.2%, from USD 279 million in 2020 to USD 2,079 million in 2021; results from operating activities attributable to the Power segment increased by USD 158 million, or 21.6%, from USD 731 million in 2020, to USD 889 million in 2021.

The Group's operating profit margin increased from 9.8% in 2020 to 20.5% in 2021.

USD 3,992 mn
the Group's adjusted EBITDA in 2021

Adjusted EBITDA is defined as results from operating activities adjusted for amortisation and depreciation, impairment charges and loss on disposal of property, plant and equipment.

The following table sets forth the Group's adjusted EBITDA and adjusted EBITDA margin by segment (before intersegmental elimination) for the years indicated:

(USD mn, except %)	Year ended 31 December 2021	2020
Adjusted EBITDA Metals segment	**2,893**	871
Adjusted EBITDA Power segment	**1,172**	993
Consolidation adjustment	**(73)**	(3)
Adjusted EBITDA	**3,992**	**1,861**
Adjusted EBITDA margin Metals segment	**24.1%**	10.2%
Adjusted EBITDA margin Power segment	**37.3%**	36.8%
Adjusted EBITDA Margin Group	**28.3%**	**18.0%**

In 2021, the Group's adjusted EBITDA increased by USD 2,131 million, or 114.5%, to USD 3,992 million from USD 1,861 million in 2020. The increase in 2021 as compared to 2020 was mainly due to the same factors that influenced the operating results of the Group.

USD 1,762 mn
the Group's share of profits of associates

Share of profits of associates and joint ventures

(USD mn, %)	Year ended 31 December 2021	2020
Share of profit in Norilsk Nickel, with	**1,762**	930
Effective shareholding of	**15.01%**	15.82%
Share of profit in BEMO project, with	**58**	51
Effective shareholding of	**28.44%**	28.44%
Share of profit in other associates/joint ventures	**(18)**	(10)
Share of profits of associates and joint ventures	**1,802**	**971**

The Group has a number of associates and joint ventures, which are accounted for in the Financial Statements under the equity method. The principal associates and joint ventures include Norilsk Nickel, Queensland Alumina Limited and the BEMO Project.

The Group's share of the profits of its associates and joint ventures increased by USD 832 million, or 89.5%, to USD 1,762 million in 2021 from USD 930 million in 2020.

The deviation in the share of the profits of the associates and joint ventures in 2021 as compared to 2020 can primarily be attributed to the increase of profit from the Group's investment in Norilsk Nickel. In 2020, Norilsk Nickel recognised the environmental provision in the amount of USD 2.2 billion due to liquidation of diesel fuel leak at the industrial site of HPP-3 in Norilsk and compensation of environmental damages that led to EBITDA decreasing in 2020.

In 2021, the Group has participated in the repurchase of Norilsk Nickel shares to raise additional funds to finance its own investment programme. The Group sold Norilsk Nickel shares with the aggregate consideration of USD 1,418 million. The carrying value of the shares sold amounted to USD 313 million, and USD 613 million of currency translation reserve attributed to the shares sold was reclassified to profit/(loss) for the period, resulting in net gain of USD 492 million recognised in the consolidated statement of income.

The market value of the investment amounted to USD 12,395 million and USD 14,123 million as at 31 December 2021 and 31 December 2020, respectively, and is determined by multiplying the quoted bid price per share on the Moscow Exchange on the year-end date by the number of shares held by the Group.

Finance income and costs

The Group's finance income primarily consists of interest income and net foreign exchange gain. The Group's finance costs primarily consist of interest expense on interestbearing liabilities and net foreign exchange loss.

(USD mn)	Year ended 31 December 2021	2020
FINANCE INCOME		
Net foreign exchange gain	**-**	98
Interest income	**65**	61
Dividend income	**22**	1
Total finance income	**87**	**160**
Finance costs		
Interest expense	**(709)**	(788)
Net foreign exchange loss	**(33)**	-
Change in fair value of derivative financial instruments	**(352)**	(226)
Revaluation of financial assets	**(47)**	-
Other finance costs	**-**	(2)
Total finance costs	**(1,141)**	**(1,016)**

The Group's finance income for 2021 decreased by USD 73 million, or 45.6%, to USD 87 million from USD 160 million in 2020, mainly a result of foreign exchange gain in 2020.

The Group's finance costs for 2021 increased by USD 125 million, or 12.3%, from USD 1,016 million in 2020 to USD 1,141 million in 2021 as a result of change in fair value of derivative financial instruments (USD 352 million in 2021 compared to USD 226 million in 2020) due to strong appreciation in prices for the metal hedged, and foreign exchange loss.

Profit before taxation

For the reasons inscribed above, the Group recorded a profit before taxation of USD 4,138 million in 2021 as compared to USD 1,125 million in 2020. In 2021, the Power segment generated a profit before taxation of USD 566 million compared to USD 409 million in 2020. In 2021, Metals segment generated a profit before taxation of USD 3,641 million as compared to USD 716 million in 2020.

Income tax expense

The Group's income tax expense for 2021 increased by USD 495 million to USD 604 million from USD 109 million in 2020, as a result of the rise profit before taxation in 2021 as compared to 2020.

Profit for the year

For the reasons inscribed above, the Group's profit for the year ended 31 December 2021 was USD 3,534 million, as compared to profit for the year ended 31 December 2020 of USD 1,016 million.

METALS SEGMENT

In 2021 and 2020, Metals segment accounted for 79.3% and 76.1% of the business segments' revenues (before adjustments), respectively. As at 31 December 2021 and 31 December 2020, the assets of the Metals segment accounted for 66.5% and 62.2% of the Group's total assets (before adjustments), respectively

Selected financial data

The following table sets forth selected data of Metals segment (before intersegmental elimination) for the periods indicated:

(USD mn)	Year ended 31 December 2021	2020
Revenues	**11,994**	8,566
Gross profit	**3,721**	1,454
Gross profit margin	**31.0%**	17.0%
Pre-tax profit	**3,641**	716
Profit for the period	**3,225**	759
Net profit margin	**26.9%**	8.9%
Adjusted EBITDA	**2,893**	871
Adjusted EBITDA margin	**24.1%**	10.2%
Adjusted net profit[1]	**1,536**	60
Recurring net profit[2]	**3,298**	990
Recurring net profit margin[3]	**27.5%**	11.6%

Revenues

The following table sets forth components of Metals segment's sales data (before intersegmental elimination) for the years indicated:

	Year ended 31 December 2021	2020
SALES OF PRIMARY ALUMINIUM AND ALLOYS		
Revenue, USD mn	**9,966**	**7,088**
Sales volumes, kt	**3,904**	3,926
Average sales price (USD/t)	**2,553**	1,805
SALES OF ALUMINA		
Revenue, USD mn	**610**	**533**
Sales volumes, kt	**1,677**	1,729
Average sales price (USD/t)	**364**	308
Sales of foil and other aluminium products, USD mn	**515**	**381**
Other revenue, USD mn	**903**	**564**
Total, USD mn	**11,994**	**8,566**

Metals segment's revenue increased in 2021 by USD 3,428 million, or by 40.0%, to USD 11,994 million from USD 8,566 million in 2020.

Revenue from sales of primary aluminium and alloys increased by USD 2,878 million, or by 40.6%, to USD 9,966 million in 2021, as compared to USD 7,088 million in 2020, primarily due to a 41.4% increase in the weighted-average realised aluminium price per tonne (to an average of USD 2,553 per tonne in 2021 from USD 1,805 per tonne in 2020) driven by an increase in the LME aluminium price (to an average of USD 2,475 per tonne in 2021 from USD 1,702 per tonne in 2020), while sales volumes remained almost flat in the compared periods.

Revenue from sales of alumina increased by 14.4% to USD 610 million for the year ended 31 December 2021 from USD 533 million for the year ended 31 December 2020, due to an increase in the average sales price by 18.2%, together with a decrease in sales volumes of 3.0%.

Revenue from sales of foil and other aluminium products increased by USD 134 million, or by 35.2%, to USD 515 million in 2021, as compared to USD 381 million in 2020 due to an increase in revenue from sales of aluminium wheels by 58.6% together with an increase in sales of foil by 28.3% between the comparable periods.

Revenue from other sales, including sales of other products, bauxite and energy services increased by 60.1% to USD 903 million for the year ended 31 December 2021 as compared to USD 564 million for the previous year, due to a 54.3% increase in sales of other materials that was a result both by the increase in sales volumes along with the increase in average sales price.

1. Adjusted net (loss)/profit for any period represents net (loss)/profit for the relevant period adjusted for the net effect from the share in the results of Norilsk Nickel, the net effect of embedded derivative financial instruments and the net effect of noncurrent assets impairment.
2. Recurring net profit represents adjusted net (loss)/profit for the relevant period plus RUSAL's effective share of Norilsk Nickel's profits, net of tax.
3. Recurring net profit margin represents recurring net profit for the relevant period divided by total revenues and expressed as a percentage for the relevant period attributable to Metals segment.

FINANCIAL REVIEW

Cost of sales

The following table sets forth components of Metals segment's cost of sales (before intersegmental elimination) for the years indicated:

	Year ended 31 December	
(USD mn)	2021	2020
Cost of alumina	741	608
Cost of bauxite	506	447
Cost of other raw materials and other costs	3,387	2,298
Purchases of primary aluminium from joint ventures	696	465
Energy costs	2,070	1,868
Depreciation and amortisation	572	542
Personnel expenses	618	512
Repair and maintenance	407	381
Net change in provisions for inventories	28	(2)
Change in finished goods	(752)	(7)
Total cost of sales	**8,273**	**7,112**

Metals segment's cost of sales increased by USD 1,161 million, or by 16.3%, to USD 8,273 million for the year ended 31 December 2021, as compared to USD 7,112 million for the year ended 31 December 2020.

The cost of alumina increased by USD 133 million, or by 21.9%, to USD 741 million in 2021 as compared to USD 608 million in 2020 primarily due to the increase in alumina purchase price between the periods.

The cost of bauxite increased by USD 59 million, or by 13.2%, to USD 506 million in 2021 as compared to USD 447 million in 2020.

The cost of raw materials (other than alumina and bauxite) and other costs increased by 47.4% for the year ended 31 December 2021 compared to the same period of 2020, due to an increase in raw materials purchase price.

Energy costs increased by USD 202 million, or by 10.8%, to USD 2,070 million for the year ended 31 December 2021, as compared to USD 1,868 million for the year ended 31 December 2020 due to increase in the average electricity tariff between the comparable periods.

The finished goods mainly consist of primary aluminium and alloys (c.95%). The dynamic of change between the reporting periods was driven by the fluctuations of primary aluminium and alloys physical inventory between the reporting dates: 96.9% increase in 2021 and 2.6% increase in 2020.

Adjusted EBITDA and adjusted EBITDA margin

In 2021, Metals segment's adjusted EBITDA (before intersegmental elimination) increased by USD 2,022 million, or 232.1%, to USD 2,893 million from USD 871 million in 2021. The factors that contributed to the increase in adjusted EBITDA margin were the same ones that influenced the operating results.

The following table sets forth a reconciliation of Metals segment's adjusted EBITDA to its results from operating activities for the periods indicated:

	Year ended 31 December	
(USD mn)	2021	2020
RECONCILIATION OF ADJUSTED EBITDA		
Results from operating activities	2,079	279
Add:		
Amortisation and depreciation	596	570
Loss on disposal of property, plant and equipment	9	13
Impairment of noncurrent assets	209	9
Adjusted EBITDA	**2,893**	**871**

The following table sets forth a reconciliation of Metals segment's adjusted net profit and recurring net profit to its net profit for the periods indicated:

	Year ended 31 December	
(USD mn)	2021	2020
RECONCILIATION OF ADJUSTED NET PROFIT		
Net profit for the period	3,225	759
Adjusted for:		
Share of profits and other gains and losses attributable to Norilsk Nickel, net of tax effect	(1,762)	(930)
Change in derivative financial instruments, net of tax (20%)	356	222
Gain from partial disposal of investment in associate	(492)	-
Impairment of noncurrent assets, net of tax	209	9
Adjusted net profit	**1,536**	**60**
Add back:		
Share of profits of Norilsk Nickel, net of tax	1,762	930
Recurring net profit	**3,298**	**990**

Adjusted net (loss)/profit for any period is defined as the net (loss)/profit adjusted for the net effect of the Company's investment in Norilsk Nickel, the net effect of derivative financial instruments and the net effect of non-current assets impairment. Recurring net profit for any period is defined as adjusted net (loss)/profit plus the Company's net effective share in Norilsk Nickel results.

POWER SEGMENT

In 2021 and 2020, the Power segment accounted for 20.7% and 23.9% of the business segments' revenues (before adjustments), respectively. As at 31 December 2021 and 31 December 2020, the assets of the Power segment accounted for 33.5% and 37.8% of the Group's total assets (before adjustments), respectively

Selected financial data

The following table sets forth selected data of the Power segment (before intersegmental elimination) for the periods indicated:

	Year ended 31 December	
(USD mn)	2021	2020
Revenues	3,138	2,697
Gross profit	1,317	1,115
Gross profit margin	42.0%	41.3%
Results from operating activities (EBIT)	889	731
Operating profit margin	28.3%	27.1%
Pre-tax profit	566	409
Profit for the period	374	257
Net profit margin	11.9%	9.5%
Adjusted EBITDA	1,172	993
Adjusted EBITDA margin	37.3%	36.8%

The Power segment's revenue increased by USD 441 million, or 16.4%, to USD 3,138 million in 2021 from USD 2,697 million in 2020, mainly reflecting increase in average electricity generation volumes by 10.0%.

Revenue from electricity sales increased by 15.1% y-o-y to USD 1,453 million in 2021. The increase was driven mainly by 10.8% growth in electricity sales volumes and higher electricity sales prices compared to 2020. In 2021, the average electricity spot price on the day-ahead market in the second price zone, increased 7.1% y-o-y to 934 RUB/MWh.

Capacity sales increased by 15.2% y-o-y to USD 500 million in 2021. The increase was mainly driven by higher capacity sales prices compared to 2020.

Revenues

The following table sets forth components of the Power segment's sales data (before intersegmental elimination) for the years indicated:

	Year ended 31 December	
	2021	2020
Average rate RUB/USD	**73.65**	**72.15**
SALES OF ELECTRICITY		
Revenue, USD mn	**1,453**	**1,262**
Sales volumes, TWh	108.4	97.8
Average sales price (RUB/MWh)	988	931
SALES OF CAPACITY		
Revenue, USD mn	**500**	**434**
Sales volumes, GW/year	172.8	178.5
Average sales price ('000 RUB/MW)	213	175
SALES OF HEAT		
Revenue, USD mn	**417**	**393**
Sales volumes, mn Gcal	24.5	23.4
Average sales price (RUB/Gcal)	1,257	1,209
Sales of semifinished products, USD mn	**268**	**180**
Other revenues, USD mn	**500**	**428**
Total, USD mn	**3,138**	**2,697**

Heat sales increased by 6.1% y-o-y to USD 417 million in 2021 reflecting growth in heat prices and sales volumes.

The Power segment's electricity generation increased from 82.2 TWh in 2020 to 90.4 TWh in 2021. In 2020, HPPs generated 69.3 TWh of electricity, or 84.3% of the total electricity generated by the Power segment, while in 2021 they generated 77.7 TWh of electricity, or 86.0% of the total electricity generated by the Power segment. The increase in HPP generation can be primarily explained by increased water reserves.

Cost of sales

The following table sets forth components of the Power segment's cost of sales (before intersegmental elimination) for the years indicated:

(USD mn)	Year ended 31 December 2021	2020
Electricity and capacity	427	361
Personnel expenses	354	319
Depreciation and amortisation	216	206
Cost of raw materials and fuel	257	227
Aluminium	182	117
Electricity transmission costs	160	141
Other	225	211
Total cost of sales	**1,821**	**1,582**

The Power segment's cost of sales increased by USD 239 million, or by 15.1%, to USD 1,821 million for the year ended 31 December 2021, as compared to USD 1,582 million for the year ended 31 December 2020.

Power segment's cost increased following gradual raise of salaries for employees throughout 2021, inflationary growth in raw materials purchase prices, as well as significant hike in aluminium purhcase prices, increase in raw materials purchase price due to inflationary pressure and increase of aluminium purchase prices as a result of LME aluminium prices growth to an average of USD 2,475 per tonne in 2021 from USD 1,702 per tonne in 2020.

Adjusted EBITDA and adjusted EBITDA margin

The following table sets forth the Power segment's adjusted EBITDA and adjusted EBITDA margin for the years indicated:

(USD mn)	Year ended 31 December 2021	2020
Adjusted EBITDA (HPP's)	1076	914
Adjusted EBITDA (CHP's)	38	30
Adjusted EBITDA (Coal)	31	30
Adjusted EBITDA (Other and unallocated)	27	19
Adjusted EBITDA (Power segment)	**1,172**	**993**
Adjusted EBITDA margin (Power segment)	37.3%	36.8%
Adjusted EBITDA margin (HPP's)	86.4%	84.8%
Adjusted EBITDA margin (CHP's)	5.2%	4.4%
Adjusted EBITDA margin (Coal)	13.1%	12.8%

In 2021, the Power segment's adjusted EBITDA (before intersegmental elimination) increased by USD 179 million, or 18.0%, to USD 1,172 million, from USD 993 million in 2020. The growth was driven by an increase in electricity generation volumes and increase in average electricity spot prices and capacity prices.

As Power operations account for a sizeable portion of the revenues attributable to the Power segment, and are, therefore, a predominant contributor to the adjusted EBITDA of the segment. The low-cost operation of HPPs positively affects the overall adjusted EBITDA of the Power segment. The proportion of HPPs' contribution to the adjusted EBITDA of the Power segment in particular was 91.8% in 2021 and 92.1% in 2020.

The following table sets forth a reconciliation of the Power segment's adjusted EBITDA to the Power segment's results from operating activities for the periods indicated:

(USD mn)	Year ended 31 December 2021	2020
RECONCILIATION OF ADJUSTED EBITDA		
Results from operating activities	889	731
ADD:		
Amortisation and depreciation	229	214
Gain on disposal of property, plant and equipment	(4)	(1)
Impairment of non-current assets	58	49
Adjusted EBITDA	**1,172**	**993**

NET ASSETS

In 2021, the Group's net assets increased by USD 4,246 mn to

USD 10,311 mn

as at 31 December 2021, from USD 6,065 mn as at 31 December 2020

(USD mn)	Year ended 31 December 2021	2020
GROUP		
Non-current assets	17,090	16,062
Current assets	8,967	6,599
Non-current liabilities	(9,897)	(12,021)
Current liabilities	(5,849)	(4,575)
Net assets	**10,311**	**6,065**
RUSAL		
Non-current assets	12,470	11,501
Current assets	8,436	5,877
Non-current liabilities	(5,790)	(8,044)
Current liabilities	(4,592)	(2,791)
Net assets	**10,524**	**6,543**
POWER SEGMENT		
Non-current assets	9,725	9,667
Current assets	824	903
Non-current liabilities	(4,121)	(3,981)
Current liabilities	(1,461)	(1,955)
Net assets	**4,967**	**4,634**

In 2021, Metals segment's net assets increased by USD 3,981 million, or by 60.8%, to USD 10,524 million as at 31 December 2021, from USD 6,543 million as at 31 December 2020. This was mainly caused by an increase in total assets, driven primarily by the increase in property, plant and equipment, inventories, trade and other receivables (including dividends receivable) and advances paid.

In 2021, the Power segment's net assets as at 31 December 2021 increased by USD 333 million, or by 7.2%, to USD 4,967 million, from USD 4,634 million as at 31 December 2021 mainly due to current liabilities decrease, driven by loans scheduled repayments (net repayment – USD 431 million).

Net working capital

Net working capital is defined as inventories plus short-term trade and other receivables (excluding dividend receivables), less trade and other payables.

The following table sets forth the calculation of the net working capital of the Group, Power segment and Metals segment as at the dates indicated:

(USD mn)	As at 31 December 2021	2020
GROUP		
Inventories	3,731	2,339
Shortterm trade and other receivables	2,655	1,431
Dividends receivable	(827)	-
Trade and other payables	(2,806)	(2,156)
Net working capital	**2,753**	**1,614**
METALS SEGMENT		
Inventories	3,692	2,292
Shortterm trade and other receivables	2,473	1,163
Dividends receivable	(827)	-
Trade and other payables	(2,408)	(1,836)
Net working capital	**2,930**	**1,619**
POWER SEGMENT		
Inventories	158	113
Shortterm trade and other receivables	306	333
Trade and other payables	(602)	(491)
Net working capital	**(138)**	**(45)**

As at 31 December 2021, the Group's net working capital amounted to USD 2,753 million, compared to USD 1,614 million as at 31 December 2020.

In 2021, net working capital increased by 71% compared to 2020 due to an increase of inventories (accumulation of inventories for future repairs, increase of cost due to increase of mineral extraction tax and implementation of temporary export duties), which was partly offset by increase in account payables (export duties, investment and repair works, purchases of equipment and materials).

FINANCIAL REVIEW

LIQUIDITY AND CAPITAL RESOURCES

Liquidity was managed separately in both segments – Power and Metals

General

In 2021, the Group's liquidity requirements primarily related to funding working capital, capital expenditures and debt service. The Group used a variety of internal and external sources to finance operations. During the periods under review, short and longterm funding sources included predominantly the rouble and foreign currencydenominated secured and unsecured loans from Russian and international banks, as well as debt instruments issued in both the Russian and international capital markets.

Dividends

No dividends were declared and paid during the year ended 31 December 2021 and the year ended 31 December 2020.

Cash flows

The following table sets forth the Group's selected cash flow data for the periods indicated:

(USD mn)	Year ended 31 December 2021	2020
Cash flows from operating activities	**2,168**	1,890
Cash flows from/(used in) investing activities	**285**	(77)
Cash flows used in financing activities	**(2,691)**	(1,372)
Net change in cash and cash equivalents	**(238)**	**441**
Cash and cash equivalents at the beginning of the period, excluding restricted cash	**2,549**	2,265
Effect of exchange rate changes on cash and cash equivalents	**17**	(157)
Cash and cash equivalents at the end of the period, excluding restricted cash[1]	**2,328**	**2,549**
Free cash flow	**1,705**	968

Cash flows from operating activities

The Group's cash flows from operating activities for 2021 were USD 2,168 million, an increase of USD 278 million, or 14.7%, compared to USD 1,890 million in 2020. This increase was driven by the same factors that led to the increase in adjusted EBITDA between the comparable periods.

Cash flows generated from/(used in) investing activities

The Company generated USD 285 million net cash from investing activities for the year ended 31 December 2021 as compared to outflow of USD 77 million in the previous year primarily due to proceeds from partial disposal of associate in amount USD 1,421 million in 2021 compensated by an increase by USD 385 million in an acquisition of property, plant and equipment and an acquisition of intangible and a decrease by USD 550 million of dividends from associates and joint ventures between the comparable periods.

Cash flows used in financing activities

The Group's cash flows used in financing activities for 2021 were USD 2,691 million, an increase of USD 1,319 million from USD 1,372 million in 2020 was primarily driven by significant net debt repayments of USD 1,593 million in 2021.

[1] As at 31 December 2021 and 31 December 2020, included in cash and cash equivalents was restricted cash of USD 2 million and USD 13 million, respectively.

Free cash flow

The following table sets forth a reconciliation of the free cash flow to the cash flows from operating activities for the periods indicated:

(USD mn)	Year ended 31 December 2021	2020
Reconciliation of free cash flow		
Group		
Cash flows generated from operating activities	**2,168**	1,890
ADJUSTED FOR:		
Capital expenditures (acquisition of property, plant and equipment and acquisition of intangible assets)	**(1,513)**	(1,128)
Dividends from associates and joint ventures	**620**	1,170
Interest received	**63**	56
Interest paid	**(703)**	(779)
Restructuring fees and expenses related to issuance of shares	**(36)**	(26)
Settlement of derivative financial instruments	**(315)**	(215)
Free cash flow	**1,705**	**968**

Reconciliation of free cash flow		
Metals segment		
Cash flows generated from operating activities	1,146	1,091
ADJUSTED FOR:		
Capital expenditures (acquisition of property, plant and equipment and acquisition of intangible assets)	(1,192)	(897)
Dividends from associates and joint ventures	620	1,170
Interest received	37	26
Interest paid	(380)	(465)
Restructuring fees	(34)	(12)
Settlement of derivative financial instruments	(315)	(215)
Free cash flow	**1,303**	**698**
Power segment		
Cash flows generated from operating activities	1,022	805
ADJUSTED FOR:		
Capital expenditures (acquisition of property, plant and equipment and acquisition of intangible assets)	(321)	(237)
Interest received	26	30
Interest paid	(323)	(314)
Restructuring fees and expenses related to issuance of shares	(2)	(14)
Free cash flow	**402**	**270**

Capital expenditures

In 2021 and 2020, the Group's capital expenditures (comprising the acquisition of property, plant and equipment, as well as the acquisition of intangible assets) were USD 1,513 million and USD 1,128 million, respectively. The Group's subsidiaries financed their cash requirements through a combination of operating cash flows and borrowings. The table below sets forth the capital expenditures (before adjustments) of Metals and Power segments for the periods indicated:

(USD mn)	Year ended 31 December 2021	2020
Metals segment	**1,192**	897
Power segment	**321**	237

Metals segment recorded a total capital expenditure of USD 1,192 million for the year ended 31 December 2021. Metals segment's capital expenditure in 2021 was aimed at maintaining existing production facilities. Maintenance capex amounted to 67% of the aggregate capex in 2021.

The Group continued to the invest in Taishet aluminium smelter. The project includes construction of an aluminium smelter in Taishet in the Irkutsk Region (Eastern Siberia), with a design production capacity of LC-1 (first series) of 352 pots, or 428.5 kt per annum. Electricity consumed by LC-1 (first series) amounts to 6,370 million kWh. On 16 December 2021, the first electrolyzers of Taishet smelter were put into trial operation.

In 2021, capital expenditure by the Power segment amounted to USD 321 million. Maintenance capex accounted for 52% of total capital expenditure. The Group's Power segment continued to invest in technical connections to its power supply infrastructure and improving the efficiency of the Group's CHPs, further progressing the HPP New Energy modernisation programme.

In 2021, the Company launched a new hydroelectric unit at the Irkutsk HPP, replaced runner at the Bratsk HPP. Two new runners were delivered to the Krasnoyarsk HPP and technical re-equipment works began.

In 2021, the Company delivered equipment and started construction and installation work under the Capacity Allocation Contracts (CAC) projects for CHP-6 in Bratsk and Novo-Irkutsk CHP, equipment was supplied to replace three turbo generators for CHP-10.

Cash

As at 31 December 2021 and 31 December 2020, the Group's cash and cash equivalents, excluding restricted cash, were USD 2,328 million and USD 2,549 million, respectively. As at 31 December 2021 and 31 December 2020, the Power segment's cash and cash equivalents were USD 346 million and USD 333 million, respectively. Meanwhile, the Metals segment's cash and cash equivalents were USD 1,984 million and USD 2,229 million, respectively.

FINANCIAL REVIEW

LOANS AND BORROWINGS

The nominal value of the Group's loans and borrowings was

USD 8,448 mn

as at 31 December 2021, not including bonds, which amounted to an additional USD 2,457 mn

Set out below is an overview of certain key terms of selected facilities in the Group's loan portfolio as at 31 December 2021:

Facility / Lender	Principal amount outstanding as at 31 December 2021	Tenor/Repayment schedule	Pricing
METALS SEGMENT			
Syndicated facilities			
PXF facility 2019	USD 995 mn	Up to USD 1.085 bn syndicated aluminium pre-export finance term facility – until November 2024; equal quarterly repayments starting from January 2022	3 month LIBOR plus 2.1% p.a.
PXF Facility 2021	USD 200 mn	Up to USD 200 mn syndicated aluminium pre-export finance term facility — until January 2024 equal quarterly repayments starting from April 2022	3 month LIBOR plus 1.7% p.a.
Taishet project financing	RUB 23 bn	Up to RUB 45 billion syndicated project finance facility — until December 2035, quarterly repayments starting from March 2023	Key rate of the Bank of Russia plus 3.15% p.a.
Bilateral loans			
Bank Loan	USD 375 mn	2 tranches, the last repayment in November 2022, bullet repayment at final maturity date	2.15% - 2.25% p.a.
	USD 2.1 bn		3 month LIBOR plus 3.0% p.a.
Bank Loan	RUB 17.9 bn	December 2027, quarterly repayments starting from September 2024	Key rate of the Bank of Russia plus 1.9% p.a.
Bonds			
Eurobond	USD 512 mn[1]	February 2022, repayment at final redemption date	5.125% p.a.
Eurobond	USD 482 mn	May 2023, repayment at final redemption date	5.3% p.a.
Eurobond	USD 498 mn	February 2023, repayment at final redemption date	4.85% p.a.
RUB bonds	RUB 70 bn swapped into USD, for equivalent USD 1.1 bn (after cross-currency swaps)	5 tranches, the last repayment is May 2030, repayments at final redemption dates, subject to a bondholders' put option exercisable within 3.0–3.5 years	2.9%–4.69% p.a. (after cross-currency swaps)
POWER SEGMENT			
Syndicated loan	RUB 44.9 bn[2]	June 2023, quarterly repayments starting from September 2019	The key rate of the Bank of Russia + 2% p.a.
Bilateral loan	RUB 88.5 bn	December 2026, quarterly repayments starting from September 2020	The key rate of the Bank of Russia + 1.5% p.a.
Bilateral loan	RUB 100.8 bn	December 2022 (with the Borrower's right to extend to December 2026 – with scheduled repayments starting from 2023)	The key rate of the Bank of Russia + 1.65% p.a.

1. In February 2022, Rusal completed the scheduled repayment of Eurobonds in the amount of USD 512 million out of its own funds.
2. The loan was fully refinanced in March 2022 through a new RUB 41 bn bilateral loan.

SECURITY

As of 31 December 2021, the Metals segment's debt (save for several unsecured loans and bonds) is secured, among others, by assignment of receivables under specified contracts, certain pledges of shares of a number of the Group's subsidiaries, designated accounts, shares in Norilsk Nickel (representing 25% of Norilsk Nickel's total nominal issued share capital).

As of 31 December 2021, the Power segment's debt is secured, among others, by pledges of shares and interests in certain operating and non-operating companies and property, plant and equipment.

KEY EVENTS

On 28 January 2021, RUSAL signed the sustainability-linked pre-export finance facility for an amount of up to USD 200 million. Following the success of the first Russian sustainability-linked syndicated pre-export finance facility arranged in 2019 by international and Russian banks, RUSAL continues to pursue its ambitious decarbonisation goals. The group of international banks continues to support RUSAL in its aim to develop low-carbon aluminium technologies and sustainable aluminium production. The interest rate under the facility is subject to a sustainability discount or premium depending on the RUSAL's fulfilment of the applicable key performance indicators which will be further agreed between the parties. The proceeds were used to refinance more expensive debt.

In March 2021, RUSAL announced the signing and commencement of the drawdown of a syndicated loan agreement for an amount of up to RUB 45 billion. The term of financing is up to 15 years. The funds raised were used to finance the completion of the start-up phase of the TaAZ smelter and partial refinancing of investments made in 2020.

CONTINGENCIES

The summary of the Group's principal contingencies is set out below. For a detailed discussion of the Group's contingencies in 2021, including environmental contingencies, risks and considerations, see Note 22 of the Annual Financial Statements.

Taxation

Russian tax, currency and customs legislation is subject to varying interpretations, and changes, which can occur frequently. Management's interpretation of such legislation, as applied to the transactions and activities of the Group, may be challenged by the relevant local, regional or federal authorities. Notably recent developments in the Russian environment suggest that the authorities in this country are becoming more active in seeking to enforce, through the Russian court system, interpretations of the tax legislation, in particular in relation to the use of certain commercial trading structures, which may be selective for particular tax payers and different from the authorities' previous interpretations or practices. Different and selective interpretations of tax regulations by various government authorities and inconsistent enforcement create further uncertainties in the taxation environment in the Russian Federation.

Tax risks attributable to the Group, together with an estimate of the maximum possible additional amounts which may reasonably become payable in respect of such risks, are disclosed in Note 22 (a) of the Annual Financial Statements.

Legal contingencies

The Group's business activities expose it to a variety of lawsuits and claims which are monitored, assessed and contested on an ongoing basis. Where management believes that a lawsuit or another claim would result in an outflow of economic benefits for the Group, a best estimate of such outflow is included in provisions in the consolidated financial statements (Note 22 (c)). As at 31 December 2021, the amount of claims where management assesses outflow as possible approximates USD 21 million (31 December 2020: USD 21 million).

FINANCIAL RATIOS

Gearing

The Group's gearing ratio – the ratio of total debt (including both long-term and short-term borrowings and bonds outstanding) to total assets – as at 31 December 2021 and 31 December 2020, was 41.9% and 54.7%, respectively.

Return on equity

The Group's return on equity – the amount of net profit as a percentage of total equity – was 34.3% and 16.8% as at 31 December 2021 and 31 December 2020, respectively.

Interest coverage ratio

The Group's interest coverage ratio – the ratio of earnings before interest and taxes to net interest – for the years ended 31 December 2021 and 31 December 2020, was 4.5x and 1.4x, respectively.

GOING CONCERN

The Group closely monitors and manages its funding position and liquidity risk throughout the year, including monitoring forecast results, to ensure that it has access to sufficient funds to meet forecast cash requirements. Cash forecasts are regularly produced and sensitivities considered for, but not limited to, changes in power and aluminium prices, foreign exchange and interest rates, production rates, costs and interests. These forecasts and sensitivity analyses allow management to mitigate liquidity or covenant compliance risks in a timely manner. After making enquiries of management, the Directors believe that adoption of the going concern basis in preparing the financial statements is appropriate.

REPORT ON PAYMENTS TO GOVERNMENTS

The table below shows the amounts paid by the Group's entities to public authorities (primarily in the form of miscellaneous taxes and levies) in connection with their extraction activities:

Type of payment 2021 ('000 USD)	Russia	Kazakhstan	Ukraine	Guinea	Guyana	Jamaica	Total
Production fees	–	–	–	–	–	–	**–**
Taxes or levies on corporate sales, production or profits	54,615	24,843	88	5,887	17	14,061	**99,512**
Royalties	–	–	–	–	–	692	**692**
Dividends	–	–	–	–	–	–	**–**
Signing-on, discovery and production bonuses	–	–	–	–	–	–	**–**
License fees, rental charges, entry fees and other consideration for licenses and/or concessions	4,642	1,101	56	–	347	55	**6,201**
Infrastructure improvement payments	2,844	248	–	–	–	–	**3,093**
Total	**62,102**	**26,193**	**144**	**5,887**	**364**	**14,808**	**109,497**

STRATEGIC REPORT

SUSTAINABILITY REVIEW

This section of the Annual Report provides an overview of the programmes En+ Group has established to drive continuous improvement in our sustainability performance. Our 2021 Sustainability Report will provide much more detailed information.

SUSTAINABLE MANAGEMENT

From the generation of clean energy that powers our smelters and provides affordable electricity to millions of people across Siberia, to the production of low-carbon aluminium, En+ Group is built on sustainability. We are committed to integrating sustainable development principles and values into our daily operations and to continuously improving our ESG practices.

In 2021, the Group adopted six corporate policies to support our ESG practices. Corporate documents are available in both English and Russian on our website.

- Diversity and Equal Opportunities Policy
- Quality Policy
- Biodiversity Policy
- Supplier standards
- Regulations on Information Policy
- Regulations on Insider Information

OUR REPORTS

In 2021, En+ Group released its third **Sustainability Report** which is compiled using international non-financial standards and best global practices. Our Sustainability Reports provide our stakeholders with information about the Group's approach to Sustainable Development, ESG risk management, key ESG indicators and the progress of our sustainability projects and programmes.

Our contribution to the United Nations' Sustainable Development Goals is covered in our Sustainability Reports and, in significantly more detail, in our annual SDG Report. In 2021, the Company released the third **annual SDG Report**, which reflects the Group's approach to supporting the UN SDGs and highlights the Group's projects that support these efforts.

In September 2021, En+ Group published its **Pathway to Net Zero Report**, which provides comprehensive details on the initiatives undertaken across the whole value chain to achieve our previously announced sector-beating climate targets in line with the 1.5°C scenario.

Key results in 2021[1]

Total number of employees	**93,189 at the end of 2021**
Gender diversity	**27.3% of workforce were female (27% in 2020)**
LTIFR	**0.16[2] (24% decrease compared to 2020)**
Social investment	**USD 55 mn**
Metals segment's GHG emissions in electrolysis operations	**2.02 tCO_2e/tAl[3]**

ESG RANKINGS AND AWARDS

CDP
RUSAL A-
LLC EUROSIBENERGO C

WWF
LLC BAIKAL ENERGY COMPANY WAS RANKED FIRST AMONG POWER GENERATING COMPANIES IN RUSSIA FOR THE THIRD TIME IN A ROW

WINNER OF THE BRICS SOLUTIONS FOR SDGS AWARDS 2021 FOR THE COMPANY'S STELLAR 360 PROJECT.

EN+ GROUP WON THE "INDUSTRY LEADERSHIP AWARD: ALUMINIUM" AT THE 2021 S&P GLOBAL PLATTS GLOBAL METALS AWARDS.

TOP RANKED IN EXPERT RA'S "ESG-TRANSPARENCY RATING OF RUSSIAN COMPANIES AND BANKS"

SHORTLISTED FOR THE BUSINESS TRANSFORMATION AWARDS NOMINATION AT THE RESPONSIBLE BUSINESS AWARDS 2021

THE WINNER OF "ESG BREAKTHROUGH" IN THE GREEN LIGHT AWARDS.

EN+ GROUP IS ONE OF JUST 28 COMPANIES GLOBALLY WITH CONFIRMATION FROM UN ENERGY THAT ITS COMMITMENTS TO EXPANDING CLEAN ENERGY GENERATION AND ACCESS HAVE BEEN OFFICIALLY RECOGNISED AS AN ENERGY COMPACT.

1. Preliminary data, being verified as part of the En+ Group 2021 Sustainability Report preparation.
2. LTIFR is calculated per 200,000 hours worked.
3. Preliminary data, being verified as part of the En+ Group 2021 Sustainability Report preparation. Level 1 in accordance with the Aluminium Carbon Footprint Technical Support Document (2018) (https://www.world-aluminium.org/media/filer_public/2018/11/22/carbon_footprint_technical_support_document_v1_published.pdf).

STRATEGIC REPORT

We support the UN SDGs

Chosen based on the areas where the Group could have the most positive impact, eight of the seventeen SDGs were selected as central to the Group's operations. Nonetheless, En+ Group supports all 17 SDGs, and due to the interconnectedness of the Global Goals, most of our projects support more than one single SDG.

En+ Group participated in the UN Global Compact's SDG Ambition Accelerator programme, which supports private sector organisations' accelerated integration of the Goals into corporate strategy and management systems. The Accelerator empowers and equips participating companies to establish and implement business goals that support and increase their positive impact on the SDGs.

The Goals were presented to the Health, Safety and Environment Committee under the En+ Group Board of Directors, which made a decision to approve further research on the integration of the Goals into Company strategy.

New SDG-Focused Goals

Key SDG

13 CLIMATE ACTION	6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY
En+ Group goals		
Reduce emissions by at least 35% by 2030, and achieve net zero greenhouse gas (GHG) emissions by 2050 (Scope 1 and 2, as benchmarked against the Group's 2018 GHG emissions[1])	• By 2030, eliminate untreated wastewater discharge generated by the Power segment • By 2030, minimise non-production water losses through technological optimisation • By 2025, deploy recycled water systems for main processes in the Metals segment[2]	• Increase use of alternative energy sources by 2030 • Reduce the average carbon intensity of generated and consumed electricity • By improving hydropower plant efficiency, increase clean electricity generation by 2.5 TWh, from the same amount of water passing through the turbines, and prevent over 2.5 mt of CO_2 emissions per annum from 2025
Other SDGs supported		
3 Good health and well-being; 7 Affordable and clean energy; 9 Industry, innovation and infrastructure; 12 Responsible consumption and production; 15 Life on land; 17 Partnerships for the goals	3 Good health and well-being; 11 Sustainable cities and communities; 12 Responsible consumption and production; 14 Life below water; 15 Life on land; 17 Partnerships for the goals	1 No poverty; 9 Industry, innovation and infrastructure; 11 Sustainable cities and communities; 13 Climate action; 17 Partnerships for the goals

[1] The Group's 2018 GHG emissions (Scope 1 and 2) were 50.0 mt CO_2e.
[2] At the BAZ, UAZ, and RBA facilities.

Climate leadership

For more than a decade, we have been working to address the climate crisis. As the world's largest producer of renewable energy from hydropower, which powers our aluminium smelters and provides a clean and affordable source of electricity to communities across Siberia, we believe we have an important role to play in driving and supporting the clean energy transition. Our commitment to these goals underpins our ambitious 2050 net zero target.

Read more on Climate Leadership at p.70

Human development

En+ Group works hard to ensure that all communities local to our operations benefit from our presence. We encourage healthy lifestyles through sport, provide support during health crises, offer access to industry-oriented education and training, and focus on delivering sustainable economic development.

Read more on Human Development at p.90

Collaboration and partnerships

Our collaborations and partnerships look both outward towards international stakeholders and seek to address urgent sustainability issues on national and regional levels. Together with sustainability leaders and leaders of our respective industries, we come together to discuss, share, and develop the latest progress in sustainable development.

Read more on Partnerships at p.66

Environmental stewardship

Our main hydropower production facilities are located in Siberia. Almost two thirds of their energy production depends on the water flow of the Angara, the sole river flowing out from Lake Baikal – the world's oldest, largest and deepest freshwater lake. Being reliant on the lake, we recognise we have a responsibility to create partnerships and coalitions to protect Baikal and its unique biodiversity, as well as our other regions of operation.

Read more on Environmental Stewardship at p.82

STRATEGIC REPORT

We collaborate to build a better future

Stakeholder Engagement Policy

The Company believes that collaboration is essential for achieving progress towards the SDGs and building a better future. We are committed to working closely with various local and international stakeholders, and to sharing our vision and insights for the collaborative development of potential solutions to the world's economic, social and environmental challenges.

Advocacy

Recognising that global change cannot come from one actor alone, En+ Group unites with the industry and like-minded peers to advocate for a shift of the entire market towards a green economy. In 2021, our advocacy-oriented partnerships included:

- United Nations Global Compact (UNGC)
- World Business Council on Sustainable Development (WBCSD)
- Climate Partnership of Russia
- International Chamber of Commerce (ICC) Russia
- Carbon Pricing Leadership Coalition (CPLC)
- International Policy Coalition for Sustainable Growth
- Business 20 (B20)
- Business and Industry Advisory Committee to the Organisation for Economic Cooperation and Development (BIAC)

Transparency and certification

En+ Group supports the notion that emission transparency is the first stage towards increased climate commitments. We disclose our own emissions and promote industry-wide transparency and disclosure. In 2021, in support of the transparency and certification values, we worked closely with the following organisations:

- Aluminium Stewardship Initiative (ASI)
- International Aluminium Institute (IAI)
- Carbon Disclosure Project (CDP)
- London Metal Exchange

Energy transition

As the world's largest independent hydropower producer, En+ Group places the energy transition at the core of its values. We believe the future green economy will be shaped by the energy transition and will depend on renewable energy sources. In 2021, through the following energy-focused partnerships, we aimed to increase exposure around the future possibilities surrounding renewable energy:

- International Hydropower Association (IHA)
- Global Sustainable Electricity Partnership (GSEP)
- 'Hydropower of Russia' Association

Climate

Operating among the hard-to-abate sectors, En+ Group is aware of the impact that industrial sectors are having on the climate. Therefore, we believe it is essential to reduce our GHG emissions to ensure a contribution to the global efforts to mitigate climate change and align with the 1.5°C scenario. In 2021, the partnerships below supported our climate ambitions:

- Science Based Targets initiative (SBTi)
- UN High-Level Political Forum on Sustainable Development
- Conferences of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC)
- Business Ambition for 1.5°C
- Mission Possible Partnership and Aluminium for Climate
- Race to Zero

We invest in scientific and technological development

R&D Policy
Patent Policy

Goals and results

	Goals	2021 Results
1	REVISE THE APPROACH AND UPDATE THE R&D MANAGEMENT SYSTEM.	R&D management system updated. New approach for R&D project evaluation implemented.
2	CREATE A RESEARCH STRATEGY.	A research strategy has been developed and implemented as part of the R&D Policy.
3	REVIEW THE EXISTING REGULATORY DOCUMENTS.	Existing regulatory documents have been updated.
4	INSTALL FIVE NEW CHARGING STATIONS FOR ELECTRIC VEHICLES TO SUPPORT THE GROWTH OF CLEAN ENERGY.	Five EV charging stations were installed and put into service in 2021.

Our approach to scientific and technological development takes into account industrial and economic feasibility, as well as environmental impact. Our innovative projects use the best available environmental technologies and reduce costs.

En+ Group has established a Technology Council, consisting of representatives of the Company's business units and experts from research institutes. The council is responsible for approving R&D projects and assessing their results. There is Groups' Patent policy.

In the Power segment, an Innovation Committee was established, which is now responsible for selecting and evaluating projects, and identifying technological approaches to energy efficiency, digitalisation, renewable energy, and other areas of development. The committee is made up of the Company's project leaders, experienced engineers, and industry professionals.

As the world's leading producer of low-carbon aluminium and renewable energy, En+ Group is focused on further developing a robust technological base within the Company. En+ Group has an R&D Department specialising in technology scouting and evaluation, energy-related applied research, and intellectual property management and commercialisation. Our Metals segment concentrates its own R&D competences in research centres and institutes:

- The Institute of Light Materials and Technologies (ILM&T)
- Russian Aluminium and Magnesium Institute
- The Siberian Scientific Research and Design Institute of the Aluminium and Electrode Industry
- The Engineering and Technology Centre (RUSAL ETC)

DEVELOPMENT OF PEROVSKITE SOLAR PANELS

Since 2016, the Group has been engaged in the 'Perovskite Solar Module Development' project in cooperation with the Faculty of Materials Science of Moscow State University (MSU). The project implementation was supported by the Federal Target Programme until 2019, and is currently supported by the Russian Scientific Foundation. In 2021, the research yielded the following results:

A new method of multilayer sealing (encapsulation) of perovskite solar cells that does not damage the light-absorbing and organic conductive layers of the devices was developed. The efficiency of encapsulated perovskite solar cells is over 19% and it does not decrease after the devices have been stored in humid air for >1,500 hours, which proves a high resistance to atmospheric factors at ambient temperatures. The samples demonstrate high photostability: encapsulated solar cells retain 93% of the initial efficiency after 1,000 hours of irradiation with white light with a power of 90–110 MW at a temperature of 21–28°C.

The optimum conditions for the synthesis of single-phase hybrid perovskite films with the target morphology and composition were confirmed by applying reactive polyhalide ink to the surface of a lead-containing precursor film and immersing the precursor film in a solution of iodine and polyhalides in non-polar solvents. The high photostability of the synthesised films was demonstrated in comparison with the samples synthesised using the classical solution technique.

Test perovskite solar cells with an efficiency of more than 17% were produced using improved approaches to the synthesis of AMX3 films using polyhalides. It was demonstrated that the solar cells produced using the approaches developed by the project team are highly competitive with conventional test samples in terms of photostability and retain at least 99–100% of the initial efficiency after exposure to >800 hours of white light irradiation at 100 MW/cm² in humid air at room temperature.

New computer modelling and machine learning algorithms were developed to predict the properties of hybrid perovskite-like materials.

HYDROGEN ENERGY DEVELOPMENT

En+ Group embarked on a new development in hydrogen energy in 2021. With its massive green energy opportunities, En+ is considering hydrogen production by electrolysis using hydrpower. In addition, the Company is interested in facilities for hydrogen transportation over long distances and is considering a project to develop, jointly with partners, cryogenic tank containers for liquid hydrogen transportation.

The Company is working on developing hydrogen usage and is exploring opportunities for supplying hydrogen to consumers in Russia and abroad, and also plans to participate in a project to build hydrogen fuelling stations in Siberia

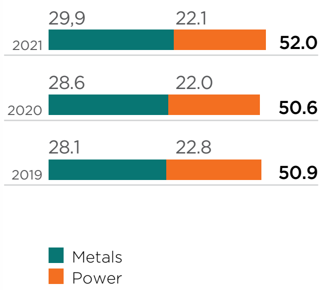
CLIMATE LEADERSHIP

Environmental Policy

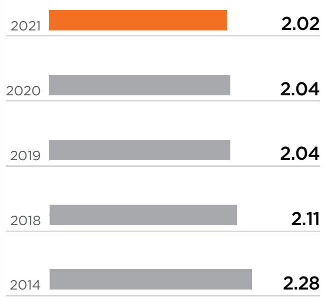
Goals and results

	Goals	2021 Results
1	DISCLOSE THE PATHWAY TO NET ZERO.	A detailed pathway for achieving a 35% reduction in emissions and net zero by 2050 was published in September 2021. Detailed plans for each part of the pathway are being developed.
2	VERIFY AND APPROVE THE SBTI TARGETS OF THE METALS SEGMENT.	En+ Group submitted its SBTs and roadmap to net zero for verification to the SBTi in September. The targets are currently under review by SBTi.
3	FINALISE A TCFD PROJECT TO ASSESS CLIMATE CHANGE RISKS AND OPPORTUNITIES.	The project is completed. The results of the project will be considered in the Pathway to Net Zero progress Report.
4	MINIMISE THE INDUSTRIAL CARBON FOOTPRINT THROUGH THE IMPLEMENTATION OF ENERGY EFFICIENCY MEASURES.	The internal audit and inventory of available actions were implemented in the Power segment. The energy efficiency projects were prioritised by term, implementation complexity and expected effect. The first projects are planned to be reviewed by the Investment Committee in 2022.
5	START CONSTRUCTION WORKS ON THE SMALL-SCALE SEGOZERSKAYA HPP (8.1 MW) IN KARELIA (RUSSIA).	Preparations for construction work were carried out, building permits have been obtained.
6	CONTINUE ASSESSMENT OF GREENHOUSE GAS EMISSIONS FROM HYDROPOWER RESERVOIRS AND EXPAND THE ASSESSMENT TO UST-ILIMSK HPP.	Annual cycle of measurements for Bratsk and Ust-Ilimsk HPP reservoirs has been performed (autumn, summer and spring campaigns). Second year cycle for Bratsk reservoir has been started in autumn 2021. The preliminary data for average annual methane emissions are in the lower emissions range for global boreal HPP reservoirs.

