RusHydro

15 YEARS – UNITING THE ENERGY

ANNUAL REPORT 2019

Contents

ANNUAL REPORT 2019 OF PSJC RUSHYDRO, INCLUDING INFORMATION ON SUSTAINABLE DEVELOPMENT

Preliminary approved by the Board of Directors of PJSC RusHydro

Subject to approval by the Annual General Meeting of Shareholders of PJSC RusHydro

Responsibility statement

Management's responsibility statement in respect of the annual report and consolidated financial statements

We hereby confirm to the best of our knowledge that
- the consolidated financial statements of PJSC RusHydro and its subsidiaries (RusHydro Group), prepared in accordance with the IFRS, give a true and fair view of the assets, liabilities, financial position and profit or loss of RusHydro Group;
- this annual report includes a fair review of the development and performance of the business and the position of RusHydro Group, as well as a description of the principal risks and uncertainties affecting the operations of PJSC RusHydro and its subsidiaries.

Nikolay Shulginov,
Chairman of the Management Board –
General Director

Yulia Medvedeva, Chief Accountant

Disclaimer: forward-looking information

The report contains information on RusHydro Group's plans and intentions in the medium and long term. These plans and intentions are forward-looking and their feasibility depends, among other things, on a number of economic, political and legal factors beyond the Company's control (the global financial, economic and political situation, key markets, changes in tax, customs and environmental legislation, etc.). As such, actual future performance indicators may differ from the forward-looking statements published in this annual report.

The key topic of the 2019 Annual Report is 15 years anniversary of PJSC RusHydro.

Information on the report

This annual report of Public Joint-Stock Company Federal Hydro-Generating Company RusHydro ("PJSC RusHydro" or the "Company") for 2019 is the 15th annual report prepared by the Company to address a diverse range of stakeholders. The report has been prepared in an integrated format to include comprehensive information on the financial, operational and sustainability performance of RusHydro Group[1] in 2019, as well as the plans and forecasts for the medium and long term. *[102-50]*

The appendices to this annual report are available in the Appendices Book on the Company's website http://www.eng.rushydro.ru/

See the Company's annual reports for the previous years at http://www.eng.rushydro.ru/

See RusHydro's corporate social responsibility and sustainability reports for the previous years on the Company's website at http://www.eng.rushydro.ru/

[1] For the purpose of this report, RusHydro Group means a group of companies including PJSC RusHydro and its subsidiaries (controlled entities). The control is determined in accordance with Article 2 of Federal Law No. 39-FZ On Securities Market dated April 22,1996.

The report also includes references to the following segments:

- RAO ES East Subgroup (also "RAO ES East Holding") means JSC RAO ES East and its subsidiaries engaged in electricity and heat generation, distribution and sales primarily in the Russian Far East, as well as transport, construction, maintenance and other supporting service companies;
- ESC RusHydro Subgroup means subsidiaries of RusHydro Group engaged in sales of electricity and heat to end consumers;
- RusHydro Subgroup (includes the headquarters of PJSC RusHydro, its branches and subsidiaries, except for RAO ES East Subgroup).

Compliance with standards and requirements

The report was prepared in line with the principles and requirements of:

- Russian laws;
- Moscow and London Stock Exchanges;
- Disclosure Guidance and Transparency Rules of the UK Listing Authority;
- Corporate Governance Code recommended by the Bank of Russia;
- Global Reporting Initiative Sustainability Reporting Standards ("GRI SRS");
- GRI Electric Utilities Sector Supplement (GRI Electric Utilities (EU));
- Guidance on Core Indicators for Entity Reporting on Contribution towards Implementation of the UN Sustainable Development Goals until 2030 ("SDGs") of the United Nations Conference on Trade and Development (UNCTAD);
- International Integrated Reporting Framework (<IR>);
- specific provisions of the AA1000 Institute of Social and Ethical Accountability Series of Standards (AA1000AP and AA1000SES);
- Company's internal regulations (including RusHydro's Corporate Governance Code, Information Policy Regulations, etc.).

The report has been prepared in accordance with the GRI SRS: Core option. *[102-54]*

A representative of the senior management responsible for the preparation of the report is a member of the Management Board – First Deputy General Director, who is also in charge of the unit of financial and corporate law management. *[102-32]*

Content and boundaries of the report *[101]*

The content of this report has been determined in accordance with the requirements of the applicable regulations and standards with inputs from RusHydro's stakeholders. For more information on the content determination process and the materiality matrix, see the Additional Information section.

The operational results of RusHydro Group (including financial and production ones) have been disclosed in line with the IFRS reporting boundaries[1], unless otherwise specified in the notes to the disclosure.