Gross GHG emissions (Scope 1 + 2)[2] (mt CO_2e)



The Metals segment's GHG emissions in electrolysis operations(tCO_2e/tAl)[3]



We are striving to become one of the leaders in the fight against climate change

We are constantly expanding renewable energy sources, improving production efficiency, and reducing negative impact on the environment and climate.

In January 2021, En+ Group committed to reduce GHG emissions by at least 35% by 2030 and to be net zero by 2050 (Scope 1 and 2 as benchmarked against the Group's 2018 GHG emissions[1]) . To achieve its commitments, the Group will need to upgrade its production facilities and introduce innovative technologies throughout the production chain. In September 2021, En+ Group published its Pathway to Net Zero Report, which outlines, in comprehensive detail, the initiatives being undertaken across the whole value chain to achieve its sector-beating climate targets in line with 1.5°C pathways.

En+ Group's total GHG emissions increased in 2021 compared to 2020, due to a number of factors. GHG emissions in the Power segment were increased due to the length of the heating season. The increase of GHG emissions in the Metals segment was due to the fact that the PGLZ was taken into account in full for the entire year (in 2020 only the 4th quarter was taken into account), the perimeter of covered enterprises was also expanded.

The Group is confidently moving towards reducing direct specific greenhouse gas emissions by 15% from 2014 levels (2.28 tCO_2e/tAl) at existing aluminium smelters by 2025. In 2021, the intensity of GHG emissions from electrolysis operations was 2.02 tCO_2e/tAl – a 11% reduction from the 2014 baseline.

1. The Group's 2018 GHG emissions (Scope 1 and 2) were 50.0 mt CO_2e.
2. Preliminary data, being verified as part of the En+ Group 2021 Sustainability Report preparation.
3. Preliminary data, being verified as part of the En+ Group 2021 Sustainability Report preparation. Level 1 in accordance with the Aluminium Carbon Footprint Technical Support Document (2018) (https://www.world-aluminium.org/media/filer_public/2018/11/22/carbon_footprint_technical_support_document_v1_published.pdf).

We improve energy efficiency

Our energy generation strategy includes expanding hydropower generation, reducing network losses, and increasing the share of power generated closer to the regions of highest consumption.

Energy efficiency programmes and projects are central and energy-saving technology is widely implemented. We actively develop new ways to generate electricity, optimise power generation, and make our aluminium production more efficient to address our carbon footprint and other issues related to the environment and climate change.

In 2020, we developed project documentation for the Segozerskaya HPP in Russia (Karelia). In 2021, preparations for construction work were carried out, building permits have been obtained.

Read more on Energy Consumption in Appendices

ALLOW

RUSAL has been offering its customers ALLOW low-carbon aluminium, produced with renewable hydropower, since 2017. ALLOW enables our customers to progress their decarbonisation journey, and to reduce the carbon footprint of their products across all major aluminium-consuming segments. ALLOW has a guaranteed low-carbon footprint of less than 4 tCO_2e/tAl (smelter emissions, Scope 1 and 2, IAI Level 1) and 2.4 tCO_2e/tAl on average. The Group verified its primary aluminium alloys in accordance with the criteria of the ALLOW brand in 2020 with the help of the international audit company, TÜV Austria. The ALLOW digital passport will provide our customers with easy access to a full set of environmental, social, and governance (ESG) information. It will also be available on LME's platform to enable buyer decisions based on carbon footprint, ASI (Aluminium Stewardship Initiative) certification, and the sources of energy used in its production.

NEW ENERGY PROGRAMME

Upgraded equipment at the Bratsk, Ust-Ilimsk, Irkutsk and Krasnoyarsk HPPs supported an increase in hydropower production of 2,105.2 GWh in 2021, helping to prevent greenhouse gas emissions by approximately 2,440 kt of CO_2e emissions, due to the partial replacement of prior thermal power generation volumes.

ENERGY EFFICIENCY INITIATIVE

In 2021, Aughinish Alumina Ltd. (AAL) reduced its carbon footprint by 34.15 kt of CO_2e through increased energy efficiency, and it continues to have one of the lowest carbon footprints in the world, ranked among the best 5%. As a result of this continued improvement Aughinish's carbon footprint has reduced by 3%.

I-REC STANDARD

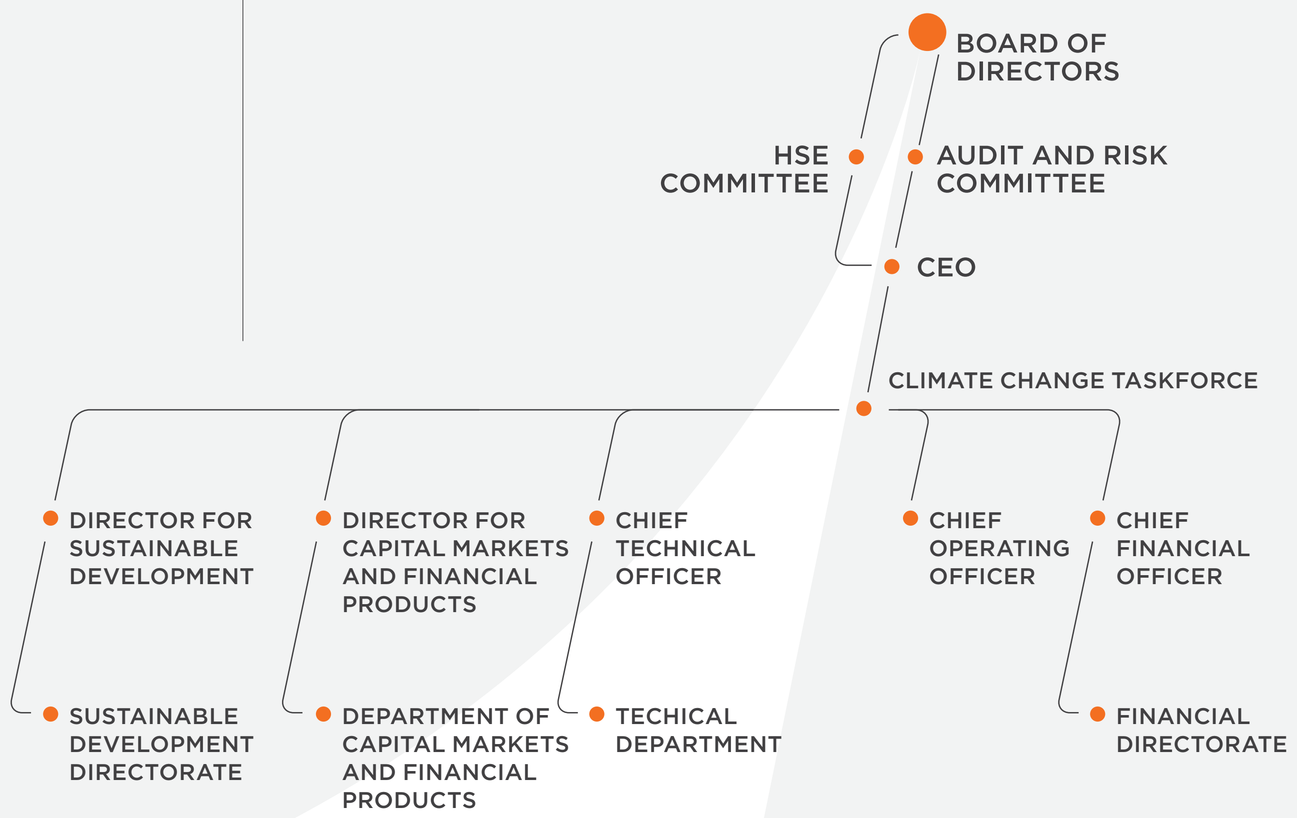
I-REC

By the end of 2021 En+ Group has issued over one million international renewable energy certificates (I-RECs). The certificates issued meet major international sustainability and carbon accountability standards, including the GHGP, CDP and RE100, and meet the stakeholder expectations of industry best practice. The certificates correspond to the electric energy produced by En+ Group companies such as LLC EuroSibEnergo-Hydrogeneration (Krasnoyarsk HPP) and LLC Abakan SPP (Abakansk Solar Plant). The electrical energy produced by these companies meets internationally recognised standards for renewable energy tracking. I-RECs serve to increase transparency in the energy sector and provide clarity about the use of renewable electricity among end-consumers. Energy consumers can use I-RECs to help them meet their Scope 2 carbon targets, and to support their internal corporate social responsibility policies.

Task Force on Climate-related Financial Disclosures (TCFD)

This chapter of climate risk analysis has been prepared in line with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). We intend to provide our stakeholders with additional information on the principles guiding our approach to climate change, including identified and assessed risks for our assets and measures taken to mitigate and adapt those risks. The conducted climate risk analysis of the Metals and Power segments, which includes transitional and physical risks, was implemented in terms of the Company's consolidated operations in line with the TCFD disclosure. The project on the assessment of climate change risks and opportunities for our value chain is completed. As part of the strategy development, the detailed disclosure in accordance with the TCFD recommendations will be published in autumn 2022.

CLIMATE RISK
GOVERNANCE STRUCTURE



In 2020–2021, the Board and HSE Committee discussed climate-related issues in

18 out of 43 meetings

Governance

The Group's climate risk corporate governance system outlines the relationship between the Group's shareholders, the Board, the CEO and the management team, as well as the competencies and duties of the Board committees in relation to managing the global climate change agenda.

When making strategic decisions concerning climate change, the Group is guided by its environmental policy, whose main objective is the continual reduction of environmental and climate impacts, as well as mitigation and management of related risks, with a view to preventing global temperature rises above 1.5°C.

The Board of Directors possesses strong capacity and competence to respond to climate-related risks and opportunities effectively. The Board oversees the implementation of all ESG-related corporate policies, monitors the attainment of the Company's environmental protection and climate goals, performs annual analysis of the progress towards climate change goals and the implementation of activities related to climate change, and makes decisions to revisit the targets and implement new activities that will be included in the business plans.

On the subject of climate change, the Board is mainly assisted by the Health, Safety and Environment Committee (HSE Committee). The HSE Committee assists the Board in solving climate change issues. The HSE Committee currently oversees climate-related risks and reports them to the Board of Directors to enable the Board to address these risks.

In 2020–2021, the Board and HSE Committee discussed climate-related issues in 18 out of 43 meetings. The main issues related to climate change, which were addressed by the HSE Committee, are as follows:

- Health, safety and environment KPIs
- Environmental risk management
- Results of the environmental audits
- Introduction of the UN Global Compact Business Ambition for 1.5°C initiative
- UN Global Compact's SDG Ambition Accelerator

Should any obstacles or important matters related to climate change arise that require a decision by the Board of Directors, meetings may be held dedicated specifically to discuss the particular climate issue, in order to make an immediate decision, such as potential acquisitions and divestitures entailing consideration of climate related risks.

To manage our pathway to net zero, we have created the En+ Climate Change Taskforce to drive our transformation. The Taskforce is headed by the Chief Operating Officer and reports directly to the Chairman. Each of the transformational verticals is led by a senior executive from our management team. The Taskforce works in continuous collaboration across multiple lines of business. The key objective of the Taskforce is to develop an integrated climate strategy that will enable us to achieve our ambitious net zero GHG emissions goal by assessing climate change risks and opportunities. The Group cooperates with branch managers to stay up to date with the most recent information on risks and opportunities in all regions of operations.

KPIs are applicable to management team members to ensure the absence of environmental incidents, accidents, or violations by such members. For the CEO, KPIs also include other sustainability metrics. A detailed list of goals is given in the Metrics and Targets section.

Environmental protection activities are carried out in both of our segments by the specialised sustainable development directorate. We are working on the development of a climate risk register covering the Group's assets. Managers at all levels are responsible for the timely identification and assessment of risks, development of risk management activities and communication of risks to all of the Company's stakeholders within their area of responsibility, and also for ensuring that identified risks are included in risk maps for the Group's divisions and in the Group's corporate risk map in a timely and complete manner.

Strategy

The Group has been involved in climate risk assessment for many years. Climate risk assessment is one of the stages of the Company's strategy. Climate-associated risks and factors have been identified, analysed and evaluated to make strategic decisions related to global climate change. Scenario analysis was used to assess the importance of climate risks and their potential impact on the Group's assets.

The scenario analysis conducted complies with the TCFD guidelines and underlines the importance of a key type of transition risk scenario – the so-called 2°C scenario – which lays out a pathway and an emissions trajectory consistent with keeping the increase in the global average temperature to 2°C above pre-industrial levels, corresponding to the baseline goals of the Paris Climate Agreement.

Different climate scenarios were considered to assess how climate risks and opportunities might affect the Company. The following scenarios[1] were chosen:

- SSP 126 "Sustainability scenario" corresponding to warming of 1.5–2°C
- SSP 245 "Middle of the road scenario" corresponding to warming of 2–4°C
- SSP 585 "Fossil Fuel Economy scenario" corresponding to warming of 4–7°C

En+ Group has identified climate-related risks and opportunities in the short, medium, and long terms. The short term is defined as 0–1 year. The short-term horizon is used to set immediate decarbonisation objectives. The medium term is defined as 2–3 years. The medium-term horizon is used to set objectives which require more than a year for implementation. The long term is defined as up to 10 years. This is a period with a higher uncertainty, during which activities and projects are planned with a high margin of resistance to variable factors.

En+ Group is a company with many assets in different regions. For a correct assessment of climate risks, it is important to consider the climatic features of different regions. Therefore, an in-depth analysis of climate risks specific to the area under consideration was carried out with regard to the local specifics of the regions.

Risk management

En+ Group realises the necessity of integrating the identification, assessment, and management of climate-related risks into the Company's overall risk management process.

The Company's risk management system provides for the identification and the financial and probabilistic estimation and control over any change in risks from both the internal and external environments with regards to the financial and/or economic activities of the Group's operating companies and businesses.

Risk assessment is part of the Company's corporate governance system. Climate risks are identified, assessed, and managed by the Company as a specific risk management process, which is fully compliant with the Company's corporate risk management system. The main purpose of risk management is to choose the most effective methods of addressing each identified risk and to ensure that both executives and employees of the Company are informed on the topic. The HSE Committee currently oversees climate-related risks and reports on them as part of its agenda to address the risks for the Board of Directors.

Physical risks and opportunities

The physical risk register lists physical risks that may potentially undermine the Group's operations and supply chain. The register will be updated on a regular basis. Among the physical risk factors we consider the probability of severe events (acute risks) such as precipitation and flooding anomalies, abnormal heat and abnormal cold, as well as the chronic risks relevant to the Group's activities, such as average annual temperature and precipitation increase.

[1] Keywan Riahi et al. The Shared Socioeconomic Pathways and their energy, land use, and greenhouse gas emissions implications: An overview. Global Environmental Change, Volume 42, 2017, p. 153-168, ISSN 0959-3780, https://doi.org/10.1016/j.gloenvcha.2016.05.009.

Key physical risks of the Group are described in a table below:

Physical risk	Risk factor	Scenario	Region of exposure	Impact in time horizon: Short term 2022	Impact in time horizon: Medium-term 2022–2025	Impact in time horizon: Long-term 2025–2050	Probability[1]
			Komi Republic	○	○	●	Low
		SSP126	Republic of Guinea	○	○	●	Medium
			Komi Republic	○	○	●	Low
		SSP245	Republic of Guinea	○	○	●	High
			Republic of Guinea	○	○	●	High
Infrastructure disrup-tion (under-flooding of quarries)		SSP585	Komi Republic	○	○	●	Low
		SSP126	Krasnoyarsk Territory	○	○	●	Low
		SSP245	Republic of Guinea Nizhny Novgorod Region Irkutsk Region	○	○	●	Low
			Republic of Guinea Nizhny Novgorod Region Irkutsk Region	○	○	●	Low
Infrastructure disruption	abnormal precipitation	SSP585	Krasnoyarsk Territory	○	○	●	Medium
		SSP126		○	○	●	Low
		SSP245		○	○	●	Low
	abnormal precipitation	SSP585	Armenia	○	○	●	Low
		SSP126		○	○	●	Low
		SSP245		○	○	●	Low
Supply disruptions	strong wind	SSP585	Jamaica	○	○	●	Low
		SSP126	Krasnoyarsk Territory Republic of Guinea	○	○	●	Medium
			Krasnoyarsk Territory	○	○	●	Medium
		SSP245	Republic of Guinea	○	○	●	High
			Krasnoyarsk Territory	○	○	●	Medium
Reduced productivity	abnormal heat	SSP585	Republic of Guinea	○	○	●	High
		SSP126		○	○	●	Low
		SSP245		○	○	●	Low
Equipment damage/loss	abnormal frosts	SSP585	Irkutsk Region	○	○	●	Low
		SSP126		○	○	●	Low
		SSP245		○	○	●	Low
Halt in production	abnormal precipitation deficits	SSP585	Irkutsk Region	○	○	●	Low
Breaching of the integrity of production facilities		SSP126		○	○	●	Low
		SSP245		○	○	●	Medium
	abnormal precipitation	SSP585	Irkutsk Region	○	○	●	Low
		SSP126		○	○	●	Low
		SSP245		○	○	●	Low
Main building's roof collapse	abnormal snowfall	SSP585	Irkutsk Region	○	○	●	Low

○ - insignificant impact, ● - significant impact (based on a qualitative risk assessment)

SSP 126 "Sustainability scenario" corresponds to warming of 1.5–2°C.
SSP 245 "Middle of the road scenario" corresponds to warming of 2–4°C.
SSP 585 "Fossil Fuel Economy scenario" corresponds to warming of 4–7°C.

[1] Based on a qualitative risk assessment scale: low (less than 20%), medium (20–60%), high (60–100%) probability.

Physical opportunities of the Group are described in the table below:

Opportunity category	Opportunity	Assets under exposure: Metals segment	Assets under exposure: Power segment	Impact in time horizon: Short-term 2022	Impact in time horizon: Medium-term 2022–2025	Impact in time horizon: Long-term 2025–2050
Chronic	Reduction in consumption of fuel and energy resources and in required heating energy capacity due to a shorter heating season.	+		○	○	●
	Increase in the share of low-carbon electricity supply through solar energy development. The number of cloudy days in summer is expected to decrease in the Russian Federation with the exception of the Primorsky Krai and the Caucasus Region.	Applicable to En+ Group		○	○	●
	Increase in dwelling electricity demand for air conditioning due to abnormal heat will increase profit.		+	○	○	●
	Increase in dwelling heat demand for heating due to abnormal cold will increase profit.		+	○	○	●
	Additional energy potential (in low-water years, abnormal precipitation can restore normal headwater level in reservoir within a short period of time).		+	○	●	●
Acute	Increase in the share of low-carbon electricity supply through solar energy development.	Applicable to En+ Group		○	●	●

○ - insignificant impact, ● - significant impact (based on a qualitative opportunity assessment)

Transition risks and opportunities

Compilation of the transition risk register was carried out in accordance with the TCFD recommendations. The transition risk register includes risks such as policy constraints on emissions, imposition of a carbon tax, water restrictions, land use restrictions or incentives, and market demand and supply shifts. The register will be updated on a regular basis.

Transition risks of the Group are described in the table below:

Risk category	Risk	Risk factor	Scenario	Assets under exposure: Metals segment	Assets under exposure: Power segment	Impact in time horizon: Short-term 2022	Impact in time horizon: Medium-term 2022–2025	Impact in time horizon: Long-term 2025–2050	Probability within the scenario analysis
Policy and Legal	Expenses related to the purchase of offsets	Setting the national carbon price and creating a regional inventory of GHG emissions	SSP126			○	●	●	high
			SSP245			○	●	●	medium
			SSP585			○	●	●	low
	Additional tax burden due to the CBAM introduction	Introduction of CBAM	SSP126			○	○	●	high
			SSP245			○	○	●	high
			SSP585			○	○	●	high
	Costs of arranging measures to adapt to and to minimise the impact of the global climate change	Approval of the national action plan for adaptation to climate change	SSP126			○	○	●	medium
			SSP245			○	○	●	high
			SSP585	Applicable to En+ Group		○	○	●	high
	Reduction in demand for non-green electricity due to the introduction of CBAM	Introduction of CBAM	SSP126		+	○	○	●	high
			SSP245		+	○	●	●	medium
			SSP585		+	○	●	●	low

Risk category	Risk	Risk factor	Scenario	Assets under exposure: Metals segment	Assets under exposure: Power segment	Impact in time horizon: Short-term 2022	Impact in time horizon: Medium-term 2022–2025	Impact in time horizon: Long-term 2025–2050	Probability within the scenario analysis
Technology	Capital expenditure on the transition to energy-efficient and energy-saving solutions in production processes	High carbon intensity of manufacturing processes	SSP126			○	●	●	high
			SSP245			○	●	●	medium
			SSP585	Applicable to En+ Group		○	●	●	low
	Decrease in demand for the Company's products in the European markets	Reorientation of aluminium exports to Asian markets	SSP126	+		●	●	●	high
			SSP245	+		●	●	●	medium
			SSP585	+		●	●	●	low
	Reduction or absence of additional government investments to reduce GHG emissions	Investment restriction for hydro generation facilities	SSP126		+	○	●	●	medium
			SSP245		+	○	●	●	medium
			SSP585		+	○	●	●	low
	Failure to achieve the declared impeller performance of hydraulic units within the New Energy programme	Implementation of the New Energy programme	SSP126		+	●	●	●	low
			SSP245		+	●	●	●	low
			SSP585		+	●	●	●	low
	Increasing the carbon intensity of production by using Elegaz-insulated circuit breakers	Replacement of switching equipment	SSP126		+	○	○	●	low
			SSP245		+	○	○	●	low
			SSP585		+	○	○	●	low
Reputation	Reduced investment appeal of the Company	Negative perception of the Company by investors, independent shareholders, local communities	SSP126			○	○	●	high
			SSP245			○	○	●	medium
			SSP585	Applicable to En+ Group		○	○	●	low
	Sludge overflow that entails costs on eliminating the consequences of the accident and paying a fine	Level overflow on sludge fields	SSP126	+		●	●	●	high
			SSP245	+		●	●	●	medium
			SSP585	+		●	●	●	medium
Market	Reduced product margins and competitiveness due to high carbon footprint	Lower demand for high-carbon generation	SSP126			○	●	●	high
			SSP245			○	●	●	medium
			SSP585	Applicable to En+ Group		○	●	●	low
	Lower demand for coal products	Transition to low-carbon economic development	SSP126		+	○	●	●	high
			SSP245		+	○	●	●	medium
			SSP585		+	○	●	●	low

○ - insignificant impact, ● - significant impact (based on a qualitative risk assessment)

SSP 126 "Sustainability scenario" corresponds to warming of 1.5–2°C.
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[1] Based on a qualitative risk assessment scale: low (less than 20%), medium (20–60%), high (60–100%) probability.

Transition opportunities of the Group are described in the table below:

Opportunity category	Opportunity	Assets under exposure: Metals segment	Assets under exposure: Power segment	Impact in time horizon: Short-term 2022	Impact in time horizon: Medium-term 2022–2025	Impact in time horizon: Long-term 2025–2050
	Company's regular annual reporting of GHG emissions to stakeholders			●	●	●
	Continuous monitoring of GHG emission reduction targets			●	●	●
	Adoption of the methodology to calculate GHG emissions and the carbon footprint of products			●	●	●
	Possibility of attracting additional investments in connection with the publication of reports in which a company/supplier's low carbon footprint is noted (low carbon products and power generation).			●	●	●
	Introduction of the carbon price criterion to assess the strategic areas of product manufacturing and sales at the national and corporate levels			○	●	●
	Additional profit from selling carbon credits in the domestic market (national regulation)			○	●	●
	Additional profit associated with the possibility of selling carbon credits within the framework of the mechanism provided in Article 6.4 of the Paris agreement (international regulation)	Applicable to En+ Group		○	○	●
Policy and Legal	Regulatory Impacts for the Coal Industry Policy Directions (bank lending, licensing regulation, regulation of the use of coal in the domestic market, development of infrastructure, attraction of investment from domestic and external coal consumers)		+	○	○	●
	Decarbonisation of processes			●	●	●
	Increasing investment in the production of low-carbon generation (high-current production, CCUS technologies)	Applicable to En+ Group		○	○	●
Technology	Use of Energy-Efficient Equipment in the Process Chain and Best Available Technologies (BAT)	+		○	●	●
	Increasing investment attractiveness	Applicable to En+ Group		●	●	●
Reputation	Increased demand for materials used in the transition to a decarbonised power system	+		●	●	●
	Increased demand for less carbon-intensive products	Applicable to En+ Group		○	●	●
	Increased demand for electricity due to transport electrification		+	○	●	●
	Additional profits from a green hydrogen project		+	○	○	●
Market	Implementation of climate projects for the introduction of small hydropower plants		+	○	●	●

○ - insignificant impact, ● - significant impact (based on a qualitative opportunity assessment)

Metrics and targets

The GHG emissions of the Group were calculated in compliance with the GHG Protocol. The GHG emissions calculation for the Metals segment is certified by the independent authority TÜV Rheinland as part of the audit and GHG verification

Read more on GHG emissions and GHG emissions intensity at p.71

In line with TCFD recommendations, En+ Group sets short-term, medium-term, and long-term goals

Short-term climate-related goal:

Read more on Short-term Climate-Related Goals for 2021 at p.70

Mid-term climate-related goals

The Metals segment of the Group set seven goals in its strategy up to 2025 to reduce GHG emissions. In addition to reducing the average specific direct and indirect GHG emissions to no more than 2.7 tonnes of CO_2 equivalent per tonne of aluminium, as mentioned above, our strategic climate change goals up to 2025 are:

Goals

1. To reduce direct specific GHG emissions by 10% vs. 2014 in existing alumina refineries by 2025.
2. To reduce direct specific greenhouse gas emissions by 15% compared to 2014 (2.28 tCO_2e/tAl) at existing aluminium smelters by 2025.
3. To purchase at least 95% of electricity from hydropower plants and other carbon-free sources of power generation for aluminium smelters by 2025.
4. To reduce specific electric power consumption by aluminium smelters by 7% vs. 2011 by 2025.
5. To use an internal carbon price when making strategic and investment decisions, starting in 2017.
6. To support Russian and international initiatives and associations advocating for actions to prevent climate change and backing carbon prices, provided they are aligned with the Company's strategic goals.

Long-term climate-related goals:

In January 2021, the Board of Directors approved targets of a reduction in GHG emissions by at least 35% by 2030, with a target to reach net zero emissions by 2050 (Scope 1 and 2, as benchmarked against the Group's 2018 GHG emissions).

Read more on Group's Objectives and Intentions in the Pathway to Net Zero Report

ENVIRONMENTAL STEWARDSHIP

Environmental Policy

Goals and results

Goals	2021 Results
1 **IMPLEMENT ACTIONS FOR THE TECHNICAL REFURBISHMENT OF FLY ASH PRECIPITATORS** at the Novo-Irkutsk and Ust-Ilimsk CHPs, and CHP-6.	The fly ash precipitator refurbishment project is ongoing.
2 **IMPLEMENT LARGE-SCALE ASH AND SLAG WASTE UTILISATION INITIATIVES** according to the plan of LLC Baikal Energy Company.	The project for using the wastes for mines restoration/land habitation is on the Environmental examination stage. After the examination it will be decided how to scale up this practice. A second project concerns the use of waste as a component in road construction. In 2021, the appropriate R&D has been started. 150 metres of roadbed near Irkutsk has been constructed by using fly and bottom ash. The monitoring of road conditions was started in autumn of 2021 and will continue in the first half of 2022 to assess the use of fly and bottom ash in road construction.
3 **DEVELOP PROJECT DOCUMENTATION FOR THE BRANCHES OF LLC EUROSIBENERGO-HYDROGENERATION** to ensure the organised collection, treatment, and disposal of surface and drainage wastewater from HPPs, and to equip drainage systems with local wastewater treatment systems. Draft materials for a preliminary feasibility study for similar projects at Krasnoyarsk HPP.	The project documentation stage for wastewater treatment facilities was started in 2021 at Bratsk, Ust-Ilimsk and Irkutsk HPPs. The pre-preliminary examination for wastewater treatment facilities at Krasnoyarsk HPP has been completed.

En+ Group takes a responsible approach to the use of natural resources and applies the precautionary principle in its risk management system and when evaluating environmental impacts to minimise the adverse consequences of its activities. The Company uses innovative high-tech solutions that allow us to combine the minimisation of environmental impacts with optimisation of the production process.

The key aspects of the Company's environmental protection activities are:
- Identifying and assessing the environmental and climate aspects and risks generated by the Company's facilities, as well as the impact of environmental and climate risks on the Company's activities
- Complying with environmental legislation in the regions where the Group operates, as well as with internal corporate regulations and industry best practice, which can be more tough than local regulations
- Preventing and mitigating environmental and climate impacts
- Restoring of territories and offsetting the residual impacts on ecosystems from operational activity
- Engaging with stakeholders and respecting their views

In line with its environmental policy, the Company is constantly improving the existing environmental management system to comply with ISO 14001, the international standard on environmental management systems, and GOST R 14001–2016, the Russian national standard on environmental management systems. In 2021, the ISO 14001 implementation project has been completed at LLC EuroSibEnergo-Hydrogeneration including the Bratsk, Irkutsk, and Ust-Ilimsk HPPs. The environmental management system is ready for certification.

In 2021, the supervisory authorities carried out inspections of the Company's enterprises. No significant environmental fines or incidents (exceeding USD 1 million) were reported. Work is underway to remedy all recorded minor incidents.

We take a responsible approach to air quality issues in regions of operation

All of the Company's facilities, without exception, comply with the requirements of environmental legislation. Despite this, En+ Group is constantly striving to improve its environmental performance by implementing measures and initiatives aimed at reducing emissions of pollutants into the atmosphere.

As part of its responsible approach to air quality issues in its regions of operation, En+ Group has been taking an active part in the implementation of the Environmental National Project and Clean Air Federal Programme since 2018. The goal of this programme is to significantly improve air quality in 12 industrial Russian cities, including Bratsk, Novokuznetsk, and Krasnoyarsk – cities where En+ Group operates. According to the plan, the reduction in emissions should reach 20% of the volume of the 2017 base year by 2024, and automatic continuous emissions measurement systems should be installed. The Company's facilities located in the cities affected by the programme are taking various measures to reduce the volume of emissions of pollutants released into the atmosphere.

Enterprises of the Metals segment are implementing a list of measures aimed at improving air quality in the regions of operation, including:
- Monitoring atmospheric conditions through automatic continuous emissions measurement systems and mobile laboratories
- Using modern gas treatment facilities, including units engineered by RUSAL's design and scientific departments
- Conducting R&D activities and implementing the results
- Applying Eco-Søderberg technology (at the Krasnoyarsk, Bratsk, Irkutsk, and Novokuznetsk aluminium smelters)
- Using best available technologies to reduce air emissions
- Refurbishing aluminium smelters

The main emissions of the Power segment are associated primarily with the combustion of fossil fuels for energy generation. One of the ways to reduce the volume of pollutant emissions into the atmosphere is to increase the efficiency of generation at the Company's facilities. Baikal Energy Company LLC is continuing to upgrade the electrostatic precipitators at the Novo-Irkutsk CHP and the Novo-Ziminskaya CHP, and replacing fly ash traps with modern electrostatic precipitators at CHP-6 and UICHP to reduce the pollutant output.

We comply with the limits on water withdrawal from water bodies and wastewater discharge

The majority of water usage at Company sites relates to the alumina facilities of the Metals segment and the power generation facilities in the Power segment. All enterprises of En+ Group comply with the limits on water withdrawal from water bodies and wastewater discharge; no significant violations of legal requirements were recorded in the reporting period. Most of the enterprises are located in regions that are not classified as water scarce.

The Company's activities in the field of water management include:
- Reducing the volume of fresh water used in operational processes
- Reducing the volume of wastewater produced and the concentration of hazardous substances contained therein
- Increasing water recycling
- Increasing the quantity and quality of wastewater treatment processes
- Water quality monitoring

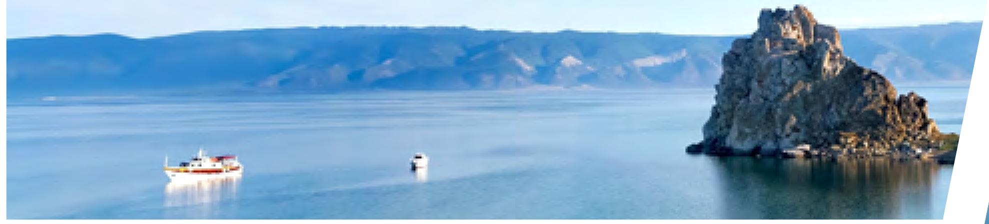
Lake Baikal

En+ Group, the largest company operating in the Baikal region, operates hydropower plants on the Angara River flowing out of Lake Baikal, thus providing a supply of renewable power En+ Group regulates the water regime of the Angarsk cascade in accordance with the instructions of Rosvodresursy, the Russian federal water resources agency

LAKE BAIKAL WATER LEVEL MANAGEMENT

The Institute of Water Problems of the Russian Academy of Sciences, with the financial support of En+ Group, completed studies to define operation schedules for controlling the water regimes of the Angara-Yenisei cascade reservoirs and Lake Baikal in the spring of 2021.

One of the most important deliverables of the work was the "Green" version of the operation schedule for managing the water regime of the Irkutsk Reservoir and Lake Baikal. The "Green" option is based on the following idea: in order to minimise the impact of anthropogenic management of the level of Lake Baikal, it is necessary to arrange management in such a way that the lake level trend replicates its natural behaviour as accurately as possible. The natural (restored) levels of Lake Baikal for specific inflow conditions are determined by simulation modelling. New rules for managing the lake level were developed based on this approach. At the same time, the needs of water users are still met and the energy parameters of the HPP cascade are generally maintained.



ENVIRONMENTAL MONITORING OF LAKE BAIKAL

En+ Group recognises its share of responsibility for the environmental well-being of the lake and takes efforts to support and preserve its biodiversity. In 2021, the third annual expedition for environmental monitoring of Lake Baikal was carried out to obtain unbiased data on the condition of the lake's ecosystems. Researchers from seven leading Russian scientific research institutions took part in the expedition, i.e. Lomonosov Moscow State University, Moscow; Severtsov Institute of Ecology and Evolution of the Russian Academy of Sciences, Moscow; Siberian Federal University, Krasnoyarsk; Irkutsk State University, Irkutsk; Moscow Institute of Physics and Technology, Moscow; Institute of Limnology of the Russian Academy of Sciences, Saint-Petersburg; and Trofimuk Institute of Petroleum Geology and Geophysics, Siberian Branch of Russian Academy of Sciences, Novosibirsk.

Research into underground flows of biogenic substances and assessment of stress levels in the Baikal sponge and gammarus populations were added to the basic monitoring programme in 2021.

Hydrochemical analyses of the water samples confirmed that the main pollutants entered Lake Baikal through the Selenga River. New data were obtained confirming inflows of biogenic substances into Lake Baikal carried by groundwater from populated areas that do not have waste water treatment facilities.

ENVIRONMENTAL PROJECTS GRANT COMPETITION

The second grant competition aimed at protecting Lake Baikal and aquatic ecosystems from adverse environmental impacts was held in 2021. The competition considered projects for the conservation of Lake Baikal and its natural territories, as well as other water bodies.

7

participating cities: Irkutsk, Baikalsk, Ust-Ilimsk, Angarsk, Divnogorsk, Miass and Nizhny Novgorod

4

nominations: "Science and practice", "Pooling resources", "Local initiative", and "Transferring experience"

22

projects received Company support. The size of the grant fund in 2021 amounted to RUB 10 mn

ELECTRIC VEHICLE CHARGING STATIONS IN IRKUTSK

En+ Group pursues development of EV charging infrastructure in the Irkutsk Region, Siberia, to contribute to improvement of the environment in the cities where the Group operates.

Eight 50–100 kW EV charging stations were installed and launched in the Irkutsk Region in 2020–2021, providing both slow and fast charging (80% of battery capacity in 20 min). Another 18–20 100 kW charging stations are to be installed throughout 2022–2023 in large cities in the Irkutsk Region (Bratsk, Usolye-Sibirskoye, Tulun, and Taishet), along the Federal Motor Road connecting the cities, and along the road to Olkhon island.

More than 700 different consumers have already used the stations, with 10,000 charging sessions overall. En+ Group's new charging stations are integrated within a single system enabling current and future users to take advantage of a special mobile application to activate a charging session by simply choosing a station and plugging their vehicle in.

BAIKAL DIALOGUE

The Baikal Dialogue project, supported by WWF Russia, is aimed at updating the status of the environmental and social challenges of the Baikal Natural Territory (BNT) and finding solutions. "Assessment of environmental and social challenges of the BNT" was performed in 2021 by nine experts gathered under the aegis of EcoCentre "Zapovedniki", with participation of specialists from the Lake Baikal Foundation.

The Project's seven main themes are:

- International aspects of protection and sustainability of the BNT
- Integration of strategic environmental assessment approaches within the assessment of environmental and social challenges of the BNT
- Assessment of cumulative environmental and social impact on the BNT
- Industrial and domestic pollution in the BNT
- Solidifying the network of the Natural Areas under Preferential Protection and preserving the biodiversity of Lake Baikal
- Development of a dialogue between the authorities, businesses and civil society around Lake Baikal
- Analysis of corporate practices used by various companies in the BNT to preserve the unique ecosystem and support local residents

Interim results of the project were widely discussed at various venues throughout the year, including the Shapkhaev Hearings in Irkutsk. A kick-off and bottom-line sessions were held on the basis of the Public Chamber of the Russian Federation by videoconferencing with the Public Chambers of the Irkutsk Region and the Republic of Buryatia.

We reduce and mitigate the impact of waste generation

En+ Group's two main focus areas for waste management are increasing waste recycling and ensuring the safe disposal of waste at disposal facilities.

En+ Group implements several measures to prevent or mitigate the impact of waste generation:

- Conducting research on waste recycling and implementing the results
- Land rehabilitation after decommissioning of waste dams
- Using modern waste disposal facilities to ensure long-term and reliable storage and/or burial
- Reducing the amount of bauxite and nepheline residue generated by the Metals segment and ash and slag waste generated by the Power segment
- Raising awareness of waste management throughout the Company

The issue of disposal of waste containing polychlorinated biphenyls (PCBs) – extremely hazardous persistent organic pollutants – is especially important for En+ Group. The Company has developed a plan for the complete removal of such waste from all enterprises by 2025. This goal is consistent with the international obligations assumed by Russia under the Stockholm Convention on Persistent Organic Pollutants (POPs).

En+ Group operates a significant number of waste disposal sites. Each of these sites meets all legal requirements, and their safe management is one of the Company's key priorities. Safety is an absolute priority at all stages of the waste disposal facilities life cycle. The key elements ensuring the safety of sludge storage facilities are constant monitoring of their technical condition and the high qualifications of the personnel of these facilities. Each of these aspects is closely monitored:

- Tailing dams are inspected periodically, and their condition is consistently monitored using instruments
- The Company requires that personnel operating tailing dams are certified and ensures the professional development of technicians that supervise the safety of hydraulic structures

WASTE MANAGEMENT INITIATIVE

Aughinish Alumina Ltd. (AAL) continues to participate in RemovAL, which is a large research project funded by the EU's Horizon 2020 programme, and coordinated by the National Technical University of Athens (NTUA) to advance existing technologies for the sustainable processing of Bauxite Residue (BR). In 2021, AAL in association with industry partners developed and constructed a pilot scale residue dealkalisation plant to produce residue with a soda content <0.5%, making it usable in the iron and cement industries. In 2021, AAL also demonstrated the use of farmed bauxite residue as a stabiliser with other industrial by-products (fly ash) for civil work applications, with the successful construction of a 150m section of road on our Bauxite Residue Disposal Area (BRDA).

AAL is also participating in ReActiv, another large research project funded by the EU's Horizon 2020, which is coordinated by Holcim, the biggest cement producer in Europe. The objective of the project is to produce cements with a portion of clinker replaced with modified Bauxite Residue (BR). Through ReActiv, modification will be made to both the alumina and cement production processes, linking them through the new ReActiv technologies and transforming them into an active material suitable for new, low-carbon cement products.

In 2021, AAL also started construction work on the Salt Cake Wet Oxidation Project (SWOP). This project will convert salt cake, which is an impurity removed as part of the refinery process, to caustic which will be fully recovered into the refinery. The elimination of salt cake will reduce the future requirement for storage of this by-product on the BRDA.

We rehabilitate disturbed land

The rehabilitation of disturbed lands is also an important aspect of the Company's environmental activities. These works are carried out by En+ Group specialists after the completion of open pit mining and decommissioning of waste disposal facilities. They include:

- The reclamation of disturbed terrain and soil upon the completion of open-cut mining
- The restoration of waste disposal facilities, such as ash dumps and landfills
- The recultivation of disturbed and contaminated land

We pay special attention to the study of the state of biodiversity in the regions of operations

15 LIFE ON LAND

Biodiversity Policy

Goals and results

Goals	2021 Results
1 CONTINUE THE MONITORING OF BIODIVERSITY IN COLLABORATION WITH SCIENTIFIC INSTITUTIONS.	The Company pursued implementation of its biodiversity preservation projects in 2021.
2 CONTINUE TO IMPLEMENT BIORESOURCE RESTORATION PROGRAMMES.	See page 88 for the measures of on the replenishing the of aquatic biological resources.
3 CONTINUE TO IMPROVE MANAGEMENT OF BIODIVERSITY CONSERVATION ISSUES.	A Biodiversity Policy was developed and adopted in 2021. The Company designed its strategic approach to biodiversity conservation.

En+ Group is aware that deterioration of biodiversity and ecosystem services caused by anthropogenic factors is a global challenge requiring decisions to be taken at all governance levels and practical action. The Biodiversity Policy was developed and adopted in December 2021 for the Group's Metals and Power segments. The policy stipulates our key principles and approaches to biodiversity conservation and ecosystem services management. Our practice of biodiversity conservation and ecosystem services management is based on the hierarchy of measures devised to mitigate impact on the environment and open consultations with stakeholders and the local communities in the first instance. We have no doubt that our success in the long run will be conditional on the development of science and education. This is why we pay special attention to environmental education and research into the biodiversity of the regions where we operate.

Provisions of the Policy are implemented through various projects aimed at supporting certain species and their habitats, and also through our daily efforts to improve the environmental management system. The Group relies on scientific surveys, carries out specific environmental monitoring and takes actions to prevent environmental impacts, and protect ecosystems and habitats. The monitoring results are used to assess the current state of the environment and adjust planned environmental actions to mitigate the adverse consequences arising from the industrial development of the area.

Specialists of En+ Group and RUSAL, jointly with partners from Business for Nature and the World Business Council for Sustainable Development, have provided their comments on the revised Convention on Biological Diversity to be discussed and adopted by COP-15 in 2022.

Read more on Environmental Monitoring of Lake Baikal at p.84

WATER DWELLERS

En+ Group has been successfully working on the artificial restoration of aquatic biological resources endemic to the rivers of Eastern Siberia since 2014. This action is included in the annual plan for the artificial reproduction of aquatic biological resources of the Angara-Baikal Territorial Administration of the Federal Agency for Fishery.

Overall, the Group's production facilities released over 10,100 Siberian sturgeon fry, 12,645 grayling fry and around 253,000 peled (northern whitefish) in the Yenisei, Chikoy, and Belaya rivers, and in Bratsk Reservoir on the Angara River. The Group has already invested more than RUB 4.3 million on the conservation of fish resources and released more than 1.5 million fry into the reservoirs of the Angara region.

AVIFAUNA

A scientific study of the state of avifauna in the lower reaches of the Irkutsk hydropower plant was conducted in 2021 as part of the semiaquatic bird support project. The researchers studied the 200km section of the Angara River downstream from the dam. The aim of the work was to identify the bird species most vulnerable to fluctuations in water levels and propose measures to support them.

Out of 249 species living in the area under consideration, four were selected: mallard, grey duck, lake gull and river tern. These species nest mainly on islands in the Angara riverbed near Irkutsk. These species have a nesting period in May-June, when spring floods occur in the Angara basin. Since birds arrange nesting sites directly at the water's edge, sharp fluctuations in water levels can lead to clutch losses.

Four possible biotechnical solutions were considered to protect the nesting sites of these bird species from water level fluctuations. A floating island is considered to be the most effective solution for bird conservation given the engineering and administrative issues.

BAIKAL SEAL PRESERVATION PROGRAMME

The Baikal seal is the only mammal that lives in Lake Baikal and is endemic to the region. The seal sits at the top of the food chain in the Baikal ecosystem, and conclusions about the quality of its habitat, i.e. the Baikal ecosystem as a whole, can be drawn from the condition of the seals. For this reason the seals, particularly their migration patterns and health, need to be constantly monitored.

En+ Group and the Severtsov Institute of Ecology and Evolution of the Russian Academy of Sciences (IEE RAS) signed a cooperation agreement at the end of 2019, which envisages, inter alia, preservation of biodiversity, including the Baikal seal preservation programme. En+ Group and other partners of the Institute joined a comprehensive programme developed by IEE RAS through to 2025 to preserve the Baikal seal. In 2021, as part of the programme, scientists carried out an expedition to the Ushkan islands to count the seal population and to study the health of the animals. We also made a contribution to this work by sharing the findings of the Lake Baikal environmental monitoring.

BIODIVERSITY MANAGEMENT PLAN

In 2021, Aughinish Alumina Ltd. (AAL) launched a 5 Year Biodiversity Management Plan (BMP). This plan identifies opportunities for biodiversity enhancement and conservation, and recommends practical measures aimed at conserving and enhancing the natural heritage of AAL and its surrounding lands, which have a large variety of habitats and species. These habitats range from salt marsh to lowland hay meadows, and species range from Eurasian otters to barn owls. The plan includes objectives and targets associated with native species, vegetation management, habitat management, improving ecological connectivity and increasing biodiversity awareness.

HUMAN DEVELOPMENT

HEALTH AND SAFETY

Health, Occupational, Industrial and Fire Safety Policy

Goals and results

	Goals	2021 Results
1	ACHIEVE ZERO WORK-RELATED FATALITIES.	Goal was not achieved.
1	REDUCE LTIFR.	The LTIFR experienced a decrease through successful prevention of group injury cases.
1	ENHANCE THE OHS MANAGEMENT SYSTEM, guided by international best practice.	External auditors EXELUM provided findings of their audits at nine Group facilities in 2021.

Nothing matters more to us than the safety, health, and well-being of our employees. Our approach to health and safety (HS) rests on strong leadership and a "zero injuries" culture. En+ Group believes that health and safety is not just about legal requirements and duty

Lofty goals and good operational procedures are not enough. Our approach is about each employee, regardless of position, and building a culture of prioritising work safety and care for employees' health.

Awareness of the importance of HS issues from the top of the organisation is essential to create inspiring working conditions and save the lives of our employees. En+ Group pays particular attention to the engagement of executives and senior managers since they set a good "tone at the top" by focusing their teams on the right priorities.

En+ Group's key HS document is the corporate Health, Occupational, Industrial and Fire Safety Policy, in which the Company states, as a shared core principle, that the health and safety of employees has overall priority. No circumstances and goals, either production or commercial, should be considered as a reason for not complying with industrial safety requirements. This strategic document also determines the role of line managers and executives in ensuring safe working conditions and the well-being of all employees.

In compliance with domestic legislation requirements, Group employees regularly undergo all respective mandatory training, including in health and safety, and fire and industrial safety, as well as compulsory safety briefings for new employees, and regular, targeted, and ad hoc employee briefings.

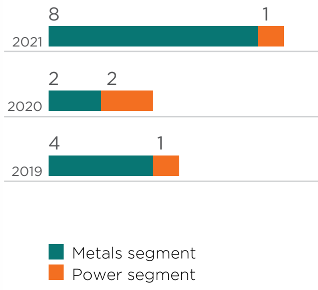
The Group monitors, records and investigates all incidents regardless of severity. This includes incidents resulting in micro-injuries, and instances of employees' health deteriorating over a period of time. The findings of these investigations are used to develop and implement corrective actions, intended to prevent future accidents or occupational health impacts. Protecting human life and health from threats related to industrial factors, or from consequences of accidents, is our highest priority.

We conduct comprehensive investigations of all injuries

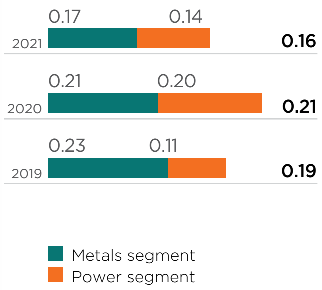
En+ Group deeply regrets that there were nine work-related fatalities in 2021, notwithstanding the Company's commitment to zero fatalities. The Group apologises to the families of our colleagues and grieves for these unbearable losses. En+ Group management conducts comprehensive investigations of all fatalities in order to develop and implement corrective measures and achieve zero fatalities. The number of fatalities in Metals segment increased as a result of safety violations by the deceased employees or other workers in related jobs.

Despite an overall decrease in LTIFR, one fatal accident occurred at the Novo-Irkutsk CHP of the En+ Group's Power segment in 2021. A site visit for risk auditing was arranged, followed by a meeting among top managers and the heads of the HS service to uncover the causes of the accident.

Work-related employee fatalities[1]



Lost Time Injury Frequency Rate (LTIFR)[2] per 200,000 hours worked



During the reporting period, LTIFR within the Group amounted to 0.16, a decrease of 24%, with the LTIFR of the Power segment at 0.14. The LTIFR of the Power segment showed a reduction by 30% through the successful prevention of group injury cases. The LTIFR of the Metals segment showed a 19% reduction to 0.17

We develop a safety culture

The Company promotes a healthy environment through a wide range of health and safety initiatives and projects, protecting against occupational health hazards and supporting our employees.

METALS SEGMENT	
Transition to international standard	The production safety management system in the Metals segment was transitioned from the OHSAS 18001:2007 standard to the international ISO 45001:2018 standard, as confirmed by the DNV GL certificate (international accredited registrar and classification society).
Introduction of an automated information system	In 2021, the Metals segment began the introduction of the automated information system "Safety of production activities – RUSAL" at two enterprises: in Krasnoyarsk (KrAZ) and Achinsk (AGK).
Remote control overhead cranes	This Metals segment project, launched in 2019, continues to equip overhead trailing cranes with remote control systems.
Reducing the physical exertion of the employees of the electrolysis shop	The Metals segment realised a project to reduce the physical exertion levels for electrolysis shop workers.
Look Around project	The Look Around project to identify risks and hazardous situations is targeted at improving the level of immersion of employees into daily HSE issues and timely identification and reporting of potential hazards so they can be addressed.
POWER SEGMENT	
Lifesaving rules	Basic and Essential safety rules were developed in 2020 to form a conscious attitude to safety based on an analysis of the causes of injury. A set of posters was designed to visualise separate rules. Visualisation of all Basic and Essential safety rules was completed and posters were placed around production sites in 2021.
Monthly HSE meetings	In 2021, managers continued to hold monthly HSE meetings via video conference calls, where directors of the production facilities reported on the results of their HSE efforts, discussed the findings of workplace audits, and shared experiences in health and safety improvements.
Regulation of ongoing monitoring	To assess the OHS management system, the Group established a programme of ongoing monitoring of health and safety conditions. Under this regulation, the state of the OHS management system at production sites is regularly assessed in various key areas. The final review is announced by the executive of the production site at the monthly HS meeting. Review components were revised following the monitoring findings analysis in 2021 to launch upgraded regulations in 2022, including a substantial increase in the weight of assessment based on monitoring findings and KPI structure.
Video recording of work permits	The Group's Power segment began to use video recording in 2019 to enhance the safety of the most hazardous works. The list of operations to be recorded was extended in 2020, and later in 2021 a competition was held for the best video record of permits to carry out hazardous work and switching in electrical installations using portable video recorders.
Problem solving board	In 2021, an accelerated procedure for solving HS problems was introduced based on the deliverables of an analysis of the functioning of the regulation adopted in 2019, through involving top managers in solving problems spotted by employees, reviewing the results achieved and considering issues which require a large amount of time to be resolved at a monthly HSE meeting by the CEO of the Group's Power segment. Furthermore, in 2021, a training video was filmed with professional actors explaining in plain language and a humorous and didactic style how this tool is to be used.
Uniform procedure for introductory HS briefings for visitors	In 2021, a uniform procedure for introductory HS briefings for visitors was introduced at all operating companies of the Group's Power segment. At briefings, visitors will learn about the priorities of the Group's HS policy, and receive an extract from the Basic and Principal Rules relevant to visitors, explaining existing risks, and the measures required for safe visits to the operating facilities.
Workshop for HS department managers	At the end of 2021, an offline three-day workshop was held for the managers of the HS departments of the Group's Power segment in Irkutsk. The participants visited nine production facilities, made their proposals on enhancing occupational safety, and finally drafted a statement where they defined the main mission of the HS departments and assumed advanced obligations for ensuring safety at work.

1. Preliminary data, being verified as part of the En+ Group 2021 Sustainability Report preparation. KRAMZ and SMR are included in work-related fatalities of the Metals segment.
2. Preliminary data, being verified as part of the En+ Group 2021 Sustainability Report preparation. KRAMZ and SMR are included in LTIFR of the Metals segment. Figures for 2020 were recalculated because of an improvement in methodology.

RESPONSIBILITY FOR EMPLOYEES

Diversity and Equal Opportunities Policy

Goals and results

	Goals	2021 Results
1	**EXPANSION OF THE NETWORK OF SPECIALISED UNIVERSITIES AND COLLEGES,** interaction with schools in all regions where we operate.	We are actively interacting with educational institutions, and we have made agreements with professional training schools in the regions where the Power segment operates.
1	**CONTINUE THE PROJECT FOR OBTAINING HIGHER EDUCATION** at the National Research Technical University (INRTU) by the Company's employees.	Project implementation is underway.
1	**LAUNCH A SCHOLARSHIP PROGRAMME.**	Scholarship programme was launched.
1	**CONTINUE THE IT ACADEMY PROGRAMME, ENERGY LAB.**	Project implementation is underway.
1	**CONTINUE TO WORK WITH THE PERSONNEL RESERVE AND SEARCH** for high-potential personnel.	The work is underway.
1	**CONTINUE CORPORATE DEVELOPMENT PROGRAMMES TRANSFORMATION,** Kommersant, School of Occupational Safety and Health Administration.	Project implementation is underway.
1	**CONTINUE YOUTH DEVELOPMENT PROGRAMMES.**	Programme implementation is underway.
1	**IMPLEMENTATION OF NEW IT PROGRAMMES FOR WORK WITH ASSESSMENT,** training and development of personnel.	A new internal web portal was launched for Company staff assessment and development, as well as an external career portal for both school/university students and experienced professionals.
1	**INSTALL DIGITAL SIMULATORS FOR HPP OPERATIONAL PERSONNEL** at all En+ Group hydroelectric power plants in 2021-2022, including Krasnoyarsk, Bratsk and Ust-Ilimsk HPPs.	Simulators were installed.

The greatest capital of our Group is our people. En+ Group's success is due to the creation of a culture of team engagement, where everyone can develop

En+ Group consists of more than 60 companies in 12 countries. We comply strictly with labour laws and personnel management standards in Russia and other operating countries.

En+ Group's key personnel objectives:

- Attract and retain the best talent
- Increase employee engagement
- Ensure favourable working conditions and a working environment conducive to the professional development of employees and the well-being of their families

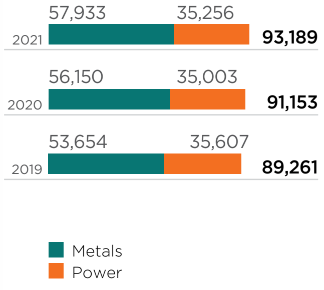
We support diversity and equal opportunities

We work hard to promote equal employment opportunities and fair working conditions, and deliver excellent results. The Group respects personal freedom and human rights and does not tolerate any form of discrimination in the workplace.

En+ Group has always been committed to ensuring socio-cultural diversity and building a more inclusive workplace. The Group works to ensure equal employment opportunities, promotions, training, and remuneration for all employees, regardless of ethnicity, national origin, religious beliefs, gender, age, sexual orientation, marital status, disability, or any other characteristics, within the framework of applicable legislation. In our opinion, the complete elimination of all forms of discrimination, intimidation or harassment is an integral part of the Group's success.

As we understand the advantages of a diverse team, we search for and hire employees from different backgrounds. Leveraging access to a broad range of opinions and expertise from our employees, we can improve business performance and better support local economies around the world. Women accounted for 27.3% of En+ Group employees in 2021, a slight increase on the previous year (27% in 2020). The nature of our business involves some highly hazardous operations. Women's access to such positions and work in such operations are strictly regulated by law in some of the countries where we operate, including Russia. We endeavour to fully comply with all industry-related restrictions, while doing our best to create an inclusive and diverse environment.

Total number of employees (full-time equivalent)[1]



Workforce gender diversity[2]

	2021	2020
Women	27.3%	27%
Men	72.7%	73%

En+ Group's Board gender diversity

	2021	2020
Women	33%	33%
Men	67%	67%

The number of women at all levels of Group management corresponds to the general gender balance of the Group

Management team gender diversity

	2021	2020
Women	21%	25%
Men	79%	75%

Senior management gender diversity[3]

	2021	2020
Women	19%	17%
Men	81%	83%

Middle management gender diversity[3]

	2021	2020
Women	22%	21%
Men	78%	79%

1. Preliminary data, being verified as part of the En+ Group 2021 Sustainability Report preparation. The total number of employees at the end of the year does not include external secondary job employees and employees in German asset acquired in 2021(Headcount as of December 31, 2021 was 210 people). Data was collected on the basis of the HR data collection system. The figures for 2020 were recalculated owing to improvements in the methodology.
2. Preliminary data, being verified as part of the En+ Group 2021 Sustainability Report preparation.
3. Preliminary data, being verified as part of the En+ Group 2021 Sustainability Report preparation. Figures for 2020 were recalculated because of an improvement in methodology.

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We recognise and respect human rights

Policy on Human Rights
Corporate Code of Ethics

Key points

In 2021, the Group identified

- No incidents of discrimination
- No incidents of child labour
- No incidents of forced or compulsory labour

The Group is guided by

- The Universal Declaration of Human Rights
- The ILO Declaration on Fundamental Principles and Rights at Work
- The UN Global Compact
- The UN Guiding Principles on Business and Human Rights

We maintain the long-term motivation of our employees

The well-being of our employees is important to us. We guarantee all employees a decent wage, benefits, an inclusive work environment, and safe working conditions.

Depending on the position, an employee may receive bonuses monthly, quarterly, and annually. Employees who perform special tasks or participate in working groups can also expect additional payments. The bonus component of a manager's salary is contingent on the achievement of specific targets and KPIs.

EN+ MOTIVATIONAL SYSTEM

- BONUSES AWARDED BY THE HEAD OF A COMPANY FROM A SPECIALLY ALLOCATED FUND
- PAYMENTS TO EMPLOYEES PROACTIVELY PARTICIPATING IN SOCIAL PROJECTS AT GROUP COMPANIES
- PAYMENTS TO EMPLOYEES WHO HAVE RECEIVED CORPORATE, STATE OR DEPARTMENTAL AWARDS
- ANNUAL PERFORMANCE BASED BONUSES

We have a broad social support system designed to encourage and maintain the long-term motivation of our employees. Full-time and part-time employees have equal access to all benefits. In addition to the guarantees and benefits established by the labour legislation of the Russian Federation, En+ Group provides employees with the following social benefits

KEY SOCIAL BENEFITS FOR EMPLOYEES

- FINANCIAL AID
- MEDICAL SERVICES
- SPORTS ACTIVITIES
- PENSION BENEFITS
- PROVISION OF MEALS
- CHILDCARE PROGRAMMES
- RECREATION AT HEALTH RESOSTS
- PREFERENTIAL MORTGAGE PROGRAMME

PAY RISES

Unprecedented measures were taken in 2021 to raise the attractiveness of the Metals and Power segments. The Company's management substantially raised salaries to improve the Company's attractiveness as an employer, and to attract and retain highly qualified professionals. The pay rise is one of the most important prerequisites for the Company's further sustainable development.

35,455
man-courses
were completed in 2021

We invest in training and development of our employees

The key objective of En+ Group in personnel training is to cultivate a set of professional skills in our employees which meet the requisite quality and efficiency of our production programme while ensuring safety and fostering long-term technological development within the industry.

We encourage the training and development of our employees, starting with career guidance at school, and the training of students in targeted training programmes at specialised institutes and universities, as well as continued training once young professionals join the Group, in the process contributing to the development of the personal effectiveness and professional skills of employees in the workplace.

The current system of mandatory staff training regulates the training and procedures for each position in the industry. The En+ Group's corporate training system complements the mandatory system, taking into account the specific requirements imposed by the external environment.

Every employee has access to vocational and advanced training

In 2021, the following developments in training were implemented:

- Employees received training in professional competencies, including development of practical skills at special training sites. A new training ground for labour protection when working at height was put into operation
- Managers and specialists completed advanced training aimed at improving and acquiring new competencies required for their work
- Vocational and advanced training programmes were updated and revised in accordance with professional standards and the law of the Russian Federation
- The Company continues to introduce and develop unique hydropower plant mock-up simulators
- The Company provided simulators for training boiler, turbine and boiler-turbine shop operational personnel
- The Company conducted competitions among the operational personnel of LLC EuroSibEnergo
- An automated WEB-Expert-based system was introduced to test the knowledge of managers and specialists

Every employee has access to the Corporate University platform

The Corporate University of the Power segment obtained a new educational licence and completely updated its training programmes in 2021.

Employees are able to attend higher education on a preferential basis

The project enabling the Power segment's employees to receive higher education at Irkutsk National Research Technical University (INRTU) has proven to be successful and in demand. It will be continued in 2022.

We invest in a health and safety culture

Achievements of 2021:

- An annual Safety Culture Contest was held
- The School of Occupational Health and Safety programme was completed for those who enrolled in 2020
- 323 teachers and 5,574 workers were trained

We invest in the internal talent pool

Achievements of 2021:

- The Company launched a new portal for the assessment and development of the Company's personnel and an external career portal aimed at both schoolchildren and students, as well as experienced professionals
- The Internal Talent Pool was reviewed at the top management level; the training methodology for the personnel reserve was changed
- The Company continues to implement the "Kommersant" project, and the third wave of the "Transformation" personnel reserve members commenced their assessment and development
- The Corporate University developed the "Competence Development Guide"

36 project teams
were qualified for the final

We invest in the innovation skills of the younger generation

Attracting youth to innovation

"Energy Lab" is an annual acceleration programme aimed primarily at attracting talented youth to address current production challenges and search for promising technological ideas of interest to the Company and the energy industry in general.

The En+ Group's acceleration of innovative projects programme was launched in partnership with INRTU and supported by the EuroSibEnergo Corporate University in 2018. Get-to-know tours were held for the participants of the Energy Lab contest for the first time in 2021; 36 project teams from 10 universities and colleges from 8 Russian cities qualified for the final.

Attracting IT students to the Power and Metals segments

The unique project "IT Academy" was launched in 2021 to serve as an additional programme of targeted training for IT students to attract them to the power and metals sectors. Graduates, once they successfully complete the course, will enjoy guaranteed employment with En+ Group and RUSAL. Training takes place through the Institute of Information Technologies and Data Analysis at INRTU with the support of En+ Digital and the EuroSibEnergo Corporate University, assisted by the Company's IT specialists and external speakers.

The programme offers unique knowledge, practical skills and competencies, and increased scholarships for the period of study, plus internships at the companies of the Power and Metals segments, and assistance and support in choosing a topic and preparing graduate qualification work, as well as obtaining Russian and international certificates and advanced training certificates in a state-approved format.

Scholarship programme for engineering students

In 2021, a new En+ Group and RUSAL Scholarship Programme was launched for promising students in the following specialties: power, metallurgy, chemistry, thermal power engineering, thermal chemistry, etc. The amount of the scholarship is determined based on the level of further education (higher or secondary), as well as the year of study. For example, a scholarship for a second-year university student will be RUB 10,000 a month, and for a fifth-year student up to RUB 25,000.

Youth Development Programme

In 2021, the updated "My Career 2.0" youth development programme was successfully completed with the 2020 intake. The winners of 2021 were included in the Internal Talent Pool of the Power segment and will continue their development under corporate development programmes. It was resolved to have the programme continue on an annual basis to search for talented young professionals.

In order to arrange for targeted training for students and advanced training for specialists in the Power segment, two Corporate Training and Research Centres were established: in partnership with Irkutsk National Research Technical University (2008) and the other in partnership with Bratsk State University (2011). Students take a 2.5-year course at the Corporate Training and Research Centre under additional educational programmes that include more than 1,000 academic hours of specialised training in technical areas (repair and operation of thermal/electrical equipment, relay protection and automation, etc.) under the guidance of expert teachers. The list of additional training programmes was expanded in 2021.

We invest in the human resources of the scientific community

In 2021, En+ Group, in partnership with INRTU and the EuroSibEnergo Corporate University, launched the "Future Teacher" project, which will contribute to the development and skills of INRTU lecturers.

COMMUNITY ENGAGEMENT

Stakeholder Engagement Policy

Goals and results

Goals	2021 Results
1 **IMPLEMENT CHARITABLE, SOCIAL AND INFRASTRUCTURE PROJECTS** in the regions of operation.	The implementation of social projects in the field of ecology, landscaping, and social support continued in accordance with the Company's sustainable development goals.
2 **OPTIMISE AND STANDARDISE SOCIAL INVESTMENT MANAGEMENT PROCESSES.**	All social investments of the Company are reviewed and approved by the Company's Social Investments Committee on a monthly basis.
3 **CONDUCT SOCIAL RESEARCH IN 2021-2022 TO DETERMINE FURTHER DEVELOPMENT GOALS FOR LOCAL COMMUNITIES.**	A sociological study is planned for 2022.
4 **SUPPORTING LOCAL COMMUNITIES IN THE FIGHT AGAINST COVID-19.**	Specialised hospitals have been built, the transfer of masks and medicines to healthcare institutions has been organised, and the work of volunteers has been organised.

USD 55 mn
the Group's total social investment in 2021

En+ Group has a large direct positive effect on the economy of its regions of operation; the enterprises of En+ Group being one of the largest employers, taxpayers, and implementers of social and infrastructure programmes.

Local communities represent one of the key stakeholder groups for En+, as do local NGOs and local authorities. En+ strives to support local communities both in Russia and abroad, increasing the Group's positive community impact and minimising any possible negative influence in all regions of operation.

The Group's interaction with local communities is based on regular discussions with representatives of the local community and annual community surveys to identify local challenges and target community development activities. When interacting with local communities, the Group seeks to understand and take into account local specifics and is actively involved in solving the problems faced by local communities.

The Company implements a wide range of social and charitable programmes, primarily free of charge, aimed at the improvement of residents' well-being, the development of social infrastructure and the urban environment, the improvement of educational and healthcare services, support for public and children's sports, and help for vulnerable groups of people. En+ Group regularly evaluates its programmes, updates them, and introduces new ones. Assessment shows that programme results correspond to the goals set. Our contribution to the development of the regions where we operate allows us to create a positive social climate and loyalty to the Company among the population.

We develop infrastructure in our regions of operation

The Group considers infrastructure development as its main community engagement activity. By implementing infrastructure projects, the Group contributes significantly to the urban development of the cities where it is present. We are convinced that cities should reflect the needs of their residents and be convenient to live in.

The Power segment has carried out activities aimed at the development of infrastructure and the urban environment, including:

- Construction of a children's sports- and playground in Ust-Ilimsk, Angarsk, Divnogorsk, and Tulun
- Construction of a modern eco-friendly game complex in Irkutsk
- Construction of a ski base in Nizhneudinsk
- Construction of a ski base in Divnogorsk
- Reconstruction of the Bratsk Drama Theater: construction of an addtional chamber stage
- Development of an architectural concept for the improvement of the IGPP dam based on a survey of stakeholders

The RUSAL Territory programme accounts for a significant share of the Group's infrastructure investment. Despite the limitations associated with COVID-19, this programme continued its activities in the area of socioeconomic development of the territories, including:

- Completion of the last project supported in the framework of the 2017 RUSAL Territory competition (the Museum Yard cultural heritage site, Krasnoyarsk)
- Continuation of realisation of projects supported by RUSAL in 2019 in Volgograd, Krasnoturinsk, Severouralsk, and the Taezhny village of the Boguchansky district
- Holding an international competition to develop a concept for the development of the Gorky Central Park in Krasnoyarsk
- Attraction of federal funds to the cities of presence within the framework of the competition of the Ministry of Construction
- Selection of contractors to create plans for the architectural development of public spaces in ten cities of presence
- Monitoring of the implementation of RUSAL's previous infrastructure projects

We support health of employees and local communities

The year 2021 has shown the particular importance of the Group's investment in healthcare. Both segments have committed significant resources to counter the pandemic. The Group continued programmes to provide assistance and protection for employees, veterans and local communities from COVID-19.

COVID-19 RESPONSE

Operations
En+ Group will take every opportunity to prevent the spread of the virus and to ensure maximum employee protection. During the pandemic, we ensured secure, uninterrupted production at the Group's facilities and achieved robust financial results supported by solid operational performance. We also successfully negotiated refinancing for credit facilities and drastically reduced our financing costs while fuelling growing sales of our value-added products (VAP) due to increasing premiums.

Support for employees
Keeping our employees healthy is our main goal. Since March 2020, En+ Group has been taking active measures to combat the spread of coronavirus: a situation room and a hotline for assistance were set up, personnel flows and proximity were limited as much as possible, and some employees moved to remote working. We also provided thermometry control and disinfection of the workplaces and premises of production facilities to ensure the safety of our employees.

Consultations regarding COVID-19
The Consulting Centre for Medical Assistance of En+ Group received more than 470,000 requests from employees and their families regarding the diagnosis and treatment of illness caused by coronavirus infection. The consulting services programme was launched on 24 December 2020 for Power segment employees in Miass and Nizhny Novgorod, as well as in cities in the Irkutsk Region and Krasnoyarsk Territory.

Remote consultations are available 24/7. They are conducted by the best medical personnel from medical facilities in the cities where the Company operates. If necessary, specialists arrange hospitalisation under personal supervision in medical centres for patients with COVID-19.

En+ Group recognises that these medical consultations are indespensible to ensuring full recover after COVID-related illness.

Vaccination
The Company believes that achieving collective immunity is an important task for the organisations involved in ensuring the health and safety of the regions. En+ Group has launched a partnership programme with leading state medical facilities in the regions of its presence for the prompt vaccination of Power segment employees.

Support for communities
Throughout the COVID-19 pandemic, the Company has purchased PPE, medical equipment, and medicines for medical facilities in the regions of its operation, local communities and employees.

In addition, both Metals and Power segments actively promoted healthy lifestyle and sports activities among local citizens, employees, and their families. For this purpose, En+ builds and renovates sports infrastructure, purchases sports equipment, and holds healthy lifestyle events. One of the Group's largest sport and healthy lifestyle projects is Get on Your Skis, Everyone!

We invest in innovation skills

The Group considers the implementation of educational projects to be one of its most important tasks in the field of social investment.

We develop volunteering

Volunteer initiatives are an important tool for the Group when building relationships with local communities, non-profit organisations, and government agencies. En+ pays great attention to the development of volunteer programmes, considering them one of the most important ways to solve social problems.

The Group has been active in volunteer activity since 2010. In 2021, the implementation of charitable projects continued. However, due to the ban on holding mass events, changes were made to the programme implementation plan, with most of the events being moved online.

The Group strives to involve the volunteer movement in environmental protection. Among the most popular environmental projects of the Metals segment are Day of the River and Green Wave. The most famous projects of the Power segment are the 360 Project, environmental grant competition, and partnerships with local environmental NGOs realised under the Nature Matters programme.

NATURE MATTERS PROGRAMME

The Nature Matters programme has been implemented by the Company since 2011. It includes environmental, social, scientific, and educational projects that are implemented in cooperation with leading non-profit societies and associations.

360 PROJECT

In 2021, the 360 volunteer project was held for the tenth time. Taking all safety precautions, volunteer actions were carried out to collect garbage and improve the territories of reservoirs in six cities where En+ Group enterprises operate. The volunteers collected 23 tonnes of garbage and sent more than 2,500 kg of waste for recycling. The participants also planted 772 shrubs, installed information stands and equipped recreation areas. An online eco-marathon 360 was also launched, the main idea of which was to unite civically-minded people. More than 1,000 participants registered for the online eco-marathon. In total, more than 3,000 people took part in the 360 Project in 2021.

Read more on educational projects at p.96

INTERNAL CONTROL AND RISK MANAGEMENT

A comprehensive framework of internal controls is in place across the Group, designed to protect the Group's assets, improve business processes, and ensure compliance of the Group's operating companies with applicable laws and regulations.

Audit and Risk Committee

The Board of Directors has responsibility for the efficiency and effectiveness of the financial and economic activities of the Group and is responsible for maintaining and reviewing the effectiveness of the Company's systems of internal control and risk management.

The Board has established an Audit and Risk Committee (the "A&RC"), which assists the Board in its review of the financial statements of the Group; ensures that systems of internal control and risk management are in place and operating effectively; oversees the internal and external audit processes and performs such other activities as are requested by the Board.

The Company's structure includes the Internal Audit Directorate (the "IAD"), which is independent of management, and which reports to the A&RC and the Board. The IAD assists the A&RC and the Board in overseeing the financial and economic activities of the Group and the related systems of internal control and risk management.

The IAD reports regularly to the A&RC concerning the results of both scheduled and unscheduled audits; any deficiencies identified in the system of internal control; recommendations and corrective measures to be taken by management; identified risks and related financial exposures and mitigation measures.

Internal control system (ICS)

The IAD seeks to provide assurance to management and shareholders of the Company that the Group's assets are safeguarded and profits are maximised; that the Company complies with the requirements of applicable laws and regulations; and that proper accounting records are maintained.

The IAD seeks to ensure that an effective system of internal control is in place and operating effectively across the Group, including:

1. Operational and financial control
- Conducting audits of the efficiency and effectiveness of business processes across the operating companies in order to identify and minimise risks associated with ineffective management, and to enhance control of operational and technological processes, commercial activities, personnel management, implementation of investment projects, financing, etc.
- Conducting audits to prevent and identify fraudulent activities by management, employees and third-party contractors (such as fraud, misappropriation, misuse of the Group's assets, sub-optimal use of materials and time), and mitigate the effects thereof
- Exercising control over commercial activities (including the selection of suppliers of raw materials, other materials and services, including construction and/or installation works) in the interests of effective cost management for the Group (including by participating in the Tenders Committee and overseeing the work of Tenders Committee across the Group's operating companies)

The operational and financial control objectives are achieved through comprehensive audits and controls inspections conducted by the IAD in accordance with the annual audit plan (approved by the A&RC) using a risk-based approach. In addition, the IAD conducts unscheduled audits as requested by management and provides an independent opinion in the fields and areas requiring immediate decision-making by management. The IAD uses audit findings to develop corrective actions aimed at minimising or eliminating any failures or weaknesses identified by audits, with a view to preventing such breaches in the future. The IAD regularly updates management and the A&RC on its audit and review findings, and on the status and implementation of the recommendations it has provided to management.

2. Compliance control
- Auditing compliance with the requirements of creditor banks, listing rules and other financial regulators, including with respect to sanctions, etc.
- Auditing compliance with the internal regulations and policies of the Group, designed to ensure compliance with the requirements of the supervisory authorities, financial institutions and other counterparties of the Company

3. Regulation of business processes
- Development of the Group's system of internal control and mitigation of risks of common process violations/losses and particular aspects of the Group's activities (system of authority delegation; control over conflicts of interest, related-party transactions, compliance procedures; control over business travel, etc.).
- Development of uniform standards of commercial activities (e.g. Generalised Regulations on Purchases in accordance with applicable law and regulations; regulations on sales of illiquid assets of the Company)

4. Development and implementation of projects to improve ICS
- Identifying cost management opportunities in commercial activities (e.g. sales of illiquid assets – regulations are reviewed and tools and measures introduced aimed at improving the Company's commercial services efficiency, including the reduction in cost of goods, works, and services)
- Providing recommendations and development of terms of reference for automation of separate modules of the e-document flow, general accounting and management accounting systems

Improvement of the corporate system of internal control

The IAD achieved substantial results in 2021 in controlling and improving the ICS.

1. Targets for control over the Group's commercial activities and development of measures to increase the efficiency of commercial activities
- Reduction of costs for the purchase of services, construction and assembly works and key commodities and materials was achieved through improved commercial conditions, broadened competitive environment and negotiations as part of the control of procurement activities
- Goals regarding standardised control over commodities and turnover of goods and materials in the Power segment's companies were achieved; specialised automated forms for inventory management were developed and implemented
- The target for the sale of the Group's illiquid assets was exceeded by 100%
- General Guidelines for forming initial minimum prices for purchasing in the Group's Power segment
- Third update of the General Procurement Regulations for all enterprises of the Company
- Second update of the General Regulations on Illiquid and Non-core Assets of the Company

2. Development and adoption of a framework of regulations for the ICS
- The contracting regulations of the Group companies have been updated
- The automated work travel documentation execution process has been improved to comply with the respective regulations
- Development of the Group's regulations portal has been launched

RISK MANAGEMENT FRAMEWORK

The Company has established a risk management system, which is an integral part of the Company's internal control system and corporate governance framework, to reduce any potential threats to the Company's compliance with its corporate governance standards and ensure consistent and sustainable business development.

The Company's risk management system provides for the identification, financial and probabilistic estimation and control over any change in the risk of both the internal and external environment with regard to the financial and/or economic activities of the Group's operating companies.

The vertical principle is used to manage the risks of the Company, based on the identification of any risks to the business processes of standalone operating companies with subsequent consolidation at the Business level, and then at the Company level, in accordance with the regulating documents that stipulate the procedure and the responsibilities of all participants in the risk management process.

Risk maps are used to illustrate the risks of operating companies and the Businesses. Risk maps provide details of each risk event scenario, estimates of possible risk impact and measures aimed at mitigating the possible negative impact on the activities of operating companies, Businesses and the Company. The Company risk map includes a list of all possible risks that may threaten the objectives of the Company in the current calendar year.

Risk status monitoring is undertaken on a quarterly basis to analyse any changes, update the estimates for existing risks and implement measures for controlling identified risks, as well as to search for, identify and estimate the impact of new risks arising during the quarter/year.

The risk monitoring results are submitted to management, the Chief Executive Officer, the A&RC and the Board. Responsibility for effective risk management rests with the Chief Executive Officer.

Key risk management developments of the Company in 2021:

1. 2021 Risk Map development and monitoring on quarterly basis over the year

The En+ Group's Regulations on Risk Management establish the procedure for the development of Risk Maps by all entities of the Group for the coming year and for the quarterly review and update of the developed Risk Maps. A high level of detail has been provided in the development of risk management measures, with subsequent regular monitoring of their implementation. The results are provided to the Group's executive management and the Board of Directors.

2. Better use of risk management tools in achieving the production targets of operating companies

Risk management targets have been incorporated into setting the Group's overall targets, as well as into the targets of the operating companies' management. The actual achievements in risk management will be measured against the managers' KPIs to calculate their performance bonuses.

3. Increasing awareness of the Company's employees of the risk management measures taken by their operating companies and the Group

Materials on risk management system basics and objectives were developed for training. The materials were posted on bulletin boards and uploaded to the corporate portals of operating companies and their branches; all employees have free access to the risk management regulations. The second phase of large-scale training in risk management took place on the Company's Corporate University platform.

4. Update of local risk management regulations of the Group's operating companies

The risk management regulations were updated following the improvement of the risk management system.

Risk identification

As part of its strategic, business planning and risk processes, the Group considers how a number of macroeconomic themes may influence its principal risks. These are factors about which the Company should be cognisant in developing its strategy, including long-term supply and demand trends. They include, for example, developments in technology, demographics, climate change, and how markets and the regulatory environment may respond. These themes are relevant to the Group's assessments across a number of its principal risks. The Group will continue to monitor these themes and the relevant developing policy environment at an international and national level, and will adapt its strategy accordingly.

Since March 2020, the Company has been monitoring the evolving situation, and consequent emerging risk, with regard to the spread of COVID-19. The Group has been working with a variety of stakeholders, including industry and medical organisations to ensure its operational response and advice to its workforce is appropriate and commensurate with the prevailing expert advice and level of risk.

En+ Group's key business risks

The Group's principal risks, as set out in the table below, are those risks which could prevent the business from executing its strategy and creating value for shareholders, or which could lead to a significant loss of reputation. The Committee has carried out an assessment of the principal risks facing the Company, including those that would threaten its business model, future performance, solvency or liquidity.

Risk impact is based upon an estimation of the combined impact of probability and financial effect of a given risk (i.e. a probabilistic assessment of the risk impact on the Group). Thus, the higher the probability, the higher the potential impact, and vice versa.

Risk impact on the Company		Changes in 2021	
🔴	High	▲	Higher impact
🟠	Medium	N/C	No impact
🟢	Low	▼	Lower impact

	Risk	Description	Change in 2021	Mitigation measures
EXTERNAL AND MARKET RISKS				
1	**Environment** 🟠	Pollution of land, water courses or air due to equipment failure or human error, delay in implementation of investment projects of production modernisation giving rise to penalties and/or fines. Suspension of operations or loss of licence to operate	**N/C**	The Group's environmental management system Consistent application of the Group's Environmental Policy throughout planning and implementation of the environmental strategy Environmental audit and environmental monitoring of production processes Engagement with national and local governments on developments in environmental legislation Environmental KPIs for Company management
2	**Laws and regulations** 🔴	Business impact of changes in, or the manner of enforcement of laws and regulations in Russia and globally, including antimonopoly regulation, tariff regulation, licensing and permits, environmental regulation, and HSE regulation	**N/C**	Monitoring of changes in the regulatory frameworks Interaction with the regulatory authorities
3	**Market – supply, demand, and commodity price volatility** 🔴	Business impact of volatility in supply, demand and/or prices of commodities fundamental to the Group's operations: Metals segment: aluminium, alumina, bauxite, energy sources (primarily gas) Power segment: electricity prices in certain segments of the Wholesale Electricity and Capacity Market (long-term contracts, 'day-ahead' market)	▲	The Group monitors its key risks, and conducts market research & analysis, and business & scenario planning The Company partially hedges its market risks by using derivative financial instruments
4	**Geopolitical** 🔴	Risks of a negative impact on the Group in the case that new sanctions are imposed by foreign states: impact on the Company's share price; supply of equipment, which may lead to the postponement of investment projects; capital flows and ability of the Group to secure foreign currency credit facilities Risks of a negative impact on the Metals segment's operations in various countries (Guyana, Guinea)	▲	Continuous monitoring of the political situation is exercised in the countries where the Group operates
5	**Force majeure – natural disasters, large-scale accidents, epidemics, etc.** 🟠	The Company may suffer major damages to its production facilities, or suspension/ discontinuation of operations as a result of natural disasters, epidemics, terror attacks	**N/C**	Scenario planning and development of early response measures Implementing a set of organisational and practical measures to ensure asset safety Continuous implementation of the measures until the end of the COVID-19 pandemic

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	Risk	Description	Change in 2021	Mitigation measures
BUSINESS AND OPERATIONAL RISKS				
6	**Maintenance**	These risks relate to equipment: failures of equipment that may result in damage to property, reduced output or discontinued operations	**N/C**	Timely maintenance and repairs/overhauls of equipment; modernisation of production facilities
7	**Legal**	Risks that losses may be incurred as a result of enforcement of court judgements on claims by contractors or shareholders of the companies of the Group	**N/C**	Legal defence against lawsuits Negotiating with the claimants
8	**Commercial and project**	Risks of disruptions in supply chains of goods and raw materials: sales of the products from metals and coal businesses require the use of railway infrastructure with its uncertain availability pattern Risks of monopoly pricing at the transportation market Risks of projects not completed on time/on budget	▲	Negotiating with suppliers of logistical services Ensuring timely supply and performance under investment contracts in accordance with the Group's internal regulations
9	**Health and safety**	Workforce or contractor injury due to human error, equipment failure, or job management, given the endemic risks within the Power and Metals segments relating to major accident hazards and asset integrity	**N/C**	The Group has arranged special-purpose units to reduce the probability of occupational injuries by means of development of regulations, staff training and ensuring compliance with the rules relevant to complicated and hazardous works through relevant control measures. Supervisory authorities (the Russian technological supervision service Rostechnadzor, and the consumer rights compliance service Rospotrebnadzor, etc.) exercise scheduled and ad hoc checks to control compliance with HSE requirements
10	**IT security & resilience**	Risks of important data loss or damage to components of the IT infrastructure by hacking or malware attacks Risks of failures of the automated information control and management systems of large industrial facilities (HPPs, CHPs, etc.)	**N/C**	Testing the IT infrastructure to detect security vulnerabilities Use of uniform policies and procedures for ensuring security of all Group entities
FINANCIAL RISKS				
11	**Financial**	Financial impact of market volatility regarding foreign exchange and interest rates Tax risks	▲	The Group exercises continuous control over the financial condition of Group companies. Monitoring of compliance with the terms of the loan agreements with banks is arranged at the Group's entities to ensure uninterrupted operating activities. Regular control is exercised over compliance with the agreed financial covenants; tax planning is undertaken, as well as control over tax accruals and payments
CLIMATE-RELATED RISKS[1]				
12	**Transitional risks N/A**	Financial or reputational impact due to policy, legal, technology, and market changes	**N/C**	Constant monitoring of policy, legal, technology, and market changes and proactive management of these issues
13	**Physical risks N/A**	Negative impact on operational process due to climate change, including water supply and temperature variations	**N/C**	Business and scenario planning; climate research and analysis

In late February and in March 2022, some countries and organisations announced new packages of sanctions against the public debt of the Russian Federation, Russia's central bank, a number of Russian banks and certain Russian-government related entities and institutions plus personal sanctions against a number of individuals as well as certain other restrictions. There has been a significant increase in volatility on the securities and currency markets, as well as a significant depreciation of the rouble against the US dollar and the euro. The quantitative effect of these events cannot be accurately estimated at the moment with any degree of confidence.

Due to all these circumstances, Central Bank of Russia increased key rate to 20% in the end of February 2022 and subsequently decreased to 17% in the beginning of April 2022 that may negatively affect the financial position of the Company due to high interest rates for credit facilities. The Russian Government has also announced intention to change regulation of domestic metals' sales prices, which may have an adverse effect on the Company's profitability.Due to unavoidable logistical and transport challenges on the Black Sea and surrounding area, RUSAL's had been obliged to halt temporarily production at the Nikolaev Alumina Refinery located in the Nikolaev Region, Ukraine. Output of this refinery in 2021 amounted to 1.8 mt of alumina. In addition, on 20 March 2022 the Australian government imposed an immediate ban on exports of alumina and aluminium ores, including bauxite, to Russia. This action will affect, among other things, the alumina export from Australia that comprises almost 20% of RUSAL's total alumina demand.

At the date of this Report, the Company continues to evaluate the effect of all of the above and analysing the possible impact of a variety of micro- and macroeconomic conditions on the Company's future financial position and results of operations in 2022 and onwards.

Climate-related risks[1]

The Company considers and examines climate-related risks and opportunities. This year En+ Group continued its work on implementing the Task Force on Climate-related Financial Disclosures (TCFD) recommendations.

The Company aims to make its climate change reporting more transparent for stakeholders. For detailed information please refer to the Task Force on Climate-related Financial Disclosures section that focuses on implementation of the TCFD recommendations and to the Sustainability Reports.

[1] For detailed information please refer to the Task Force on Climate-related Financial Disclosures section of the Annual Report 2021.

STRATEGIC REPORT

ETHICS AND COMPLIANCE

En+ Group develops a unified corporate culture shared by all employees with an atmosphere of mutual respect, trust and openness. Commitment to the highest legal and ethical standards is at the core of our business and declared in the Code of Corporate Ethics.

The Code states the key values, principles and standards of business conduct to be adhered to by the employees and Board members. It explains matters relating to employees, third parties, customers and governmental authorities; health, safety and environment; efficiency; ensuring confidentiality of information; control and reporting, and conflicts of interest. The Code of Corporate Ethics is publicly available in Russian and English on the Company's corporate website.

Corporate compliance system

En+ Group operates an effective corporate compliance system, subject to applicable laws, recommendations issued by regulators, special requirements of the industry and best practices. The Group is striving for the continuous improvement of existing processes and the implementation of new ones. The Compliance Committee of the Board of Directors ensures control and continuous development of the Group's compliance management system.

Anticorruption compliance and corporate ethics

En+ Group takes every opportunity to promote best practice in fighting corruption, and consistently complies with high standards of responsible and ethical behaviour. The Group has adopted an Anti-Bribery and Corruption Policy and a Conflict of Interest Policy. The provisions of these policies are applied at each Group company and serve as the basis for continuous improvement of the corporate culture. En+ Group consistently adjusts existing corruption prevention measures and implements new ones. Particular attention is paid to conflicts of interest, which are often a cause of corruption offences. As part of our commitment to ethical business practices, in 2021 the Board of Directors approved the En+ Group Supplier Standards, thereby setting out expectations for partners of the Group's in terms of responsible business, quality assurance and sustainability.

Sanctions compliance

En+ Group is focused upon mitigating the risk of imposition of international economic sanctions. A relevant compliance programme has been devised and is being continuously developed by the Group. The Board of Directors approved the Sanctions Compliance Policy aimed at ensuring that En+ Group and its officers, directors and employees comply with the applicable legislation for mitigating such risk.

Insider information compliance

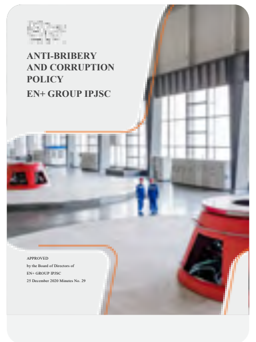
Since the financial instruments of En+ Group are traded on securities markets in Russia and in the UK, the Group has paid great attention to maintaining an effective system of measures to prevent misuse of insider information and market manipulation. The Board of Directors approved the Regulations on the Information Policy and Regulations on Insider Information. These regulations, as well as a number of additional internal acts, determine the procedure for using insider information, the rules for protecting its confidentiality and monitoring compliance with the requirements of legislation in order to ensure fair pricing of financial instruments and protect the rights of stakeholders of En+ Group. The Group approved the list of insider information, maintains the list of insiders, sets up timely disclosure processes, and implements appropriate internal control.

Hotline "Signal"

En+ Group operates a 24/7 hotline, "Signal", for employees and other stakeholders to interact on issues related to ethical violations, corruption and other illegal actions. The Group is constantly running an information campaign designed to promote this way of communication and to involve stakeholders in the continuous improvement of the unified corporate culture.

To download the Code of Corporate Ethics from our website:

https://enplusgroup.com/en/investors/corporate-documents/



To download the Anti-Bribery and Corruption Policy from our website:

https://enplusgroup.com/en/investors/corporate-documents/

CORPORATE GOVERNANCE

CORPORATE GOVERNANCE

CORPORATE GOVERNANCE

The Company is committed to high standards of corporate governance. The Group intends to continue to improve in this area and to adhere to internationally recognised standards of corporate governance, transparency, disclosure and accountability applicable to listed companies.

The Company has made substantial changes to its corporate governance practices, as a result of the OFAC Sanctions imposed on the Company and its subsidiaries on 6 April 2018 and their subsequent removal on 27 January 2019. Following these changes, the Company has proven its commitment to high international standards of corporate governance.

As an international company[1], the Company aims to comply with the recommendations of the Russian Corporate Governance Code insofar as is appropriate and practicable in the Group's context. In its corporate governance practices, the Company is also guided by the Listing Rules of the Moscow Exchange.

As a company incorporated in Russia, with GDRs listed on the Official List of the UK Financial Conduct Authority and traded on the Main Market of the London Stock Exchange[2], the Company is not required to comply with the provisions of the UK Corporate Governance Code. However, the Company has chosen to comply with the UK Corporate Governance Code insofar as is appropriate and practicable in the Group's context.

Adhering to high standards of corporate governance is an important element in attracting new investment, strengthening the Group's competitive position and enhancing shareholder value. Good governance is based on clarity of roles and responsibilities, and the Company aims to ensure that its governance procedures are applied to all areas of decision-making across the Group.

The Board of Directors of the Company is responsible to all of En+ Group's stakeholders for the strategic management of the Company. The day-to-day running of the Company falls within the competence of the CEO[3]. However, the Board retains responsibility for the approval of certain matters, which affect the shape and risk profile of the Company (see details below).

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

We consider the following corporate governance principles to be fundamental to our operations:

- Transparency
- Open and clear decision-making
- Legal compliances
- Ongoing growth of the Company's value for the benefit of all stakeholders

1. As defined under the Federal Law No. 290-FZ On International Companies and International Funds dated 3 August 2018.
2. On 3 and 4 March 2022, the London Stock Exchange suspended the admission to trading of the instruments for most Russian companies, including En+ Group.
3. The Charter uses the term "General Director" which is used interchangeably with the term "CEO" in public disclosures made by the Company.
4. As at the date of this Report.

AT A GLANCE

9 directors
including

5
independent non-executive directors[4]

6 Board
committees

Chairs of all Board committees
are independent non-executive directors

18 January 2021
– En+ announced its ambition to become net zero by 2050 and to reduce greenhouse gas emissions by at least 35% by 2030

23 December 2021
– the Board approved 6 new corporate policies

CORPORATE GOVERNANCE STRUCTURE

The Company's corporate governance structure includes the following key elements

General shareholders meeting
read more at p. 114

Board
read more at p. 116

CEO
read more at p. 125

TIMELINE OF CORPORATE GOVERNANCE CHANGES

2021 /26 MAY

The annual general shareholders meeting of the Company took place. The Board's composition has been updated, inter alia two new independent non-executive directors were appointed to the Board.

2021 /DECEMBER

One new non-executive director was elected to fill in the vacant position on the Board.

The Board approved six new corporate policies, including the Supplier Standards, the Biodiversity Policy, the Quality Policy and the Diversity and Equal Opportunities Policy.

2022 /3 MARCH

The London Stock Exchange suspended the admission to trading of the En+ Group's GDRs.

2022 /7 MARCH

Joan MacNaughton has resigned from the Board.

2022 /25 MARCH

Lord Barker has resigned from his role as Executive Chairman of the Board and as a director, Christopher Burnham has been elected as Chairman of the Board on the same date.

2022 /31 MARCH

Carl Hughes has resigned from the Board.

GENERAL SHAREHOLDERS MEETING

The general shareholders meeting *(the "GSM") is the supreme governance body of the Company. The Charter details the matters which fall within the powers of the GSM.*

Voting at a GSM is conducted on the basis of one vote per ordinary share. Decisions are generally passed by a simple majority of shareholders voting in favour of a motion at the meeting, save for a number of matters which, under the Charter, require the adoption of a special resolution (i.e. voting by a 2/3 majority), including, inter alia:

- The adoption of amendments to the Charter or approval of the restated Charter
- A change in the Company's status to non-public, or obtaining public status
- The reorganisation of the Company by way of consolidation, merger in the form of acquisition, division, or divestment
- The liquidation of the Company
- The fragmentation, conversion or consolidation of Company shares
- The acquisition of the Company's outstanding shares
- Fn increase or reduction in the Company's share capital

The GSM is quorate if shareholders holding more than half of the votes attached to the outstanding voting shares in the Company participate.

If the quorum for holding of an annual GSM is not reached, an adjourned GSM with the same agenda shall be reconvened at a later date. If the quorum for an extraordinary GSM is not reached, an adjourned GSM with the same agenda may be reconvened at a later date. An adjourned GSM is quorate if attended by shareholders holding no less than 30% of outstanding voting shares in the Company.

Resolutions of the GSM may be adopted either in a meeting held in the form of joint presence of shareholders or by absentee voting.

If the agenda of a GSM includes issues relating to the election of the Board, approval of the Company's auditor for the audit of accounting (financial) statements prepared under the Russian Accounting Standards ("RAS"), or approval of the annual report and annual accounting (financial) statements of the Company, it may be conducted only with the joint presence of shareholders. However, due to the COVID-19 pandemic, in 2021 the Russian joint-stock companies were permitted[1] to hold GSMs with the above-mentioned agenda via absentee voting.

An extraordinary GSM may be held based on a resolution of the Board either adopted on its own initiative, or at the request of a shareholder (or shareholders) holding no less than 10% of voting shares in the Company as at the date of the request. An extraordinary GSM convened at the request of a shareholder (or shareholders) holding at least 10% of voting shares in the Company shall be held within 50 days from the date of the request to convene the extraordinary GSM.

The Charter envisages a procedure for electronic voting at GSM. Voting may be carried out in electronic form if this is envisaged by the decision of the Board. In such a case ballots may be filled out in electronic form on the Internet, or sent to the Company's email address.

Information (materials) which are to be provided to the GSM should be made available within 20 days prior to the GSM, and in the event of a GSM with an agenda item on the Company's reorganisation, within 30 days prior to the GSM.

[1] In accordance with the Federal Law No. 17-FZ dated 24 February 2021.

Annual GSM

The annual GSM must be convened by the Board between 1 March and 30 June of each year, and the agenda must include the following items:

- The election of the Board members
- The approval of the Company's auditor for the audit of accounting (financial) statements prepared in accordance with RAS
- The approval of the Company's annual report
- The approval of annual accounting (financial) statements of the Company
- The approval of distribution of profits of the Company, including the payment (declaration) of dividends, except for payment (approval) of any interim dividends

The Company's shareholders holding in aggregate at least 2% of voting shares in the Company may no later than 30 days from the end of the reporting year propose items for the agenda of the annual GSM and candidates for election to the Board.

Report on meetings held

In 2021, the annual GSM of the Company was held on 26 May 2021 in the form of absentee voting.

The annual GSM considered and passed the following resolutions:

1. "To approve the Company's Annual Report for 2020"
2. "To approve the Company's annual accounting (financial) statements for the 2020 reporting year"
3. "Not to distribute the net profit received by the Company for 2020 and not to pay dividends on shares for 2020"
4. "To elect the Board of Directors of the Company consisting of 12 members from the list of candidates approved by the Board of Directors of the Company:
    1. Lord Barker
    2. Christopher Burnham
    3. Timur Fidailevich Valiev
    4. Vadim Viktorovich Geraskin
    5. Anastasia Vladimirovna Gorbatova
    6. Joan MacNaughton
    7. Thurgood Marshall Jr.
    8. Elena Valerievna Nesvetaeva
    9. Zhanna Sergeevna Fokina
    10. Carl Hughes
    11. Andrey Vladimirovich Sharonov
    12. Andrey Vladimirovich Yanovsky"
5. "To approve Ernst & Young Limited Liability Company as the auditor of the Company for the audit of accounting (financial) statements prepared in accordance with the legislation of the Russian Federation on accounting"

CORPORATE GOVERNANCE

BOARD OF DIRECTORS

The Board adheres to the consistent approach that aims to create a long-term value of the Company by supporting the balance between short-term and long-term objectives.

The Board of Directors of the Company is responsible to all of En+ Group's stakeholders for the strategic management of the Company

As at 31 December 2021, there were 12 directors on the Board, including seven independent non-executive directors, four non-executive directors and the Executive Chairman of the Board. As at the date of this Report, there are nine directors on the Board, including five independent non-executive directors and four non-executive directors.

In accordance with the Barker Plan[1] and as a condition to the removal of the Company from OFAC's SDN List, the Company announced on 28 January 2019 the immediate appointment of 7 new independent non-executive directors, namely:

- Christopher Burnham
- Carl Hughes
- Joan MacNaughton
- Nicholas Jordan
- Igor Lojevsky
- Alexander Chmel
- Andrey Sharonov

On 8 February 2019, Lord Barker was appointed as Executive Chairman of the Board and Christopher Burnham as Senior Independent Director.

Lord Barker's appointment came with additional powers and responsibilities, designed to enhance the control of the Board over the corporate governance systems and procedures of the Company. The appointment was aimed at further increasing cooperation between the Board and the Company's management, with the ultimate objective of promoting the successful performance of the Company.

Most of the above directors were re-elected in 2021 by the annual GSM. On 26 May 2021, the annual GSM has elected two new independent non-executive directors: Thurgood Marshall Jr. and Zhanna Fokina. On 15 December 2021, following resignation of Anastasia Gorbatova, who has served as a director of the Company since May 2019, one new non-executive director, Olga Filina, was elected to fill in the vacant position.

On 7 March 2022, Joan MacNaughton has resigned from the Board. On 25 March 2022, Lord Barker has resigned from his role as Executive Chairman of the Board and as a director, Christopher Burnham has been elected as Chairman of the Board on the same date. On 31 March 2022, Carl Hughes has resigned from the Board.

The quality and breadth of experience of the directors, and the balance of the Board's composition are intended to protect and promote the Board's effectiveness.

[1] Lord Barker's plan regarding the removal of the OFAC Sanctions from the Company was announced on 27 April 2018 and subsequently adopted by the Board on 18 May 2018. The plan provided for the reduction of Mr. Deripaska's shareholding to below 50% and the appointment of certain new directors such that the Board would include a majority of newly appointed independent directors. Further details in connection with the Barker Plan were disclosed, in particular, in the Company's 2018 Annual Report, available on the Company's website at https://enplusgroup.com/en/investors/results-and-disclosure/annual-reports/.