The boundaries of the GRI SRS disclosure are indicated in Appendix No. 22.

RusHydro Group's subsidiaries not included in the boundaries of the disclosure are not material for the purposes of reporting.

The full list of legal entities belonging to RusHydro Group is available in the Additional Information section. *[102-45]*

In 2019, there were no significant changes in the scale and structure of RusHydro Group's operations or fundamental changes in the wording and calculation of indicators, which could affect the assessment of the Group's key performance indicators as compared to the previous annual report. Additional comments (if any) to indicator calculations are provided in the footnotes. *[102-48] [102-10]*

Assurance of the report

[102-56]

The accuracy of data provided in the annual report has been confirmed by the Company's Internal Audit Commission. The accuracy of the financial report has been confirmed the Company's independent auditor opinion provided in Appendix No. 16.

Reliability of qualitative and quantitative information prepared in accordance with the GRI SRS (Selected Information) has been verified in line with the Assurance Engagements Other than Audits or Reviews of Historical Financial Information of International Standard for Assurance Engagements (ISAE) 3000 (revised). The independent auditor's report on the audit results, which provides limited assurance regarding the Selected Information, can be found in the Additional Information section. The independent audit was performed by JSC PricewaterhouseCoopers Audit.

Materiality, completeness and balanced character of the reporting information have been confirmed by the public (stakeholder) assurance of the report. For more details, see the section titled Additional Information.

The report has also taken into account feedback and recommendations from the expert committees of the Moscow Exchange and Expert RA rating agency judging the annual report competitions, as well as recommendations of the RSPP Council on Non-Financial Reporting.

[1] The report also covers information on PJSC Boguchanskaya HPP, which is not a subsidiary or part of RusHydro Group, but a joint venture of RusHydro Group and UC RUSAL.

Message from the Chairman of the Board of Directors

Dear shareholders,

In 2019, RusHydro Group continued to grow sustainably. Following the commissioning of new generating facilities and the upgrade of our existing ones, the installed capacity of RusHydro's power plants increased to 40 GW. As a result, we have further strengthened our leading position in this area. The Group's electricity generation, including Boguchanskaya HPP, remained close to the previous year's record high level and amounted to 142.8 bn kWh. This is an increase on the average over the last three years. Heat supply grew by 0.4% to 30.0 mn Gcal.

RusHydro Group is developing in line with its priorities. The Russian Far East is our key operational macroregion. Electricity consumption in this region is growing faster than Russia's average. In 2019, UES East and isolated energy systems in the Far East registered a 3.3% growth as compared to a slight decline across Russia.

The Russian Government is taking steps to further enhance the region's investment appeal. It has extended the mechanism to bring tariffs for industrial consumers in line with the Russian base (average) rate for another year and is considering further extension to 2028. Another step was to approve the long-term tariff regulation in the Far East, with isolated energy hubs already operating under the new system and a similar measure to come into effect in the UES East's non-price zone from 1 July 2020. This solution will enable energy companies to improve their efficiency and channel the resulting savings into modernizing and upgrading their facilities. It also makes the macroregion's regulatory framework more transparent for potential investors.

Given the need for the faster development of energy infrastructure and capacities, RusHydro commissioned Nizhne-Bureyskaya HPP and Sakhalinskaya GRES-2 in 2019. We are also completing the construction of a CHPP in Sovetskaya Gavan and a wind diesel power plant in the settlement of Tiksi, and providing for a utility connection of consumers. Total capacity connected to the Group's electrical grids in the Far East in 2019 increased by 630 MW (582 MW in 2018).

In the mid-term, we plan to implement another four major investment projects as part of the Comprehensive Trunk Infrastructure Upgrade and Extension Plan until 2024. They include the construction of Khabarovskaya CHPP-4, Artyomovskaya CHPP-2 and the second stage of Yakutskaya GRES-2, as well as the upgrade of Vladivostokskaya CHPP-2 with a total electrical and heat capacity amounting to 1.3 GW and 2,600 Gcal/h, respectively. The construction projects will guarantee returns on investment.

All our CAPEX projects in the Russian Far East are fully in line with the Russian President's Order On National Goals and Strategic Objectives of the Russian Federation through to 2024 and aim to ensure stable power supply for the consumers, foster a comfortable urban environment and promote the digital economy.

New generating facilities will deliver positive multiplier effects by building a strong foundation for the growth of other industries, creating jobs, contributing more taxes, and improving the quality of life.

Setting the stage for sustainable development in our regions of operation is one of our main priorities. In 2019, RusHydro Group paid more than RUB 82 bn in taxes to the budgets of all levels. As part of our charity program, which seeks, among other things, to foster a favorable social environment and help unlock Russia's spiritual, scientific, technical and intellectual potential, we supported over 300 socially important projects in the regions where we operate.