Board composition and attendance

Board attendance and number of meetings in 2021

	Appointed on	Resigned on	Attendance[1]
EXECUTIVE CHAIRMAN OF THE BOARD			
Lord Barker	17.10.2017	25.03.2022	17/17
NON-EXECUTIVE DIRECTORS			
Olga Filina	15.12.2021	–	2/2
Vadim Geraskin	08.02.2019	–	17/17
Anastasia Gorbatova	29.05.2019	09.12.2021	14/14
Elena Nesvetaeva	08.02.2019	–	17/17
Ekaterina Tomilina	08.02.2019	26.05.2021	6/6
Timur Valiev	26.05.2021	–	11/11
INDEPENDENT NON-EXECUTIVE DIRECTORS			
Christopher Burnham	27.01.2019	–	17/17
Alexander Chmel	27.01.2019	26.05.2021	6/6
Zhanna Fokina	26.05.2021	–	11/11
Carl Hughes	27.01.2019	31.03.2022	17/17
Nicholas Jordan	27.01.2019	26.05.2021	6/6
Joan MacNaughton	27.01.2019	07.03.2022	17/17
Thurgood Marshall Jr.	26.05.2021	–	11/11
Andrey Sharonov	27.01.2019	–	17/17
Andrey Yanovsky	25.09.2020	–	17/17
TOTAL NUMBER OF MEETINGS			**17**

During 2021, the Board held 17 meetings, and all of them were held in the form of absentee voting

[1] The number of meetings attended/maximum number of meetings the directors could have attended.

CORPORATE GOVERNANCE

Board's focus during the year

STRATEGY AND RISK

16 December 2021
- The Board considered an update on health and safety matters
- The Board considered an update on COVID-19
- The Board approved the Company's Business Plan for 2022

19 November 2021
- The Board considered an update on health and safety matters
- The Board considered an update on COVID-19

17 September 2021
The Board approved the Company's Pathway to Net Zero Report

18 August 2021
- The Board considered an update on health and safety matters
- The Board considered an update on COVID-19

19 July 2021
The Board approved the Company's Sustainability Report for 2020

26 May 2021
- The Board considered an update on health and safety matters
- The Board considered an update on COVID-19

18 May 2021
The Board considered the Company's climate change ambition (in the form of the Spin-Off Action Plan)

21 April 2021
The Board preliminarily approved the Company's Annual Report 2020

24 March 2021
- The Board considered an update on health and safety matters
- The Board considered an update on COVID-19

15 January 2021
The Board approved the Company's climate change ambition

SUCCESSION AND LEADERSHIP

15 December 2021
- The Board elected Olga Filina as a member of the Board
- The Board elected its committees

3 June 2021
The Board updated the composition and appointed the chairpersons of all its committees

26 May 2021
The Board re-appointed Lord Barker as a chairperson of the Board

24 March 2021
The Board approved the results of the assessment of the CEO KPI achievement for 2020

CORPORATE GOVERNANCE

23 December 2021
The Board approved the Supplier Standards, the Biodiversity Policy, the Quality Policy, the Diversity and Equal Opportunities Policy, the Regulations on the Information Policy, the Regulations on Inside Information.

29 October 2021
The Board approved the general levels of D&O liability insurance

24 March 2021
The Board approved the assessment of achievement of annual KPIs for the CEO for 2021

FINANCIAL PERFORMANCE

18 August 2021
The Board approved the consolidated interim condensed financial information for the 6 months ended 30 June 2021

21 April 2021
The Board preliminarily approved the Company's annual accounting (financial) statements for the 2020 reporting year

24 March 2021
The Board approved the consolidated financial statements for the year ended 31 December 2020 and the separate financial statements for the year ended 31 December 2020

DIRECTORS' AND OFFICERS' INSURANCE

The liability of members of the Board of Directors related to execution of their duties at the Company is insured under a D&O liability insurance policy, which is renewed annually and represents insurance against any in-scope losses of the Directors.

BOARD RESPONSIBILITIES

The matters specifically reserved for the Board under the Charter include, inter alia, the following:
- The determination of the priority areas for the Company's activities
- The approval of the Company's long-term strategy and objectives and its overall management mechanism
- The day-to-day control over implementation of the Company's long-term strategy and objectives
- The 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
- The convening of annual and extraordinary general meetings of shareholders
- The establishment and termination of committees, commissions, councils and other structural units of the Board, approval of their personal composition and regulations governing their operations
- The approval of internal documents of the Company (or making amendments or additions thereto) on the issues of environmental protection, insurance and risk management of the Company
- The approval of the Company's dividend policy
- The approval of certain transactions with a value exceeding USD 75 million
- The approval of share incentive plans and schemes provided to employees, as well as annual Key Performance Indicators for the CEO
- The approval of the Company's auditors (for the audit of financial statements in accordance with IFRS, or other internationally recognised rules other than IFRS)
- The approval of the register holder of the Company
- The appointment of the sole executive body (the CEO) of the Company

The Board has taken steps to ensure that the members of the Board (in particular, the non-executive directors) develop an understanding of the major shareholders' views about the Company. The directors, including the Chairman, have direct face-to-face contact with shareholders at regular investor meetings.

Training and professional development of the Board members

Newly elected directors complete an induction training programme upon their appointment.

The key elements of the programme include, inter alia:
- Personal meetings, in person or electronically, with the CEO, the Chairman of the Board, the Corporate Secretary, management team, and/or heads of corporate business units
- Familiarisation with operations, including on-site visits to the Group's production facilities with briefings on operational and managerial issues and meetings with local management
- Provision of Board information packages, including internal reporting documents for previous periods
- Provision of internal documents and Q&As with the management team
- Presence, as invitees, at meetings of all Board committees
- Mandatory training, including by external advisors, on matters relating to insider trading, regulatory disclosure and compliance with sanctions

The Corporate Secretary runs the induction training programme for newly elected directors of the Company, and coordinates all involved parties with the assistance of the Corporate Governance Committee and the Nominations Committee.

As part of its Board training and professional development efforts, the Board also regularly conducts training sessions for Board members on various matters, often led by external advisors. In 2021, due to COVID-19 pandemic all planned training sessions were postponed until 2022.

Biographies of directors

who served on the Board in 2021 and have resigned as at the date of this Report

Rt Hon The Lord Barker of Battle PC

Executive Chairman of the Board

Appointed:
17 October 2017

Resigned:
25 March 2022

After an early career spanning both international corporate finance and the Russian energy sector, Lord Barker entered the British House of Commons in 2001 through to 2015, during which time he served as UK Minister of State for Energy & Climate Change and Prime Minister David Cameron's special envoy on Climate Change.

He was made a life Peer in 2015. In February 2019, Lord Barker took a leave of absence from the House of Lords following his appointment as Executive Chairman of En+ Group.

Lord Barker has served on the boards of The Environmental Defense Fund Europe and The Climate Group and also chaired the London Sustainable Development Commission for Mayor Boris Johnson 2014-2016. He is also currently a non-executive chairman of EVN Group, the leading UK developer of electric vehicle infrastructure.

Lord Barker was educated at Lancing College, London University and London Business School.

Alexander Chmel

Independent Non-Executive Director

Appointed:
27 January 2019

Resigned:
26 May 2021

Alexander is a Senior Advisor to the Board Practice of Korn Ferry in Russia and the CIS. He has extensive experience working as an independent director, chairman, and member of audit committees of Russian public companies, including ENEL RUSSIA, ChelPipe, Vysochaishy (GV Gold).

He spent 22 years in senior management roles in PricewaterhouseCoopers, worked as an Adjunct Professor and a Director of Corporate Programmes at the Moscow School of Management, SKOLKOVO.

In 2016, 2019 and 2020 Alexander became one of the Top 50 Independent Directors in Russia in the national "Director of the Year" rating. He holds a Diploma in Company Direction from the Institute of Directors (UK).

Nicholas Jordan

Independent Non-Executive Director

Appointed:
27 January 2019

Resigned:
26 May 2021

Nicholas has more than 30 years' experience in senior positions in leading global financial institutions.

Nicholas serves as a Non-Executive Director at ITI Capital. His previous roles include Chairman of the Supervisory Board at 4finance Group S.A, CEO at Finstar Financial Group, Co-CEO of Goldman Russia and CEO of Russia & CIS at UBS Group AG.

Nicholas worked for more than 10 years with Deutsche Bank, becoming Vice Chairman and Head of the Russian Office where he was responsible for overseeing the securities, trading and asset management departments.

He has a BA in Political Science from Boston University.

Joan MacNaughton CB Hon FEI

Independent Non-Executive Director

Appointed:
27 January 2019

Resigned:
7 March 2022

Joan is currently Chair of the Climate Group and of the Advisory Board of the New Energy Coalition of Europe. She sits on the Strategic Advisory Board of ENGIE UK, of the Grantham Institute at Imperial College and LSE, London.

Her former positions include Chair of the International Energy Agency and Executive Chair of the "World Energy Trilemma" of the World Energy Council and membership of many academic and corporate Boards.

Joan held a wide range of positions in the UK Government until 2007. As Director General of Energy, she played a key role in shaping UK energy policy, including leading the Clean Energy Action Plan of the 2005 Gleneagles G8 Summit.

Anastasia Gorbatova

Non-Executive Director

Appointed:
29 May 2019

Resigned:
9 December 2021

Anastasia is the head of M&A and International Projects at Basic Element which she joined in 2013.

Anastasia has over 20 years of professional experience with top tier law firms and Russian key blue chip companies advising on multibillion cross border transactions on M&As, EPC, capital markets and corporate finance.

Anastasia graduated from Moscow State University of International Relations (MGIMO) with a degree in Law (cum laude).

Ekaterina Tomilina

Non-Executive Director

Appointed:
8 February 2019

Resigned:
26 May 2021

Ekaterina is currently the Director of Corporate Finance at Basic Element.

She joined RUSAL in 2000 as the Head of its Structured Finance and Capital Markets Department. In 2012, Ekaterina was appointed as Director of Corporate Finance at RM Rail, which is part of Russian Machines, an industrial and engineering company controlled by Basic Element.

Ekaterina held various finance positions at investment company Alfa Group and Tyumen Oil Company from 1997 until 2000, where she oversaw finance, trade and international matters.

Ekaterina is a graduate of the Moscow State University of International Relations (MGIMO), with a degree in International Economics.

Carl D. Hughes

Independent Non-Executive Director

Appointed:
27 January 2019

Resigned:
31 March 2022

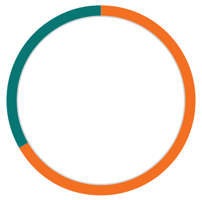
Throughout his career, Carl has specialised in the oil and gas, mining and utilities sectors. He joined Arthur Andersen in 1983 and became a partner in 1993. He was appointed the head of the UK energy and resources industry practice of Andersen in 1999 and subsequently of Deloitte in 2002. When Carl retired from the partnership of Deloitte in 2015, he was a vice-chairman, senior audit partner and leader of the firm's energy and resources business globally.

Carl holds a number of corporate and charitable appointments. He is a non-executive director and chairman of the audit committee of EnQuest Plc; a member of the finance and audit committee of the Energy Institute; a board member of the Audit Committee Chairs' Independent Forum; a member of the General Synod of the Church of England; and deputy chairman of the finance committee of The Archbishops' Council.

He holds an MA in Philosophy, Politics and Economics from the University of Oxford, is a Fellow of the Institute of Chartered Accountants in England and Wales, and a Fellow of the Energy Institute.

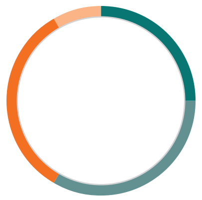
Biographies of the directors currently serving on the Board

Gender diversity[1]



Male 8
Female 4

Age[1]



35-45 3
46-55 4
56-65 4
65+ 1

Independence[1]

Executive Chairman 1
Independent Directors 7
Non-executive Directors 4

[1] As at 31 December 2021.

A C R

Hon Christopher Bancroft Burnham

Chairman of the Board, Independent Non-Executive Director

Appointed: 27 January 2019

Appointed as Chairman of the Board: 25 March 2022

Christopher has a distinguished career in government, diplomacy, banking, and private equity. He is a globally recognised expert in the implementation of accountability and transparency, having served as Under Secretary General for Management of the U.N., Under Secretary of State for Management (acting), Assistant Secretary of State for Resource Management and CFO of the U.S. Department of State.

Christopher serves as Chairman and CEO of Cambridge Global Capital, which he co-founded. He is the former Vice Chairman and Managing Director of Deutsche Asset Management.

He studied at Georgetown's National Security Studies Program, graduated from Washington and Lee University, and Harvard University, where he earned an M.P.A. in 1990.

G H N

Zhanna Fokina

Independent Non-Executive Director

Appointed: 25 May 2021

Zhanna has extensive experience working in environmental control and supervisory authorities.

Currently, she heads the Environment unit at RUSAL Krasnoyarsk. Zhanna manages the company's environmental reporting and monitoring in the zone influenced by the enterprise, as well as programmes of industrial ecological control. She also supports government supervisory authorities' inspections in the environmental protection field.

Before joining RUSAL she worked in Rosprirodnadzor (Federal Service for Supervision of Natural Resources) and in pharmaceutical industry.

In 2009, she graduated from the Siberian Federal University.

A H R

Andrey Yanovsky

Independent Non-Executive Director

Appointed: 25 September 2020

Andrey has been CEO of the Moscow-based hospital operator European Medical Centre and a member of the Board since 2014.

During his career, Andrey was CEO of the Coca-Cola Company franchise in Russia, CEO of Nidan Juices (2003-2009), vice-president for organisational development and personnel at TNK-BP (2009-2013), Director for strategy and organisational development at Nefteservice (2013-2014).

Andrey graduated from the Riga High Military School, Kingston University, Strategic Management, MBA.

C H R

Thurgood Marshall Jr.

Independent Non-Executive Director

Appointed: 26 May 2021

Thurgood Marshall Jr. has an extensive experience at the intersection of law, business, politics and policy.

Throughout his career, Thurgood served as an international law firm partner, was a member of the boards of listed companies and held a wide range of positions in the US Government: Staff Director and Chief Counsel to Senator Al Gore, Director of Legislative Affairs & Deputy Counsel to Vice President Al Gore, Cabinet Secretary.

Thurgood also practiced law in Washington DC when he completed his judicial clerkship.

He earned his Bachelor of Arts (BA) in 1978 and a Juris Doctor (JD) degree in 1981 in University of Virginia.

H

Vadim Geraskin

Non-Executive Director

Appointed: 8 February 2019

Vadim has significant experience in government relations at both a national and regional level.

Since September 2012, he has been the deputy CEO for Government Relations at Basic Element and heavily involved in pushing the company's socioeconomic development programmes in the regions where it operates.

Vadim headed RUSAL's Natural Monopolies Administration for eight years before joining Basic Element, and previously headed RUSAL's transport and logistics administration and Transport Department. From 1997 to 2000 he served as CEO of Zarubezhcontract, a company operating in the non-ferrous metals market. From 1993 to 1997 he worked for Aluminproduct Company.

Vadim graduated from Lomonosov Moscow State University with a degree in Physics.

A G N

Andrey Sharonov

Independent Non-Executive Director

Appointed: 27 January 2019

Andrey is CEO of National ESG-Alliance, Chairman of the Board of NefteTransService, Skolkovo Foundation, a member of several other boards.

He was a People's Deputy of the USSR, Chairman of the State Committee for Youth Affairs, served in the Ministry of Economic Development and Trade, was managing director and chairman of the Board of Troika Dialog, Deputy Mayor of Moscow for Economic Policy, Chairman of the Regional Energy Commission, and headed the Executive Committees of Moscow Urban and Open Innovations Forums.

He graduated from Ufa State Aviation Technical University and the Russian Academy of Public Administration, and holds a PhD in sociological science.

R

Elena Nesvetaeva

Non-Executive Director

Appointed: 8 February 2019

Elena has extensive experience working on investments and in the banking sector. She currently heads the Investment Department at Basic Element, which she joined in 2009. At Basic Element she manages the company's investment projects and portfolio, and is responsible for driving the group's investment strategy and asset valuation, acquisition projects and M&A transactions.

She worked in the banking sector and for a timber-processing holding.

Elena graduated with distinction from the Faculty of Economics of the Syktyvkar State University, the Russian Academy of National Economy under the Government of the Russian Federation, and the Institute of Business and Business Administration with a degree in Management.

C G

Olga Filina

Non-Executive Director

Appointed: 15 December 2021

Olga Filina has over 15 years of experience in internal control and compliance (including senior positions at Deloitte and KPMG).

Main areas of specialisation are investigations of complex cases of fraud, anti-corruption investigations (including in the field of financial investigations and audits for compliance with the US Foreign Corrupt Practices Act (FCPA)), formation and testing of the compliance function, outsourcing and support of hotlines, project management for internal audit and internal control.

C R

Timur Valiev

Non-Executive Director

Appointed: 26 May 2021

Timur has extensive professional experience in managing court activities, claims and contracting, legal support of M&A projects and the creation of joint ventures.

From 2013 to 2019, he held the position of General Counsel of En+ Group.

Prior to his career at En+ Group, he served as Director for International Projects and M&A at Basic Element Limited.

Prior to joining Basic Element Limited, Timur worked at international law firm Dewey & LeBoeuf, the legal department of TNK-BP, and at a number of Russian consulting firms.

He graduated from Lomonosov Moscow State University.

Full biographies can be found on the Company's website:

https://enplusgroup.com/en/company/corporate-governance/board-of-directors/

Key

- *Committee chair* (orange)
- A *Audit and Risk Committee*
- C *Compliance Committee*
- G *Corporate Governance Committee*
- H *Health, Safety, and Environment Committee*
- N *Nominations Committee*
- R *Remuneration Committee*

COMMITTEES OF THE BOARD

22
Total number of meetings in 2021

Overview

As at the date of this Report the Board has established six committees to assist it in exercising its functions:
- the Audit and Risk Committee (the "A&RC")
- the Compliance Committee (the "CC")
- the Corporate Governance Committee (the "CGC")
- the Health, Safety and Environment Committee (the "HSE Committee")
- the Nominations Committee (the "NC")
- the Remuneration Committee (the "RemCom")

All of the Committees are advisory bodies, whose primary function is to make recommendations to the Board on the matters falling within their remit.

The composition of the Company's existing Board committees was amended on 3 June 2021 and further amended on 15 December 2021. The details regarding each of the Committees are set out below.

Committees attendance and number of meetings in 2021[1]

	A&RC	CC	CGC	HSE Committee	NC	RemCom
EXECUTIVE CHAIRMAN OF THE BOARD						
Lord Barker	—	3/3[2]	—	1/2[3]	1/1	—
NON-EXECUTIVE DIRECTORS						
Olga Filina	—	0/0	0/0	—	—	—
Vadim Geraskin	—	—	—	5/5	—	—
Anastasia Gorbatova (until 9 December 2021)	—	4/4	1/1	—	—	—
Elena Nesvetaeva	—	—	—	—	—	2/2
Timur Valiev	—	1/1	—	—	—	1/1
INDEPENDENT NON- EXECUTIVE DIRECTORS						
Christopher Burnham	6/6	4/4	—	—	—	2/2
Alexander Chmel (until 26 May 2021)	3/3	3/3	—	2/2	—	—
Zhanna Fokina	—	—	1/1	3/3	0/1	—
Carl Hughes	6/6	3/4	1/1	—	4/4	—
Nicholas Jordan (until 26 May 2021)	—	—	0/0	—	3/3	1/1
Joan MacNaughton	—	—	1/1	5/5	4/4	—
Thurgood Marshall Jr.	—	1/1	—	3/3	—	0/1
Andrey Sharonov	5/6	—	1/1	—	4/4	—
Andrey Yanovsky	6/6	—	—	3/3	—	2/2
TOTAL NUMBER OF MEETINGS	**6**	**4**	**1**	**5**	**4**	**2**

1. The number of meetings attended/maximum number of meetings the directors could have attended.
2. Until 3 June 2021.
3. Until 3 June 2021.

Environmental Advisory Board[1]

In order to enhance its commitment to sustainability, on 25 September 2019 the Company announced the launch of its new Environmental Advisory Board (the "EAB"). The EAB is chaired by Adnan Z. Amin, who was the first Director-General of the International Renewable Energy Agency ("IRENA"), an intergovernmental organisation charged with driving the transition towards the use of renewable energy on a global scale.

The EAB advises the Board on delivering its environmental agenda and identifying emerging environmental issues.

The members of the EAB include Joan MacNaughton (resigned from the Board on 7 March 2022), Chair of The Climate Group and of the Advisory Board of the New Energy Coalition of Europe, as well as external advisors with specific expertise in both environmental and wider sustainability issues.

Share Dealing Code

Upon admission to the Main Market of the London Stock Exchange in November 2017, the Company adopted a code or dealing in securities in relation to the GDRs, the ordinary shares, and any other securities of the Company, which is based on the requirements of EU Market Abuse Regulation (EU) 596/2014. This code applies to the directors and other relevant employees of the Group (to the extent it does not contradict the Charter and the applicable UK and Russian law provisions).

Shareholdings of Directors

As at 31 December 2021 Carl Hughes (resigned from the Board on 31 March 2022) held 5,000 GDRs in the Company. As at the date of this Report Timur Valiev holds 64 shares of the Company. Aside from this, throughout 2021, none of the directors directly or indirectly held any shares in the Company and none of the directors concluded any transactions with the Company shares.

Responsibility Statement

The members of the Board confirm that, to the best of their knowledge:

The consolidated financial statements, prepared in accordance with IFRS as issued by the International Accounting Standards Board and as adopted by the European Union, give a true and fair view of the assets, liabilities, financial position and profit or loss of the Company and its subsidiaries, taken as a whole.

This Annual Report includes a fair review of the development and performance of the business and the position of the Company and its subsidiaries, taken as a whole, together with a description of the principal risks and uncertainties that they face.

Sole executive body – CEO

Under the Charter, the CEO acts as the sole executive body of the Company.

The CEO is responsible for directing the Company's day-to-day operations and holds all powers falling outside the exclusive competence of the GSM and the Board, including, inter alia:
- acting on behalf of the Company without a power of attorney (including by representing the Company and entering into transactions on its behalf)
- passing resolutions to establish branches and representative offices of the Company
- issuing powers of attorney, authorising their holders to represent the Company

The CEO is appointed by the Board for a period of five years unless another term of office is established by the Board.

Currently, the post of the CEO is held by Vladimir Kiriukhin

Vladimir Kiriukhin
Chief Executive Officer (CEO)

Appointed: 1 November 2018

Joined the Group: January 2000

Vladimir oversees the Company's long-term strategy, business development and cooperation with key external stakeholders, including regulators.

A long-serving member of En+ Group, previously Vladimir held several senior positions at EuroSibEnergo, including CEO. He held senior positions at Russian Aluminium and MAREM+. Vladimir was also a Chairman of the Board at Irkutskenergo, Chairman of the Board at Krasnoyarsk HPP, served in the Board of RUSAL.

He is a member of the Governmental Commission on Electric Power Sector Development, which coordinates regulatory decisions on key issues facing the Russian electric power industry.

He graduated from the All-Union Institute of Interindustrial Information with a PhD in engineering, having previously obtained a major in mathematics from the Higher Naval School of Radio Electronics.

Vladimir does not hold any shares in the Company and has not entered into any transactions with the Company shares during 2021.

1. On 28 April 2020, the Board decided to temporarily suspend the work of the EAB due to COVID-19 pandemic. The Group remains committed to its climate and broader environmental agenda.

CORPORATE GOVERNANCE

COMMITTEES

AUDIT AND RISK A

Composition

Pursuant to the Regulations on the Audit and Risk Committee, approved by the Board on 13 December 2019, the A&RC consists of members, all of whom have been determined by the Board to be independent non-executive directors, recognised as such pursuant to the Listing Rules of the Moscow Exchange. The Committee meets at least once per quarter of the Company's financial year.

The current composition of the A&RC is as follows:

- Christopher Burnham
- Andrey Sharonov
- Andrey Yanovsky

The A&RC is responsible, inter alia, for the following matters:

- Overseeing the integrity, completeness and accuracy of the financial statements of the Company and the consolidated financial statements of the Group
- Reviewing material aspects of the Company's and its subsidiaries' accounting policies to ensure that they are appropriate and consistently applied
- Reviewing the Company's annual report (including the annual consolidated financial statements) and making recommendations to the Board with respect to its contents
- Reviewing material matters and judgments (including significant financial reporting estimates and judgements) regarding the Company and the consolidated financial statements
- Monitoring the adequacy, reliability and effectiveness of operation of the Group's systems of risk management and internal control
- Reviewing and assessing the implementation of risk management and internal control policies to ensure that the systems of risk management and internal control are adequate and operating effectively
- Monitoring and assessing any important new systems (including IT systems) and ensuring that related controls are adequate, reliable and effective
- Ensuring that the internal audit function is independent and unbiased
- Assessing the effectiveness of the internal audit function
- Controlling the operating effectiveness of the system for reporting potential cases of fraud by the Group's employees and third parties, and other violations within the Group

The A&RC is also responsible for reviewing the effectiveness of the external audit process and of the external auditor, in conjunction with any other relevant Board committees.

In 2021, the A&RC held six meetings. The A&RC meetings have been to consider financial statements, internal audit reports and plan for 2022, control and risk management reports, external audit reports.

CORPORATE GOVERNANCE G

Composition

Pursuant to the Regulations on the CGC approved by the Board on 1 December 2020, the majority of CGC members are represented by independent directors recognised as such pursuant to the Listing Rules of the Moscow Exchange. The CGC meets at least three times a year.

The current composition of the CGC is as follows:

- Andrey Sharonov, as chairman
- Olga Filina
- Zhanna Fokina

The CGC's primary role is to oversee the Company's and the Group's corporate governance matters.

The responsibilities of the CGC are the following:

- Determining the priorities of the Group in the area of corporate governance
- Reviewing the corporate governance system and corporate values of the Company for compliance with the goals and objectives of the Company, and the scale of its business and risks assumed

In 2021, the CGC held one meeting to consider D&O liability insurance policy of the Company.

NOMINATIONS N

Composition

Pursuant to the Regulations on the NC approved by the Board on 1 December 2020, the NC members are represented by independent directors recognised as such pursuant to the Listing Rules of the Moscow Exchange. The NC meets at least three times a year.

The current composition of the NC is as follows:

- Andrey Sharonov, as chairman
- Zhanna Fokina

The NC's primary role is to develop recommendations to the Board on Board performance evaluation and planning internal appointments.

The primary responsibilities of the NC are, inter alia, the following:

- Conducting a detailed formalised self-evaluation and external performance evaluation of the Board, its members, and the Board committees on an annual basis, and determining priority areas to improve the Board's capacity
- Organising external performance evaluation of the Board and its members and of the Board committees
- Interacting with shareholders (including minority shareholders) to develop recommendations to shareholders regarding voting on the Board elections
- Planning appointments so as to ensure the continuity of activities of the CEO, develop recommendations to the Board regarding nominations for the position of the Corporate Secretary (head of the unit functioning as the Corporate Secretary), and recommendations to the Board regarding nominees for the position of the head of the Internal Audit Service and the CEO of the Company
- Assessing the independence of the Board members
- Taking part in the ongoing advanced professional training of the Board members
- Considering the current and expected needs of the Company in terms of the professional qualifications of the Company's CEO, in the interests of the Company's competitiveness and development, and succession planning for such persons

In 2021, the NC held four meetings. The majority of NC meetings have been to consider selection of candidates as Board members of the Company or its subsidiaries.

REMUNERATION R

Composition

The RemCom consists of a majority of independent directors. The RemCom meets at least three times during a financial year of the Company. The current composition of the RemCom is as follows:

- Christopher Burnham, as chairman
- Thurgood Marshall Jr.
- Elena Nesvetaeva
- Timur Valiev
- Andrey Yanovsky

The RemCom is responsible, inter alia, for the following matters:

- Developing and revising from time to time the Company's remuneration policy for Board members, the CEO, the Corporate Secretary, the head of the Internal Audit Service, and developing parameters of short-term incentive programmes
- Supervising the introduction and implementation of remuneration policy and various incentive programmes in the Company, and revising the policy and programmes as and when necessary
- Performing preliminary year-end performance evaluation of the CEO in the context of the established remuneration criteria, and performing a preliminary assessment of achievement by the CEO of the targets under the long-term incentive programme
- Developing recommendations to the Board on determining the amount of remuneration and principles of bonus payment for the Company's Corporate Secretary, performing a preliminary year-end performance evaluation of the Company's Corporate Secretary, as well as issuing proposals on bonus payment to the Company's Corporate Secretary
- Supervising the disclosure of remuneration policies and procedures, and of the ownership of the Company shares by Board members and the person acting as the CEO in the annual report and on the Company's website

In 2021, the RemCom held two meetings and mainly considered KPIs of the CEO.

REMUNERATION DISCLOSURE REPORT

The Group's remuneration structure is designed to ensure a balance between engaging and retaining highly qualified managers and the interests of our shareholders

Objectives of the remuneration policy

Our remuneration policy is based on the following principles:

- Attract, remunerate and retain qualified specialists who will, in their turn, enable the Company to achieve its strategic objectives
- Provide for a balance between the achievement of short-term operating results and the long-term objectives of the Company
- Create value for our shareholders, given the risks that may impact the variable component of remuneration.

Remuneration structure

The Group's remuneration structure is designed to ensure a balance between engaging and retaining highly qualified managers and the interests of our shareholders. The established remuneration system comprises fixed and variable components. The fixed component consists of base salary, which is set in line with the market to ensure retention of key executives, and reflects the level of competence, experience, responsibility and personal achievements of the respective manager. The variable component consists of annual bonuses and may also include one-off and target bonus payments and other payments, that are determined based on the performance against pre-set key performance indicators (KPIs).

Remuneration of executive management[1]

In 2021, the remuneration of the key management personnel, including the CEO, amounted to USD 15.4 million. This remuneration includes base salary in the amount of USD 8.2 million and bonuses in the amount of USD 7.2 million.

Remuneration of Board members

In 2019, the Board considered and approved the general levels of compensation for Board members.

All members of the Board, except for the Executive Chairman, are entitled to receive remuneration of EUR 215,000 (c. USD 249,000)[2] gross per annum, paid monthly.

All members of the Board, except for the Executive Chairman, are entitled to receive additional remuneration for serving on a committee or other structural unit of the Board[3]:

- EUR 26,000 (c. USD 30,000)[4] gross per annum for chairing a committee or other structural unit of the Board
- EUR 18,000 (c. USD 21,000)[5] gross per annum for participation in each committee or other structural unit of the Board as a member

The aggregate amount of remuneration to Board members in 2021 amounted to USD 10.3 mn, excluding social insurance[6]

1. Accrual basis.
2. Calculated based on a EUR/USD exchange rate of 1.16 as at 31 December 2021.
3. The CGC members (including the chairman) do not receive compensation for membership (chairmanship) in the CGC if they at the same time participate in the NC of the Board and receive relevant compensation for participation in (chairing) the NC of the Board.
4. Calculated based on a EUR/USD exchange rate of 1.16 as at 31 December 2021.
5. Calculated based on a EUR/USD exchange rate of 1.16 as at 31 December 2021.
6. Mandatory payments (pension provision, mandatory health insurance, etc.) as required by the legislation of Russian Federation.

Structure of remuneration:

Element of remuneration	Approach	Indices and dependencies	Key changes-during the year
Base salary Base salary is stipulated by the agreements concluded with each member of the Group's management team and is aimed at attracting and retaining high caliber professionals	• Salary is set to ensure competitiveness with other comparable Russian and foreign industry peers – Fixed remuneration reflects the level of competence, responsibility and personal achievements of the respective manager, and his/her professional experience	Not applicable	No changes made during the year
Benefits Provided to support successful fulfilment of responsibilities by compensation of additional expenses associated with these responsibilities	• The company ensures a competitive total compensation portfolio for its employees, providing them with meal expenses, certain other reimbursements and medical insurance	Not applicable	No changes made during the year
Pension Retirement funding provision	• We do not fund any pension contributions or retirement benefits, except for mandatory contributions to the pension fund of the Russian Federation, as required by Russian law, which permits retiring employees to receive a defined monthly pension for life from the statutory pension fund	Not applicable	No changes made during the year
Annual bonus Ensures focus on and alignment with strategic goals of the Group	• Bonus payments for achieving personal KPIs • KPIs for the CEO are developed by the Remuneration Committee and approved by the Board • KPIs are set at the beginning of each financial (calendar) year • KPIs are regularly reviewed and updated to ensure that they align with the Group's goals	Examples: • Financial performance – Adjusted EBITDA; Free Cash Flow • HSE & sustainability – Lost Time Injury Frequency Rate (LTIFR); ensuring the absence of environmental incidents, accidents or violations • Strategy – Achievement of strategic goals and successful realisation of development projects • Other objectives – In accordance with the manager's area of responsibility	No changes made during the year
Board of Directors members' fee (excluding Chairman of the Board of Directors) For participation in/chairing board committees in addition to payments as Board members	• The objective in setting the fees paid to Board of Directors members (excluding Chairman of the Board) is to be competitive with other comparable, listed peer companies • Members of the Board receive a fixed fee for participation in/chairing each Board committee	Not applicable	No changes made during the year
Additional compensation and benefits Optional bonus payments for achievements beyond the scope of the KPIs for the relevant year	• Paid for achievements that are important for the Company, but which are outside the main KPIs	Task specific	No changes made during the year
Remuneration for other risk-taking employees To attract and retain high caliber professionals	• Top managers of En+ Group subsidiaries are considered as risk-taking employees • Application of the Group's executive remuneration policy	• Aligned with the Group's executive remuneration structure	No changes made during the year

CORPORATE GOVERNANCE

COMMITTEES CONTINUED

COMPLIANCE C

Composition

The CC was established following the removal of the Company from OFAC's SDN list. The CC holds meetings at least once per quarter of the Company's financial year.

The CC is currently comprised as follows:
- Christopher Burnham, as chairman
- Olga Filina
- Thurgood Marshall Jr.
- Timur Valiev

The primary responsibilities of the CC are, inter alia, the following:
- Ensuring the formation of a compliance management system within the Group
- Taking part in the development of policies and other internal regulations of the Company relating to matters of compliance, and consistently following up on their observance
- Ensuring that adequate compliance control is in place at the Group
- Conducting due diligence in the event of any reasonable doubt regarding observance of compliance requirements and the provisions of compliance documents

The CC reviews its own performance and reassesses the adequacy of procedures and guidelines in respect of regulatory compliance.

In 2021, the CC held four meetings and considered regular compliance reports and goals for 2022 and demerger of higher carbon assets of the Company.

HEALTH, SAFETY AND ENVIRONMENT H

The HSE Committee meets at least once per quarter of the Company's financial year.

The current composition of the HSE Committee is as follows:
- Zhanna Fokina, as chair
- Vadim Geraskin
- Thurgood Marshall Jr.
- Andrey Yanovsky

The primary responsibilities of the HSE Committee are, inter alia, the following:
- Reviewing leading international research and best practices in the area of health, safety and environment, and, if necessary, assessing their impact and preparing respective strategic recommendations to the Board in relation to the Group
- Preparing recommendations to the Board on formulating Group strategies, policies and instructions in the areas of health, safety and environment
- Taking part in the development of policies and other bylaws of the Company regarding health, safety and environment
- Preparing recommendations to the Board on possible participation, cooperation and consultations on health, safety and environmental matters with government authorities, NGOs and other companies or associations
- Controlling the Company's compliance with international standards, applicable laws and the Company bylaws on health, safety and environment
- Benchmarking the Group's operating results on occupational safety and environment against global best practices, and considering the results of such benchmarking

In 2021, the HSE Committee held five meetings and considered measures to prevent COVID-19 infection, regular HSE reports, environmental risk management status, the UN Global Compact's SDG ambition accelerator report, HSE KPIs results for 2021 and KPIs for 2022, biodiversity strategy update.

Corporate Secretary

Pursuant to the Regulations on the Corporate Secretary, the Corporate Secretary of the Company is responsible for the Company's efficient ongoing interaction with shareholders, coordination of the Company's activities in protecting the rights and interests of shareholders, and support of the effective operation of the Board and Board Committees.

The functions of the Corporate Secretary include, inter alia:
- Participation in preparation and holding of GSMs
- Supporting the activities of the Board and the Board Committees
- Implementing the Company's disclosure policy and ensuring the storage of the Company's corporate documents
- Liaisons between the Company and its shareholders, and preventing corporate conflicts
- Improving the corporate governance system and practices of the Company

Sergey Makarchuk
Corporate Secretary

Sergey Makarchuk was appointed as Secretary of the Board on 10 April 2019 and Corporate Secretary of En+ on 14 November 2019.

After working at various law firms, Sergey worked for RUSAL Group in 2007–2010 at the Corporate Governance Department of RUSAL Global Management B.V., responsible for legal corporate support of the Group's entities, the RUSAL Board, and Board Committees support. He was also involved in the Hong Kong SE & NYSE Euronext IPO of RUSAL. In 2011–2013 Sergey was Deputy Director of the Corporate Governance Department at TNK-BP Management. After the acquisition of TNK-BP by Rosneft, he continued working at Rosneft as Deputy Head of the Foreign Assets Department/ Project Director of the Corporate Governance Department.

Sergey graduated from the law faculty of Lomonosov Moscow State University in 2004.

The Corporate Secretary can be contacted with any queries at: CS@enplus.ru.

Shareholdings of CEO and management team

As at the date of this Report, neither the CEO nor members of the management team directly or indirectly hold any shares in the Company. Throughout 2021, neither the CEO nor members of the management team concluded any transactions with the shares of the Company.

Conflicts of interest and loans issued to members of the Board and the CEO

In 2021 and up to the date of this Report, the Company has not been aware of any conflicts of interest affecting any member of the Board or the CEO (including in connection with their participation in the managing bodies of the Company's competitors).

In 2021, no loans have been issued by the Company (or any Group company) to members of the Board or the CEO.

INFORMATION FOR SHAREHOLDERS AND INVESTORS

As at 31 December 2021, the free float was

13.93%

of total shareholder capital

Ordinary shares and global depositary receipts

As at 31 December 2021, the share capital of En+ Group was divided into 638,848,896 ordinary shares with the par value of USD 0.00007 each.

The En+ Group's ordinary shares in the form of Global Depositary Receipts (GDRs), are listed on the London Stock Exchange (ticker: ENPL), where one GDR represents one share. Since 18 February 2020, the Company's ordinary shares are also traded in the Level One Quotation List of the Moscow Exchange (ticker: ENPG).

On 3 and 4 March 2022, the London Stock Exchange suspended the admission to trading of the instruments for most Russian companies, including En+ Group.

The Company's management is not aware of any holdings in excess of 5% of the Company's share capital save for those disclosed by the Company immediately above.

Depositary bank

The Company's depositary bank is Citibank N.A., registered address: 388 Greenwich Street New York, New York 10013, United States of America.

The contact details of Citibank N.A. are:
Citibank, N.A.
Tel: +1 (212) 723 5435
Email: CitiADR@Citi.com
Website: https://citiadr.factsetdigitalsolutions.com/www/drfront_page.idms

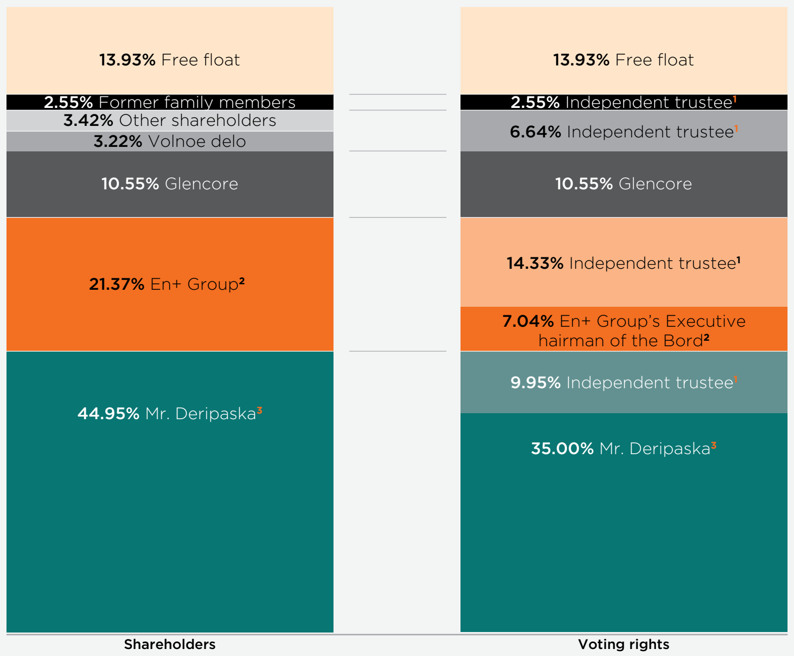
Registrar

The Company's registrar is Joint Stock Company "Interregional Registration Centre" (the "IRC").

Contact details of IRC are:

JSC "IRC"
Tel: +7 (495) 234 4470
Email: info@mrz.ru
Website: www.mrz.ru

En+ Group voting and shareholder structure as at 31 December 2021

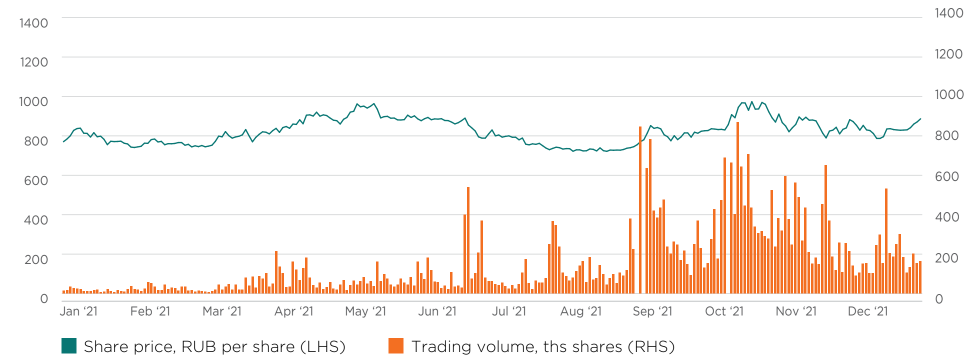


Note: percentages may not add up to 100% due to rounding.

1. Independent trustees, who exercise voting rights attaching to certain shares of the Company (33.48% in total), as required by OFAC: D.J Baker, David Crane, Arthur Dodge, Ogier Global Nominee (Jersey) Limited.
2. Shares acquired from VTB by En+ Group's subsidiary as per Company's announcements on 6 and 12 February 2020. Voting rights in respect of 14.33% of shares are held by an independent trustee, while the remaining voting rights in respect of 7.04% of shares are exercised by Executive Chairman of the Board, Lord Barker, at the Board's direction.
3. Directly or indirectly. Under the agreement between the Company and OFAC, the major shareholder's share can not exceed 44.95% and the voting rights can not exceed 35%.

En+ Group share performance and trading volumes

Moscow Exchange



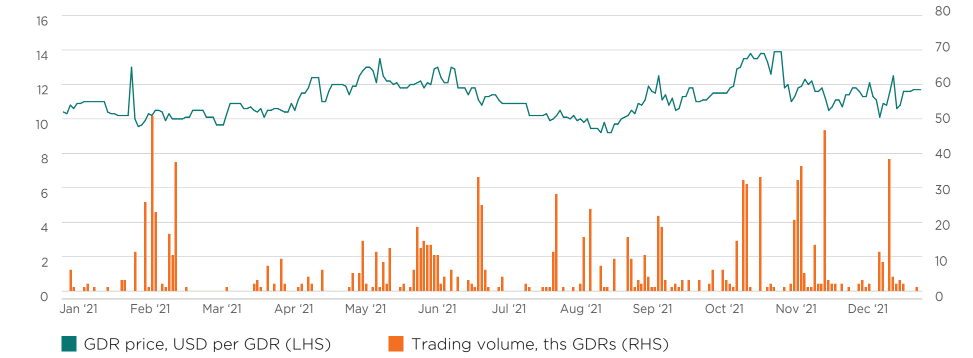
Source: Bloomberg.

RUB 886.5

The En+ Group's ordinary share price on the Moscow Exchange as at 30 December 2021

The En+ Group's ordinary share price on the Moscow Exchange increased from RUB 770.5 as at 4 January 2021 to RUB 886.5 per ordinary share as at 30 December 2021. En+ Group's market capitalisation increased from RUB 492.2 billion at the beginning of the year to RUB 566.3 billion on 30 December 2021. The average daily trading volume during the year was 159,075 ordinary shares.

London Stock Exchange



Source: Bloomberg.

USD 11.7

The price of En+ Group's GDRs as 31 December 2021

The price of En+ Group's GDRs on the LSE increased from USD 10.4 as at 4 January 2021 to USD 11.7 as at 31 December 2021. En+ Group's market capitalisation increased from USD 6.6 billion at the beginning of the year to USD 7.5 billion on 31 December 2021. The average daily trading volume during that period was 5,465 GDRs.

En+ Group's international securities identification numbers

London Stock Exchange

London Stock Exchange

	Rule 144A GDR	Regulation S GDR
Ticker	ENPL	ENPL
ISIN[1]	US29355E1091	US29355E2081
Common Code[2]	171560667	170465199
CUSIP[3]	29355E109	29355E208

MOEX MOSCOW EXCHANGE

Moscow Exchange

	Ordinary shares
Ticker	ENPG
ISIN	RU000A100K72

Instrument	Trading platform	Bloomberg code
GDRs	London Stock Exchange	ENPL LI
Ordinary shares	Moscow Exchange	ENPG RM

Share repurchases

In the reporting period the Company did not, either itself or through a person acting in their own name but on the Company's behalf, repurchase any of the Company's own shares, and did not, either itself or through a person acting in their own name but on the Company's behalf, hold any shares in treasury.

1. ISIN (International Securities Identification Number) – international identification number of the share.
2. Common Code – a nine-digit identification code issued jointly by CEDEL and Euroclear.
3. CUSIP (Committee on Uniform Security Identification Procedures) – identification number is given to the issue of shares for the purposes of facilitating clearing.

To download the Regulations on Dividend Policy from our website:

https://enplusgroup.com/en/investors/corporate-documents/

To download the Diversity Policy from our website:

https://enplusgroup.com/en/investors/corporate-documents/

Dividend policy

On 14 November 2019, the Board approved the Regulations on Dividend Policy, which provide that when determining the size of the dividends recommended to the GSM, the Board shall calculate the minimum dividends as:

- One hundred per cent (100%) of dividends received from RUSAL (as long as the Company is a RUSAL[1] shareholder)
- Seventy-five per cent (75%) of Free Cash Flow[2] of the En+ Power Segment[3], but in any event at least USD 250 million per year

Dividend payments

During 2021, the GSM of the Company did not approve any dividend distributions. The Company anticipates that dividend payments shall be resumed as soon as market condition allow.

Information disclosure

The Company pays considerable attention to ensure that any relevant information is delivered to all shareholders and analysts at the same time, in accordance with the applicable provisions of Russian law and the Moscow Exchange disclosure requirements, as well as the UK Market Abuse Regulations[4] and the FCA's Disclosure Guidance and Transparency Rules.

Information is distributed through the following channels:

- The Moscow Exchange and UK regulatory news service (RNS): the Company's price-sensitive information is disclosed through information disclosure systems
- The Company's website: the Company publishes releases on key events as well as operational and financial results
- The Company's webpage on the Russian regulatory newsfeed (Interfax e-Disclosure)

Diversity

The Company is committed to promoting a diverse and inclusive workforce, and recognises and embraces the benefits of having a diverse Board to enhance the quality of its performance.

The Board recognises the desire of stakeholders to have greater diversity in senior management and on boards.

In 2020, En+ adopted the Board of Directors Diversity Policy that aims to set out the Company's approach to promoting and maintaining the diversity of the Board.

Inclusion

En+ aims to create an environment of inclusion, where everyone is treated without discrimination.

We are working to ensure equal opportunity in recruitment, promotion, training and reward for all employees regardless of ethnicity, national origin, religion, gender, age, sexual orientation, marital status, disability, or any other characteristic protected by applicable laws.

In the unfortunate event that existing employees should become disabled, our ambition is to provide continued employment, training and occupational assistance where needed.

Email

The Investor Relations Department can be contacted with any queries at: ir@enplus.ru

1. RUSAL's dividend policy: annual payout of up to 15% of Covenant EBITDA, subject to compliance with relevant regulation and loan agreements. Covenant EBITDA is defined as UC RUSAL's EBITDA on LTM basis as defined in the relevant credit agreements, adding dividends declared by Norilsk Nickel and attributable to the shares owned by UC RUSAL.
2. "Free Cash Flow" means the operating cash flow, less net interest paid, capital expenditures and restructuring expenses, adjusted for distributions on derivatives and one-off acquisitions, plus dividends from associated companies and joint ventures, pursuant to the Group's IFRS consolidated statements.
3. "En+ Power Segment" means the Segment defined in the Group's IFRS consolidated statements.
4. Regulation (EU) No. 596/2014 of the European Parliament and of the Council of 16 April 2014 on market abuse, as retained in the domestic law of the United Kingdom by virtue of the European Union (Withdrawal) Act 2018.

#3

FINANCIAL STATEMENTS APPENDIX

EN+ GROUP IPJSC

CONSOLIDATED FINANCIAL STATEMENTS

for the year ended
31 December 2021

EN+ GROUP IPJSC
Statement of Management's Responsibilities

Statement of Management's Responsibilities for the Preparation and Approval of the Consolidated Financial Statements for the year ended 31 December 2021

The following statement, which should be read in conjunction with the auditors' responsibilities stated in the auditors' report on the audit of the consolidated financial statements set out on pages 139-143, is made with a view to distinguishing the respective responsibilities of management and those of the auditors in relation to the consolidated financial statements of EN+ GROUP IPJSC and its subsidiaries.

Management is responsible for the preparation of the consolidated financial statements for the year ended 31 December 2021 in accordance with International Financial Reporting Standards ("IFRS").

In preparing the consolidated financial statements, management is responsible for:

- Selecting suitable accounting principles and applying them consistently;
- Making judgements and estimates that are reasonable and prudent;
- Stating whether International Financial Reporting Standards have been followed, subject to any material departures disclosed and explained in the consolidated financial statements; and
- Preparing the consolidated financial statements on a going concern basis, unless it is inappropriate to presume that the Group will continue in the business for the foreseeable future.

Management, within its competencies, is also responsible for:

- Designing, implementing and maintaining an effective system of internal controls throughout the Group;
- Maintaining statutory accounting records in compliance with local legislation and accounting standards in the respective jurisdictions in which the Group operates;
- Taking steps to safeguard the assets of the Group; and
- Detecting and preventing fraud and other irregularities.

These consolidated financial statements were approved by the Board of Directors on 30 March 2022 and were signed on its behalf by:

General Director of EN+ GROUP IPJSC Vladimir Kiriukhin

EY
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ОКПО: 59002827
ОГРН: 1027739707203
ИНН: 7709383532

Independent auditor's report

To the Shareholders and Board of Directors
of EN+ GROUP IPJSC

Opinion

We have audited the consolidated financial statements of EN+ GROUP IPJSC and its subsidiaries (hereinafter collectively referred to as the "Group"), which comprise the consolidated statement of financial position as at 31 December 2021, the consolidated statement of profit or loss and other comprehensive income, consolidated statement of changes in equity and consolidated statement of cash flows for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as at 31 December 2021 and its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with International Financial Reporting Standards (IFRSs).

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (ISAs). Our responsibilities under those standards are further described in the *Auditor's responsibilities for the audit of the consolidated financial statements* section of our report. We are independent of the Group in accordance with the International Ethics Standards Board for Accountants' (IESBA) International Code of Ethics for Professional Accountants (including International Independence Standards) (IESBA Code) together with the ethical requirements that are relevant to our audit of the consolidated financial statements in the Russian Federation, and we have fulfilled our other ethical responsibilities in accordance with these requirements and the IESBA Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key audit matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. For the matter below, our description of how our audit addressed the matter is provided in that context.

Совершенствуя бизнес, улучшаем мир

We have fulfilled the responsibilities described in the *Auditor's responsibilities for the audit of the consolidated financial statements* section of our report, including in relation to this matter. Accordingly, our audit included the performance of procedures designed to respond to our assessment of the risks of material misstatement of the consolidated financial statements. The results of our audit procedures, including the procedures performed to address the matter below, provide the basis for our audit opinion on the accompanying consolidated financial statements.

Key audit matter	How our audit addressed the key audit matter
Impairment analysis of property, plant and equipment	
Impairment analysis of property, plant and equipment was a key audit matter due to the significance of fixed assets balance in the consolidated financial statements, high subjectivity of judgments and estimates underlying the impairment analysis and used by management. Current global market conditions, including fluctuations in LME aluminium prices, market premiums and alumina purchase prices together with their long-term forecasts, may indicate that some cash generating units (CGU) may be subject to either impairment loss or full or partial reversal of previously recognized impairment. Evaluation of the recoverable amount of fixed assets is based on the higher of the fair value less cost to sell and value in use. As of the reporting date management makes an assessment of value-in-use based on the discounted cash flow models. Information on the results of the impairment testing is provided in Note 11 (c) to the consolidated financial statements.	We tested management's assessment of whether indicators for potential impairment or reversal of impairment previously recorded exist. For the impairment tests performed our procedures included, among others: Comparison of key assumptions such as production volumes, forecasted aluminium sales prices, forecasted alumina and bauxites purchase prices, forecasted costs inflation, forecasted currency exchange rates, discount rates, used in the Group's financial model with published macroeconomic indicators and forecast data. Assessing the historical accuracy of management's budgets and forecasts by comparing them to actual performance. Checking the arithmetic accuracy of the impairment model and assessing a sensitivity analysis of value-in-use to changes in key assumptions. We engaged our internal valuation experts to analyze the Group's management calculations of the recoverable amount of fixed assets. We assessed the impairment related disclosures in the consolidated financial statements, including the key assumptions used and the sensitivity of the consolidated financial statements to these assumptions.

Emphasis of matter

We draw attention to Note 24 "Events subsequent to the reporting date" to the consolidated financial statements which describes the development of geopolitical tensions related to the situation in Ukraine and sanctions imposed by certain countries that have affected and could significantly affect in the future the Russian economy, as well as the activity of the Group. Our opinion is not modified in respect of this matter.

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Other matter

The consolidated financial statements of the Group for the year ended 31 December 2020 were audited by another auditor who expressed an unmodified opinion on those statements on 24 March 2021.

Other information included in the Annual Report

Other information consists of the information included in the Annual Report other than the consolidated financial statements and our auditor's report thereon. Management is responsible for the other information. The Annual Report is expected to be made available to us after the date of this auditor's report.

Our opinion on the consolidated financial statements does not cover the other information and we will not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information identified above when it becomes available and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated.

Responsibilities of management and the Audit and Risk Committee of the Board of Directors for the consolidated financial statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with IFRSs and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

The Audit and Risk Committee of the Board of Directors is responsible for overseeing the Group's financial reporting process.

Auditor's responsibilities for the audit of the consolidated financial statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

Совершенствуя бизнес, улучшаем мир

As part of an audit in accordance with ISAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with the Audit and Risk Committee of the Board of Directors, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide the Audit and Risk Committee of the Board of Directors with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, actions taken to eliminate threats or safeguards applied.

Совершенствуя бизнес, улучшаем мир

From the matters communicated with the Audit and Risk Committee of the Board of Directors, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The partner in charge of the audit resulting in this independent auditor's report is Mikhail Khachaturian.

M.S. Khachaturian,
acting on behalf of Ernst & Young LLC
on the basis of power of attorney w/o number dated 1 March 2022,
partner in charge of the audit resulting in this independent auditor's report
(main registration number 21906108270)

30 March 2022

Details of the auditor

Name: Ernst & Young LLC
Record made in the State Register of Legal Entities on 5 December 2002, State Registration Number 1027739707203.
Address: Russia 115035, Moscow, Sadovnicheskaya naberezhnaya, 77, building 1.
Ernst & Young LLC is a member of Self-regulatory organization of auditors Association "Sodruzhestvo".
Ernst & Young LLC is included in the control copy of the register of auditors and audit organizations, main registration number 12006020327.

Details of the audited entity

Name: EN+ GROUP IPJSC
Record made in the State Register of Legal Entities on 9 July 2019, State Registration Number 1193926010398.
Address: Russia 236006, Kaliningrad, Oktyabrskaya street, office 34, b. 8.

A member firm of Ernst & Young Global Limited

EN+ GROUP IPJSC
Consolidated Statement of Profit or Loss and Other Comprehensive Income
for the year ended 31 December 2021

	Note	Year ended 31 December 2021 USD million	2020 USD million
Revenues	5	14,126	10,356
Cost of sales		(9,174)	(7,808)
Gross profit		**4,952**	**2,548**
Distribution expenses		(708)	(545)
General and administrative expenses		(861)	(775)
Impairment of non-current assets		(267)	(58)
Other operating expenses, net	6	(218)	(160)
Results from operating activities		**2,898**	**1,010**
Share of profits of associates and joint ventures	13	1,802	971
Gain from partial disposal of investment in associate	13(a)	492	–
Finance income	8	87	160
Finance costs	8	(1,141)	(1,016)
Profit before tax		**4,138**	**1,125**
Income tax expense	10	(604)	(109)
Profit for the year		**3,534**	**1,016**
Attributable to:			
Shareholders of the Parent Company		2,142	684
Non-controlling interests	16(g)	1,392	332
Profit for the year		**3,534**	**1,016**
Earnings per share			
Basic and diluted earnings per share (USD)	9	**4.264**	**1.320**

The consolidated statement of profit or loss and other comprehensive income is to be read in conjunction with the notes to, and forming part of, the consolidated financial statements set out on pages 150 to 215.

EN+ GROUP IPJSC
Consolidated Statement of Profit or Loss and Other Comprehensive Income
for the year ended 31 December 2021 (continued)

	Note	Year ended 31 December 2021 USD million	2020 USD million
Profit for the year		**3,534**	**1,016**
Other comprehensive income/(loss)			
Items that will never be reclassified subsequently to profit or loss			
Actuarial (loss)/gain on post-retirement benefit plans	18(b)	(4)	3
Revaluation of non-current assets	11(e)	–	230
Taxation	10(c)	–	(46)
		(4)	187
Items that are or may be reclassified subsequently to profit or loss			
Reclassification of accumulated foreign currency translation loss to statement of profit or loss due to partial disposal of investment in associate	13	613	–
Foreign currency translation differences on foreign operations		25	(210)
Foreign currency translation differences for equity-accounted investees	13	21	(667)
Change in fair value of cash flow hedge	19	(28)	(53)
Change in fair value of financial assets		–	(1)
		631	(931)
Other comprehensive income/(loss) for the year, net of tax		**627**	**(744)**
Total comprehensive income for the year		**4,161**	**272**
Attributable to:			
Shareholders of the Parent Company		2,488	405
Non-controlling interests	16(g)	1,673	(133)
Total comprehensive income for the year		**4,161**	**272**

The consolidated statement of profit or loss and other comprehensive income is to be read in conjunction with the notes to, and forming part of, the consolidated financial statements set out on pages 150 to 215.

EN+ GROUP IPJSC
Consolidated Statement of Financial Position
as at 31 December 2021

	Note	31 December 2021 USD million	31 December 2020 USD million
Assets			
Non-current assets			
Property, plant and equipment	11	10,117	9,577
Goodwill and intangible assets	12	2,199	2,181
Interests in associates and joint ventures	13	4,028	3,832
Deferred tax assets	10(b)	150	244
Investments in equity securities measured at fair value through profit and loss	15(f)	316	75
Derivative financial assets	19	22	20
Other non-current assets	15(e)	258	133
Total non-current assets		**17,090**	**16,062**
Current assets			
Inventories	14	3,731	2,339
Trade and other receivables and advances paid	15(b)	2,655	1,431
Short-term investments		131	237
Derivative financial assets	19	120	30
Cash and cash equivalents	15(d)	2,330	2,562
Total current assets		**8,967**	**6,599**
Total assets		**26,057**	**22,661**
Equity and liabilities			
Equity	16		
Share capital		–	–
Share premium		1,516	1,516
Treasury shares		(1,579)	(1,579)
Additional paid-in capital		9,193	9,193
Revaluation reserve		2,945	2,902
Other reserves		153	169
Foreign currency translation reserve		(5,561)	(5,923)
Accumulated losses		(892)	(3,122)
Total equity attributable to shareholders of the Parent Company		**5,775**	**3,156**
Non-controlling interests	16(g)	4,536	2,909
Total equity		**10,311**	**6,065**
Non-current liabilities			
Loans and borrowings	17	8,174	10,215
Deferred tax liabilities	10(b)	1,064	1,139
Provisions – non-current portion	18	485	518
Derivative financial liabilities	19	61	28
Other non-current liabilities		113	121
Total non-current liabilities		**9,897**	**12,021**
Current liabilities			
Loans and borrowings	17	2,737	2,173
Provisions – current portion	18	161	89
Trade and other payables and advances received	15(c)	2,806	2,156
Derivative financial liabilities	19	145	157
Total current liabilities		**5,849**	**4,575**
Total equity and liabilities		**26,057**	**22,661**

The consolidated statement of financial position is to be read in conjunction with the notes to, and forming part of, the consolidated financial statements set out on pages 150 to 215.

EN+ GROUP IPJSC
Consolidated Statement of Cash Flows
for the year ended 31 December 2021

	Note	Year ended 31 December 2021 USD million	Year ended 31 December 2020 USD million
Operating activities			
Profit for the year		**3,534**	**1,016**
Adjustments for:			
Depreciation and amortisation		822	781
Impairment of non-current assets		267	58
Net foreign exchange loss/(gain)	8	33	(98)
Loss on disposal of property, plant and equipment	6	5	12
Share of profits of associates and joint ventures	13	(1,802)	(971)
Gain on partial disposal of investment in associate	13	(492)	–
Interest expense	8	709	788
Interest income	8	(65)	(61)
Dividend income	8	(22)	(1)
Income tax expense	10	604	109
Write-down of inventories to net realisable value		24	3
Impairment of trade and other receivables	6	65	10
Provision for legal claims		10	10
Change in fair value of derivative financial instruments	8	352	226
Revaluation of investments measured at fair value through profit and loss		47	–
Other finance costs	8	–	2
Operating profit before changes in working capital		**4,091**	**1,884**
(Increase)/decrease in inventories		(1,373)	212
(Increase)/decrease in trade and other receivables and advances paid		(455)	166
Increase/(decrease) in trade and other payables and advances received		434	(146)
Cash flows from operations before income tax		**2,697**	**2,116**
Income taxes paid	10(f)	(529)	(226)
Cash flows from operating activities		**2,168**	**1,890**

The consolidated statement of cash flows is to be read in conjunction with the notes to, and forming part of, the consolidated financial statements set out on pages 150 to 215.

EN+ GROUP IPJSC
Consolidated Statement of Cash Flows
for the year ended 31 December 2021 (continued)

	Note	Year ended 31 December 2021 USD million	Year ended 31 December 2020 USD million
Investing activities			
Proceeds from disposal of property, plant and equipment		20	19
Acquisition of property, plant and equipment		(1,485)	(1,108)
Acquisition of intangible assets		(28)	(20)
Cash paid for investment in equity securities measured at fair value through profit and loss		(291)	–
Cash received from / (paid for) other investments		39	(198)
Interest received		63	56
Dividends from associates and joint ventures		620	1,170
Dividends from financial assets		34	4
Proceeds from partial disposal of associate		1,421	–
(Contribution)/return of contribution to joint ventures		(9)	1
Prepayment for and acquisition of subsidiaries		(99)	(1)
Cash flows from / (used in) investing activities		**285**	**(77)**
Financing activities			
Proceeds from borrowings		2,881	3,040
Repayment of borrowings		(4,474)	(1,813)
Acquisition of own shares		–	(1,579)
Acquisition of non-controlling interest	16(a)	(44)	–
Interest paid		(703)	(779)
Restructuring fees and expenses related to issuance of shares		(36)	(26)
Settlement of derivative financial instruments		(315)	(215)
Cash flows used in financing activities		**(2,691)**	**(1,372)**
Net (decrease)/increase in cash and cash equivalents		**(238)**	**441**
Cash and cash equivalents at beginning of the year, excluding restricted cash		2,549	2,265
Effect of exchange rate changes on cash and cash equivalents		17	(157)
Cash and cash equivalents at end of the year, excluding restricted cash	15(d)	**2,328**	**2,549**

Restricted cash amounted to USD 2 million and USD 13 million at 31 December 2021 and 31 December 2020, respectively.

The consolidated statement of cash flows is to be read in conjunction with the notes to, and forming part of, the consolidated financial statements set out on pages 150 to 215.

EN+ GROUP IPJSC
Consolidated Statement of Changes in Equity
for the year ended 31 December 2021

USD million	Attributable to shareholders of the Parent Company: Share premium	Treasury share reserve	Additional paid-in capital	Revaluation reserve	Other reserves	Foreign currency translation reserve	Accumulated losses	Total	Non-controlling interests	Total equity
Balance at 1 January 2020	**1,516**	**–**	**9,193**	**2,722**	**198**	**(5,493)**	**(3,806)**	**4,330**	**3,042**	**7,372**
Comprehensive income										
Profit for the year	–	–	–	–	–	–	684	**684**	332	**1,016**
Other comprehensive (loss)/income for the year	–	–	–	*180*	*(29)*	*(430)*	–	***(279)***	*(465)*	***(744)***
Revaluation of hydro assets as at 31 December 2020 (notes 16(f), 11(e))	–	–	–	225	–	–	–	**225**	5	**230**
Taxation (note 10(c))	–	–	–	(45)	–	–	–	**(45)**	(1)	**(46)**
Other comprehensive loss	–	–	–	–	(29)	(430)	–	**(459)**	(469)	**(928)**
Total comprehensive income for the year	**–**	**–**	**–**	**180**	**(29)**	**(430)**	**684**	**405**	**(133)**	**272**
Transactions with owners										
Acquisition of own shares	–	(1,579)	–	–	–	–	–	**(1,579)**	–	**(1,579)**
Total transactions with owners	**–**	**(1,579)**	**–**	**–**	**–**	**–**	**–**	**(1,579)**	**–**	**(1,579)**
Balance 31 December 2020	**1,516**	**(1,579)**	**9,193**	**2,902**	**169**	**(5,923)**	**(3,122)**	**3,156**	**2,909**	**6,065**
Balance at 1 January 2021	**1,516**	**(1,579)**	**9,193**	**2,902**	**169**	**(5,923)**	**(3,122)**	**3,156**	**2,909**	**6,065**
Comprehensive income										
Profit for the year	–	–	–	–	–	–	2,142	**2,142**	1,392	**3,534**
Other comprehensive (loss)/income	–	–	–	–	(16)	362	–	**346**	281	**627**
Total comprehensive income for the year	**–**	**–**	**–**		**(16)**	**362**	**2,142**	**2,488**	**1,673**	**4,161**
Share of equity transactions of an associate (note 13)	–	–	–	–	–	–	73	**73**	56	**129**
Transactions with owners										
Change in effective interest in subsidiaries (note 16(a))	–	–	–	43	–	–	15	**58**	(102)	**(44)**
Total transactions with owners	**–**	**–**	**–**	**43**	**–**	**–**	**15**	**58**	**(102)**	**(44)**
Balance 31 December 2021	**1,516**	**(1,579)**	**9,193**	**2,945**	**153**	**(5,561)**	**(892)**	**5,775**	**4,536**	**10,311**

The consolidated statement of changes in equity is to be read in conjunction with the notes to, and forming part of, the consolidated financial statements set out on pages 15 to 85.

1. Background

(a) Organisation

EN+ GROUP IPJSC (the "Parent Company") was established as a limited liability company according to the legislation of the British Virgin Islands on 30 April 2002 under the name of Baufinanz Limited. On 24 December 2003 the Parent Company registered a change of its legal name to Sibir Power Metal Limited. On 18 March 2004 the Parent Company registered a change of its legal name to Eagle Capital Group Limited. On 25 August 2005 the Parent Company changed its domicile to Jersey and was renamed to En+ Group Limited. On 1 June 2017 the Parent Company changed its status to a public company and was renamed to EN+ GROUP PLC. On 9 July 2019 the Parent Company changed its domicile to the Russian Federation with a registration as EN+ GROUP International public joint-stock company (EN+ GROUP IPJSC). As at 31 December 2021 the Parent Company's registered office is Oktyabrskaya st. 8, office 34, Kaliningrad, Kaliningrad Region, 236006, Russian Federation.

On 8 November 2017, the Parent Company successfully completed an initial public offering of global depositary receipts on the London Stock Exchange. On 17 February 2020, the Parent Company's ordinary shares were included into the "Level 1" part of the list of securities admitted to trading on Moscow Exchange.

EN+ GROUP IPJSC is the parent company for a vertically integrated aluminium and power group, engaged in aluminium production and energy generation (together with the Parent Company referred to as "the Group").

As at 31 December 2021 Mr. Oleg Deripaska beneficially controls and exercises voting rights in respect of 35% of the voting shares of the Parent Company and his direct or indirect shareholding cannot exceed 44.95% of the shares of the Parent Company.

The other significant holders as at 31 December 2021 were as follows:

	Shareholding	Voting rights
Parent Company's subsidiary	21.37%	7.04%
Citi (Nominees), including	12.79%	12.79%
Glencore Group Funding Limited	*10.55%*	*10.55%*
Other shareholders	20.89%	11.70%
Independent trustees	–	33.47%

Glencore Group Funding Limited is a subsidiary of Glencore Plc.

Based on the information at the Group's disposal at the reporting date, there is no individual that has an indirect prevailing ownership interest in the Parent Company exceeding 50%, who could exercise voting rights in respect of more than 35% of the Parent Company's issued share capital or has an opportunity to exercise control over the Parent Company.

Related party transactions are detailed in note 23.

(b) Operations

The Group is a leading vertically integrated aluminium and power producer, which combines the assets and results of its Metals and Power segments.

The Metals segment operates in the aluminium industry primarily in the Russian Federation, Ukraine, Guinea, Jamaica, Ireland, Italy and Sweden and is principally engaged in the mining and refining of bauxite and nepheline ore into alumina, the smelting of primary aluminium from alumina and the fabrication of aluminium and aluminium alloys into semi-fabricated and finished products.

The Power segment engages in all major areas of the power industry, including electric power generation, power trading and supply. It also includes supporting operations engaged in the supply of coal resources to the Group. The Group's principal power plants are located in East Siberia and Volga Region, the Russian Federation.

(c) Business environment in emerging economies

The Russian Federation, Ukraine, Jamaica and Guinea have been experiencing political and economic changes that have affected, and may continue to affect, the activities of enterprises operating in these environments. Consequently, operations in these countries involve risks that typically do not exist in other markets, including reconsideration of privatisation terms in certain countries where the Group operates following changes in governing political powers.

Starting in 2014, the United States of America, the European Union and some other countries have imposed and gradually expanded economic sanctions against a number of Russian individuals and legal entities. The imposition of the sanctions has led to increased economic uncertainty, including more volatile equity markets, a depreciation of the Russian rouble, a reduction in both local and foreign direct investment inflows and a significant tightening in the availability of credit. As a result, some Russian entities may experience difficulties accessing the international equity and debt markets and may become increasingly dependent on state support for their operations. The longer-term effects of the imposed and possible additional sanctions are difficult to determine. The COVID-19 coronavirus pandemic has further increased uncertainty in the business environment (note 1(e)).

The consolidated financial statements reflect management's assessment of the impact of the Russian, Ukrainian, Jamaican and Guinean business environments on the operations and the financial position of the Group. The future business environment may differ from management's assessment.

(d) OFAC sanctions

On 6 April 2018, the U.S. Department of the Treasury's Office of Foreign Assets Control ("OFAC") designated, amongst others, the Parent Company, JSC EuroSibEnergo ("EuroSibEnergo") and UC RUSAL Plc (from 25 September 2020 UC RUSAL IPJSC, "UC RUSAL") as Specially Designated Nationals ("SDN") (the "OFAC Sanctions").

As a result, all property or interests in property of the Parent Company and its subsidiaries located in the United States or in the possession of U.S. Persons were blocked, frozen, and could not have been transferred, paid, exported, withdrawn, or otherwise dealt in. Several general licenses were issued at the time of the designation and subsequently certain transactions were authorised with the Parent Company, EuroSibEnergo and UC RUSAL, and with their respective debt and equity.

On 27 January 2019, OFAC announced the removal of the Parent Company and its subsidiaries, including UC RUSAL and EuroSibEnergo, from OFAC's SDN list and Blocked Persons with immediate effect. The removal was subject to and conditional upon the satisfaction of a number of conditions including, but not limited to:

- Ending Mr Oleg Deripaska's control of the Group, through the reduction of his direct and indirect ownership interest in the Parent Company to below 50%;
- Establishing independent voting arrangements for the Parent Company's shares held by certain shareholders;
- Corporate governance changes, including, inter alia, overhauling the composition of the EN+ Board to ensure that independent directors constitute the majority of the Board, and ongoing reporting and certifications by the Parent Company and UC RUSAL to OFAC concerning compliance with the conditions for sanctions' removal.

(e) COVID-19

During the 2021, the Russian and global economies continue to recover from the pandemic as a result of an increase in business activities and due to certain government support measures. However at the date of the financial information, the Group thoroughly monitors the COVID-19 spread and maintain a number of measures to mitigate the operational risks associated with it.

2. Basis of preparation

(a) Statement of compliance

These consolidated financial statements have been prepared in accordance with International Financial Reporting Standards ("IFRSs"), which collective term includes all International Accounting Standards and related interpretations promulgated by the International Accounting Standards Board ("IASB").

Preparation of these consolidated financial statements is also regulated by Russian Federal Law 208-FZ dated 27 July 2010 *On Consolidated Financial Statements* in all aspects, except for language and functional and presentation currencies, which are regulated by Russian Federal Law 290-FZ dated 3 August 2018 *On International Companies and International Funds*.

The Group has not early adopted any standard, interpretation or amendment that has been issued but is not yet effective. The following amended standards became effective from 1 January 2021: *Interest Rate Benchmark Reform – Phase 2*: Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16.

The amendments provide temporary reliefs which address the financial reporting effects related to replacement of interbank offered rates (IBOR) with alternative risk-free rates (RFR). These amendments had no impact on the consolidated interim condensed financial information of the Group. The Group intends to use the practical expedients in future periods if they become applicable.

(b) Standards issued but not effective

The new and amended standards and interpretations that are issued, but not yet effective, up to the date of issuance of the Group's financial statements are disclosed below. The Group intends to adopt these new and amended standards and interpretations, if applicable, when they become effective.

- IFRS 17 *Insurance Contracts*;
- *Reference to the Conceptual Framework* – Amendments to IFRS 3;
- *Property, Plant and Equipment: Proceeds before Intended Use* – Amendments to IAS 16;
- *Onerous Contracts – Costs of Fulfilling a Contract* – Amendments to IAS 37;
- IFRS 1 *First-time Adoption of International Financial Reporting Standards* – Subsidiary as a first-time adopter;
- *Definition of Accounting Estimates* – Amendments to IAS 8;
- IFRS 9 *Financial Instruments* – Fees in the '10 per cent' test for derecognition of financial liabilities;
- *Disclosure of Accounting Policies* – Amendments to IAS 1 and IFRS *Practice Statement 2*.

These amendments are not expected to have a material impact on the Group.

Amendments to IAS 1: Classification of Liabilities as Current or Non-current

In January 2020, the IASB issued amendments to paragraphs 69 to 76 of IAS 1 to specify the requirements for classifying liabilities as current or non-current. The amendments clarify:

- What is meant by a right to defer settlement;
- That a right to defer must exist at the end of the reporting period;
- That classification is unaffected by the likelihood that an entity will exercise its deferral right;
- That only if an embedded derivative in a convertible liability is itself an equity instrument would the terms of a liability not impact its classification.

The amendments are effective for annual reporting periods beginning on or after 1 January 2023 and must be applied retrospectively. The Group is currently assessing the impact the amendments will have on current practice.

(c) Basis of measurement

The consolidated financial statements have been prepared in accordance with the historical cost basis except as set out in the significant accounting policies in notes 11 and 19.

(d) Functional and presentation currency

The functional currencies of the Parent Company and Group's significant subsidiaries are the currencies of the primary economic environment and key business processes of these subsidiaries and include USD, Russian roubles ("RUB"), Ukrainian hryvna and euros ("EUR"). The consolidated financial statements are presented in USD, rounded to the nearest million, except as otherwise stated herein.

The functional currencies of investments in associates and joint ventures are RUB, Kazakhstani tenge and Australian dollar.

(e) Use of judgements, estimates and assumptions

The preparation of consolidated financial statements in conformity with IFRSs requires management to make judgements, estimates and assumptions that affect the application of accounting policies and reported amounts of assets and liabilities and the disclosure of contingent liabilities at the date of the consolidated financial statements, and the reported revenue and costs during the relevant period.

Management bases its judgements and estimates on historical experience and various other factors that are believed to be appropriate and reasonable under the circumstances, the results of which form the basis of making the judgements about carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions and conditions.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised if the revision affects only that period, or in the period of the revision and future periods if the revision affects both current and future periods.

Judgements made by management in the application of IFRSs that have a significant effect on the consolidated financial statements and estimates with a significant risk of material adjustment in the next year are discussed in note 25.

3. Significant accounting policies

Significant accounting policies are described in the related notes to the consolidated financial statements captions and in this note.

The accounting policies and judgements applied by the Group in these consolidated financial statements are the same as those applied by the Group in its consolidated financial statements as at and for the year ended 31 December 2020.

(a) Basis of consolidation

(i) Subsidiaries and non-controlling interests

Subsidiaries are entities controlled by the Group. The Group controls an entity when it is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. When assessing control, potential voting rights that presently are exercisable are taken into account.

The consolidated financial statements of subsidiaries are included in the consolidated financial statements from the date that control commences until the date that control ceases. The accounting policies of subsidiaries have been changed when necessary to align them with the policies adopted by the Group.

Non-controlling interests represent the portion of the net assets of subsidiaries attributable to interests that are not owned by the Group, whether directly or indirectly through subsidiaries, and in respect of which the Group has not agreed any additional terms with the holders of those interests which would result in the Group as a whole having a contractual obligation in respect of those interests that meets the definition of a financial liability.

Non-controlling interests are presented in the consolidated statement of financial position within equity, separately from equity attributable to the equity shareholders of the Group. Non-controlling interests in the results of the Group are presented on the face of the consolidated statement of profit or loss and other comprehensive income as an allocation of the total profit or loss and total comprehensive income for the year between non-controlling interests and the equity shareholders of the Group.

Losses applicable to the non-controlling interests in a subsidiary are allocated to the non-controlling interests even if doing so causes the non-controlling interests to have a deficit balance.

Changes in the Group's interest in a subsidiary that do not result in a loss of control are accounted for as equity transactions, whereby adjustments are made to the amounts of controlling and non-controlling-interests within consolidated equity to reflect the change in relative interests, but no adjustments are made to goodwill and no gain or loss is recognised.

When the Group loses control of a subsidiary, it is accounted for as a disposal of the entire interest in that subsidiary, with a resulting gain or loss being recognised in profit or loss. Any interest retained in that former subsidiary at the date when control is lost is recognised at fair value and this amount is regarded as the fair value on initial recognition of a financial asset (refer to note 15) or, when appropriate, the cost on initial recognition of an investment in an associate or joint venture (refer to note 13).

(ii) Acquisitions of non-controlling interests

The acquisition of an additional non-controlling interest in an existing subsidiary after control has been obtained is accounted for as an equity transaction with any difference between the cost of the additional investment and the carrying amount of the net assets acquired at the date of exchange recognised directly in equity.

The issue of a put option (a mandatory offer) to acquire a non-controlling interest in subsidiary, after control has been obtained and accounted for by the Group as an equity transaction, results in the recognition of a liability for the present value of the expected exercise price and the derecognition of non-controlling interests within consolidated equity. Subsequent to initial recognition, changes in the carrying amount of the put liability are recognised within equity. If the put option expires unexercised then the put liability is derecognised and non-controlling interests are recognised.

For a written put or forward option with the non-controlling shareholders in an existing subsidiary on their equity interest in that subsidiary, if the non-controlling shareholders do not have present access to the returns associated with the underlying ownership interest, the contract is accounted for as an anticipated acquisition of the underlying non-controlling interests, as if the put option had been exercised already or the forward had been satisfied by the non-controlling shareholders.

(iii) Transactions eliminated on consolidation

Intra-group balances and transactions, and any unrealised income and expenses arising from intra-group transactions, are eliminated in preparing the consolidated financial statements. Unrealised gains arising from transactions with equity accounted investees are eliminated against the investment to the extent of the Group's interest in the investee. Unrealised losses are eliminated in the same way as unrealised gains, but only to the extent that there is no evidence of impairment.

(b) Foreign currencies

(i) Foreign currency transactions

Transactions in foreign currencies are translated into the respective functional currencies of Group entities at the exchange rates ruling at the dates of the transactions. Monetary assets and liabilities denominated in foreign currencies at the reporting date are retranslated to the functional currency at the exchange rate at that date. The foreign currency gain or loss on monetary items is the difference between the amortised cost in the functional currency at the beginning of the period, adjusted for effective interest and payments during the period, and the amortised cost in foreign currency translated at the exchange rate at the end of the reporting period. Non-monetary items in a foreign currency are measured based on historical cost and are translated using the exchange rate at the date of transaction. Foreign currency differences arising on retranslation are recognised in profit or loss, except for differences arising on the retranslation of qualifying cash flow hedges to the extent the hedge is effective, which is recognised in other comprehensive income.

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(ii) Foreign operations

The assets and liabilities of foreign operations, including goodwill and fair value adjustments arising on acquisition, are translated from their functional currencies to USD at the exchange rates ruling at the reporting date. The income and expenses of foreign operations are translated to USD at exchange rates approximating exchange rates at the dates of the transactions.

Foreign currency differences arising on translation are recognised in other comprehensive income and presented in the currency translation reserve in equity. For the purposes of foreign currency translation, the net investment in a foreign operation includes foreign currency intra-group balances for which settlement is neither planned nor likely in the foreseeable future and foreign currency differences arising from such a monetary item are recognised in the statement of profit or loss and other comprehensive income.

When a foreign operation is disposed of, such that control, significant influence or joint control is lost, the cumulative amount of the currency translation reserve is transferred to profit or loss as part of the gain or loss on disposal. When the Group disposes of only part of its interest in a subsidiary that includes a foreign operation while retaining control, the relevant proportion of the cumulative amount is reattributed to non-controlling interests. When the Group disposes of only part of its investment in an associate or joint venture that includes a foreign operation while retaining significant influence or joint control, the relevant proportion of the cumulative amount is reclassified to profit or loss.

When the settlement of a monetary item receivable from or payable to a foreign operation is neither planned nor likely in the foreseeable future, foreign exchange gains and losses arising from such a monetary item are considered to form part of a net investment in a foreign operation and are recognised in other comprehensive income, and presented in the translation reserve in equity.

4. Segment reporting

(a) Reportable segments

An operating segment is a component of the Group that engages in business activities from which it may earn revenue and incur expenses, including revenue and expenses that relate to transactions with any of the Group's other components. All operating segments' operating results are reviewed regularly by the Group's key executive management to make decisions about resources to be allocated to the segment and assess its performance and for which discrete consolidated financial statements are available.

Individually material operating segments are not aggregated for financial reporting purposes unless the segments have similar economic characteristics and are similar in respect of the nature of products and services, the nature of production processes, the type or class of customers, the methods used to distribute the products or provide the services and the nature of the regulatory environment. Operating segments which are not individually material may be aggregated if they share a majority of these criteria.

Based on the current management structure and internal reporting the Group has identified two operating segments:

a) *Metals.* The Metals segment comprises UC RUSAL with disclosures being based on the public financial statements of UC RUSAL. All adjustments made to UC RUSAL, including any adjustments arising from different timing of IFRS first time adoption, are included in "Adjustments" column.

   The Power assets of UC RUSAL are included within the Metals segment.

b) *Power.* The Power segment mainly comprises the power assets, as described in note 1(b).

These business units are managed separately and the results of their operations are reviewed by the key executive management personnel and Board of Directors on a regular basis.

(b) Segment results, assets and liabilities

For the purposes of assessing segment performance and allocating resources between segments, the Group's senior executive management monitor the results, assets and liabilities and cash flows attributable to each reportable segment on the following bases:

- Total segment assets include all tangible, intangible assets and current assets.
- Total segment liabilities include all current and non-current liabilities.
- Revenue and expenses are allocated to the reportable segments with reference to sales generated by those segments and the expenses incurred by those segments or which otherwise arise from the depreciation or amortisation of assets attributable to those segments.
- The measure used for reporting segment results is the net profit and Adjusted EBITDA (key non-IFRS financial measure used by the Group as reference for assessing operating effectiveness). Segment profit or loss and Adjusted EBITDA are used to measure performance as management believes that such information is the most relevant in evaluating the results of certain segments relative to other entities that operate within these industries.
- Adjusted EBITDA for any period represents the results from operating activities adjusted for amortisation and depreciation, impairment charges and gain/(losses) on disposal of property, plant and equipment for the relevant period.

In addition to receiving segment information concerning segment results, management is provided with segment information concerning revenue (including inter-segment revenue), the carrying value of investments and share of profits/(losses) of associates and joint ventures, depreciation, amortisation, interest income and expenses, other finance income and costs, income tax, gains/(losses) on disposal of property, plant and equipment, impairment of non-current assets and additions of non-current segment assets used by the segments in their operations. Inter-segment pricing is determined primarily on a consistent basis using market benchmarks.

Year ended 31 December 2021

USD million	**Metals**	**Power**	**Adjustments**	**Total**
Consolidated statement of profit or loss and other comprehensive income				
Revenue from external customers	*11,790*	*2,336*	–	***14,126***
Primary aluminium and alloys	9,766	–	–	**9,766**
Alumina and bauxite	612	–	–	**612**
Semi-finished products and foil	515	252	–	**767**
Electricity	159	1,366	–	**1,525**
Heat	53	412	–	**465**
Other	685	306	–	**991**
Inter-segment revenue	*204*	*802*	*(1,006)*	**–**
Total segment revenue	**11,994**	**3,138**	**(1,006)**	**14,126**
Operating expenses (excluding depreciation and loss on disposal of PPE)	(9,101)	(1,966)	933	**(10,134)**
Adjusted EBITDA	**2,893**	**1,172**	**(73)**	**3,992**
Depreciation and amortisation	(596)	(229)	3	**(822)**
(Loss)/gain on disposal of PPE	(9)	4	–	**(5)**
Impairment of non-current assets	(209)	(58)	–	**(267)**
Results from operating activities	**2,079**	**889**	**(70)**	**2,898**
Share of profits of associates and joint ventures	1,807	(5)	–	**1,802**
Gain from partial disposal of investment in associate	492	–	–	**492**
Interest expense, net	(329)	(316)	1	**(644)**
Other finance costs, net	(408)	(2)	–	**(410)**
Profit before tax	**3,641**	**566**	**(69)**	**4,138**
Income tax expense	(416)	(192)	4	**(604)**
Profit for the year	**3,225**	**374**	**(65)**	**3,534**
Additions to non-current segment assets during the year	(1,342)	(382)	7	**(1,717)**

USD million	**Metals**	**Power**	**Adjustments**	**Total**
Consolidated statement of financial position				
Segment assets, excluding cash and cash equivalents and interests in associates and jointly ventures	14,908	5,594	(803)	**19,699**
Investment in Metals segment	–	4,595	(4,595)	**–**
Cash and cash equivalents	1,984	346	–	**2,330**
Interests in associates and jointly ventures	4,014	14	–	**4,028**
Total segment assets	**20,906**	**10,549**	**(5,398)**	**26,057**
Segment liabilities, excluding loans and borrowings and bonds payable	3,649	1,404	(218)	**4,835**
Loans and borrowings	6,733	4,178	–	**10,911**
Total segment liabilities	**10,382**	**5,582**	**(218)**	**15,746**
Total segment equity	10,524	4,967	(5,180)	**10,311**
Total segment equity and liabilities	**20,906**	**10,549**	**(5,398)**	**26,057**
Consolidated statement of cash flows				
Cash flows from operating activities	**1,146**	**1,022**	**–**	**2,168**
Cash flows from / (used in) investing activities	**490**	**(205)**	**–**	**285**
Acquisition of property, plant and equipment, intangible assets	(1,192)	(321)	–	**(1,513)**
Cash paid for investment in equity securities measured at fair value through profit and loss	(291)	–	–	**(291)**
Cash (paid for) / received from other investments	(50)	89	–	**39**
Dividends from associates and joint ventures	620	–	–	**620**
Interest received	37	26	–	**63**
Proceeds from partial disposal of associate	1,421	–	–	**1,421**
Other investing activities	(55)	1	–	**(54)**
Cash flows used in financing activities	**(1,891)**	**(800)**	**–**	**(2,691)**
Interest paid	(380)	(323)	–	**(703)**
Restructuring fees and expenses related to issuance of shares	(34)	(2)	–	**(36)**
Settlements of derivative financial instruments	(315)	–	–	**(315)**
Other financing activities	(1,162)	(475)	–	**(1,637)**
Net change in cash and cash equivalents	**(255)**	**17**	**–**	**(238)**

Year ended 31 December 2020

USD million	**Metals**	**Power**	**Adjustments**	**Total**
Consolidated statement of profit or loss and other comprehensive income				
Revenue from external customers	*8,440*	*1,916*	–	***10,356***
Primary aluminium and alloys	6,969	–	–	**6,969**
Alumina and bauxite	534	–	–	**534**
Semi-finished products and foil	381	166	–	**547**
Electricity	60	1,109	–	**1,169**
Heat	39	387	–	**426**
Other	457	254	–	**711**
Inter-segment revenue	*126*	*781*	*(907)*	**–**
Total segment revenue	**8,566**	**2,697**	**(907)**	**10,356**
Operating expenses (excluding depreciation and loss on disposal of PPE)	(7,695)	(1,704)	904	**(8,495)**
Adjusted EBITDA	**871**	**993**	**(3)**	**1,861**
Depreciation and amortisation	(570)	(214)	3	**(781)**
(Loss)/gain on disposal of PPE	(13)	1	–	**(12)**
Impairment of non-current assets	(9)	(49)	–	**(58)**
Results from operating activities	**279**	**731**	**–**	**1,010**
Share of profits and impairment of associates and joint ventures	976	(5)	–	**971**
Interest expense, net	(431)	(298)	–	**(729)**
Other finance costs, net	(108)	(19)	–	**(127)**
Profit before tax	**716**	**409**	**–**	**1,125**
Income tax expense	43	(152)	–	**(109)**
Profit for the year	**759**	**257**	**–**	**1,016**
Additions to non-current segment assets during the year	(987)	(262)	7	**(1,242)**

USD million	**Metals**	**Power**	**Adjustments**	**Total**
Consolidated statement of financial position				
Segment assets, excluding cash and cash equivalents and interests in associates and jointly ventures	11,327	5,632	(692)	**16,267**
Investment in Metals segment	–	4,595	(4,595)	**–**
Cash and cash equivalents	2,229	333	–	**2,562**
Interests in associates and jointly ventures	3,822	10	–	**3,832**
Total segment assets	**17,378**	**10,570**	**(5,287)**	**22,661**
Segment liabilities, excluding loans and borrowings and bonds payable	3,043	1,340	(175)	**4,208**
Loans and borrowings	7,792	4,596	–	**12,388**
Total segment liabilities	**10,835**	**5,936**	**(175)**	**16,596**
Total segment equity	6,543	4,634	(5,112)	**6,065**
Total segment equity and liabilities	**17,378**	**10,570**	**(5,287)**	**22,661**
Consolidated statement of cash flows				
Cash flows from operating activities	**1,091**	**805**	**(6)**	**1,890**
Cash flows from / (used in) investing activities	**128**	**(211)**	**6**	**(77)**
Acquisition of property, plant and equipment, intangible assets	(897)	(237)	6	**(1,128)**
Other investments	(191)	(7)	–	**(198)**
Dividends from the jointly controlled entities and other associates	1,170	–	–	**1,170**
Interest received	26	30	–	**56**
Other investing activities	20	3	–	**23**
Cash flows used in financing activities	**(694)**	**(678)**	**–**	**(1,372)**
Interest paid	(465)	(314)	–	**(779)**
Restructuring fee and expenses related to issuance of shares	(12)	(14)	–	**(26)**
Settlements of derivative financial instruments	(215)	–	–	**(215)**
Other financing activities	(2)	(350)	–	**(352)**
Net change in cash and cash equivalents	**525**	**(84)**	**–**	**441**

(i) Geographic information

The Group's operating segments are managed on a worldwide basis, but operate in four principal geographical areas: the CIS, Europe, Africa and the Americas. In the CIS, production facilities operate in Russia and Ukraine. In Europe, production facilities are located in Italy, Ireland and Sweden. African production facilities are represented by the bauxite mines and an alumina refinery in Guinea. In the Americas the Group operates one production facility in Jamaica, one in Guyana and a trading subsidiary in the United States of America.

The following table sets out information about the geographical location of the Group's revenue from external customers and the Group's property, plant and equipment, intangible assets, interests in associates and joint ventures and goodwill ("specified non-current assets"). The geographical location of customers is based on the location at which the services were provided or the goods delivered. The geographical location of the specified non-current assets is based on the physical location of the asset. Unallocated specified non-current assets comprise mainly goodwill and interests in associates and joint ventures.

	Year ended 31 December	
Revenue from external customers	**2021**	**2020**
	USD million	**USD million**
Russia	5,437	3,873
Turkey	1,108	956
China	772	615
Japan	744	471
USA	744	471
Netherlands	443	727
Greece	367	236
Germany	356	211
Poland	330	338
South Korea	314	329
Mexico	280	103
Italy	266	228
Norway	267	134
France	247	164
Taiwan	236	185
Other countries	2,215	1,315
	14,126	**10,356**

	31 December	
Specified non-current assets	**2021**	**2020**
	USD million	**USD million**
Russia	13,294	11,870
Guinea	232	225
Ireland	82	606
Sweden	68	–
Ukraine	6	229
Unallocated	3,408	3,132
	17,090	**16,062**

5. Revenues

IFRS 15 establishes a comprehensive framework for determining whether, how much and when revenue is recognised. The details of significant accounting policies in relation to the Group's various goods and services are set out below:

Sales of goods: comprise sale of primary aluminium, alloys, alumina, bauxite and other products. Customers obtain control of the goods supplied when the goods are delivered to the point when risks are transferred based on Incoterms delivery terms stated in the contract. Invoices are generated and revenue is recognised at that point in time. Invoices are usually payable within 60 days or in advance. Under certain Group sale contracts, the final price for the goods shipped is determined a few months later than the delivery took place. Under current requirements the Group determines the amount of revenue at the moment of recognition based on estimated selling price at the date of the invoice issued. At price finalisation the difference between estimated price and actual one is recognised as other revenue.

Rendering of transportation services: as part of sales of goods the Group also performs transportation to the customer under contract terms. In certain cases, the control of goods delivered is transferred to customers prior to transportation being completed. In these cases rendering of transportation services from when the control of goods has been transferred is considered as a separate performance obligation.

Rendering of electricity supply services: The Group is involved in sales of energy to third and related parties. Invoices are issued once a month at the end of month and paid within 30 days. Revenue is recognised over time during the month of energy supply.

	Year ended 31 December	
	2021	2020
	USD million	USD million
Sales of primary aluminium and alloys	**9,766**	**6,969**
Third parties	9,445	6,660
Related parties – companies capable of exerting significant influence	307	298
Related parties – other	12	9
Related parties – associates and joint ventures	2	2
Sales of alumina and bauxite	**612**	**534**
Third parties	388	314
Related parties – companies capable of exerting significant influence	–	12
Related parties – associates and joint ventures	224	208
Sales of semi-finished products and foil	**767**	**547**
Third parties	767	547
Sales of electricity	**1,525**	**1,169**
Third parties	1,487	1,137
Related parties – other	5	5
Related parties – associates and joint ventures	33	27
Sales of heat	**465**	**426**
Third parties	444	407
Related parties – companies capable of exerting significant influence	2	2
Related parties – other	19	17
Other revenues	**991**	**711**
Third parties	818	587
Related parties – companies capable of exerting significant influence	11	5
Related parties – other	11	8
Related parties – associates and joint ventures	151	111
	14,126	**10,356**

In 2020 transactions with Glencore International AG (a member of Glencore International) have exceeded 10% of the Group's revenue and amounted to USD1,259 million.

All revenue of the Group relates to revenue from contracts with customers.

6. Other operating expenses, net

	Year ended 31 December	
	2021	2020
	USD million	USD million
Impairment of trade and other receivables	(65)	(10)
Charity	(55)	(71)
Loss on disposal of property, plant and equipment	(5)	(12)
Other operating expenses, net	(93)	(67)
	(218)	**(160)**

7. Personnel costs

Personnel costs comprise salaries, annual bonuses, annual leave and cost of non-monetary benefits. Salaries, annual bonuses, paid annual leave and cost of non-monetary benefits are accrued in the year in which the associated services are rendered by employees. Where payment or settlement is deferred and the effect would be material, these amounts are stated at their present values.

The employees of the Group are also members of retirement schemes operated by local authorities. The Group is required to contribute a certain percentage of their payroll to these schemes to fund the benefits.

The Group's total contribution to those schemes charged to profit or loss during the years presented is shown below.

The Group's net obligation in respect of defined benefit pension and other post-retirement plans is calculated separately for each plan by estimating the amount of future benefit that employees have earned in return for their service in the current and prior periods. That benefit is discounted to determine its present value and the fair value of any plan assets are deducted. The discount rate is the yield at the reporting date on government bonds that have maturity dates approximating the terms of the Group's obligations. The calculation is performed using the projected unit credit method. When the calculation results in a benefit to the Group, the recognised asset is limited to the present value of any future refunds from the plan or reductions in future contributions to the plan.

Where there is a change in actuarial assumptions, the resulting actuarial gains and losses are recognised directly in other comprehensive income.

When the benefits of a plan are improved, the portion of the increased benefit relating to past service by employees is recognised in profit or loss immediately.

The Group recognises gains and losses on the curtailment or settlement of a defined benefit plan when the curtailment or settlement occurs. The gain or loss on curtailment comprises any resulting change in the fair value of plan assets, any change in the present value of the defined benefit obligation, any related actuarial gains and losses.

The Group also makes contributions for the benefit of employees to Russia's and the Ukrainian State's pension funds. The contributions are expensed as incurred.

	Year ended 31 December	
	2021	2020
	USD million	USD million
Contributions to defined contribution retirement plans	(273)	(225)
Contributions to defined benefit retirement plans	(3)	(5)
Total retirement costs	(276)	(230)
Wages and salaries	(1,170)	(1,023)
	(1,446)	**(1,253)**

8. Finance income and costs

Finance income comprises interest income on funds invested, dividend income and foreign currency gains. Interest income is recognised as it accrues, using the effective interest method.

Finance costs comprise interest expense on borrowings, foreign currency losses and changes in the fair value of financial assets at fair value through profit or loss. All borrowing costs are recognised in profit or loss using the effective interest method, except for borrowing costs related to the acquisition, construction and production of qualifying assets which are recognised as part of the cost of such assets.

Foreign currency gains and losses are reported on a net basis. Foreign exchange loss on loans and borrowing for the year ended 31 December 2021 amounted to USD 3 million (2020: gain of USD 291 million).

	Year ended 31 December	
	2021	2020
	USD million	USD million
Finance income		
Interest income	65	61
Dividend income	22	1
Net foreign exchange gain	–	98
	87	**160**
Finance costs		
Interest expense	(709)	(788)
Change in fair value of derivative financial instruments (note 19)	(352)	(226)
Revaluation of investments measured at fair value through profit or loss	(47)	–
Net foreign exchange loss	(33)	–
Other finance costs	–	(2)
	(1,141)	**(1,016)**

9. Earnings per share

The calculation of basic earnings per share is based on the profit attributable to ordinary equity shareholders for the years ended 31 December 2021 and 31 December 2020.

	Year ended 31 December	
	2021	2020
Issued ordinary shares at beginning of the year	502,337,774	638,848,896
Acquisition of own shares	–	(136,511,122)
Weighted average number of shares	502,337,774	518,002,985
Profit for the year attributable to the shareholders of the Parent Company, USD million	2,142	684
Basic and diluted earnings per share, USD	**4.264**	**1.320**

Acquisition of own shares was accounted for in the weighted average numbers of shares calculation for the year ended 31 December 2020 only.

There were no outstanding dilutive instruments during the years ended 31 December 2021 and 31 December 2020.

10. Income tax expense

Income tax expense comprises current and deferred tax. Income tax expense is recognised in the statement of profit or loss and other comprehensive income except to the extent that it relates to items recognised directly in equity, in which case it is recognised in equity.

Current tax is the expected tax payable on the taxable income for the year, using tax rates enacted or substantively enacted at the reporting date, and any adjustment to tax payable in respect of previous years.