Efforts are also ongoing to enhance the Group's corporate governance. RusHydro Group has the highest ranking among domestic energy companies, which corresponds to the Advanced Corporate Governance Practice level, according to the Russian Institute of Directors.

By reducing costs, providing guaranteed returns on investments in our projects, implementing long-term tariff regulation in the Far East to take due account of energy companies' economically justified expenses, and improving our corporate governance, we ultimately seek to maximize the Group's market capitalization and boost its appeal for shareholders as well as strategic and financial investors. To this end, the Board of Directors approved a new dividend policy in 2019. The document sets the minimum dividend payout to be the average amount for the previous three years. In 2017–2019, we paid RUB 47 bn to our shareholders. Based on new calculations, the reporting year's dividends may exceed RUB 15 bn, which is in line with the previous year's payouts.

We are grateful to our shareholders for their trust in our governance bodies.

Yury **TRUTNEV**

Chairman of the Board of Directors
of PJSC RusHydro

Message from the Chairman of the Management Board – General Director

[102-14]

Dear shareholders, colleagues and partners!

In 2019, RusHydro celebrated its 15th anniversary. Over the years, our company, which consolidates more than 50 RAO UES hydroelectric power plants, has evolved into one of Russia's largest electric power holdings. With the exception of nuclear power, we generate all kinds of energy and are engaged in diverse operations, including the development of energy infrastructure in the Far East, a strategically important region for the nation.

In the course of our 15 years, we have put on stream 52 generating facilities with a total installed capacity of 6.05 GW and continue to build new ones. In March 2019, we inaugurated the third hydropower unit at Ust-Srednekanskaya HPP, and commissioned Nizhne-Bureyskaya HPP and Sakhalinskaya GRES-2 in September and November 2019, respectively. December saw us complete the construction of Zaramagskaya HPP-1. In 2019, we launched a hot water peaking boiler plant in Yakutsk and a solar power plant at Nizhne-Bureyskaya HPP.

The Group is continuing to implement its Comprehensive HPP Modernization Program. As at the end of 2019, we have replaced 100 turbines, 79 generators and 69 transformers. Since the start of the Program in 2012, our generating capacities have increased by nearly 430 MW. The Company's management considers it necessary to extend the Program until 2035.

Thanks to the commissioning of new generating facilities, upgrade of our existing ones and the integration of Far Eastern energy assets, we finished the anniversary year with an installed capacity of 40 GW, which represents a 1.7-fold increase as compared to the start of our growth journey.

In 2020, we plan to put on stream a CHPP in Sovetskaya Gavan, ramp up the wind diesel power plant in the settlement of Tiksi to its full capacity and complete the construction of three smaller HPPs in the Northern Caucasus. Our investments in these projects are estimated at RUB 109.4 bn.

In accordance with the Russian Government's heat generation modernization program in the Far East, RusHydro Group's priority region of operation, we expect to implement four major investment projects before 2026. The projects aimed at modernizing our thermal power plants include the construction of new facilities at Artyomovskaya CHPP-2, Khabarovskaya CHPP-4 and the second stage of Yakutskaya GRES-2 to replace obsolete and heavily worn-out facilities, as well as the upgrade of Vladivostokskaya CHPP-2. The list of these facilities was approved by the Russian Government in 2019. RusHydro set up three dedicated branches (Primorsky Krai, Khabarovsk and Yakutsk) responsible for these projects. Design work is under way.

We have also achieved significant progress in developing smaller HPPs. The Company's Management Board gave the go ahead for the smaller HPP development program, and the Russian Government approved the extension of support to renewable energy projects until 2035, including the Company's proposal to change the classification criteria for smaller HPPs by increasing maximum capacity from 25 MW to 50 MW. Given Russia's extensive but untapped water resources, we advocate the inclusion of hydropower in the energy strategy of the Russian Federation until 2035 drafted by the Russian Government.

We kept opening single settlement centers for consumers in the Far East and the Krasnoyarsk Territory. Starting from 2016, we have set up 47 such centers, with another four to follow by the year-end. In 2019, we launched the Russian Far East's first charging network for electric vehicles. This is a very promising line of business, with the number of EVs increasing by more than 50% each year. This new project will enable a fast and convenient charging of electric vehicles, while also helping us to step up electricity sales, diversify business and create new competencies. In 2020, we plan to open 40 more charging stations.