Deferred tax is recognised in respect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. Deferred tax is not recognised for the following temporary differences: the initial recognition of goodwill, the initial recognition of assets or liabilities in a transaction that is not a business combination and that affects neither accounting nor taxable profit, and differences relating to investments in subsidiaries to the extent that they probably will not reverse in the foreseeable future. New information may become available that causes the Group to change its judgement regarding the adequacy of existing tax liabilities. Such changes to tax liabilities will impact tax expenses in the period that such a determination is made. Deferred tax is measured at the tax rates that are expected to be applied to the temporary differences when they reverse, based on the laws that have been enacted or substantively enacted by the reporting date. Deferred tax assets and liabilities are offset when they relate to income taxes levied by the same taxation authority and the Group has both the right and the intention to settle its current tax assets and liabilities on a net or simultaneous basis.

A deferred tax asset is recognised to the extent that it is probable that future taxable profits will be available against which temporary differences can be utilised. Deferred tax assets are reviewed at each reporting date and are reduced to the extent that it is no longer probable that the related tax benefit will be realised.

Additional income taxes that arise from the distribution of dividends are recognised at the same time as the liability to pay the related dividends is recognised.

(a) Income tax expense

	Year ended 31 December	
	2021	2020
	USD million	USD million
Current tax expense		
Current tax for the year	(569)	(223)
Deferred tax expense		
Origination and reversal of temporary differences	(35)	114
	(604)	**(109)**

The Parent Company is a tax resident of the Russian SAR (special administrative region). Companies which register in the SAR as part of the continuance out of a foreign jurisdiction (such as the Parent Company) may have a number of tax benefits, subject to certain conditions.

The Parent Company and subsidiaries pay income taxes in accordance with the legislative requirements of their respective tax jurisdictions. For companies domiciled in Russia the applicable tax rate is 20%; in Ukraine of 18%; Guinea of 0%; China of 25%; Kazakhstan of 20%; Australia of 30%; Jamaica of 25%; Ireland of 12.5%, Sweden of 20.6% and Italy of 26.9%. For the Group's subsidiaries domiciled in Switzerland the applicable tax rate for the year is the corporate income tax rate in the Canton of Zug, Switzerland, which differs depending on the company's tax status. The rate consists of a federal income tax and a cantonal/communal income and capital taxes. The latter includes a base rate and a multiplier, which may change from year to year. Applicable income tax rates are 9.55% and 11.85% for Swiss subsidiaries. For the UC RUSAL's significant trading companies, the applicable tax rate is 0%. The applicable tax rates for the year ended 31 December 2020 were the same as for the year ended 31 December 2021 except for tax rates for subsidiaries domiciled in Switzerland which amounted to 9.1% and 11.91% subsequently and subsidiary domiciled in Sweden which amounted to 21.4%.

Reconciliation of effective tax rate

	Year ended 31 December			
	2021		2020	
	USD million	%	USD million	%
Profit before taxation	**4,138**	**(100)**	**1,125**	**(100)**
Income tax at tax rate applicable for the Parent Company	**(828)**	**20**	**(225)**	**20**
Other non-deductible/taxable items, net	(57)	1	115	(10)
Effect of changes in investment in Norilsk Nickel	451	(10)	186	(17)
Change in unrecognised deferred tax assets	(99)	2	(243)	22
Effect of reversal of impairment	42	(1)	30	(3)
Effect of different income tax rates	(113)	3	28	(2)
Income tax	**(604)**	**15**	**(109)**	**10**

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(b) Recognised deferred tax assets and liabilities

Deferred tax assets and liabilities are attributable to the following items:

	Assets		Liabilities		Net	
	31 December		31 December		31 December	
USD million	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**
Property, plant and equipment	97	72	(1,250)	(1,287)	**(1,153)**	**(1,215)**
Inventories	71	65	(13)	(15)	**58**	**50**
Trade and other receivables	61	40	(32)	(24)	**29**	**16**
Trade and other payables and advances received	23	29	–	–	**23**	**29**
Financial instruments	3	8	(5)	(6)	**(2)**	**2**
Tax loss carry-forward	90	187	–	–	**90**	**187**
Others	133	119	(92)	(83)	**41**	**36**
Tax assets/(liabilities)	**478**	**520**	**(1,392)**	**(1,415)**	**(914)**	**(895)**
Set off of tax	(328)	(276)	328	276	–	–
Net deferred tax assets/(liabilities)	**150**	**244**	**(1,064)**	**(1,139)**	**(914)**	**(895)**

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(c) Movement in temporary differences during the year

USD million	**1 January 2021**	**Recognised in profit or loss**	**Currency translation**	**31 December 2021**
Property, plant and equipment	(1,215)	50	12	(1,153)
Inventories	50	7	1	58
Trade and other receivables	16	13	–	29
Trade and other payables and advances received	29	(6)	–	23
Financial instruments	2	(4)	–	(2)
Tax loss carry-forwards	187	(100)	3	90
Others	36	5	–	41
	(895)	**(35)**	**16**	**(914)**

USD million	**1 January 2020**	**Recognised in profit or loss**	**Recognised in equity**	**Currency translation**	**31 December 2020**
Property, plant and equipment	(1,307)	12	(46)	126	(1,215)
Inventories	87	(37)	–	–	50
Trade and other receivables	15	2	–	(1)	16
Trade and other payables and advances received	29	1	–	(1)	29
Financial instruments	(1)	3	–	–	2
Tax loss carry-forwards	78	113	–	(4)	187
Others	21	20	–	(5)	36
	(1,078)	**114**	**(46)**	**115**	**(895)**

Recognised tax losses expire in the following years:

Year of expiry	**31 December 2021 USD million**	**31 December 2020 USD million**
Without expiry	90	187
	90	**187**

(d) Unrecognised deferred tax assets

Deferred tax assets have not been recognised in respect of the following items:

	31 December 2021 USD million	**31 December 2020 USD million**
Deductible temporary differences	1,009	976
Tax loss carry-forwards	510	444
	1,519	**1,420**

Deferred tax assets have not been recognised in respect of these items because it is not probable that future taxable profits will be available against which the Group can utilise the benefits therefrom. Tax losses expire in the following years:

Year of expiry	**31 December 2021 USD million**	**31 December 2020 USD million**
Without expiry	510	443
Up to 1 year	–	1
	510	**444**

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(e) Unrecognised deferred tax liabilities

The Group's subsidiaries have retained earnings where dividend distributions are subject to taxation, for which deferred taxation has not been provided because remittance of the earnings has been indefinitely postponed through reinvestment and, as a result, such amounts are considered to be permanently invested. It was not practicable to determine the amount of temporary differences relating to investments in subsidiaries where the Group is able to control the timing of reversal of the difference. Reversal is not expected in the foreseeable future.

(f) Current taxation in the consolidated statement of financial position represents

	31 December 2021 USD million	31 December 2020 USD million
Net income tax payable at the beginning of the year	7	10
Income tax for the year	569	223
Income tax paid	(529)	(226)
Translation difference	(3)	–
	44	**7**
Represented by:		
Income tax payable (note 15(c))	62	28
Income tax receivable (note 15(b))	(18)	(21)
Net income tax payable/(receivable)	**44**	**7**

11. Property, plant and equipment

(a) Accounting policy

(i) Recognition and measurement

Until 1 January 2016 all items of property, plant and equipment were measured at cost less accumulated depreciation and impairment losses. The cost of property, plant and equipment at 1 January 2004, the date of transition to IFRSs, was determined by reference to its fair value at that date.

Cost includes expenditure that is directly attributable to the acquisition of the asset. The cost of self-constructed assets includes the cost of materials and direct labour, any other costs directly attributable to bringing the asset to a working condition for its intended use, the costs of dismantling and removing the items and restoring the site on which they are located and capitalised borrowing costs. Purchased software that is integral to the functionality of the related equipment is capitalised as part of that equipment.

When parts of an item of property, plant and equipment have different useful lives, they are accounted for as separate items (major components) of property, plant and equipment.

The cost of periodic relining of electrolysers is capitalised and depreciated over the expected production period.

Gains or losses on disposal of an item of property, plant and equipment are determined by comparing the proceeds from disposal with the carrying amount of property, plant and equipment, and are recognised net within gain/(loss) on disposal of property, plant and equipment in profit or loss.

Most of the hydro assets have long useful lives (up to 100 years) and their performance does not deteriorate significantly. Considering changes in the regulation of the Russian power sector (100% liberalisation) and the fact that hydropower is one of the most efficient sectors of the electric power industry, management believes that hydropower assets were significantly undervalued prior to 1 January 2016.

On 1 January 2016 the Group identified a separate class of assets – hydro assets – and changed its accounting policy for this class from the cost to the revaluation model to provide users with more relevant information on the Group's financial position.

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Hydro assets are a class of property, plant and equipment with unique nature and use in their hydropower plants. Since 1 January 2016 hydro assets are measured at a revalued amount, being their fair value at the date of the revaluation less any subsequent accumulated depreciation and subsequent accumulated impairment losses. Revaluations are made based on periodic valuation by an external independent valuer.

A class of assets may be revalued on a rolling basis provided that revaluations of the class of assets are completed within a short period and provided the revaluations are kept up to date.

After an item of property, plant and equipment is revalued, any accumulated depreciation at the date of the revaluation is eliminated against the gross carrying amount of the asset and the net amount restated to the revalued amount of the asset.

A revaluation increase on hydro assets is recognised directly under the heading of revaluation surplus in other comprehensive income. However, the increase is recognised in profit or loss to the extent that it reverses a revaluation decrease of the same asset previously recognised in profit or loss. A revaluation decrease on hydro assets is recognised in profit or loss. However, the decrease is recognised in other comprehensive income to the extent of any credit balance existing in the revaluation surplus.

(ii) Subsequent costs

The cost of replacing a part of an item of property, plant and equipment is recognised in the carrying amount of the item if it is probable that the future economic benefits embodied within the part will flow to the Group and its cost can be measured reliably. The carrying amount of the replaced part is derecognised. The costs of the day-to-day servicing of property, plant and equipment are recognised in profit or loss as incurred.

(iii) Exploration and evaluation assets

Exploration and evaluation activities involve the search for mineral resources, the determination of technical feasibility and the assessment of commercial viability of an identified resource. Exploration and evaluation activities include:

- Researching and analysing historical exploration data;
- Gathering exploration data through topographical, geochemical and geophysical studies;
- Exploratory drilling, trenching and sampling;
- Determining and examining the volume and grade of the resource;
- Surveying transportation and infrastructure requirements; and
- Conducting market and finance studies.

Administration costs that are not directly attributable to a specific exploration area are charged to profit or loss.

License costs paid in connection with a right to explore in an existing exploration area are capitalised and amortised over the term of the permit.

Exploration and evaluation expenditure is capitalised as exploration and evaluation assets when it is expected that expenditure related to an area of interest will be recouped by future exploitation, sale, or, at the reporting date, the exploration and evaluation activities have not reached a stage that permits a reasonable assessment of the existence of commercially recoverable ore reserves. Capitalised exploration and evaluation expenditure is recorded as a component of property, plant and equipment at cost less impairment losses. As the asset is not available for use, it is not depreciated. All capitalised exploration and evaluation expenditure is monitored for indications of impairment. Where there are indicators of potential impairment, an assessment is performed for each area of interest in conjunction with the group of operating assets (representing a cash-generating unit, CGU) to which the exploration is attributed. Exploration areas at which reserves have been discovered but which require major capital expenditure before production can begin are continually evaluated to ensure that commercial quantities of reserves exist or to ensure that additional exploration work is underway or planned. To the extent that capitalised expenditure is not expected to be recovered it is charged to profit or loss.

Exploration and evaluation assets are transferred to mining property, plant and equipment or intangible assets when development is sanctioned.

(iv) Stripping costs

Expenditure relating to the stripping of overburden layers of ore, including estimated site restoration costs, is included in the cost of production in the period in which it is incurred.

(v) Mining assets

Mining assets are recorded as construction in progress and transferred to mining property, plant and equipment when a new mine reaches commercial production.

Mining assets include expenditure incurred for acquiring mineral and development rights and developing new mining operations.

Mining assets include interest capitalised during the construction period, when financed by borrowings.

(vi) Depreciation

The carrying amounts of property, plant and equipment (including initial and any subsequent capital expenditure) are depreciated to their estimated residual value over the estimated useful lives of the specific assets concerned, or the estimated life of the associated mine or mineral lease, if shorter. Estimates of residual values and useful lives are reassessed annually and any change in estimate is taken into account in the determination of remaining depreciation charges. Leased assets are depreciated over the shorter of the lease term and their useful lives. Land is not depreciated.

Any accumulated depreciation at the date of the revaluation is eliminated against the gross amount of the assets, and the net amount is restated to the revalued amount of the asset.

The property, plant and equipment is depreciated on a straight-line or units of production basis over the respective estimated useful lives as follows:

- Hydro assets — predominantly 49 to 62 years;
- Buildings and constructions — predominantly 15 to 50 years;
- Machinery and equipment — 4 to 50 years;
- Electrolysers — 4 to 15 years;
- Mining assets — units of production on proven and probable reserves;
- Other — 1 to 30 years.

(b) Disclosure

USD million	Land and buildings	Machinery and equipment	Electrolysers	Hydro assets	Mining assets	Construction in progress	Other	Total
Cost/deemed cost								
1 January 2020	**4,846**	**7,779**	**2,713**	**4,026**	**673**	**2,518**	**341**	**22,896**
Additions	67	4	120	–	31	1,020	–	**1,242**
Acquired through business combinations	10	8	–	–	–	2	1	**21**
Disposals	(14)	(97)	–	–	(10)	(18)	(6)	**(145)**
Transfers	137	360	43	4	1	(684)	139	**–**
Revaluation of hydro assets as at 31 December 2020	–	–	–	65	–	–	–	**65**
Change in estimate of site restoration provision	–	–	–	–	(2)	–	–	**(2)**
Translation difference	(256)	(262)	(8)	(652)	(77)	(145)	(42)	**(1,442)**
At 31 December 2020	**4,790**	**7,792**	**2,868**	**3,443**	**616**	**2,693**	**433**	**22,635**
Additions	250	25	143	–	62	1,236	1	**1,717**
Acquired through business combinations	8	6	–	–	–	–	1	**15**
Disposals	(60)	(95)	–	–	(3)	(26)	(6)	**(190)**
Transfers	189	520	35	37	9	(697)	(93)	**–**
Change in estimate of site restoration provision	–	–	–	–	(2)	–	–	**(2)**
Translation difference	(26)	(21)	(14)	(20)	(10)	–	3	**(88)**
At 31 December 2021	**5,151**	**8,227**	**3,032**	**3,460**	**672**	**3,206**	**339**	**24,087**

USD million	Land and buildings	Machinery and equipment	Electrolysers	Hydro assets	Mining assets	Construction in progress	Other	Total
Depreciation and impairment losses								
1 January 2020	**(2,692)**	**(5,665)**	**(2,385)**	**(99)**	**(567)**	**(1,323)**	**(282)**	**(13,013)**
Depreciation charge	(148)	(361)	(156)	(83)	(8)	–	(24)	**(780)**
(Impairment losses) / reversal of impairment	26	(30)	(3)	–	(21)	17	3	**(8)**
Revaluation of hydro assets as at 31 December 2020	6	86	–	–	3	–	4	**99**
Disposals	1	1	–	(1)	–	–	–	**1**
Transfers	–	–	–	165	–	–	–	**165**
Translation difference	133	169	8	18	65	60	25	**478**
At 31 December 2020	**(2,674)**	**(5,800)**	**(2,536)**	**–**	**(528)**	**(1,246)**	**(274)**	**(13,058)**
Depreciation charge	(161)	(371)	(164)	(94)	(35)	–	(14)	**(839)**
(Impairment losses) / reversal of impairment	(163)	(438)	15	–	(68)	432	(26)	**(248)**
Disposals	8	80	–	–	1	4	4	**97**
Transfers	1	(31)	–	–	–	–	30	**–**
Translation difference	24	24	13	1	11	5	–	**78**
At 31 December 2021	**(2,965)**	**(6,536)**	**(2,672)**	**(93)**	**(619)**	**(805)**	**(280)**	**(13,970)**
Net book value								
At 1 January 2020	**2,154**	**2,114**	**328**	**3,927**	**106**	**1,195**	**59**	**9,883**
At 31 December 2020	**2,116**	**1,992**	**332**	**3,443**	**88**	**1,447**	**159**	**9,577**
At 31 December 2021	**2,186**	**1,691**	**360**	**3,367**	**53**	**2,401**	**59**	**10,117**

Depreciation expense of USD 778 million (2020: USD 738 million) has been charged to cost of goods sold, USD 8 million (2020: USD 6 million) to distribution expenses and USD 25 million (2020: USD 27 million) to administrative expenses.

Interest capitalised for the years ended 31 December 2021 and 31 December 2020 was USD 9 million and USD 12 million, respectively.

Included in construction in progress at 31 December 2021 and 31 December 2020 are advances to suppliers of property, plant and equipment of USD 174 million and USD 145 million, respectively.

(c) Impairment

Management reviewed the carrying amount of the Group's non-financial assets at the reporting date to determine whether there were any indicators of impairment or reversal of impairment.

Management identified several factors that indicated that for a number of the Group's CGUs previously recognised impairment losses may require reversal and for a number of CGUs impairment losses may need to be recognised. These include significant increase of aluminium prices as a result of LME appreciation, significant increase of oil and gas prices and overall market instability, fluctuations of coal sale prices and additional volumes of electricity transmission set in further periods. For alumina cash generating units, the major influence was unfavourable fluctuations in prices of energy resources which are a significant part of cash cost. For bauxite cash generating units, sales prices and the cash cost of bauxite were relatively stable.

For the purposes of impairment testing, value in use of each cash generating unit was determined by discounting expected future net cash flows of the cash generating unit. Values assigned to key assumptions and estimates used to measure the units' recoverable amount was based on external sources of information and historical data. Management believes that the values assigned to the key assumptions and estimates represented the most realistic assessment of future trends. The risk factors related to future COVID-19 uncertainties have been incorporated into the discount rates applied.

METALS

At 31 December 2021 and 31 December 2020 management identified several indicators that a number of the Group's CGUs may be impaired or that previously recognised impairment losses may need to be reversed.

Based on results of impairment testing as at 31 December 2021, management concluded that a reversal of previously recognised impairment loss relating to property, plant and equipment should be recognised in these consolidated financial statements in respect of KAZ, VgAZ, Kubal and Taishet aluminium smelters (the latter aluminium smelter under construction) in the amount of USD 699 million. Additionally management concluded that at the same date an impairment loss relating to property, plant and equipment of Mykolaiv alumina refinery and Aughinish Alumina in the amount of USD 693 million should be recognised in these consolidated financial statements.

Based on results of impairment testing as at 31 December 2020, management has concluded that a reversal of previously recognised impairment loss relating to property, plant and equipment should be recognised in those consolidated financial statements in respect of Taishet aluminium smelter (aluminium smelter under construction) and Mykolaiv alumina refinery in the amount of USD 158 million.

The pre-tax discount rates applied to the above mentioned cash generating units, estimated in nominal terms based on an industry weighted average cost of capital, are presented in the table below.

	Year ended 31 December	
	2021	2020
Taishet aluminium smelter	11.2%	11.8%
Mykolaiv alumina refinery	16.5%	18.7%
Kubikenborg Aluminium (Kubal)	14.3%	19.8%
KAZ (Kandalaksha aluminium smelter)	15.8%	15.5%
VgAZ (Volgograd aluminium smelter)	15.2%	14.8%
Aughinish Alumina	10.8%	11.9%

The recoverable amounts of a number of the cash generating units tested for impairment are particularly sensitive to changes in forecast aluminium and alumina prices, foreign exchange rates and applicable discount rates.

Additionally, management identified specific items of property, plant and equipment that are no longer in use and therefore are not considered to be recoverable amounting to USD 190 million at 31 December 2021 (2020: USD 117 million). These assets have been impaired in full. No further impairments of property, plant and equipment or reversal of previously recorded impairment were identified.

POWER

At 31 December 2021 and 2020 management identified several indicators that property, plant and equipment of the Coal, Irkutsk GridCo and CHPs CGUs may be impaired or that previously recognised impairment losses may need to be reversed.

Based on results of impairment testing as at 31 December 2021, management concluded that impairment losses of USD 17 million should be recognized regarding Irkutsk GridCo CGU. As at 31 December 2020 no impairment losses regarding CGUs described above were recognised.

The following key assumptions were used to determine the recoverable amount of the Coal CGU:

	Year ended 31 December	
	2021	2020
Sales volumes of coal in 2022/2021	13,889 ths tonnes	12,885 ths tonnes
Expected growth of sales volumes of coal till 2031/2030	12%	12%
Weighted average price for coal in 2022/2021	USD 13 (RUB 930)	USD 12 (RUB 890)
Weighted average price growth after 2022/2021	2%-4%	4%
Post-tax discount rate	13.0%	12.5%

The recoverable amount of the Coal CGU is particularly sensitive to changes in forecast of sales volumes, coal prices and applicable discount rates. A 1% increase of the discount rate applied would have resulted in the decrease in the recoverable amount of Coal CGU but would not lead to an impairment.

The following key assumptions were used to determine the recoverable amount of the Irkutsk GridCo CGU:

	Year ended 31 December	
	2021	2020
Sales volumes of electricity transmission in 2022/2021	51 mln MWh	50 mln MWh
Expected growth of sales volumes till 2031/2030	10%	10%
Tariffs for electricity transmission in 2022/2021	USD 6-9 (RUB 445-665)	USD 6-9 (RUB 400-629)
Tariffs growth till 2031/2030	42%	42%
Post-tax discount rate	12.5%	12.0%

The anticipated price/tariffs growth included in the cash flow projections for the years from 2022 to 2031 have been based on the publicly available forecasts of Ministry of Economic Development of the Russian Federation.

The recoverable amounts estimated at 31 December 2021 and 31 December 2020 include cash flows from sales of electricity transmission to Taishet aluminium smelter.

The recoverable amount of the Irkutsk GridCo CGU is also particularly sensitive to changes in forecast electricity transmission volumes and tariffs, as well as applicable discount rates.

The following key assumptions were used to determine the recoverable amount of the CHPs CGU:

	Year ended 31 December	
	2021	2020
Electricity sales volumes in 2022/2021	29 mln MWh	27 mln MWh
Electricity sales volumes growth till 2031/2030	5%	5%
Electricity sales prices in 2022/2021	USD 7-27 (RUB 544-2,011)	USD 8-26 (RUB 568-1,916)
Electricity sales prices growth till 2031/2030	37%-42%	40%-42%
Sales volumes of heat in 2021-2030/2022-2031	20 mln Gcal	20 mln Gcal
Heat tariffs in 2022/2021	USD 16 (RUB 1,211)	USD 16 (RUB 1,186)
Tariffs growth till 2031/2030	42%	67%
Post-tax discount rate	13.0%	13.0%

The recoverable amount of CHP CGU is particularly sensitive to changes in forecast electricity sales prices as well as applicable discount rates.

Additionally, management identified specific items of property, plant and equipment that are not considered to be recoverable amounting to USD 41 million (2020: USD 49 million). No further impairment of property, plant and equipment or reversal of previously recorded impairments was identified.

(d) Security

The carrying value of property, plant and equipment which is subject to lien under loan agreements was USD 1,048 million at 31 December 2021 (31 December 2020: USD 1,086 million) (note 17).

(e) Hydro assets

As disclosed in note 11(a)(i), the Group regularly performs an independent valuation of its hydro assets. As at 31 December 2021 a valuation by external independent appraiser was not performed because based on management's analysis, the fair value of hydro assets approximated their carrying amount at that date. As at 31 December 2020 the independent appraiser estimated the fair value of hydro assets at USD 3,443 million with an equity effect of USD 230 million and revaluation loss of USD nil million recognised in profit or loss.

The valuation analysis was primarily based on the cost approach to determine depreciated replacement cost as it is the most reliable method to estimate value for assets that do not have an active market and do not generate an identifiable revenue stream by asset. This method considers the cost to reproduce or replace the property, plant and equipment, adjusted for physical depreciation, functional and economic obsolescence.

Depreciated replacement cost was estimated based on internal sources and, where available, analysis of the Russian and international markets for similar property, plant and equipment. Various market data were collected from published information, catalogues, statistical data etc.

In addition, cash flow testing was conducted to identify if there is any economic obsolescence of the hydro assets. Forecasts of net cash flows were determined based on the actual results for the preceding years and approved budgets. Based on the analysis results, there was no economic obsolescence as at 31 December 2021 or 2020.

The fair value measurement for hydro assets have been categorised as Level 3 fair values based on the inputs to the valuation techniques used.

Net book value as at 31 December 2021 according to the cost model amounted to USD 358 million (31 December 2020: USD 333 million).

(f) Leases

The Group assesses whether a contract is or contains a lease based on whether the contract conveys a right to control the use of an identified asset for a period of time in exchange for consideration. At inception or on reassessment of a contract that contains a lease component, the Group allocates the consideration in the contract to each lease and non-lease component on the basis of their relative stand-alone prices. However, for the leases of properties in which Group acts as a lessee, the Group does not separate non-lease components and account for the lease and non-lease components as a single lease component.

The Group applies judgement to determine the lease term for some lease contracts in which it is a lessee that include renewal options, the assessment of whether the Group is reasonably certain to exercise such options impacts the lease term, which significantly affects the amount of lease liabilities and right-of-use assets recognised.

In determining the enforceable period (i.e. the maximum lease term), the Group considers whether both it and the lessor has a right to terminate the lease without permission from the other party and, if so, whether that termination would result in more than an insignificant penalty. If a more than insignificant penalty exists, then the enforceable period extends until the point at which a no more than an insignificant penalty exists.

The Group leases many assets, including land, properties and production equipment. The Group recognises a right-of-use asset and a lease liability at the lease commencement date. The right-of-use asset is initially measured at cost and subsequently measured at cost less any accumulated depreciation and impairment losses and adjusted for certain remeasurements of the lease liability as required by IFRS 16.

The cost comprises the initial amount of the lease liability adjusted for any lease payments made at or before the commencement date, plus any initial direct costs incurred and an estimate of costs to dismantle and remove the underlying asset or to restore the underlying asset or the site on which it is located, less any lease incentives received.

The right-of-use asset is subsequently depreciated using the straight-line method from the commencement date to the end of the lease term, unless the lease transfers ownership of the underlying asset to the Group by the end of the lease term or the cost of the right-of-use asset reflects that the Group will exercise a purchase option. In that case the right-of-use asset is depreciated over the useful life of the underlying asset, which is determined on the same basis as those of property and equipment. In addition, the right-of-use asset is periodically reduced by impairment losses, if any, and adjusted for certain remeasurements of the lease liability.

The Group presents right-of-use assets as part of property plant and equipment, the same line item as it presents underlying assets of the same nature that it owns. Additions to right-of-use assets were in the amount of USD 43 million during the year ended 31 December 2021 (31 December 2020: USD 68 million). The carrying amounts of right-of-use assets are presented below.

	Property, plant and equipment		
USD million	**Land and buildings**	**Machinery and equipment**	**Total**
Balance at 1 January 2021	67	4	71
Balance at 31 December 2021	**36**	**6**	**42**

Total depreciation charges related to the right-of-use assets for the year ended 31 December 2021 amount to USD 15 million (31 December 2020: USD 20 million).

USD 15 million of right-of-use assets has been impaired during the year ended 31 December 2021 (31 December 2020: USD 2 million). The Group's total cash outflow for leases was in the amount of USD 26 million for the year ended 31 December 2021 (31 December 2020: USD 29 million).

The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted using the interest rate implicit in the lease or, if that rate cannot be readily determined, the Group's incremental borrowing rate. Generally, the Group uses its incremental borrowing rate as the discount rate.

In accordance with IFRS 16 variable payments which do not depend on index or rate, e.g. which do not reflect changes in market rental rates, should not be included in the measurement of lease liability. In respect of municipal or federal land leases where lease payments are based on cadastral value of the land plot and do not change until the next revision of that value or the applicable rates (or both) by the authorities, the Group has determined that, under the current revision mechanism, the land lease payments cannot be considered as either variable that depend on index or rate or in-substance fixed, and therefore these payments are not included in the measurement of the lease liability. Future cash outflows to which the Group is potentially exposed that are not recognised in right-to-use assets and are not reflected in the measurement of lease liabilities and which arise from variable lease payments not linked to index or rate are in the amount of USD 199 million as at 31 December 2021 (31 December 2020: USD 173 million).

The lease liability is subsequently increased by the interest cost on the lease liability and decreased by lease payment made. It is remeasured when there is a change in future lease payments arising from a change in an index or rate, a change in the estimate of the amount expected to be payable under a residual value guarantee, or as appropriate, changes in the assessment of whether a purchase or extension option is reasonably certain to be exercised or a termination option is reasonably certain not to be exercised.

The Group presents lease liabilities as part of other payables and other non-current liabilities in the statement of financial position depending on the period to which future lease payments relate. The total non-current part of lease liabilities as at 31 December 2021 amounted to USD 45 million (31 December 2020: USD 57 million).

Total interest costs on leases recognised for the year ended 31 December 2021 amount to USD 7 million (31 December 2020: USD 9 million).

The Group does not recognise right-of-use assets and lease liabilities for some leases of low-value assets and short-term leases. The Group recognises the lease payments associated with these leases as an expense on a straight-line basis over the lease term. The expense relating to short-term leases in the amount of USD 18 million is included in cost of sales or administrative expenses depending on type of underlying asset for the year ended 31 December 2021 (31 December 2020: USD 18 million).

When the Group is an intermediate lessor the sub-leases are classified with reference to the right-of the use asset arising from the head lease, not with reference to the underlying asset.

12. Goodwill and intangible assets

(a) Accounting policy

(i) Goodwill

On the acquisition of a subsidiary, an interest in a joint venture or an associate or an interest in a joint arrangement that comprises a business, the identifiable assets, liabilities and contingent liabilities of the acquired business (or interest in a business) are recognised at their fair values unless the fair values cannot be measured reliably. Where the fair values of assumed contingent liabilities cannot be measured reliably, no liability is recognised but the contingent liability is disclosed in the same manner as for other contingent liabilities.

The Group accounts for business combinations using the acquisition method when the acquired set of activities and assets meets the definition of a business and control is transferred to the Group. In determining whether a particular set of activities and assets is a business, the Group assesses whether the set of assets and activities acquired includes, at a minimum, an input and substantive process and whether the acquired set has the ability to produce outputs.

The Group has an option to apply a 'concentration test' that permits a simplified assessment of whether an acquired set of activities and assets is not a business. The optional concentration test is met if substantially all of the fair value of the gross assets acquired is concentrated in a single identifiable asset or group of similar identifiable assets.

Business combinations are accounted for using the acquisition method as at the acquisition date, which is the date on which control is transferred to the Group.

Goodwill arises when the cost of acquisition exceeds the fair value of the Group's interest in the net fair value of identifiable net assets acquired. The Group measures goodwill at the acquisition date as the fair value of the consideration transferred; plus the recognised amount of any non-controlling interests in the acquiree less the net recognised amount (generally fair value) of the identifiable assets acquired and liabilities assumed. The consideration transferred does not include amounts related to the settlement of pre-existing relationships. Such amounts are generally recognised in profit or loss. Transaction costs, other than those associated with the issue of debt or equity securities, that the Group incurs in connection with a business combination are expensed as incurred.

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Goodwill is not amortised but is tested for impairment annually. For this purpose, goodwill arising on a business combination is allocated to the cash-generating units expected to benefit from the acquisition and any impairment loss recognised is not reversed even where circumstances indicate a recovery in value.

In respect of associates or joint ventures, the carrying amount of goodwill is included in the carrying amount of the interest in the associate and joint venture and the investment as a whole is tested for impairment whenever there is objective evidence of impairment. Any impairment loss is allocated to the carrying amount of the interest in the associate and joint venture.

When the fair value of the Group's share of identifiable net assets acquired exceeds the cost of acquisition, the difference is recognised immediately in profit or loss.

(ii) Research and development

Expenditure on research activities, undertaken with the prospect of gaining new scientific or technical knowledge and understanding, is recognised in profit or loss when incurred.

Development activities involve a plan or design for the production of new or substantially improved products and processes. Development expenditure is capitalised only if development costs can be measured reliably, the product or process is technically and commercially feasible, future economic benefits are probable and the Group intends to and has sufficient resources to complete development and to use or sell the asset. The expenditure capitalised includes the cost of materials, direct labour and overhead costs that are directly attributable to preparing the asset for its intended use and capitalised borrowing costs. Other development expenditure is recognised in profit or loss when incurred.

Capitalised development expenditure is measured at cost less accumulated amortisation and accumulated impairment losses (refer to note 11(c)).

(iii) Other intangible assets

Other intangible assets that are acquired by the Group, which have finite useful lives, are measured at cost less accumulated amortisation and accumulated impairment losses (refer to note 11(c)).

(iv) Subsequent expenditure

Subsequent expenditure is capitalised only when it increases the future economic benefits embodied in the specific asset to which it relates. All other expenditure, including expenditure on internally generated goodwill and brands, is recognised in profit or loss when incurred.

(v) Amortisation

Amortisation is recognised in profit or loss on a straight-line basis over the estimated useful lives of intangible assets, other than goodwill, from the date that they are available for use. The estimated useful lives are as follows:

- Software 5 years;
- Other intangible assets 2-8 years.

The amortisation method, useful lives and residual values are reviewed at each financial year end and adjusted if appropriate.

(b) Disclosure

USD million	Goodwill	Other intangible assets	Total
Cost			
Balance at 1 January 2020	**2,686**	**645**	**3,331**
Additions	33	27	**60**
Disposals	–	(48)	**(48)**
Foreign currency translation	(234)	(19)	**(253)**
Balance at 31 December 2020	**2,485**	**605**	**3,090**
Additions	14	40	**54**
Disposals	–	(3)	**(3)**
Foreign currency translation	(8)	3	**(5)**
Balance at 31 December 2021	**2,491**	**645**	**3,136**
Amortisation and impairment losses			
Balance at 1 January 2020	**(450)**	**(505)**	**(955)**
Amortisation charge	–	(10)	**(10)**
Disposals	–	48	**48**
Foreign currency translation	–	8	**8**
Balance at 31 December 2020	**(450)**	**(459)**	**(909)**
Amortisation charge	–	(11)	**(11)**
Impairment	–	(14)	**(14)**
Foreign currency translation	–	(3)	**(3)**
Balance at 31 December 2021	**(450)**	**(487)**	**(937)**
Net book value			
At 1 January 2020	**2,236**	**140**	**2,376**
At 31 December 2020	**2,035**	**146**	**2,181**
At 31 December 2021	**2,041**	**158**	**2,199**

Goodwill additions for the years ended 31 December 2021 and 31 December 2020 relate to acquisition of certain companies engaged in production and infrastructure areas and was determined as the difference between the consideration paid and the fair value of acquired assets and liabilities.

(c) Amortisation charge

The amortisation charge is included in cost of sales and administrative expenses in consolidated statement of profit or loss and other comprehensive income.

(d) Impairment testing of goodwill and other intangible assets

For the purposes of impairment testing, goodwill is allocated to the following CGUs. These units represent the lowest level within the Group at which the goodwill is monitored for internal management purposes.

The aggregate carrying amounts of goodwill allocated to each business, and the related impairment losses recognised, are as follows:

USD million	Allocated goodwill 2021	Accumulated impairment loss 2021	Allocated goodwill 2020	Accumulated impairment loss 2020
UC RUSAL	2,269	(449)	2,273	(449)
Angara HPPs (Irkutskenergo)	221	–	211	–
Strikeforce Mining and Resources Limited	1	(1)	1	(1)
	2,491	**(450)**	**2,485**	**(450)**

METALS

The aluminium segment represents the lowest level within UC RUSAL at which goodwill is monitored for internal management purposes. The recoverable amount represents value in use as determined by discounting the future cash flows generated from the continuing use of the plants within UC RUSAL's aluminium segment.

Similar considerations to those described above in respect of assessing the recoverable amount of property, plant and equipment apply to goodwill.

At 31 December 2021, management analysed changes in the economic environment and developments in the aluminium industry and the Group's operations since 31 December 2020 and performed an impairment test for goodwill at 31 December 2021 using the following assumptions to determine the recoverable amount of the segment:

- Total production was estimated based on average sustainable production levels of 3.8 million metric tonnes of primary aluminium, of 8.4 million metric tonnes of alumina and of 16.7 million metric tonnes of bauxite. Bauxite and alumina will be used primarily internally for production of primary aluminium;
- The aluminium and alumina prices were based on the long-term aluminium and alumina price outlook derived from available industry and market sources and were as follows:

	2022	2023	2024	2025	2026
Aluminium sales prices, based on the long-term aluminium price outlook, USD per tonne	2,623	2,476	2,371	2,375	2,411
Alumina sales prices, based on the long-term alumina price outlook, USD per tonne	345	319	316	320	352
Nominal foreign currency exchange rates, RUB per 1 USD	72.2	74.7	76.8	79.2	80.7
Inflation in RUB	6.6%	4.5%	3.6%	4.2%	3.3%
Inflation in USD	4.0%	2.1%	2.1%	2.0%	2.1%

Operating costs were projected based on the historical performance adjusted for inflation;

- Nominal foreign currency exchange rates applied to convert operating costs of the Group denominated in RUB into USD and inflation in RUB and USD assumed in determining recoverable amounts were as above;
- The pre-tax discount rate was estimated in nominal terms based on the weighted average cost of capital basis and was 11.5%;
- A terminal value was derived following the forecast period assuming a 2.0% annual growth rate.

Values assigned to key assumptions and estimates used to measure the units' recoverable amount were based on external sources of information and historical data. Management believes that the values assigned to the key assumptions and estimates represented the most realistic assessment of future trends. The results were particularly sensitive to the following key assumptions:

- A 5% reduction in the projected aluminium and alumina price levels would result in a decrease in the recoverable amount by 18% but would not lead to an impairment;
- A 5% increase in the projected level of electricity and alumina costs in the aluminium production would have resulted in a 6% decrease in the recoverable amount but would not lead to an impairment;
- A 1% increase in the discount rate would have resulted in a 9% decrease in the recoverable amount but would not lead to an impairment.

Based on results of impairment testing of goodwill, management concluded that no impairment should be recorded in the consolidated financial statements as at 31 December 2021.

At 31 December 2020, management analysed changes in the economic environment and developments in the aluminium industry and the Group's operations since 31 December 2019 and performed an impairment test for goodwill at 31 December 2020 using the following assumptions to determine the recoverable amount of the segment:

- Total production was estimated based on average sustainable production levels of 3.8 million metric tonnes of primary aluminium, of 8.5 million metric tonnes of alumina and of 15.7 million metric tonnes of bauxite. Bauxite and alumina will be used primarily internally for production of primary aluminium;
- The aluminium and alumina prices were based on the long-term aluminium and alumina price outlook derived from available industry and market sources and were as follows:

	2021	2022	2023	2024	2025
Aluminium sales prices, based on the long-term aluminium price outlook, USD per tonne	1,919	1,906	1,927	1,955	2,003
Alumina sales prices, based on the long-term alumina price outlook, USD per tonne	295	304	307	318	335
Nominal foreign currency exchange rates, RUB per 1USD	73.2	71.9	71.2	72.5	74.1
Inflation in RUB	3.8%	4.0%	3.9%	4.0%	4.1%
Inflation in USD	1.5%	1.8%	2.2%	1.9%	2.1%

Operating costs were projected based on the historical performance adjusted for inflation. Nominal foreign currency exchange rates applied to convert operating costs of the Group denominated in RUB into USD and inflation in RUB and USD assumed in determining recoverable amounts were as above:

- The pre-tax discount rate was estimated in nominal terms based on the weighted average cost of capital basis and was 11.4%;
- A terminal value was derived following the forecast period assuming a 2.0% annual growth rate.

Values assigned to key assumptions and estimates used to measure the units' recoverable amount was based on external sources of information and historical data. Management believes that the values assigned to the key assumptions and estimates represented the most realistic assessment of future trends. The results were particularly sensitive to the following key assumptions:

- A 5% reduction in the projected aluminium and alumina price levels would result in a decrease in the recoverable amount by 33% but would not lead to an impairment;
- A 5% increase in the projected level of electricity and alumina costs in the aluminium production would have resulted in a 25% decrease in the recoverable amount but would not lead to an impairment;
- A 1% increase in the discount rate would have resulted in a 11% decrease in the recoverable amount but would not lead to an impairment.

Based on results of impairment testing of goodwill, management concluded that no impairment should be recorded as at 31 December 2020.

POWER

Goodwill primarily resulted from the acquisition of Irkutskenergo's HPPs. For the purposes of impairment testing, goodwill is allocated to the Angara HPPs CGU. It represents the lowest level within the Group at which goodwill is monitored for internal management purposes.

Management performs impairment testing of goodwill annually at 31 December of the respective calendar year.

The recoverable amount of Angara HPPs in 2021 and 2020 was determined by reference to its value in use derived by discounting of the future cash flows generated from continuing use of production facilities.

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The following key assumptions were used to determine the recoverable amount of the Angara HPPs cash-generating unit at 31 December 2021:

- The sales volumes were projected based on the approved budgets for 2021. In particular, the sales volumes of electricity in 2022 were planned at the level of 53 million MWh with a decline by 7% till 2031.
- Sales prices were based on the long-term price outlook derived from the available industry and market sources. The prices for electricity were estimated at the levels of USD 0.6-11.9 (RUB 45-875) per MWh depending on market segment in 2022 and increased by 37-40% respectively till 2031. Operating costs were projected based on the historical performance and the anticipated increase during the projected period was in line with inflation.
- The post-tax discount rate was estimated in nominal terms based on the weighted average cost of capital amounted to 13.0%.
- A terminal value was derived following the forecast period assuming a 4% annual growth rate.

The following key assumptions were used to determine the recoverable amount of the Angara HPPs cash-generating unit at 31 December 2020:

- The sales volumes were projected based on the approved budgets for 2021. In particular, the sales volumes of electricity in 2021 were planned at the level of 48 million MWh with an insignificant decline by 1% till 2030.
- Sales prices were based on the long-term price outlook derived from the available industry and market sources. The prices for electricity were estimated at the levels of USD 0.5-11.5 (RUB 39-846) per MWh depending on market segment in 2021 and increased by 19-40% respectively till 2030. Operating costs were projected based on the historical performance and the anticipated increase during the projected period was in line with inflation.
- The post-tax discount rate was estimated in nominal terms based on the weighted average cost of capital amounted to 12.9%.
- A terminal value was derived following the forecast period assuming a 4% annual growth rate.

Reasonable possible changes in key assumptions did not lead to an impairment in either 2021 or 2020.

13. Interests in associates and joint ventures

An associate is an entity in which the Group has significant influence, but not control or joint control, over its management, including participation in the financial and operating policy decisions.

A joint venture is an arrangement whereby the Group and other parties contractually agree to share control of the arrangement and have rights to the net assets of the arrangement.

An investment in an associate or a joint venture is accounted for in the consolidated financial statements under the equity method, unless it is classified as held for sale (or included in a disposal group that is classified as held for sale). Under the equity method, the investment is initially recorded at cost, adjusted for any excess of the Group's share of the acquisition-date fair values of the investee's identifiable net assets over the cost of the investment (if any). Thereafter, the investment is adjusted for the post acquisition change in the Group's share of the investee's net assets and any impairment losses relating to the investment. Any acquisition-date excess over cost, the Group's share of the post-acquisition, post-tax results of the investees and any impairment losses for the year are recognised in the consolidated statement of profit or loss and other comprehensive income, whereas the Group's share of the post-acquisition post-tax items of the investees' other comprehensive income is recognised in the consolidated statement of other comprehensive income, the Group's share of the post-acquisition results recorded directly in the statement of changes in equity is recognized in the consolidated statement of changes in equity as the share of other changes in equity of associate.

When the Group's share of losses exceeds its interest in the associate or the joint venture, the Group's interest is reduced to nil and recognition of further losses is discontinued except to the extent that the Group has incurred legal or constructive obligations or made payments on behalf of the investee.

Unrealised profits and losses resulting from transactions between the Group and its associates and joint venture are eliminated to the extent of the Group's interest in the investee, except where unrealised losses provide evidence of an impairment of the asset transferred, in which case they are recognised immediately in profit or loss.

If an investment in an associate becomes an investment in a joint venture or vice versa, retained interest is not remeasured. Instead, the investment continues to be accounted for under the equity method.

In all other cases, when the Group ceases to have significant influence over an associate or joint control over a joint venture, it is accounted for as a disposal of the entire interest in that investee, with a resulting gain or loss being recognised in profit or loss. Any interest retained in that former investee at the date when significant influence or joint control is lost is recognised at fair value and this amount is regarded as the fair value on initial recognition of a financial asset.

In the Group's statement of financial position, investments in associates and joint ventures are stated at cost less impairment losses, unless classified as held for sale (or included in a disposal group that is classified as held for sale).

An impairment loss in respect of an investment in an associate or joint venture is calculated as the difference between its carrying amount after application of the equity method of accounting and its recoverable amount. The recoverable amount of such investment is the greater of its value in use and its fair value less cost to sell. In determining the value in use of the investment the Group estimates: (a) its share of the present value of the estimated future cash flows expected to be generated by the investee, including the cash flows from the operations of the investee and the proceeds on the ultimate disposal of the investment; or (b) the present value of the estimated future cash flows expected to arise from the dividends to be received from the investee and from its ultimate disposal depending on which available information with respect to each investee is more reliable. An impairment loss is reversed to the extent that the recoverable amount of the investment subsequently increases and the resulting carrying amount does not exceed the carrying amount that would have been determined, after application of the equity method, had no impairment loss previously been recognised.

	31 December	
	2021	**2020**
	USD million	**USD million**
Balance at the beginning of the year	**3,832**	**4,248**
Group's share of profits, impairment and reversal of impairment	1,802	971
Group's share of equity transactions	129	–
Acquisition and contribution to investments	9	9
Partial disposal of investment in associate	(313)	–
Return of prepayment for shares	–	(11)
Dividends	(1,452)	(718)
Foreign currency translation	21	(667)
Balance at the end of the year	**4,028**	**3,832**
Goodwill included in interests in associates	2,300	2,034

The following list contains only the particulars of associates, all of which are corporate entities, which principally affected the results or assets of the Group.

Name of associate/ joint venture	Place of incorporation and operation	Particulars of issued and paid up capital	Proportion of ownership interest: Group's effective interest*	Proportion of ownership interest: Group's nominal interest	Principal activity
PJSC MMC Norilsk Nickel	Russian Federation	153,654,624 shares, RUB1 par value	15.01%	26.25%	Nickel and other metals production
Queensland Alumina Limited	Australia	2,212,000 shares, AUD 2 par value	11.38%	20%	Production of alumina under a tolling agreement
BEMO project	Cyprus, Russian Federation	BOGES Limited and BALP Limited – 10,000 shares EUR 1.71 each	28.44%	50%	Energy / Aluminium production

* Interest attributable to the shareholders of the Parent Company.

The summary of the consolidated financial statements of associates and joint ventures for the year ended 31 December 2021 is presented below:

	PJSC MMC Norilsk Nickel		Queensland Alumina Limited		BEMO project		Other associates and joint ventures	
	Group share	**100%**	**Group share**	**100%**	**Group share**	**100%**	**Group share**	**100%**
	USD million	**USD million**	**USD million**	**USD million**	**USD million**	**USD million**	**USD million**	**USD million**
Non-current assets	5,590	13,565	185	933	1,362	2,548	234	562
Current assets	2,605	9,870	34	176	152	293	85	198
Non-current liabilities	(2,788)	(10,564)	(103)	(448)	(862)	(1,724)	(91)	(182)
Current liabilities	(2,133)	(8,083)	(116)	(580)	(57)	(115)	(69)	(143)
Net assets	**3,274**	**4,788**	**–**	**81**	**595**	**1,002**	**159**	**435**

	PJSC MMC Norilsk Nickel		Queensland Alumina Limited		BEMO project		Other associates and joint ventures	
	Group share	**100%**	**Group share**	**100%**	**Group share**	**100%**	**Group share**	**100%**
	USD million	**USD million**	**USD million**	**USD million**	**USD million**	**USD million**	**USD million**	**USD million**
Revenue	4,711	17,852	111	555	487	974	260	761
Profit/(loss) and impairment from continuing operations	1,762	6,974	–	(30)	58	97	(18)	68
Other comprehensive income/(loss)	24	98	–	(5)	(3)	(7)	–	(3)
Total comprehensive income/(loss)	**1,786**	**7,072**	**–**	**(35)**	**55**	**90**	**(18)**	**65**

The summary of the consolidated financial statements of associates and joint ventures for the year ended 31 December 2020 is presented below:

	PJSC MMC Norilsk Nickel		Queensland Alumina Limited		BEMO project		Other associates and joint ventures	
	Group share	**100%**	**Group share**	**100%**	**Group share**	**100%**	**Group share**	**100%**
	USD million	**USD million**	**USD million**	**USD million**	**USD million**	**USD million**	**USD million**	**USD million**
Non-current assets	5,206	12,147	199	777	1,420	2,680	248	428
Current assets	2,381	8,559	35	181	132	255	70	169
Non-current liabilities	(2,959)	(10,619)	(92)	(359)	(945)	(1,890)	(101)	(201)
Current liabilities	(1,506)	(5,412)	(142)	(478)	(67)	(134)	(47)	(117)
Net assets	**3,122**	**4,675**	**–**	**121**	**540**	**911**	**170**	**279**

	PJSC MMC Norilsk Nickel		Queensland Alumina Limited		BEMO project		Other associates and joint ventures	
	Group share	**100%**	**Group share**	**100%**	**Group share**	**100%**	**Group share**	**100%**
	USD million	**USD million**	**USD million**	**USD million**	**USD million**	**USD million**	**USD million**	**USD million**
Revenue	4,325	15,545	123	617	364	728	258	748
Profit/(loss) and impairment from continuing operations	930	3,634	–	(20)	51	52	(10)	61
Other comprehensive income/(loss)	(562)	(699)	–	1	(95)	(189)	(10)	(20)
Total comprehensive income/(loss)	**368**	**2,935**	**–**	**(19)**	**(44)**	**(137)**	**(20)**	**41**

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(a) PJSC MMC Norilsk Nickel

In 2021 the Group has participated in the repurchase of Norilsk Nickel shares to raise additional funds to finance its own investment programme. The Group sold 3,691,465 shares for RUB 27,780 per share, with the aggregate consideration of USD 1,418 million. The carrying value of the shares sold amounted to USD 313 million, and USD 613 million of currency translation reserve attributed to the shares sold was reclassified to profit/(loss) for the period, resulting in net gain of USD 492 million recognised in the consolidated statement of income. The effective interest in Norilsk Nickel held by the Metals segment after the transaction comprised 26.39%, the average effective interest for the year 2021 was 27.11%.

The Group's investment in Norilsk Nickel is accounted for using equity method and the carrying value as at 31 December 2021 and 31 December 2020 amounted USD 3,274 million and USD 3,122 million, respectively. The Group's share of profit of Norilsk Nickel was USD 1,762 million, other comprehensive income was USD nil million, the foreign currency translation gain of USD 24 million, other effects related to transactions with non-controlling interest owners of USD 129 million for the year ended 31 December 2021.

As at 31 December 2020 Group's associate PJSC MMC Norilsk Nickel recognized a liability on the execution of a put option held by owners of 13.3% non-controlling interest in the share capital in LLC "GRK "Bystrinskoye" in the amount of USD 428 million. Since the non-controlling interest owners did not exercise their right under the put option before its expiry date of 31 December 2021, PJSC MMC Norilsk Nickel derecognised the liability on the execution of the put option as at 31 December 2021. PJSC MMC Norilsk Nickel recorded derecognition of the liability directly in the consolidated statement of changes in equity as Other effects related to transactions with non-controlling interest owners in the amount of USD 490 million, which was its fair value at 31 December 2021 immediately before derecognition. The Group recognized its share of this change of interest in the net assets of the associate directly in the consolidated statement of changes in equity as Share of equity transactions of an associate in the amount USD 129 million.

The market value amounted USD 12,395 million and USD 14,123 million as at 31 December 2021 and 31 December 2020, respectively, and is determined by multiplying the quoted bid price per share on the Moscow Exchange on the year-end date by the number of shares held by the Group.

(b) Queensland Alumina Limited

The carrying value of the Group's investment in Queensland Alumina Limited as at both 31 December 2021 and 31 December 2020 amounted to USD nil million. At 31 December 2021 management has not identified any impairment reversal indicators relating to the Group's investment in QAL and as a result no detailed impairment testing was performed in relation to this investment.

(c) BEMO project

The carrying values of the Group's investment in BEMO project as at 31 December 2021 and 31 December 2020 amounted to USD 595 million and USD 540 million, respectively.

For the purposes of impairment testing, the BEMO project was separated into two cash generating units – the Boguchansky Aluminium Smelter ("BoAZ') and the Boguchansky Hydro Power Plant ("BoGES"). The recoverable amount was determined by discounting the expected future net cash flows of each cash generating unit.

At 31 December 2021 management did not identify any impairment indicators relating to the Group's investment in BoGES nor any impairment reversal indicators relating to investments in BoAZ and as a result no detailed impairment testing was performed in relation to this investment.

At 31 December 2021, accumulated losses of USD 51million (2020: USD 443 million) related to impairment charges at BoAZ have not been recognised because the Group's investment has already been fully written down to USD nil million.

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Additional financial information of the Group's effective interest in BEMO project for the year ended 31 December 2021 and 31 December 2020 is presented below:

	31 December 2021 USD million	31 December 2020 USD million
Cash and cash equivalents	32	30
Current financial liabilities	(25)	(43)
Non-current financial liabilities	(770)	(859)
Depreciation and amortisation	(53)	(17)
Interest income	1	1
Interest expense	(13)	(15)
Income tax expense	(14)	(13)

14. Inventories

Inventories are measured at the lower of cost or net realisable value.

The cost of inventories is determined under the weighted average cost method, and includes expenditure incurred in acquiring the inventories, production or conversion costs and other costs incurred in bringing them to their existing location and condition. In the case of manufactured inventories and work in progress, cost includes an appropriate share of production overheads based on normal operating capacity.

Net realisable value is the estimated selling price in the ordinary course of business, less the estimated cost of completion and selling expenses.

Production costs include mining and concentrating costs, smelting, treatment and refining costs, other cash costs and depreciation and amortisation of operating assets.

	31 December	
	2021 USD million	2020 USD million
Raw materials and consumables	1,613	1,127
Work in progress	786	591
Finished goods and goods for resale	1,510	778
	3,909	**2,496**
Write-down to net realisable value	(178)	(157)
	3,731	**2,339**

Inventories at 31 December 2021 and 31 December 2020 are stated at cost.

Inventories with a carrying value of USD 781 million and USD 738 million were pledged as collateral for secured bank loans at 31 December 2021 and 31 December 2020, respectively (note 17).

15. Non-derivative financial instruments

Non-derivative financial instruments comprise investments in securities, trade and other receivables (excluding prepayments and tax assets), cash and cash equivalents, loans and borrowings and trade and other payables (excluding advances received and tax liabilities).

Non-derivative financial instruments, except for trade and other receivables, are recognised initially at fair value plus any directly attributable transaction costs. Trade and other receivables are recognised at transaction price.

A financial instrument is recognised when the Group becomes a party to the contractual provisions of the instrument. Financial assets are derecognised if the Group's contractual rights to the cash flows from the financial assets expire or if the Group transfers the financial asset to another party without retaining control or substantially all risks and rewards of the asset. Financial liabilities are derecognised if the Group's obligations specified in the contract expire or are discharged or cancelled.

IFRS 9 *Financial Instruments* sets out requirements for recognising and measuring financial assets, financial liabilities and some contracts to buy or sell non-financial items. The details of significant accounting policies are set out below.

Classification and measurement of financial assets and financial liabilities

IFRS 9 specifies three principal classification categories for financial assets: measured at amortised cost, fair value through other comprehensive income ("FVOCI") and fair value through profit or loss ("FVTPL"). The classification of financial assets under IFRS 9 is generally based on the business model in which a financial asset is managed and its contractual cash flow characteristics. Under IFRS 9, derivatives embedded in contracts where the host is a financial asset in the scope of the standard are never bifurcated. Instead, the hybrid financial instrument as a whole is assessed for classification.

The Group's financial assets mostly fall within the category of financial assets measured at amortised cost. The only exception is derivative financial assets measured at fair value through profit or loss and cash flow hedges accounted through other comprehensive income (note 19) and other investments measured at fair value through profit or loss (note 15(e)). The same applies to the Group's financial liabilities.

(a) Impairment of trade receivables

Under IFRS 9, loss allowances (expected credit losses – ECL) are measured on either of the following bases:

- 12-month ECLs: these are ECLs that result from possible default events within the 12 months after the reporting date; and
- lifetime ECLs: these are ECLs that result from all possible default events over the expected life of a financial instrument.

The Group measures loss allowances at an amount equal to lifetime ECLs, except for bank balances for which credit risk (i.e. the risk of default occurring over the expected life of the financial instrument) has not increased significantly since initial recognition. The Group measures loss allowances for trade receivables at an amount equal to lifetime ECLs.

When determining whether the credit risk of a financial asset has increased significantly since initial recognition and when estimating ECLs, the Group considers reasonable and supportable information that is relevant and available without undue cost or effort. This includes both quantitative and qualitative information and analysis, based on the Group's historical experience and informed credit assessment and including forward-looking information.

The Group assumes that the credit risk on a financial asset has increased significantly if it is more than 30 days past due.

The Group considers a financial asset to be in default when:

- The borrower is unlikely to pay its credit obligations to the Group in full, without recourse by the Group to actions such as realising security (if any is held); or
- The financial asset is more than 90 days past due, but additional analysis is conducted for each such receivable and assessment is updated accordingly.

The maximum period considered when estimating ECLs is the maximum contractual period over which the Group is exposed to credit risk.

ECLs are a probability-weighted estimate of credit losses. Credit losses are measured as the present value of all cash shortfalls (i.e. the difference between the cash flows due to the entity in accordance with the contract and the cash flows that the Group expects to receive). ECLs are discounted at the effective interest rate of the financial asset in case of long-term assets.

At each reporting date, the Group assesses whether financial assets carried at amortised cost are credit-impaired. A financial asset is 'credit-impaired' when one or more events that have a detrimental impact on the estimated future cash flows of the financial asset have occurred.

Loss allowances for financial assets measured at amortised cost are deducted from the gross carrying amount of the assets. Impairment losses related to trade and other receivables are presented as part of net other operating expenses.

The following analysis provides further detail about the calculation of ECLs related to trade receivables. The Group uses an allowance matrix to measure the ECLs of trade receivables from the customers. Loss rates are calculated using a 'roll rate' method based on the probability of a receivable progressing through successive stages of delinquency to write-off. The ECLs were calculated based on actual credit loss experience over the past two years. The Group performed the calculation of ECL rates separately for the customers of each key trading company of the Group. Exposures within each trading company were not further segmented except for individually significant customers which bear specific credit risk depending on the repayment history of the customer and relationship with the Group.

METALS

The following table provides information about determined ECLs rates for trade receivables both as at 1 January 2021 and 31 December 2021.

	Weighted-average loss rate		
	31 December 2021	**1 January 2021**	**Credit-impaired**
Current (not past due)	1%	1%	No
1-30 days past due	18%	4%	No
31-60 days past due	45%	10%	No
61-90 days past due	52%	71%	No
More than 90 days past due	63%	86%	Yes

POWER

The following table provides information about determined ECLs rates for trade receivables both as at 1 January 2021 and 31 December 2021.

	Weighted-average loss rate		
	31 December 2021	**1 January 2021**	**Credit-impaired**
Current (not past due)	1%	1%	No
1-90 days past due	1%	1%	No
90-180 days past due	30%	30%	No
More than 180 days past due	100%	100%	Yes

Fluctuations reflect differences between economic conditions during the period over which the historical data has been collected, current conditions and the Group's view of economic conditions over the expected lives of the receivables.

Impairment losses in respect of trade receivables are recorded using an allowance account unless the Group is satisfied that recovery of the amount is remote, in which case the impairment loss is written off against trade receivables directly.

(b) Trade and other receivables and advances paid

	31 December 2021 USD million	31 December 2020 USD million
Trade receivables from third parties	**949**	**610**
Trade receivables from related parties, including	**126**	**63**
Related parties – companies capable of exerting significant influence	*105*	*50*
Related parties – other	*2*	*2*
Related parties – associates and joint ventures	*19*	*11*
VAT recoverable	**419**	**364**
Advances paid to third parties	**137**	**120**
Advances paid to related parties, including	**109**	**67**
Related parties – companies capable of exerting significant influence	*–*	*1*
Related parties – associates and joint ventures	*109*	*66*
Other receivables from third parties	**171**	**224**
Other taxes receivable	**19**	**30**
Income tax receivable	**18**	**21**
Dividends receivable from related parties	**827**	**–**
Related parties – associates and joint ventures	*827*	*–*
Other current assets	**9**	**8**
	2,784	**1,507**
Impairment of receivables	(129)	(76)
	2,655	**1,431**

(i) Ageing analysis

Included in trade and other receivables are trade receivables (net of allowance for doubtful debts) with the following ageing analysis as of the statement of financial position dates:

METALS

	31 December 2021 USD million	31 December 2020 USD million
Current	833	372
Past due 1-30 days	16	77
Past due 31-60 days	–	2
Past due 61-90 days	1	1
Past due over 90 days	11	11
Amounts past due	28	91
	861	**463**

POWER

	31 December 2021 USD million	31 December 2020 USD million
Current	160	146
Past due 1-30 days	11	14
Past due 31-60 days	6	6
Past due 61-90 days	4	6
Past due 91-180 days	7	6
Past due over 180 days	3	1
Amounts past due	31	33
	191	**179**

Trade receivables are on average due within 60 days from the date of billing. The receivables that are neither past due nor impaired (i.e. current) relate to a wide range of customers for whom there was no recent history of default.

The Group has concluded that there is no material impact of COVID-19 related matters described in note 1(e) on the expected credit losses assessment as at 31 December 2021.

Further details of the Group's credit policy are set out in note 20(e).

(c) Trade and other payables and advances received

	31 December 2021 USD million	31 December 2020 USD million
Accounts payable to third parties	896	687
Accounts payable to related parties, including	103	52
Related parties – companies capable of exerting significant influence	*6*	*3*
Related parties – associates and joint ventures	*97*	*49*
Advances received from third parties	1,163	903
Other payables and accrued liabilities	267	224
Income tax payable	62	28
Other taxes payable	315	262
	2,806	**2,156**

All of the trade and other payables are expected to be settled or recognised as income within one year or are repayable on demand.

(d) Cash and cash equivalents

	31 December 2021 USD million	31 December 2020 USD million
Bank balances, USD	549	1,027
Bank balances, RUB	402	701
Bank balances, EUR	85	109
Bank balances, other currencies	75	33
Short-term bank deposits	1,213	679
Other cash equivalents	4	–
Cash and cash equivalents in the consolidated statement of cash flows	**2,328**	**2,549**
Restricted cash	2	13
Cash and cash equivalents in the consolidated statement of financial position	**2,330**	**2,562**

As at 31 December 2021 and 31 December 2020 included in cash and cash equivalents was restricted cash of USD 2 million and USD 13 million, respectively.

(e) Other non-current assets

	31 December 2021 USD million	31 December 2020 USD million
Long-term deposits	139	111
Prepayment for subsidiary acquisition	73	–
Other non-current assets	46	22
	258	**133**

In September 2020 the Group obtained control of PGLZ LLC by acquiring 99.9% of its shares. The Group has determined that together the acquired inputs and processes significantly contribute to the ability to create revenue and has concluded that the acquired set is a business. Total consideration paid amounted to USD 71 million and was paid in cash as at 1 January 2020. Fair value of acquired assets and liabilities amounted to USD 24 million from which USD 21 million related to property, plant and equipment.

(f) Investments in equity securities measured at fair value through profit and loss

As at 31 December 2021 the Group owns circa 7% of RusHydro shares, most of which were acquired by Rusal subsidiaries through several transactions consummated from July 2020 till April 2021, for a total consideration of USD 366 million, of which USD 291 million was incurred in 2021. The Group treats them as equity securities measured at fair value through profit and loss.

16. Equity

(a) Share capital, additional paid-in capital and transactions with shareholders

As at 31 December 2021 the Parent Company's share capital is divided into 638,848,896 ordinary shares with a nominal value of USD 0.00007 each. The Parent Company may also issue 75,436,818.286 ordinary shares.

As at 31 December 2021 and 31 December 2020 all issued ordinary shares were fully paid.

Change in effective interest in subsidiaries

In 2021, through certain transactions, the Group increased its effective interest in Irkutskenergo from 93.2% to 98.03% for USD 44 million.

(b) Treasury share reserve

When shares recognised as equity are repurchased, the amount of the consideration paid, which includes directly attributable costs, net of any tax effects, is recognised as a deduction from equity. Repurchased shares are classified as treasury shares and are presented in the treasury share reserve. When treasury shares are sold or reissued subsequently, the amount received is recognised as an increase in equity, and the resulting surplus or deficit on the transaction is presented in additional paid-in capital.

The reserve for the Group's treasury shares comprises the cost of the Parent Company's shares held by the Group. As at 31 December 2021 and 31 December 2020 the Group held 136,511,122 of its own shares.

(c) Currency translation reserve

The currency translation reserve comprises all foreign exchange differences arising from the translation of the consolidated financial statements of foreign operations. The reserve is dealt with in accordance with the accounting policies set out in note 3(b).

(d) Other reserves

Other reserves include the cumulative unrealised actuarial gains and losses on the Group's defined post-retirement benefit plans, the effective portion of the accumulative net change in fair value of cash flow hedges, the Group's share of other comprehensive income of associates and cumulative unrealised gains and losses on Group's financial assets which have been recognised directly in other comprehensive income.

(e) Dividends

During the years ended 31 December 2021 and 31 December 2020 the Group did not declare and pay dividends.

The Parent Company may distribute dividends from retained earnings and profit for the reporting period in compliance with the current legislation of the Russian Federation and the provisions of its Charter.

(f) Revaluation reserve

The revaluation reserve comprises the cumulative net change in the fair value of hydro assets at the reporting date and is dealt with in accordance with the accounting policies set out in note 11(a)(i).

An independent valuation analysis of hydro assets was carried out as at 31 December 2020, the fair value of hydro assets was estimated at USD 3,443 million (note 11(e)). As a result of this fair value valuation, the Group recognised an additional revaluation reserve in the amount of USD 184 million net of tax (including USD 180 million attributable to shareholders of the Parent Company).

(g) Non-controlling interests

The following table summarises the information relating to each of the Group`s subsidiaries that has material non-controlling interest:

31 December 2021

	UC RUSAL	Irkutskenergo Group	OJSC Irkutsk Electric Grid Company	Total
NCI percentage	**43.1%**	**1.97%**	**46.6%**	
Assets	20,422	5,772	534	
Liabilities	(10,382)	(3,462)	(175)	
Net assets	**10,040**	**2,310**	**359**	
Carrying amount of NCI	4,329	46	161	**4,536**
Revenue	11,994	1,790	345	
Profit	3,225	17	(9)	
Other comprehensive income	627	172	–	
Total comprehensive income	**3,852**	**189**	**(9)**	
Profit attributable to NCI	1,391	4	(3)	**1,392**
Other comprehensive income attributable to NCI	269	12	–	**281**
				1,673
Cash flows generated from operating activities	1,146	398	36	
Cash flows generated from / (used in) investing activities	490	(409)	(60)	
Cash flows (used in) / generated from financing activities	(1,891)	79	26	
Net increase in cash and cash equivalents	**(255)**	**68**	**2**	

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31 December 2020

	UC RUSAL	Irkutskenergo Group	OJSC Irkutsk Electric Grid Company	Total
NCI percentage	**43.1%**	**6.8%**	**47.6%**	
Assets	16,894	5,176	517	
Liabilities	(10,835)	(3,200)	(165)	
Net assets	**6,059**	**1,976**	**352**	
Carrying amount of NCI	2,613	129	167	**2,909**
Revenue	8,566	1,598	309	
Profit	759	24	8	
Other comprehensive income	(963)	104	–	
Total comprehensive income	**(204)**	**128**	**8**	
Profit attributable to NCI	327	2	3	**332**
Other comprehensive income attributable to NCI	(415)	(18)	(32)	**(465)**
				(133)
Cash flows generated from operating activities	1,091	178	60	
Cash flows generated from / (used in) investing activities	128	(1,688)	(64)	
Cash flows used in financing activities	(694)	1,539	4	
Net increase/(decrease) in cash and cash equivalents	**525**	**29**	**–**	

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17. Loans and borrowings

This note provides information about the contractual terms of the Group's loans and borrowings. For more information about the Group's exposure to interest rate and foreign currency risk refer to notes 20(c)(ii) and 20(c)(iii), respectively.

	31 December	
	2021	2020
	USD million	USD million
Non-current liabilities		
Secured bank loans	6,291	7,756
Unsecured bank loans	567	22
Bonds	1,316	2,437
	8,174	**10,215**

	31 December	
	2021	2020
	USD million	USD million
Current liabilities		
Current portion of secured bank loans	675	462
Current portion of unsecured bank loans	5	3
	680	**465**
Secured bank loans	–	260
Unsecured bank loans	871	1,387
Accrued interest	68	60
Bonds	1,118	1
	2,057	**1,708**
	2,737	**2,173**

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(a) Loans and borrowings

	31 December	
	2021	2020
	USD million	USD million
Non-current liabilities		
Secured bank loans		
Variable		
USD – 3M Libor + 1.7%	125	–
USD – 3M Libor + 2.1%	718	1,073
USD – 3M Libor + 3.0%	2,098	2,097
RUB – CBR + 1.50-2.00%	3,041	4,585
RUB – CBR + 3.15%	309	–
Fixed		
RUB – fixed at 10.00%	–	1
	6,291	**7,756**
Unsecured bank loans		
Variable		
RUB – CBR + 1.15-1.8%	534	–
RUB – other	–	13
EUR – 6M Euribor + 0.67%	33	9
	567	**22**
Bonds	1,316	2,437
	8,174	**10,215**
Current liabilities		
Current portion of secured bank loans		
Variable		
USD – 1M Libor + 3.60%	–	54
USD – 3M Libor + 1.7%	75	–
USD – 3M Libor + 2.1%	268	–
RUB – CBR + 1.5-2.00%	332	367
Fixed		
RUB – fixed at 8.75-11.5%	–	41
	675	**462**
Current portion of unsecured bank loans		
Variable		
EUR – 6M Euribor + 0.67%	5	1
RUB – other	–	2
	5	**3**
Secured bank loans		
Variable		
USD – 3M Libor + 1.35-1.65%	–	260
	–	**260**
Unsecured bank loans		
Variable		
USD – 1M Libor + 2.40%	–	200
RUB – CBR + 1.0-2.0%	481	967
Fixed		
USD – fixed at 2.15-2.97%	375	200
RUB – fixed at 5.75-10.5%	15	20
	871	**1,387**
Accrued interest	68	60
Bonds	1,118	1
	2,057	**1,708**
	2,737	**2,173**

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The bank loans are secured as at 31 December 2021 and 31 December 2020 by the following:

- Rights, including all monies and claims, arising out of certain sales contracts between the Group's trading subsidiaries and its ultimate customers, were assigned to secure the syndicated Pre-Export Finance Term Facility Agreements (PXFs) dated 25 October 2019 and dated 28 January 2021;
- Properties, plant and equipment – refer to note 11(d);
- Inventories – refer to note 14;
- Shares of the Group companies as described below.

METALS

On 28 January 2021, the Metals segment entered into a new three-year sustainability-linked pre-export finance facility for up to USD 200 million. The interest rate is subject to a sustainability discount or premium depending on UC RUSAL's fulfilment of the sustainability key performance indicators (KPIs). The proceeds were used to refinance the principal outstanding under the existing debt.

The nominal value of UC RUSAL's loans and borrowings was USD 4,266 million at 31 December 2021 (31 December 2020: USD 5,329 million).

As at 31 December 2021 and 31 December 2020 the secured bank loans are secured by certain pledges of shares of a number of UC RUSAL's subsidiaries and 25% +1 share of Norilsk Nickel (Group's associate).

POWER

In February 2020, the Group entered into 2 loan agreements with Sberbank:

Loan 1 – 3-year RUB 100.8 billion loan agreement to finance the acquisition of a 21.37% stake in the Parent Company for USD 1.6 billion from VTB (note 1(a)).

Loan 2 – loan agreement allowing the extension of the final maturity of the Loan 1 by 4 years during 2022.

The nominal value of Power loans and borrowings was USD 4,182 million at 31 December 2021 (31 December 2020: USD 4,610 million).

As at 31 December 2021 and 31 December 2020 the secured bank loans are secured by certain pledges of shares of a number of Parent Company's subsidiaries, including LLC ESE–Hydrogeneration – 100% (2020: 100%), JSC Krasnoyarsk Hydro-Power Plant – 100% (2020: 100%), PJSC Irkutskenergo – 73.18% (2020: 77.43%) and JSC EuroSibEnergo – 50% + 1 share (2020: 50% + 1 share). As at 31 December 2021 and 31 December 2020 21.37% shares of the Parent Company were pledged under RUB 100.8 billion loan agreement described above.

The fair value of the Group's liabilities measured at amortised cost approximate their carrying values as at 31 December 2021 and 31 December 2020.

(b) Bonds

As at 31 December 2021, the Group had bonds denominated in RUB and eurobonds denominated in USD as follows:

Type	Series	The number of bonds traded in the market	Nominal value, USD million	Nominal interest rate	Put-option date	Maturity date
Bond	BO-01	30,263	–	0.01%	18.04.2019	07.04.2026
Bond	BO-001P-01	15,000,000	202	9.00%	27.04.2022	16.04.2029
Bond	BO-001P-02	15,000,000	202	8.60%	25.01.2023	28.06.2029
Bond	BO-001P-03	15,000,000	202	8.25%	12.09.2022	30.08.2029
Bond	BO-001P-04	15,000,000	202	7.45%	14.11.2022	01.11.2029
Bond	BO-002P-01	10,000,000	134	6.50%	09.06.2023	28.05.2030
Eurobond	–	511,998	512	5.125%	–	02.02.2022
Eurobond	–	481,985	482	5.3%	–	03.05.2023
Eurobond	–	497,642	498	4.85%	–	01.02.2023

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As at 31 December 2021, the amount of accrued interest on these bonds was 44 million (31 December 2020: USD 44 million).

The total foreign exchange gain on bonds for the year ended 31 December 2021 accounted in other comprehensive income as part of the cash flow hedge result amounted to USD 4 million (USD 167 million for the year ended 31 December 2020).

18. Provisions

(a) Accounting policy

A provision is recognised if, as a result of a past event, the Group has a present legal or constructive obligation that can be estimated reliably, and it is probable that an outflow of economic benefits will be required to settle the obligation. Provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the liability. The unwinding of the discount is recognised as finance costs.

(i) Site restoration

The mining, refining and smelting activities of the Group can give rise to obligations for site restoration and rehabilitation. Restoration and rehabilitation works can include facility decommissioning and dismantling, removal or treatment of waste materials, land rehabilitation, and site restoration. The extent of work required and the associated costs are dependent on the requirements of law and the interpretations of the relevant authorities.

Provisions for the cost of each restoration and rehabilitation program are recognised at the time that environmental disturbance occurs. When the extent of disturbance increases over the life of an operation, the provision is increased accordingly. Costs included in the provision encompass obligated and reasonably estimable restoration and rehabilitation activities expected to occur progressively over the life of the operation and at the time of closure in connection with disturbances at the reporting date.

Routine operating costs that may impact the ultimate restoration and rehabilitation activities, such as waste material handling conducted as an integral part of a mining or production process, are not included in the provision. Costs arising from unforeseen circumstances, such as the contamination caused by unplanned discharges, are recognised as an expense and liability when the event gives rise to an obligation which is probable and capable of reliable estimation.

Restoration and rehabilitation provisions are measured at the expected value of future cash flows, discounted to their present value and determined according to the probability of alternative estimates of cash flows occurring for each operation. Discount rates used are specific to the country in which the operation is located. Significant judgements and estimates are involved in forming expectations of future activities and the amount and timing of the associated cash flows. Those expectations are formed based on existing environmental and regulatory requirements.

When provisions for restoration and rehabilitation are initially recognised, the corresponding cost is capitalised as an asset, representing part of the cost of acquiring the future economic benefits of the operation. The capitalised cost of restoration and rehabilitation activities is amortised over the estimated economic life of the operation on a units of production or straight-line basis. The value of the provision is progressively increased over time as the effect of discounting unwinds, creating an expense recognised as part of finance expenses.

Restoration and rehabilitation provisions are also adjusted for changes in estimates. Those adjustments are accounted for as a change in the corresponding capitalised cost, except where a reduction in the provision is greater than the unamortised capitalised cost, in which case the capitalised cost is reduced to nil and the remaining adjustment is recognised in profit or loss. Changes to the capitalised cost result in an adjustment to future amortisation charges. Adjustments to the estimated amount and timing of future restoration and rehabilitation cash flows are a normal occurrence in light of the significant judgements and estimates involved. Factors influencing those changes include revisions to estimated reserves, resources and lives of operations; developments in technology; regulatory requirements and environmental management strategies; changes in the estimated costs of anticipated activities, including the effects of inflation and movements in foreign exchange rates; and movements in general interest rates affecting the discount rate applied.

(ii) Legal claim

In the normal course of business, the Group may be involved in legal proceedings. Where management considers that it is more likely than not that proceedings will result in the Group compensating third parties, a provision is recognised for the best estimate of the amount expected to be paid. Where management considers that it is more likely than not that proceedings will not result in the Group compensating third parties or where, in rare circumstances, it is not considered possible to provide a sufficiently reliable estimate of the amount expected to be paid, no provision is made for any potential liability under the litigation but the circumstances and uncertainties involved are disclosed as contingent liabilities. The assessment of the likely outcome of legal proceedings and the amount of any potential liability involves significant judgement. As law and regulations in many of the countries in which the Group operates are continuing to evolve, particularly in the areas of taxation, sub-soil rights and protection of the environment, uncertainties regarding litigation and regulation are greater than those typically found in countries with more developed legal and regulatory frameworks.

(b) Disclosure

USD million	Pension liabilities	Site restoration	Provisions for legal claims	Total
Balance at 1 January 2020	**111**	**459**	**37**	**607**
Non-current	*104*	*432*	*–*	***536***
Current	*7*	*27*	*37*	***71***
Provisions made during the year	13	59	10	**82**
Provisions reversed during the year	(1)	(23)	–	**(24)**
Actuarial losses	(3)	–	–	**(3)**
Provisions used during the year	(7)	(3)	(9)	**(19)**
Change in estimates	–	(1)	–	**(1)**
Translation difference	(14)	(15)	(6)	**(35)**
Balance at 31 December 2020	**99**	**476**	**32**	**607**
Non-current	*91*	*427*	*–*	***518***
Current	*8*	*49*	*32*	***89***
Provisions made during the year	10	96	14	**120**
Provisions reversed during the year	–	(23)	(4)	**(27)**
Actuarial loss	4	–	–	**4**
Provisions used during the year	(7)	(2)	(20)	**(29)**
Change in estimates	–	(8)	–	**(8)**
Translation difference	–	(21)	–	**(21)**
Balance at 31 December 2021	**106**	**518**	**22**	**646**
Non-current	*98*	*387*	*–*	***485***
Current	*8*	*131*	*22*	***161***
	106	**518**	**22**	**646**

(c) Pension liabilities

As at 31 December 2021, the pension liability is represented by UC RUSAL of USD 66 million (31 December 2020: USD 55 million) and Power of USD 40 million (31 December 2020: USD 43 million).

The provision for pensions mainly comprises lump sum payments at retirement by aluminium plants located in Russia and Ukraine, and by electricity generating companies. The Group also provides pension benefits to eligible participants at facilities located outside of the Russian Federation and Ukraine.

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Group subsidiaries in the Russian Federation

The Group voluntarily provides long-term and post-employment benefits to its former and existing employees including death-in-service, jubilee, lump sum upon retirement, material support for pensioners and death-in-pension benefits. Furthermore, the Group provides regular social support payments to some of its veterans of World War II.

The above employee benefit programs are of a defined benefit nature. The Group finances these programs on a pay-as-you-go basis, so plan assets are equal to zero.

Group subsidiaries in Ukraine

Due to legal requirements, the Ukrainian subsidiaries are responsible for partial financing of the state hardship pensions for those of its employees who worked, or still work, under severe and hazardous labour conditions (hardship early retirement pensions). These pensions are paid until the recipient reaches the age of entitlement to the State old age pension (55-60 years for female (dependent on year of birth) and 60 years for male employees). In Ukraine, the Group also voluntarily provides long-term and post-employment benefits to its employees including death-in-service, lump sum benefits upon retirement and death-in-pension benefits.

The above employee benefit programs are of a defined benefit nature. The Group finances these programs on a pay-as-you-go basis, so plan assets are equal to zero.

Group subsidiaries outside the Russian Federation and Ukraine

At its Guinean entities, the Group provides a death-in-service benefit and lump-sum benefits upon disability and old-age retirement.

At its Guyana subsidiary, the Group provides a death-in-service benefit.

At its Italian subsidiary (Eurallumina) the Group only provides lump sum benefits upon retirement, which relate to service up to 1 January 2007.

In Sweden (Kubikenborg Aluminium AB), the Group provides defined benefit lifelong and temporary pension benefits. The lifelong benefits are dependent on the past service and average salary level of the employee, with an accrual rate that depends on the salary bracket the employee is in. The liability relates only to benefits accrued before 1 January 2004.

The number of employees in all jurisdictions eligible for the plans as at 31 December 2021 and 2020 was 50,518 and 48,548, respectively. The number of pensioners in all jurisdictions as at 31 December 2021 and 2020 was 42,086 and 43,422, respectively.

Actuarial valuation of pension liabilities

The actuarial valuations of UC RUSAL and the portion of UC RUSAL's funds specifically designated for the UC RUSAL's employees were completed by a qualified actuary, Robert van Leeuwen AAG, as at 31 December 2021, using the projected unit credit method as stipulated by IAS 19.

The key actuarial assumptions (weighted average, weighted by DBO) are as follows:

	31 December 2021 % per annum	31 December 2020 % per annum
Discount rate	7.9	5.7
Future salary increases	8.7	7.1
Future pension increases	4.2	3.6
Staff turnover	4.7	4.7
Mortality	USSR population table for 1985, Ukrainian population table for 2000	USSR population table for 1985, Ukrainian population table for 2000
Disability	70% Munich Re for Russia; 40% of death probability for Ukraine	70% Munich Re for Russia; 40% of death probability for Ukraine

As at 31 December 2021 and 31 December 2020 the Group's obligations were fully uncovered as the Group has only wholly unfunded plans.

POWER

The principal assumptions used in determining pension obligations for the pension plans are shown below:

	31 December 2021	31 December 2020
Discount rate	8.5%	6.0%
Future salary increases	5.7%	5.5%
Pension and inflation rate increases	4.2%	4.0%

(d) Site restoration and environmental provisions

The Group provides for site restoration obligations when there is a specific legal or constructive obligation for mine reclamation, landfill closure (primarily comprising red mud basin disposal sites) or specific lease restoration requirements. The Group does not record any obligations with respect to decommissioning of its refining or smelting facilities and restoration and rehabilitation of the surrounding areas unless there is a specific plan to discontinue operations at a facility. This is because any significant costs in connection with decommissioning of refining or smelting facilities and restoration and rehabilitation of the surrounding areas would be incurred no earlier than when the facility is closed and the facilities are currently expected to operate over a term in excess of 50-100 years due to the perpetual nature of the refineries and smelters and continuous maintenance and upgrade programs resulting in the fair values of any such liabilities being negligible.

The site restoration provision relates primarily to mine reclamation and red mud basin disposal sites at alumina refineries and ash dumps removal at coal burning electricity and heat generation stations.

The principal assumptions used in determining site restoration provision are:

	31 December 2021	31 December 2020
Timing of cash outflows	2022: USD 130 million 2023-2027: USD 30 million 2028-2038: USD 150 million after 2038: USD 405 million	2021: USD 49 million 2022-2026: USD 33 million 2027-2037: USD 131 million after 2037: USD 374 million
Years required to fill the ash dumps	26.5	18.1
Discount rate for Irkutskenergo and Coal segment assets after adjusting for inflation	4.2%	2.8%
Risk free discount rate for UC RUSAL after adjusting for inflation	1.19%	0.73%

The risk free rate for the year 2020-2021 represents an effective rate, which comprises rates differentiated by years of obligation settlement and by currencies in which the provisions were calculated.

At each reporting date management have assessed the provisions for site restoration and concluded that the provisions and disclosures are adequate.

(e) Provisions for legal claims

The Group's subsidiaries are subject to a variety of lawsuits and claims in the ordinary course of its business. As at 31 December 2021, there were several claims filed against the Group's subsidiaries contesting breaches of contract terms and non-payment of existing obligations. Management has reviewed the circumstances and estimated that the amount of probable outflow related to these claims should not exceed USD 22 million (31 December 2020: USD 32 million).

At each reporting date management has assessed the provisions for litigation and claims and concluded that the provisions and disclosures are adequate.

19. Derivative financial assets and liabilities

Accounting policies

The Group enters, from time to time, into various derivative financial instruments to manage its exposure to commodity price risk, foreign currency risk and interest rate risk.

Embedded derivatives are separated from the host contract and accounted for separately if the economic characteristics and risks of the host contract and the embedded derivative are not closely related, a separate instrument with the same terms as the embedded derivative would meet the definition of a derivative and the combined instrument is not measured at fair value through profit or loss.

On initial designation of the derivative as a hedging instrument, the Group formally documents the relationship between the hedging instrument and hedged item, including the risk management objectives and strategy in undertaking the hedge transaction and the hedged risk, together with the methods that will be used to assess the effectiveness of the hedging relationship. The Group makes an assessment, both at the inception of the hedge relationship as well as on an ongoing basis, of whether the hedging instruments are expected to be highly effective in offsetting the changes in the fair value or cash flows of the respective hedged items attributable to the hedged risk, and whether the actual results of each hedge are within a range of 80-125%. For a cash flow hedge of a forecast transaction, the transaction should be highly probable to occur and should present an exposure to variation in cash flows that ultimately could affect reported profit or loss.

Derivatives are recognised initially at fair value; attributable transaction costs are recognised in profit or loss when incurred. Subsequent to initial recognition, derivatives are measured at fair value.

The measurement of fair value of derivative financial instruments, including embedded derivatives, is based on quoted market prices. Where no price information is available from a quoted market source, alternative market mechanisms or recent comparable transactions, fair value is estimated based on the Group's views on relevant future prices, net of valuation allowances to accommodate liquidity, modelling and other risks implicit in such estimates. Changes in the fair value therein are accounted for as described below.

When a derivative is designated as the hedging instrument in a hedge of the variability in cash flows attributable to a particular risk associated with a recognised asset or liability or a highly probable forecast transaction that could affect profit or loss, the effective portion of changes in the fair value of the derivative is recognised in other comprehensive income and presented in the hedging reserve in equity. Any ineffective portion of changes in the fair value of a derivative is recognised in profit or loss.

When the hedged item is a non-financial asset, the amount accumulated in equity is included in the carrying amount of the asset when the asset is recognised. In other cases, the amount accumulated in equity is reclassified to profit or loss in the same period that the hedged item affects profit or loss. If the hedging instrument no longer meets the criteria for hedge accounting, expires or is sold, terminated or exercised, or the designation is revoked, then hedge accounting is discontinued prospectively. If the forecast transaction is no longer expected to occur, then the balance in equity is reclassified to profit or loss.

Changes in the fair value of separated embedded derivatives and derivative financial instruments not designated for hedge accounting are recognised immediately in profit or loss.

Disclosures

	31 December 2021 USD million		31 December 2020 USD million	
	Derivative assets	Derivative liabilities	Derivative assets	Derivative liabilities
Petroleum coke supply contracts and other raw materials	24	15	31	43
Forward contracts for aluminium and other instruments	118	26	19	9
Cross currency swap	–	165	–	133
Total	**142**	**206**	**50**	**185**
Non-current	*22*	*61*	*20*	*28*
Current	*120*	*145*	*30*	*157*

Derivative financial instruments are recorded at their fair value at each reporting date. Fair value is estimated in accordance with Level 3 of the fair value hierarchy based on management estimates and consensus economic forecasts of relevant future prices, net of valuation allowances to accommodate liquidity, modelling and other risks implicit in such estimates. The Group's policy is to recognise transfers between levels of fair value hierarchy as at the date of the event or change in circumstances that caused the transfer. The following significant assumptions were used in estimating derivative instruments:

	2022	2023	2024	2025	2026
LME Al Cash, USD per tonne	2,795	2,658	2,466	2,315	2,272
Platt's FOB Brent, USD per barrel	76	71	68	66	65

The movement in the balance of Level 3 fair value measurements of derivatives is as follows:

	31 December	
	2021	2020
	USD million	USD million
Balance at the beginning of the year	**(135)**	**54**
Unrealised changes in fair value recognised in statement of profit or loss (finance expense) during the year	(352)	(226)
Unrealised changes in fair value recognised in other comprehensive income (cash flow hedge) during the year	(28)	(53)
Realised portion of electricity, coke and raw material contracts and cross currency swap	451	90
Balance at the end of the year	**(64)**	**(135)**

During the year 2021 there have been no changes in valuation techniques used to calculate the derivative financial instruments compared to prior year.

Management believes that the values assigned to the key assumptions and estimates represented the most realistic assessment of future trends. The results for the derivative instruments are not particularly sensitive to any factors other than the assumptions disclosed above.

UC RUSAL entered into various petroleum coke supply contracts and other raw materials where the price of coke is determined with reference to the Brent oil price, LME aluminium price and average monthly aluminium quotations. UC RUSAL also sells products to various third parties at prices that are influenced by changes in London Metal Exchange aluminium prices. From time to time UC RUSAL enters into forward sales and purchase contracts for a portion of its anticipated primary aluminium sales and purchases to reduce the risk of fluctuating prices on these sales. During the year ended 31 December 2021 the Group recognised a total net loss of USD 352 million in relation to the above contracts (31 December 2020: loss of USD 226 million). Unrealised changes in fair value recognised in other comprehensive income (cash flow hedge) during the period are fully attributable to cross currency swaps (note 17(b)).

20. Financial risk management and fair values

(a) Fair values

Management believes that the fair values of financial assets and liabilities approximate their carrying amounts.

The methods used to estimate the fair values of the financial instruments are as follows:

Trade and other receivables, short-term investments, cash and cash equivalents, current loans and borrowings and trade and other payables: the carrying amounts approximate fair value because of the short maturity period of the instruments.

Investments in equity securities: measured at fair value through profit and loss, so, its carrying amount is equal its fair value.

Long-term loans and borrowings, other non-current liabilities: the fair values of other non-current liabilities are based on the present value of the anticipated cash flows and approximate carrying value, other than Eurobonds and RUSAL Bratsk bonds issued. The fair value of the loans and borrowings with fixed and floating interest rate as at 31 December 2021 and 31 December 2020 was calculated based on the present value of future principal and interest cash flows, using discount interest rate that take into account the currency of the debt, expected maturity dates and credit risks associated with the Group that existed at the reporting date.

Derivatives: the fair value of derivative financial instruments, including embedded derivatives, is based on quoted market prices. Where no price information is available from a quoted market source, alternative market mechanisms or recent comparable transactions, fair value is estimated based on the Group's views on relevant future prices, net of valuation allowances to accommodate liquidity, modelling and other risks implicit in such estimates. Option-based derivatives are valued using Black-Scholes models and Monte-Carlo simulations. The derivative financial instruments are recorded at their fair value at each reporting date.

The following table presents the fair value of Group's financial instruments measured at the end of the reporting period on a recurring basis, categorised into the three-level fair value hierarchy as defined by IFRS 13, *Fair Value Measurement*. The level into which a fair value measurement is classified is determined with reference to the observability and significance of the inputs used in the valuation technique as follows:

- Level 1 valuations: Fair value measured using only Level 1 inputs i.e. unadjusted quoted prices in active markets for identical assets or liabilities at the measurement date.
- Level 2 valuations: Fair value measured using Level 2 inputs i.e. observable inputs which fail to meet Level 1, and not using significant unobservable inputs. Unobservable inputs are inputs for which market data are not available.
- Level 3 valuations: Fair value measured using significant unobservable inputs.

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		Carrying amount				Fair value			
	Note	Designated at fair value USD million	Financial assets at amortised cost USD million	Other financial assets/ (liabilities) USD million	Total USD million	Level 1 USD million	Level 2 USD million	Level 3 USD million	Total USD million
Financial assets measured at fair value									
Petroleum coke supply contracts and other raw materials	19	24	–	–	**24**	–	–	24	**24**
Forward contracts for aluminium and other instruments	19	118	–	–	**118**	–	–	118	**118**
Investments in equity securities measured at fair value through profit and loss		–	–	316	**316**	316	–	–	**316**
		142	**–**	**316**	**458**	**316**	**–**	**142**	**458**
Financial assets not measured at fair value*									
Trade and other receivables	15(b)	–	2,410	–	**2,410**	–	2,410	–	**2,410**
Short-term investments		–	131	–	**131**	–	131	–	**131**
Cash and cash equivalents	15(d)	–	2,330	–	**2,330**	–	2,330	–	**2,330**
		–	**4,871**	**–**	**4,871**	**–**	**4,871**	**–**	**4,871**
Financial liabilities measured at fair value									
Cross currency swaps	19	(165)	–	–	**(165)**	–	–	(165)	**(165)**
Petroleum coke supply contracts and other raw materials	19	(15)	–	–	**(15)**	–	–	(15)	**(15)**
Forward contracts for aluminium and other instruments	19	(26)	–	–	**(26)**	–	–	(26)	**(26)**
		(206)	**–**	**–**	**(206)**	**–**	**–**	**(206)**	**(206)**
Financial liabilities not measured at fair value*									
Loans and borrowings	17(a)	–	–	(8,477)	**(8,477)**	–	(8,614)	–	**(8,614)**
Unsecured bond issue	17(b)	–	–	(2,434)	**(2,434)**	(941)	(1,524)	–	**(2,465)**
Trade and other payables	15(c)	–	–	(1,643)	**(1,643)**	–	(1,643)	–	**(1,643)**
		–	**–**	**(12,554)**	**(12,554)**	**(941)**	**(11,781)**	**–**	**(12,722)**

* The Group considers that the carrying amounts of short-term trade receivables and payables are a reasonable approximation of fair values.

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As at 31 December 2020

		Carrying amount				Fair value			
	Note	Designated at fair value USD million	Financial assets at amortised cost USD million	Other financial assets/ (liabilities) USD million	Total USD million	Level 1 USD million	Level 2 USD million	Level 3 USD million	Total USD million
Financial assets measured at fair value									
Petroleum coke supply contracts and other raw materials	19	31	–	–	**31**	–	–	31	**31**
Forward contracts for aluminium and other instruments	19	19	–	–	**19**	–	–	19	**19**
Other non-current assets	15(e)	–	–	75	**75**	75	–	–	**75**
		50	**–**	**75**	**125**	**75**	**–**	**50**	**125**
Financial assets not measured at fair value*									
Trade and other receivables	15(b)	–	1,247	–	**1,247**	–	1,247	–	**1,247**
Short-term investments		–	237	–	**237**	–	237	–	**237**
Cash and cash equivalents	15(d)	–	2,562	–	**2,562**	–	2,562	–	**2,562**
		–	**4,046**	**–**	**4,046**	**–**	**4,046**	**–**	**4,046**
Financial liabilities measured at fair value									
Cross currency swaps	19	(133)	–	–	**(133)**	–	–	(133)	**(133)**
Petroleum coke supply contracts and other raw materials	19	(43)	–	–	**(43)**	–	–	(43)	**(43)**
Forward contracts for aluminium and other instruments	19	(9)	–	–	**(9)**	–	–	(9)	**(9)**
		(185)	**–**	**–**	**(185)**	**–**	**–**	**(185)**	**(185)**
Financial liabilities not measured at fair value*									
Loans and borrowings	17(a)	–	–	(9,950)	**(9,950)**	–	(9,788)	–	**(9,788)**
Unsecured bond issue	17(b)	–	–	(2,438)	**(2,438)**	(972)	(1,574)	–	**(2,546)**
Trade and other payables	15(c)	–	–	(1,253)	**(1,253)**	–	(1,253)	–	**(1,253)**
		–	**–**	**(13,641)**	**(13,641)**	**(972)**	**(12,615)**	**–**	**(13,587)**

* The Group considers that the carrying amounts of short-term trade receivables and payables are a reasonable approximation of fair values.

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(b) Financial risk management objectives and policies

The Group's principal financial instruments comprise bank loans and trade payables. The main purpose of these financial instruments is to raise finance for the Group's operations. The Group has various financial assets such as trade receivables and cash and short-term deposits, which arise directly from its operations.

The main risks arising from the Group's financial instruments are cash flow interest rate risk, liquidity risk, foreign currency risk and credit risk. Management reviews and agrees policies for managing each of these risks which are summarised below.

The Board of Directors has overall responsibility for the establishment and oversight of the Group's risk management framework.

The Group's risk management policies are established to identify and analyse the risks faced by the Group, to set appropriate risk limits and controls, and to monitor risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the Group's activities. The Group, through its training and management standards and procedures, aims to develop a disciplined and constructive control environment in which all employees understand their roles and obligations.

(c) Market risk

Market risk is the risk that changes in market prices, such as foreign exchange rates, interest rates and equity prices will affect the Group's income or the value of its holdings of financial instruments. The objective of market risk management is to manage and control market risk exposures within acceptable parameters, while optimising returns.

(i) Tariffs and commodity price risk

During the years ended 31 December 2021 and 31 December 2020, the Group has entered into certain commodity derivatives contracts in order to manage its exposure of commodity price risks.

The tariffs for electricity, heat and transmission services applied by the Group's significant subsidiaries are currently partially determined by government bodies. The Group cannot directly influence or mitigate the risks in relation to the change in tariffs.

A significant portion of the Group's generation activities is based on coal burning stations. A change in coal prices may have a significant impact on the Group's operations. To mitigate the risk of fluctuations in coal prices, the Group has historically increased its internal coal production through acquisition of coal mines and licences in the Eastern Siberia region.

(ii) Interest rate risk

The Group's exposure to the risk of changes in market interest rates relates primarily to the Group's long-term debt obligations with floating interest rates (note 17). The Group's policy is to manage its interest costs by monitoring changes in interest rates with respect to its borrowings.

The following table details the interest rate profile of the Group's and the Company's borrowings at the reporting date.

	31 December 2021		31 December 2020	
	Effective interest rate %	USD million	Effective interest rate %	USD million
Fixed rate loans and borrowings				
Loans and borrowings (note 17(a))	0.01%-10.5%	2,824	0.01%-10.5%	2,700
		2,824		**2,700**
Variable rate loans and borrowings				
Loans and borrowings (note 17(a))	0.45%-10.5%	8,019	0.67%-6.25%	9,628
		8,019		**9,628**
		10,843		**12,328**

The following table demonstrates the sensitivity to cash flows from interest rate risk arising from floating rate non-derivative instruments held by the Group at the reporting date in respect of a reasonably possible change in interest rates, with all other variables held constant. The impact on the Group's profit before taxation and equity and retained profits/accumulated losses is estimated as an annualised input on interest expense or income of such a change in interest rates. The analysis has been performed on the same basis for all years presented.

	Increase/ decrease in basis points	Effect on profit before taxation for the year USD million	Effect on equity for the year USD million
As at 31 December 2021			
Basis percentage points	+100	(80)	(64)
Basis percentage points	-100	80	64
As at 31 December 2020			
Basis percentage points	+100	(96)	(77)
Basis percentage points	-100	96	77

(iii) Foreign currency risk

The Group is exposed to currency risk on sales, purchases and borrowings that are denominated in a currency other than the respective functional currencies of group entities, primarily USD but also the Russian Rouble, Ukrainian Hryvna and Euros. The currencies in which these transactions primarily are denominated are RUB, USD and EUR.

Borrowings are primarily denominated in currencies that match the cash flows generated by the underlying operations of the Group, primarily USD but also RUB and EUR. This provides an economic hedge.

In respect of other monetary assets and liabilities denominated in foreign currencies, the Group ensures that its net exposure is kept to an acceptable level by buying or selling foreign currencies at spot rates when necessary to address short-term imbalances or entering into currency swap arrangements.

The Group's exposure at the reporting date to foreign currency risk arising from recognised assets and liabilities denominated in a currency other than the functional currency of the entity to which they relate is set out in the table below. Differences resulting from the translation of the financial statements of foreign operations into the Group's presentation currency are ignored.

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	USD-denominated vs. RUB functional currency 31 December		RUB-denominated vs. USD functional currency 31 December		EUR-denominated vs. USD functional currency 31 December		Denominated in other currencies vs. USD functional currency 31 December	
USD million	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**
Non-current assets	–	–	38	–	–	1	–	–
Derivative financial assets	–	–	–	31	–	–	–	–
Trade and other receivables	2	1	821	582	184	64	69	31
Cash and cash equivalents	–	1	428	508	81	104	50	25
Loans and borrowings	–	(314)	(549)	(1,433)	(19)	–	–	–
Provisions	–	–	(84)	(78)	(21)	(27)	(18)	(12)
Derivative financial liabilities	–	–	(16)	(32)	–	(6)	–	–
Income tax	–	–	(24)	(2)	–	–	(1)	(6)
Non-current liabilities	–	–	(1)	(1)	(6)	(6)	–	–
Short-term bonds	–	–	(1)	(1)	–	–	–	–
Trade and other payables	(1)	–	(1,080)	(404)	(104)	(49)	(135)	(88)
Net exposure arising from recognised assets and liabilities	**1**	**(312)**	**(468)**	**(830)**	**115**	**81**	**(35)**	**(50)**

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(iv) *Foreign currency sensitivity analysis*

The following tables indicate the change in the Group's profit before taxation (and accumulated losses) and other comprehensive income that could arise if foreign exchange rates to which the Group has significant exposure at the reporting date had changed at that date, assuming all other risk variables remained constant.

	Year ended 31 December 2021		
	Change in exchange rates	USD million Effect on profit before taxation for the year	USD million Effect on equity for the year
Depreciation of USD vs. RUB	15%	(70)	(70)
Depreciation of USD vs. EUR	10%	11	11
Depreciation of USD vs. other currencies	5%	(2)	(2)

	Year ended 31 December 2020		
	Change in exchange rates	USD million Effect on profit before taxation for the year	USD million Effect on equity for the year
Depreciation of USD vs. RUB	15%	(78)	(79)
Depreciation of USD vs. EUR	10%	8	8
Depreciation of USD vs. other currencies	5%	(3)	(3)

Results of the analysis as presented in the above tables represent an aggregation of the effects on the Group entities' profit before taxation and other comprehensive income measured in the respective functional currencies, translated into USD at the exchange rates ruling at the reporting date for presentation purposes.

The sensitivity analysis assumes that the change in foreign exchange rates had been applied to re-measure those financial instruments held by the Group which expose the Group to foreign currency risk at the reporting date. The analysis excludes differences that would result from the translation of other financial statements of foreign operations into the Group's presentation currency. The analysis has been performed on the same basis for all years presented.

(d) Liquidity risk

Liquidity risk is the risk that the Group will not be able to meet its financial obligations as they fall due. The Group's policy is to maintain sufficient cash and cash equivalents or have available funding through an adequate amount of committed credit facilities to meet its operating and financial commitments.

The following tables show the remaining contractual maturities at the reporting date of the Group's non-derivative financial liabilities, which are based on contractual undiscounted cash flows (including interest payment computed using contractual rates, or if floating, based on rates current at the reporting date) and the earliest the Group can be required to pay, except loans presented as payable on demand due to breach of covenant:

	31 December 2021 Contractual undiscounted cash outflow					
	Within 1 year or on demand USD million	More than 1 year but less than 2 years USD million	More than 2 years but less than 5 years USD million	More than 5 years USD million	Total USD million	Carrying amount USD million
Trade and other payables to third parties	1,540	–	–	–	**1,540**	1,540
Trade and other payables to related parties	103	–	–	–	**103**	103
Bonds	1,234	1,354	–	–	**2,588**	2,434
Loans and borrowings, including interest payable	2,170	2,652	3,947	1,704	**10,473**	8,477
	5,047	**4,006**	**3,947**	**1,704**	**14,704**	**12,554**
Financial guarantees issued: Maximum amount guaranteed	44	69	–	–	**113**	–

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	31 December 2020 Contractual undiscounted cash outflow					
	Within 1 year or on demand USD million	More than 1 year but less than 2 years USD million	More than 2 years but less than 5 years USD million	More than 5 years USD million	Total USD million	Carrying amount USD million
Trade and other payables to third parties	1,201	–	–	–	**1,201**	1,201
Trade and other payables to related parties	52	–	–	–	**52**	52
Bonds	153	1,251	1,356	–	**2,760**	2,438
Loans and borrowings, including interest payable	2,541	2,433	3,282	3,260	**11,516**	9,950
	3,947	**3,684**	**4,638**	**3,260**	**15,529**	**13,641**
Financial guarantees issued: Maximum amount guaranteed	69	45	–	–	**114**	–

At 31 December 2021 and 31 December 2020 the Group's contractual undertaking to provide loans under the loan agreement between the Group, PJSC RusHydro and BoAZ is included at maximum exposure for the Group in the liquidity risk disclosure above.

(e) Credit risk

The Group trades only with recognised, creditworthy third parties. It is the Group's policy that all customers who wish to trade on credit terms are subject to credit verification procedures. The majority of the Group's third party trade receivables represent balances with the world's leading international corporations operating in the metals industry. In addition, receivable balances are monitored on an ongoing basis with the result that the Group's exposure to credit loss is not significant. Goods are normally sold subject to retention of title clauses, so that in the event of non-payment the Group may have a secured claim. The Group does not require collateral in respect of trade and other receivables. The details of impairment of trade and other receivables are disclosed in note 15. Cash balances are held with high credit quality financial institutions. The extent of the Group's credit exposure is represented by the aggregate balance of financial assets and financial guarantees and loan commitments given.

At 31 December 2021 and 31 December 2020, the Group has no concentration of credit risk within any single largest customer but 12.6% and 5.2% of the total trade receivables were due from the Group's five largest customers.

(f) Capital risk management

The Group's objectives when managing capital are to safeguard the Group's ability to continue as a going concern in order to provide returns for shareholders and benefits for other stakeholders and to maintain an optimal capital structure to reduce the cost of capital.

The Group manages its capital structure and makes adjustments to it, in light of changes in economic conditions. To maintain or adjust the capital structure, the Group may adjust the amount of dividends paid to shareholders, return capital to shareholders, issue new shares or sell assets to reduce debt.

The Board's policy is to maintain a strong capital base so as to maintain investor, creditor and market confidence and to sustain future development of the business. The Board of Directors monitors the return on capital, which the Group defines as net operating income divided by total shareholders' equity, excluding non-controlling interests. The Board of Directors also monitors the level of dividends to ordinary shareholders.

The Board seeks to maintain a balance between higher returns that might be possible with higher levels of borrowings and the advantages and security afforded by a sound capital position.

There were no changes in the Group's approach to capital management during the year.

The Parent Company and its subsidiaries were subject to externally imposed capital requirements in the both years presented in these consolidated financial statements.

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(g) Master netting or similar agreements

The Group may enter into sales and purchase agreements with the same counterparty in the normal course of business. The related amounts receivable and payable do not always meet the criteria for offsetting in the statement of financial position.

The following table sets out the carrying amounts of recognised financial instruments that are subject to the above agreements.

	Year ended 31 December 2021	
	USD million	USD million
	Trade receivables	Trade payables
Gross amounts	114	(90)
Net amounts presented in the statement of financial position	**114**	**(90)**
Amounts related to recognised financial instruments that do not meet some or all of the offsetting criteria	(36)	36
Net amount	**78**	**(54)**

	Year ended 31 December 2020	
	USD million	USD million
	Trade receivables	Trade payables
Gross amounts	71	(61)
Net amounts presented in the statement of financial position	**71**	**(61)**
Amounts related to recognised financial instruments that do not meet some or all of the offsetting criteria	(23)	23
Net amount	**48**	**(38)**

21. Commitments

(a) Capital commitments

The Group had outstanding capital commitments which had been contracted for at 31 December 2021 and 31 December 2020 in the amount of USD 655 million and USD 813 million, including VAT, respectively. These commitments are due over a number of years.

(b) Purchase commitments

Commitments with third parties for purchases of alumina, bauxite, other raw materials and other purchases in 2022-2034 under supply agreements are estimated from USD 2,517 million to USD 4,534 million at 31 December 2021 (31 December 2020: USD 3,256 million to USD 4,644) depending on the actual purchase volumes and applicable prices.

Commitments with related parties for purchases of primary aluminium, alloys and other purchases in 2022-2030 under supply agreements are estimated from USD 5,733 million to USD 7,540 million at 31 December 2021 (31 December 2020: USD 4,741 million to USD 6,964 million) depending on the actual purchase volumes and applicable prices.

(c) Sale commitments

Commitments with third parties for sales of alumina and other raw materials in 2022-2034 are estimated from USD 1,187 million to USD 1,596 million at 31 December 2021 (31 December 2020: from USD 865 million to USD 1,375 million) and will be settled at market prices at the date of delivery. There are no commitments with related parties for sales of alumina as at 31 December 2021 and 31 December 2020.

Commitments with related parties for sales of primary aluminium and alloys in 2022 are estimated from USD 337 million to USD 412 million at 31 December 2021 (31 December 2020: from USD 224 million to USD 269 million). Commitments with third parties for sales of primary aluminium and alloys in 2022-2025 are estimated to range from USD 8,842 million to USD 12,148 million at 31 December 2021 (31 December 2020: from USD 1,738 million to USD 11,602 million).

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(d) Social commitments

The Group contributes to the maintenance and upkeep of the local infrastructure and the welfare of its employees, including contributions toward the development and maintenance of housing, hospitals, transport services, recreation and other social needs of the regions of the Russian Federation where the Group's production entities are located. The funding of such assistance is periodically determined by management and is appropriately capitalised or expensed as incurred.

22. Contingencies

(a) Taxation

Russian tax, currency and customs legislation is subject to varying interpretations, and changes, which can occur frequently. Management's interpretation of such legislation as applied to the transactions and activities of the Group may be challenged by the relevant local, regional and federal authorities. Notably recent developments in the Russian environment suggest that the authorities in this country are becoming more active in seeking to enforce, through the Russian court system, interpretations of the tax legislation, in particular in relation to the use of certain commercial trading structures, which may be selective for particular tax payers and different from the authorities' previous interpretations or practices. Recent events within the Russian Federation suggest that the tax authorities are taking a more assertive and substance-based position in their interpretation and enforcement of tax legislation.

The Russian taxation system is continually evolving and is subject to frequent changes, starting from 1 January 2015, changes aimed at regulating tax consequences of transactions with foreign companies and their activities were introduced, such as the concept of beneficial ownership of income, taxation of controlled foreign companies, tax residency rules, country-by-country reporting etc. This legislation and practice of its application is still evolving and the impact of legislative changes should be considered based on the actual circumstances.

All these circumstances may create tax risks in the Russian Federation that are substantially more significant than in other countries. Management believes that it has provided adequately for tax liabilities based on its interpretations of applicable Russian tax legislation, official pronouncements and court decisions. However, the interpretations of the tax authorities and courts, especially due to reform of the supreme courts that are resolving tax disputes, could differ and the effect on these consolidated financial statements, if the authorities were successful in enforcing their interpretations, could be significant.

In addition to the amounts of income tax the Group has provided, there are certain tax positions taken by the Group where it is reasonably possible (though less than 50% likely) that additional tax may be payable upon examination by the tax authorities or in connection with ongoing disputes with tax authorities. The Group's best estimate of the aggregate maximum of additional amounts that it is reasonably possible may become payable if these tax positions were not sustained at 31 December 2021 is USD 26 million (31 December 2020: USD 36 million).

(b) Environmental contingencies

The Group and its predecessor entities have operated in the Russian Federation, Ukraine, Jamaica, Guyana, the Republic of Guinea and the European Union for many years and certain environmental problems have developed. Governmental authorities are continually considering environmental regulations and their enforcement and the Group periodically evaluates its obligations related thereto. As obligations are determined, they are recognised immediately. The outcome of environmental liabilities under proposed or any future legislation, or as a result of stricter enforcement of existing legislation, cannot reasonably be estimated. Under current levels of enforcement of existing legislation, management believes there are no possible liabilities, which will have a material adverse effect on the financial position or the operating results of the Group. However, the Group anticipates undertaking significant capital projects to improve its future environmental performance.

(c) Legal contingencies

The Group's business activities expose it to a variety of lawsuits and claims which are monitored, assessed and contested on an ongoing basis. Where management believes that a lawsuit or another claim would result in the outflow of the economic benefits for the Group, a best estimate of such outflow is included in provisions in the consolidated financial statements (note 18(e)). As at 31 December 2021, the amount of claims, where management assesses outflow as possible approximates USD 21 million (31 December 2020: USD 21 million).

(d) Other contingent liabilities

Where the Group enters into financial guarantee contracts to guarantee the indebtedness of related parties, the Group considers these to be insurance arrangements and accounts for them as such. In this respect, the Group treats the guarantee contract as a contingent liability until such time as it becomes probable that the Group will be required to make a payment under the guarantee.

In September 2013, UC RUSAL and PJSC RusHydro entered into an agreement with BoAZ to provide loans, if the latter is unable to fulfil its obligations under its credit facilities. The aggregate exposure under the agreement is limited to RUB 16.8 billion (31 December 2021 and 31 December 2020 USD 226 million and USD 227 million, respectively) and is split between the Group and PJSC RusHydro in equal proportion.

23. Related party transactions

(a) Accounting policy

(a) A person, or a close member of that person's family, is related to the Group if that person:

(i) Has control or joint control over the Group;

(ii) Has significant influence over the Group; or

(iii) Is a member of the key management personnel of the Group or the Group's parent.

(b) An entity is related to the Group if any of the following conditions applies:

(i) The entity and the Group are members of the same group (which means that each parent, subsidiary and fellow subsidiary is related to the others).

(ii) One entity is an associate or joint venture of the other entity (or an associate or joint venture of a member of a group of which the other entity is a member).

(iii) Both entities are joint ventures of the same third party.

(iv) One entity is a joint venture of a third entity and the other entity is an associate of the third entity.

(v) The entity is a post-employment benefit plan for the benefit of employees of either the Group or an entity related to the Group.

(vi) The entity is controlled or jointly controlled by a person identified in (a).

(vii) A person identified in (a)(i) has significant influence over the entity or is a member of the key management personnel of the entity (or of a parent of the entity).

(viii) The entity, or any member of a group of which it is a part, provides key management personnel services to the group or to the group's parent.

Close members of the family of a person are those family members who may be expected to influence, or be influenced by, that person in their dealings with the entity.

(b) Transactions with related parties

The Group transacts with related parties, the majority of which are under control of SUAL Partners Limited or its shareholders, associates and joint ventures and other related parties.

Sales to related parties for the year are disclosed in note 5, trade receivables from related parties are disclosed in note 15(b), accounts payable to related parties are disclosed in note 15(c).

Purchases of raw materials and services from related parties for the period were as follows:

	Year ended 31 December	
	2021	**2020**
	USD million	**USD million**
Purchase of raw materials	**(738)**	**(480)**
Companies capable of exerting significant influence	(24)	(15)
Associates and joint ventures	(714)	(465)
Energy costs	**(76)**	**(63)**
Companies capable of exerting significant influence	(33)	(27)
Other related parties	(1)	(1)
Associates and joint ventures	(42)	(35)
Other services	**(111)**	**(114)**
Other related parties	–	(2)
Associates and joint ventures	(111)	(112)
	(925)	**(657)**

(c) Related parties balances

At 31 December 2021, included in non-current assets are balances of related parties – associates and joint ventures of USD 2 million (31 December 2020: USD 4 million). At 31 December 2021, included in non-current liabilities are balances of related parties – associates and joint ventures of USD 14 million (31 December 2020: USD 12 million).

(d) Remuneration to key management

For the year ended 31 December 2021 remuneration to key management personnel comprised short-term benefits and amounted to USD 26 million from which Board members received USD 10 million (year ended 31 December 2020: USD 19 million from which Board members received USD 7 million).

24. Events subsequent to the reporting date

The growing geopolitical tensions and the recent developments in Ukraine have had a negative impact on the Russian economy, including difficulties in obtaining international funding, significant increase in volatility on the securities and currency markets as well as significant devaluation of national currency and high inflation.

In 2022, the United States of America and the European Union have imposed sanctions against a number of Russian banks, which restrict their access to European financial markets, foreign assets were frozen for certain banks, and sanctions were introduced that restrict the access of Russian organisations to Euro and US dollar markets.

A number of other countries announced new packages of sanctions against certain Russian legal entities and personal sanctions against a number of individuals.

In March 2022, new temporary restrictive economic measures were introduced in Russian Federation, which include, amongst others, a prohibition for residents to issue loans to non-residents in foreign currency or to deposit foreign currency in their own bank accounts, and limitations on dividends and other payments on securities to foreign investors.

In March 2022, Australia banned the export of alumina and bauxite to Russia. At the beginning of March 2022, the Group has temporarily suspended the production at Mykolaiv Alumina Refinery Company Ltd in view of developments in Ukraine. These measures and events may influence the availability of alumina and bauxite or increase the purchase prices for Group. Major international shippers have suspended bookings to and from Russia which will require the Group to rebuild the supply and sales chains and may lead to additional logistics costs.

If the situation persists or continues to develop significantly, including with the loss of significant parts of foreign markets which cannot be reallocated to new markets, this may affect the Group's business, financial condition, prospects and results of operations.

The Group regards these events as non-adjusting events after the reporting period, the quantitative impact, in relation to all significant assets and liabilities, of which cannot be estimated as at the date of issue of these consolidated financial statements with a sufficient degree of confidence.

Additional sanctions and restrictions on the business activity of Russian legal entities and individuals, as well as counter-measures from Russian authorities might be introduced, the full range and possible consequences of which cannot be assessed.

25. Accounting estimates and judgements

The Group has identified the following critical accounting policies under which significant judgements, estimates and assumptions are made and where actual results may differ from these estimates under different assumptions and conditions and may materially affect financial results of the financial position reported in future periods.

Property, plant and equipment – recoverable amount

In accordance with the Group's accounting policy, each asset or cash generating unit is evaluated every reporting period to determine whether there are any indications of impairment. If any such indication exists, a formal estimate of recoverable amount is performed and an impairment loss is recognised to the extent that carrying amount exceeds recoverable amount. The recoverable amount of an asset or cash generating group of assets is measured at the higher of fair value less costs to sell and value in use.

Fair value is determined as the amount that would be obtained from the sale of the asset in an arm's length transaction between knowledgeable and willing parties, and is generally determined as the present value of the estimated future cash flows expected to arise from the continued use of the asset, including any expansion prospects, and its eventual disposal.

Value in use is also generally determined as the present value of the estimated future cash flows, but only those expected to arise from the continued use of the asset in its present form and its eventual disposal. Present values are determined using a risk-adjusted pre-tax discount rate appropriate to the risks inherent in the asset. Future cash flow estimates are based on expected production and sales volumes, commodity prices (considering current and historical prices, price trends and related factors), reserves (refer "Reserve estimates" below), operating costs, restoration and rehabilitation costs and future capital expenditure. This policy requires management to make these estimates and assumptions which are subject to risk and uncertainty; hence there is a possibility that changes in circumstances will alter these projections, which may impact the recoverable amount of the assets. In such circumstances, some or all of the carrying value of the assets may be impaired and the impairment would be charged against the profit or loss.

Property, plant and equipment – hydro assets – fair value

In accordance with the Group's accounting policy, hydro assets are carried at a revalued amount, being their fair value at the date of the revaluation less any subsequent accumulated depreciation and subsequent accumulated impairment losses. Revaluations are made with sufficient regularity to ensure that the carrying amount does not differ materially from that which would be determined using fair value at the end of the reporting period.

The valuation analysis is primarily based on the cost approach to determine depreciated replacement cost. This method considers the cost to reproduce or replace the property, plant and equipment, adjusted for physical depreciation, functional and economic obsolescence.

This policy requires management to make estimates and assumptions regarding both costs, as there is no active market for used assets of that type, and macroeconomic indicators to assess economic obsolescence which are subject to risk and uncertainty; hence there is a possibility that changes in circumstances will alter these estimates, which may impact the fair value of hydro assets. In such circumstances, the fair value of hydro assets may be lower with any consequential decrease in revaluation reserve recognised through other comprehensive income.

Inventories – net realisable value

The Group recognises write-downs of inventories based on an assessment of the net realisable value of the inventories. A write-down is applied to the inventories where events or changes in circumstances indicate that the net realisable value is less than cost. The determination of net realisable value requires the use of judgement and estimates. Where the expectation is different from the original estimates, such a difference will impact the carrying value of the inventories and the write-down of inventories charged to the profit or loss in the periods in which such estimate has been changed.

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Goodwill – recoverable amount

In accordance with the Group's accounting policy, goodwill is allocated to the Group's reportable business segments as they represent the lowest level within the Group at which the goodwill is monitored for internal management purposes and is tested for impairment annually at 31 December by preparing a formal estimate of recoverable amount. Recoverable amount is estimated as the value in use of the business segment.

Similar considerations to those described above in respect of assessing the recoverable amount of property, plant and equipment apply to goodwill.

Investments in associates and joint ventures – recoverable amount

In accordance with the Group's accounting policies, each investment in an associate or joint venture is evaluated every reporting period to determine whether there are any indications of impairment after application of the equity method of accounting. If any such indication exists, a formal estimate of recoverable amount is performed and an impairment loss recognised to the extent that the carrying amount exceeds the recoverable amount. The recoverable amount of an investment in an associate or joint venture is measured at the higher of fair value less costs to sell and value in use.

Similar considerations to those described above in respect of assessing the recoverable amount of property, plant and equipment apply to investments in associates or joint ventures. In addition to the considerations described above the Group may also assess the estimated future cash flows expected to arise from dividends to be received from the investment, if such information is available and considered reliable.

Legal proceedings

In the normal course of business, the Group may be involved in legal proceedings. Where management considers that it more likely than not that proceedings will result in the Group compensating third parties a provision is recognised for the best estimate of the amount expected to be paid. Where management considers that it is more likely than not that proceedings will not result in the Group compensating third parties or where, in rare circumstances, it is not considered possible to provide a sufficiently reliable estimate of the amount expected to be paid, no provision is made for any potential liability under the litigation but the circumstances and uncertainties involved are disclosed as contingent liabilities.

The assessment of the likely outcome of legal proceedings and the amount of any potential liability involves significant judgement. As law and regulations in many of the countries in which the Group operates are continuing to evolve, particularly in the areas of taxation, sub-soil rights and protection of the environment, uncertainties regarding litigation and regulation are greater than those typically found in countries with more developed legal and regulatory frameworks.

Provision for restoration and rehabilitation

The Group's accounting policy requires the recognition of provisions for the restoration and rehabilitation of each site when a legal or constructive obligation exists to dismantle the assets and restore the site. The provision recognised represents management's best estimate of the present value of the future costs required. Significant estimates and assumptions are made in determining the amount of restoration and rehabilitation provisions. Those estimates and assumptions deal with uncertainties such as: changes to the relevant legal and regulatory framework; the magnitude of possible contamination and the timing, extent and costs of required restoration and rehabilitation activity. These uncertainties may result in future actual expenditure differing from the amounts currently provided.

The provision recognised for each site is periodically reviewed and updated based on the facts and circumstances available at the time. Changes to the estimated future costs for operating sites are recognised in the statement of financial position by adjusting both the restoration and rehabilitation asset and provision. Such changes give rise to a change in future depreciation and interest charges. For closed sites, changes to estimated costs are recognised immediately in profit or loss.

Taxation

The Group's accounting policy for taxation requires management's judgement in assessing whether deferred tax assets and certain deferred tax liabilities are recognised on the statement of financial position. Deferred tax assets, including those arising from carried forward tax losses, capital losses and temporary differences, are recognised only where it is considered more likely than not that they will be recovered, which is dependent on the generation of sufficient future taxable profits. Deferred tax liabilities arising from temporary differences in investments, caused principally by retained earnings held in foreign tax jurisdictions, are recognised unless repatriation of retained earnings can be controlled and is not expected to occur in the foreseeable future.

Assumptions about the generation of future taxable profits and repatriation of retained earnings depend on management's estimates of future cash flows. These depend on estimates of future production and sales volumes, commodity prices, reserves, operating costs, restoration and rehabilitation costs, capital expenditure, dividends and other capital management transactions. Assumptions are also required about the application of income tax legislation. These estimates and assumptions are subject to risk and uncertainty, hence there is a possibility that changes in circumstances will alter expectations, which may impact the amount of deferred tax assets and deferred tax liabilities recognised on the statement of financial position and the amount of other tax losses and temporary differences not yet recognised. In such circumstances, some or all of the carrying amount of recognised deferred tax assets and liabilities may require adjustment, resulting in a corresponding credit or charge to profit or loss.

The Group generally provides for current tax based on positions taken (or expected to be taken) in its tax returns. Where it is more likely than not that upon examination by the tax authorities of the positions taken by the Group additional tax will be payable, the Group provides for its best estimate of the amount expected to be paid (including any interest and/or penalties) as part of the tax charge.

Reserve estimates

Reserves are estimates of the amount of product that can be economically and legally extracted from the Group's properties. In order to calculate reserves, estimates and assumptions are required about a range of geological, technical and economic factors, including quantities, grades, production techniques, recovery rates, production costs, transport costs, commodity demand, commodity prices and exchange rates.

The Group determines ore reserves under the Australasian Code for Reporting of Mineral Resources and Ore Reserves September 1999, known as the JORC Code. The JORC Code requires the use of reasonable investment assumptions to calculate reserves.

Estimating the quantity and/or grade of reserves requires the size, shape and depth of ore bodies or fields to be determined by analysing geological data such as drilling samples. This process may require complex and difficult geological judgements and calculations to interpret the data.

Since economic assumptions used to estimate reserves change from period to period, and since additional geological data is generated during the course of operations, estimates of reserves may change from period to period.

Changes in reported reserves may affect the Group's financial results and financial position in a number of ways, including the following:

- Asset carrying values may be affected due to changes in estimated future cash flows.
- Depletion charged in profit or loss may change where such charges are determined by the units of production basis, or where the useful economic lives of assets change.
- Decommissioning, site restoration and environmental provisions may change where changes in estimated reserves affect expectations about the timing or cost of these activities.

Exploration and evaluation expenditure

The Group's accounting policy for exploration and evaluation expenditure results in certain items of expenditure being capitalised for an area of interest where it is considered likely to be recoverable by future exploitation or sale or where the activities have not reached a stage which permits a reasonable assessment of the existence of reserves. This policy requires management to make certain estimates and assumptions as to future events and circumstances, in particular whether an economically viable extraction operation can be established. Any such estimates and assumptions may change as new information becomes available. If, after having capitalised the expenditure under the policy, a judgement is made that recovery of the expenditure is unlikely, the relevant capitalised amount will be written off to profit or loss.

Development expenditure

Development activities commence after project sanctioning by the appropriate level of management. Judgement is applied by management in determining when a project has reached a stage at which economically recoverable reserves exist such that development may be sanctioned. In exercising this judgement, management is required to make certain estimates and assumptions similar to those described above for capitalised exploration and evaluation expenditure. Any such estimates and assumptions may change as new information becomes available. If, after having commenced the development activity, a judgement is made that a development asset is impaired, the appropriate amount will be written off to profit or loss.

Defined benefit retirement and other post retirement schemes

For defined benefit pension schemes, the cost of benefits charged to the profit or loss includes current and past service costs, interest costs on defined benefit obligations and the effect of any curtailments or settlements, net of expected returns on plan assets. An asset or liability is consequently recognised in the statement of financial position based on the present value of defined obligations, less any unrecognised past service costs and the fair value of plan assets.

The accounting policy requires management to make judgements as to the nature of benefits provided by each scheme and thereby determine the classification of each scheme. For defined benefit pension schemes, management is required to make annual estimates and assumptions about future returns on classes of scheme assets, future remuneration changes, employee attrition rates, administration costs, changes in benefits, inflation rates, exchange rates, life expectancy and expected remaining periods of service of employees. In making these estimates and assumptions, management considers advice provided by external advisers, such as actuaries. Where actual experience differs to these estimates, actuarial gains and losses are recognised directly in the statement of profit or loss and other comprehensive income.

Impairment of assets

The carrying amounts of the Group's non-financial assets, other than inventories and deferred tax assets, are reviewed at each reporting date to determine whether there is any indication of impairment. If any such indication exists then the asset's recoverable amount is estimated. For goodwill and intangible assets that are not yet available for use, the recoverable amount is estimated at each reporting date.

An impairment loss is recognised if the carrying amount of an asset or its cash-generating unit exceeds its recoverable amount. A cash-generating unit is the smallest identifiable asset group that generates cash flows that are largely independent from other asset groups. Impairment losses are recognised in profit or loss. Impairment losses recognised in respect of cash-generating units are allocated first to reduce the carrying amount of any goodwill allocated to the units and then to reduce the carrying amount of the other assets in the unit (group of units) on a pro rata basis.

The recoverable amount of an asset or cash-generating unit is the greater of its value in use and its fair value less costs to sell. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset.

An impairment loss in respect of goodwill is not reversed. In respect of other assets, impairment losses recognised in prior periods are assessed at each reporting date for any indications that the loss has decreased or no longer exists. An impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortisation, if no impairment loss had been recognised.

Goodwill that forms part of the carrying amount of an investment in an associate or a joint venture is not recognised separately and, therefore, is not tested for impairment separately. Instead, the entire amount of the investment is tested for impairment as a single asset when there is objective evidence that the investment in an associate or a joint venture may be impaired.

26. Significant subsidiaries

The significant entities of the Group, included in these consolidated financial statements, are as follows:

Name	Place of incorporation and operation	Principal activities	Ownership and equity interest 31 December 2021	2020
UC RUSAL				
United Company RUSAL IPJSC	Russian Federation	Holding company	56.9%	56.9%
Compagnie Des Bauxites De Kindia S.A.	Guinea	Bauxite mining	100.0%	100.0%
Friguia SA	Guinea	Alumina	100.0%	100.0%
JSC RUSAL Achinsk	Russian Federation	Alumina	100.0%	100.0%
Mykolaiv Alumina Refunery Company Ltd	Ukraine	Alumina	100.0%	100.0%
JSC RUSAL Boxitogorsk Alumina	Russian Federation	Alumina	100.0%	100.0%
Eurallumina SpA	Italy	Alumina	100.0%	100.0%
PJSC RUSAL Bratsk	Russian Federation	Smelting	100.0%	100.0%
JSC RUSAL Krasnoyarsk	Russian Federation	Smelting	100.0%	100.0%
JSC RUSAL Novokuznetsk	Russian Federation	Smelting	100.0%	100.0%
JSC RUSAL Sayanogorsk	Russian Federation	Smelting	100.0%	100.0%
LLC RUSAL RESAL	Russian Federation	Processing	100.0%	100.0%
JSC RUSAL SAYANAL	Russian Federation	Foil	100.0%	100.0%
CJSC RUSAL ARMENAL	Armenia	Foil	100.0%	100.0%
LLC RUS-Engineering	Russian Federation	Repairs and maintenance	100.0%	100.0%
JSC Russian Aluminium	Russian Federation	Holding company	100.0%	100.0%
Rusal Global Management B.V.	Netherlands	Management company	100.0%	100.0%
JSC United Company RUSAL Trading House	Russian Federation	Trading	100.0%	100.0%
Rusal America Corp.	USA	Trading	100.0%	100.0%
RS International GmbH	Switzerland	Trading	100.0%	100.0%
Rusal Marketing GmbH	Switzerland	Trading	100.0%	100.0%
RTI Limited	Jersey	Trading	100.0%	100.0%
Alumina & Bauxite Company Limited	British Virgin Islands	Trading	100.0%	100.0%
JSC Bauxite-Timana	Russian Federation	Bauxite mining	100.0%	100.0%
JSC Severo-Uralsky Bauxite Mine	Russian Federation	Bauxite mining	100.0%	100.0%
JSC RUSAL URAL	Russian Federation	Primary aluminium and alumina production	100.0%	100.0%
LLC SUAL-PM	Russian Federation	Aluminium powders production	100.0%	100.0%
JSC Kremniy	Russian Federation	Silicon production	100.0%	100.0%
LLC RUSAL-Kremniy-Ural	Russian Federation	Silicon production	100.0%	100.0%
UC RUSAL Alumina Jamaica Limited	Jamaica	Alumina	100.0%	100.0%
Kubikenborg Aluminium AB	Sweden	Smelting	100.0%	100.0%
RFCL Limited (formerly RFCL S.ar.l)	Cyprus (formerly Luxembourg)	Finance services	100.0%	100.0%
ILLC AKTIVIUM	Russian Federation	Holding and investment company	100.0%	100.0%
Aughinish Alumina Ltd	Ireland	Alumina	100.0%	100.0%
LLC RUSAL Energo	Russian Federation	Electric power	100.0%	100.0%
Limerick Alumina Refining Ltd.	Ireland	Alumina	100.0%	100.0%
JSC RUSAL Management	Russian Federation	Management company	100.0%	100.0%
LLC RUSAL Taishet	Russian Federation	Smelting	100.0%	100.0%
LLC UC RUSAL Anode Plant	Russian Federation	Anodes	100.0%	100.0%
RUSAL Products GmbH	Switzerland	Trading	100.0%	100.0%
Casting and mechanical plant “SKAD” Ltd.	Russian Federation	Other aluminum production	75.0%	80.0%
LLC PGLZ	Russian Federation	Alumina	99.9%	99.9%
POWER				
ILLC EN+ HOLDING	Russian Federation	Holding company	100.0%	100.0%
JSC EuroSibEnergo	Russian Federation	Management company	100.0%	100.0%
JSC Krasnoyarsk Hydro-Power Plant	Russian Federation	Power generation	100.0%	100.0%
LLC MAREM +	Russian Federation	Power trading	100.0%	99.95%
PJSC Irkutskenergo	Russian Federation	Power generation	98.0%	93.2%
OJSC Irkutsk Electric Grid Company	Russian Federation	Power transmission and distribution	53.4%	52.4%
LLC EuroSibEnergo – Hydrogeneration	Russian Federation	Power generation	100.0%	100.0%
LLC Avtozavodskaya TEC	Russian Federation	Power generation	99.0%	96.5%
LLC EuroSibEnergo-engineering	Russian Federation	Engineering services	100.0%	100.0%
LLC Kompaniya VostSibUgol	Russian Federation	Coal production	98.0%	93.2%
LLC Razrez Cheremkhovugol	Russian Federation	Coal production	98.0%	93.2%
LLC KRAMZ	Russian Federation	Manufacturing of semi-finished products from primary aluminium	98.3%	94.0%

The nominal ownerships indicated in the table above are the effective holdings, except for UC RUSAL shareholdings where 56.88% is held by the Parent Company.

APPENDICES

GLOSSARY

Units of measurement

bn	Billion
EUR	Euro
Gcal	Gigacalorie, a unit of measurement for heating energy
Gcal/h	Gigacalorie per hour, a unit of measurement for heating power capacity
GW	Gigawatt (one million kilowatts)
GWh	Gigawatt-hour (one million kilowatt-hours)
kA	Kilo-amperes
km	Kilometre
koz	thousand troy ounces
kt	Thousand metric tonnes
ktpa	Thousand tonnes per annum
kV	Kilovolt
kW	Kilowatt
kWh	Kilowatt-hour, a unit of measurement for produced electricity
mn	Million
mt	Million metric tonnes
mtpa	Million tonnes per annum
MW	Megawatt (one thousand kilowatt), a unit of measurement for electrical power capacity
MWh	Megawatt-hour (one thousand kilowatt-hours), a unit of measurement for produced electricity
pp	Percentage point
RUB	Rouble
ths	Thousand
t, tonne	One metric tonne (one thousand kilograms)
tpa	Tonnes per annum
TW	Terawatt (one billion kilowatts)
TWh	Terawatt-hour (one billion kilowatt-hours)
USD	United States dollar

Terms and abbreviations

Adjusted EBITDA	For any period represents the results from operating activities adjusted for amortisation and depreciation, impairment charges and loss on disposal of property, plant and equipment for the relevant period
Adjusted net profit	For any period is defined as the net (loss)/profit adjusted for the net effect of the Company's investment in Norilsk Nickel, the net effect of derivative financial instruments and the net effect of non-current assets impairment
ALSCON	Aluminium Smelter Company of Nigeria Ltd., a company incorporated in Nigeria and in which UC RUSAL indirectly holds an 85% interest
ARC	The Audit and Risk Committee of the Board
ATS	Joint-stock company "Administrator of the trading system of the wholesale electricity market"
Basic Element	Basic Element Limited, a company incorporated in Jersey, of which Mr. Oleg Deripaska is the ultimate beneficial owner
BEMO, BEMO project	Boguchany Energy and Metals Complex, involving the construction of the Boguchany Hydro Power Plant (Boguchany HPP) and the Boguchany Aluminium Smelter (BoAZ, Boguchany AS), a joint 50/50 project of UC RUSAL and RusHydro. BoAZ project involves the construction of a 600 thousand tpa greenfield aluminium smelter on a 230 hectare site, located approximately 8 km to the south-east of the settlement of Tayozhny in the Krasnoyarsk Region and approximately 160 km (212 km by road) from the Boguchany HPP
Board	Board of Directors of the Company
BrAZ	Bratsk Aluminium Smelter or PJSC "RUSAL Bratsk", a company incorporated under the laws of the Russian Federation, which is a wholly owned subsidiary of UC RUSAL
CC	Compliance Committee of the Board
CCO	Competitive capacity outtake
CGC	The Corporate Governance Committee of the Board
CHP	Combined heat and power plant
CIS	The Commonwealth of Independent States
CO_2	Carbon dioxide
CO_2e	CO_2 equivalent
Continuance Date	9 July 2019, when: • The Company was registered as an international public joint-stock company in the Unified State Register of Legal Entities of the Russian Federation and changed its legal jurisdiction of incorporation from Jersey to Russia (the "Continuance") • The Company's name was changed from EN+ GROUP PLC to EN+ GROUP IPJSC
DAM, day-ahead market	The competitive selection of price bids of suppliers and buyers conducted by ATS a day before the actual delivery of electricity with the determination of prices and volumes of delivery for each hour of the day
DTRs	The FCA's Disclosure Guidance and Transparency Rules
En+, En+ Group, we, the Company, the Group	EN+ GROUP International public joint-stock company / EN+ GROUP IPJSC and its subsidiaries whose results are included in the consolidated financial statements prepared in accordance with the International Financial Reporting Standards (or, where relevant, in relation to the Company prior to the Continuance, EN+ GROUP PLC)
EuroSibEnergo	JSC EuroSibEnergo is a 100% subsidiary of En+ Group, managing its power assets
FCA	The UK's Financial Conduct Authority
FCF	Free Cash Flow
GDR	Global depositary receipt
GHG	Greenhouse gas emissions
GHG emissions Scope 1	Direct GHG emissions occur from sources that are owned or controlled by the company, for example, emissions from combustion in owned or controlled boilers, furnaces, vehicles, etc.; emissions from chemical production in owned or controlled process equipment. Direct CO_2 emissions from the combustion of biomass shall not be included in scope 1 but reported separately. GHG emissions not covered by the Kyoto Protocol, e.g. CFCs, NOx, etc. shall not be included in scope 1 but may be reported separately
GHG emissions Scope 2	Scope 2 accounts for GHG emissions from the generation of purchased electricity consumed by the company. Purchased electricity is defined as electricity that is purchased or otherwise brought into the organizational boundary of the company. Scope 2 emissions physically occur at the facility where electricity is generated
GSM	General shareholders meeting
HPP	Hydropower plant
HSE	Health, safety and environment
HSE Committee	The Health, Safety and Environment Committee
ICS	Internal Control System
IES	Integrated energy system – an aggregated production and other electricity property assets, connected via a unified production process (including production in the form of the combined generation of electrical and heat) and the supply of electrical energy under the conditions of a centralised operating and dispatch management
IFRS	The International Financial Reporting Standards
IPO	Initial public offering
Irkutskenergo	Irkutsk Public Joint Stock Company of Energetics and Electrification, a power generating company controlled by En+ as to more than 30% of its issued share capital
IrkAZ	Irkutsk Aluminium Smelter, a branch of RUSAL Bratsk in Shelekhov
ISO 9001	ISO 9001:2015 is an international standard "Quality management systems – Requirements" by International Organization for Standardization that sets out the criteria for a quality management system and is the only standard in the family that can be certified to
ISO 14001	ISO 14001:2015 is a standard "Environmental management systems – Requirements with guidance for use" by International Organization for Standardization that sets out the criteria for an environmental management system and can be certified to
ISO 45001	ISO 45001:2018 is a standard "Occupational health and safety management systems – Requirements with guidance for use" by International Organization for Standardization that sets out the criteria for a health and safety management systems and can be certified to

JORC	Joint Ore Reserves Committee of the Australasian Institute of Mining and Metallurgy, Australasian Institute of Geoscientists & the Minerals Council of Australia
KrAZ	Krasnoyarsk aluminium smelter or JSC "RUSAL Krasnoyarsk Aluminium Smelter", a company incorporated under the laws of the Russian Federation, which is an indirect whollyowned subsidiary of UC RUSAL
KUBAL	Kubikenborg Aluminium AB, a company incorporated in Sweden, which is a wholly owned subsidiary of UC RUSAL
LIBOR	In relation to any loan: • the applicable screen rate (being the British Bankers' Association Interest Settlement Rate for dollars for the relevant period, displayed on the appropriate page of the Reuters screen); or • (if no screen rate is available for dollars for the interest period of a particular loan) the arithmetic mean of the rates (rounded upwards to four decimal places) as supplied to the agent at its request quoted by the reference banks to leading banks in the London interbank market, as of the specified time (11:00 am in most cases) on the quotation day (generally two business days before the first day of that period unless market practice differs in the Relevant Interbank Market, in which case the quotation day will be determined by the agent in accordance with market practice in the Relevant Interbank Market) for the offering of deposits in dollars and for a period comparable to the interest period for that loan.
LME	London Metal Exchange
LME aluminium price	Represents the average daily closing official LME spot prices for each period
LR	The Listing Rules published by the UK's Financial Conduct Authority in its capacity as competent authority under the Financial Services and Markets Act 2000 (as amended) and the FCA's Disclosure Guidance and Transparency Rules
LSE	London Stock Exchange
LTIFR	The Lost Time Injury Frequency Rate which was calculated by the Group as a sum of fatalities and lost time injuries per million man-hours
Market Council	The non-commercial organisation formed as a result of a non-commercial partnership, which is intended to unite energy market participants and major consumers of electrical energy through membership of that body. The council is intended to ensure the proper functioning of commercial market infrastructure and effective exchanges between the wholesale and retail electrical energy markets. Additionally, it is intended to promote investment in the electrical energy industry by creating a healthy market and even playing field for participants of both the wholesale and retail electrical energy markets, when drafting new rules and regulations concerning the electrical energy industry, and facilitate self-regulation of the wholesale and retail trade in electrical energy, power and other products and services which is permissible in the wholesale and retail electrical energy markets. The council's aim is to ensure the security of energy supply in the Russian Federation, unity within the economic space, economic freedom and competition in the wholesale and retail electrical energy markets, by striking a balance between the interests of suppliers and buyers and the needs of society in general in terms of having a reliable and stable source of electrical energy
Metals segment	The Metals segment is comprised of UC RUSAL (56.88% owned by En+ Group). The power assets of UC RUSAL 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 sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories. **INFERRED MINERAL RESOURCE** Mineral Resource for which tonnage, grade and mineral content can be estimated with a low level of confidence. It is inferred from geological evidence and assumed but not verified geological and/or grade continuity. It is based on information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes which may be limited or of uncertain quality and reliability **INDICATED MINERAL RESOURCE** The part of a Mineral Resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a reasonable level of confidence. It is based on exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. The locations are too widely or inappropriately spaced to confirm geological and/or grade continuity but are spaced closely enough for continuity to be assumed **MEASURED MINERAL RESOURCE** A Mineral Resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a high level of confidence. It is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. The locations are spaced closely enough to confirm geological and grade continuity
MOEX	The Moscow Exchange
N\A	Not applicable
NC	The Nominations Committee of the Board
Net debt	The sum of loans and borrowings and bonds outstanding less total cash and cash equivalents as at the end of the relevant period, in each case attributable to the Group, Power or Metals segment, as the case may be
NkAZ	Novokuznetsk Aluminium Smelter or JSC "RUSAL Novokuznetsk", a company incorporated under the laws of the Russian Federation, which is a wholly owned subsidiary of UC RUSAL
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 Assessment Series 18001:2007 is a standard, that sets out the criteria for a health and safety management systems. OHSAS 18001 has been withdrawn and replaced by ISO 45001
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 Ore Reserves and Proved Ore Reserves. **PROBABLE ORE RESERVE** The economically mineable part of an Indicated, and in some circumstances, a Measured Mineral Resource. It includes diluting materials and allowances for losses which may occur when the coraterial 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 **PROVED ORE RESERVE** The economically mineable part of a Measured 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
pcs.	Pieces
PM Krasnoturyinsk	SUAL-PM-Krasnoturyinsk, a branch of LLC «SUAL-PM»
Power segment	The Power segment is predominantly comprised of power assets and operations, owned by En+ Group. The Power segment engages in all aspects of the power industry, including electric power generation, power trading and supply
QAL	Queensland Alumina Limited, a company incorporated in Queensland, Australia, in which UC RUSAL indirectly holds a 20% equity interest
R&D	Research and development
RemCom	The Remuneration Committee of the Board
RoW	Rest of the World ex-China
RUSAL, the Metals segment	United Company RUSAL Plc, incorporated under the laws of Jersey with limited liability (56.88% owned by En+ Group)
SDN list, Specially Designated Nationals List	List of Specially Designated Nationals and Blocked Persons, published by OFAC. US persons are generally prohibited from dealing with assets of persons designated in the SDN List which are subject to the US jurisdiction, subject to certain exemptions and exclusions set out in licenses issued by OFAC
SAZ	Sayanogorsk Aluminium Smelter or RUSAL Sayanogorsk or Sayanogorsk smelter or JSC "RUSAL Sayanogorsk", a company incorporated under the laws of the Russian Federation, which is a wholly owned subsidiary of UC RUSAL
SPP	Solar power plant
Taskforce	En+ Climate Change Taskforce led by Chief Operating Officer Vyacheslav Solomin will be responsible for the planning and implementation of the Company's climate change strategy. The Taskforce will report to the Executive Chairman, Lord Barker
TPP	Thermal power plant
UES	Unified Energy System
VAP	Value-added products. Includes wire rod, foundry alloys, billets, slabs, high purity and others
Wholesale electricity and capacity market	Sphere for the turnover of electric energy and capacity within the framework of Russia's integrated energy system within the country's 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" (by the Russian Government). The criteria for including large electricity producers and consumers in the category of large producers and large consumers are also established by the Russian government
y-o-y	Year-on-year

ABOUT THE REPORT

In this annual report (the "Annual Report" or the "Report"), the terms "En+", "En+ Group", "we", the "Company" and the "Group" in various forms shall mean EN+ GROUP International public joint-stock company/EN+ GROUP IPJSC (or, where relevant, in relation to the Company prior to the Continuance (as defined in the Corporate Governance section of this Report), EN+ GROUP PLC) and its subsidiaries whose results are included in the Group's consolidated financial statements prepared in accordance with the International Financial Reporting Standards (the "IFRS").

The Annual Report outlines, inter alia, the Company's strategy, business model and corporate governance structure, as well as its internal control and risk management processes. The Group's consolidated financial statements for the year ended and as at 31 December 2021, prepared in accordance with IFRS and accompanied by a report from the Group's auditors, are included in the Report.

This Report has been prepared in accordance with the following laws and regulations:

- Federal Law No. 39-FZ On Securities Market dated 22 April 1996
- Regulations No. 714-P On Disclosing Information by Securities Issuers dated 27 March 2020
- The Code of Corporate Governance, recommended for use by joint-stock companies by the Bank of Russia Letter No. 06-52/2463 dated 10 April 2014 (the "Russian Corporate Governance Code")
- The Listing Rules (the "LRs") published by the UK's Financial Conduct Authority (the "FCA") in its capacity as a competent authority under the Financial Services and Markets Act 2000 (as amended) (the "FSMA") and the FCA's Disclosure Guidance and Transparency Rules (the "DTRs"). The LRs and the DTRs are hereinafter together referred to as the "Rules", unless otherwise specified

Unless stated otherwise, financial results included in the Annual Report 2021 are presented and calculated based on the consolidated financial statements prepared in accordance with the IFRS.

Due to rounding, some totals in the tables, charts and diagrams in this Report may not correspond with the sum of the separate figures. This Report may also contain discrepancies in the calculation of shares, percentages, and total amounts as a result of the application of different rounding methods. Data provided in the Annual Report may differ marginally from previous disclosures, also as a result of rounding.

Approval of the Report

This Annual Report was preliminarily approved by the Company's Board of Directors (the "Board" or the "Board of Directors") on 29 April 2022 (Minutes No. 51 dated 29 April 2022). This date is referred to below as the date of this Report.

This Annual Report was approved by the general shareholders meeting of the Company on 23 June 2022 (Minutes No.3 dated 23 June 2022).

DISCLAIMER

The information presented in this Annual Report only reflects the Company's position during the review period from 1 January 2021 to 31 December 2021 (the "Review Period"), unless otherwise specified. Accordingly, all forward-looking statements, analyses, reviews, discussions, commentaries, and risks presented in this Annual Report (excluding this disclaimer and the Corporate Governance section, or unless otherwise specified) are based on the financial information available to the Company covering the Review Period only.

This Report may include statements that are, or may be deemed to be, "forward-looking statements". These forward-looking statements may be identified by the use of forward-looking terminology, including the terms "believes", "estimates", "plans", "projects", "anticipates", "expects", "intends", "may", "will" or "should" or, in each case, their negative or other variations or comparable terminology, or by discussions of strategy, plans, objectives, goals, future events or intentions. Forward-looking statements may, and often do, differ materially from actual results. Any forward-looking statements reflect the Company's current view with respect to future events and are subject to risks relating to future events and other risks, uncertainties and assumptions relating to the Group's business, results of operations, financial position, liquidity, prospects, growth or strategies. Many factors could cause the actual results of the Group to differ materially from those set forth in the forward looking statements contained herein, including, among others, macroeconomic conditions, political events, the competitive environment in which the Group operates, the impact of the COVID-19 pandemic and any other outbreaks, epidemics or pandemics, foreign exchange fluctuations and changes in financial and equity markets, as well as many other risks specifically related to the Group and its operations. Forward-looking statements speak only as of the date they are made.

To the extent available, the industry, market and competitive position data contained in this Report comes from official or third-party sources. Third-party industry publications, studies and surveys generally state that the data contained therein has been obtained from sources believed to be reliable, but that there is no guarantee of the accuracy or completeness of such data. While the Company reasonably believes that each of these publications, studies and surveys has been prepared by a reputable party, neither the Company nor any of its respective directors, officers, employees, affiliates, advisors or agents, have independently verified the data contained therein. In addition, certain industry, market and competitive position data contained in this Report comes from the Company's internal research and estimates based on the knowledge and experience of the Company's management in the markets in which the Company operates. While the Company reasonably believes that such research and estimates are reasonable, they, and their underlying methodology and assumptions, have not been verified by any independent source for accuracy or completeness and are subject to change. Accordingly, reliance should not be placed on any of the industry, market or competitive position data contained in this Report.

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