When it comes to operating results, the reporting year brought us both challenges and opportunities. In February 2019, Russian military engineers together with RusHydro specialists cleared a landslide at the Bureyskoye water reservoir and normalized hydrological conditions. In July and August, the effective operation of Bureyskaya and Zeyskaya HPPs helped minimize the negative impact of a series of floods caused by rainfalls. Across other regions, the beginning of the year saw a decrease in HPP output due to low water, which was almost fully offset in the second half of the year thanks to rare autumn and winter floods. As a result, RusHydro Group electricity generation, including Boguchanskaya HPP, amounted to 142.8 bn kWh, coming close to the previous year's record high level.

RusHydro enjoys a strong financial standing. Our total revenue increased by 1.6% to RUB 407 bn, and EBITDA exceeded RUB 97 bn. Our consolidated net profit stood at RUB 643 mn due to the effect from Far Eastern asset impairment and losses of JSC DGK.

We are taking a range of measures to normalize DGK's financial position. In 2019, the Russian Government approved the long-term tariff regulation in the Far East's non-price zone with cost base recalculation. Over the year, RusHydro's Board of Directors gave its consent to the asset swap with JSC DEK's minority shareholders, which will make RusHydro the owner of more than 94% shares of the company in exchange for the Luchegorsky coal strip mine, its non-core asset, and Primorskaya GRES technologically linked to it. The deal will enable a conversion of DGK's debt into shares. We are also optimizing DGK's organizational structure by reducing the number of management levels and consolidating repair and maintenance operations.

In 2019, RusHydro and VTB Bank signed a supplement to the forward contract entered into in March 2017. The new terms provide for a reduction of the forward rate by 0.5% per annum, which will help save up to RUB 1.5 bn in payments, and a contract extension to 2025. The extension will enable the Company to find a strategic investor and take additional measures to increase the share price.

The Company's management keeps working hard to optimize costs. In 2019, we started centralizing repairs at our Far Eastern energy facilities, along with tax and accounting functions. We are also setting up a single treasury. The efforts to cut operating expenses in 2017–2019 delivered an economic effect of RUB 24.7 bn, while Group-wide procurement savings in 2019 exceeded RUB 14.2 bn, up 48% y-o-y.

At present, RusHydro has all its international credit ratings affirmed as investment grade, with two of them on a par with the sovereign rating of the Russian Federation. ACRA confirmed RusHydro's top credit rating on the national scale.

The reporting year brought another milestone in our rating history as we made it onto the World's Best Employer rating run by Forbes and Statista. Importantly, RusHydro was Russia's only electricity generating company to feature in the rating.

Pivotal to our 15-year-long success story is the hard work of tens of thousands of employees engaged in various operations, including generation, grid management, sales, R&D, repairs and construction. I would like to thank all our people for their dedication and commitment. We all are striving to achieve common goals and bring the best value to our shareholders.

Nikolay **SHULGINOV**

Chairman of the Management Board – General Director of PJSC RusHydro

In December 2019, RusHydro celebrated its 15th anniversary

PJSC RusHydro was established in 2004 as part of the OJSC RAO UES of Russia re-organization. An unprecedented decision was made – to unite almost 50 hydroelectric power stations of RAO UES of Russia into a unique generating company.

In 2011, the energy sector of the Far East entered the RusHydro zone of responsibility – in this macroregion, RusHydro is responsible for both generation, as well as transmission and marketing of electricity and heat to end consumers. All these years the Company has been continuously developing. 52 generation facilities with the total installed capacity of more than 6,000 MW have been commissioned. Several large-scale Soviet long-term construction projects were finished, for example the Bureyskaya and Boguchanskaya HPPs, Irganayskaya and and Zaramagskiye HPPs, new thermal and hydro power plants were designed and built, generation based on renewable sources of energy is in development.

RusHydro unites high-output power plants and organizations dedicated to planning and surveying, research, engineering, and energy sales. That's why it is rightly considered one of the country's largest electric power companies. I am pleased to note, both today and in previous years, that the holding employs competent, experienced experts who preserve their professional traditions and develop them, who understand the importance of and need for their work, and who bet on drawing substantial investments, modernizing industry infrastructure, and introducing innovative technologies. They provide a significant contribution to improving the Unified Energy System of Russia. It is gratifying to know that RusHydro prioritizes environmental safety issues and puts into place a hands-on model of socially responsible and sustainable business.

Vladimir Putin,
President of the Russian Federation
06.12.2019

2006

Gelbahskaya HPP on the Sulak River, Republic of Dagestan
It is a part of the Sulaksky HydroCascade

44 MW
Installed capacity

2008

Irganayskaya HPP on the Avarskoe Koysu River, Republic of Dagestan, reached its design capacity

400 MW
Installed capacity

17%

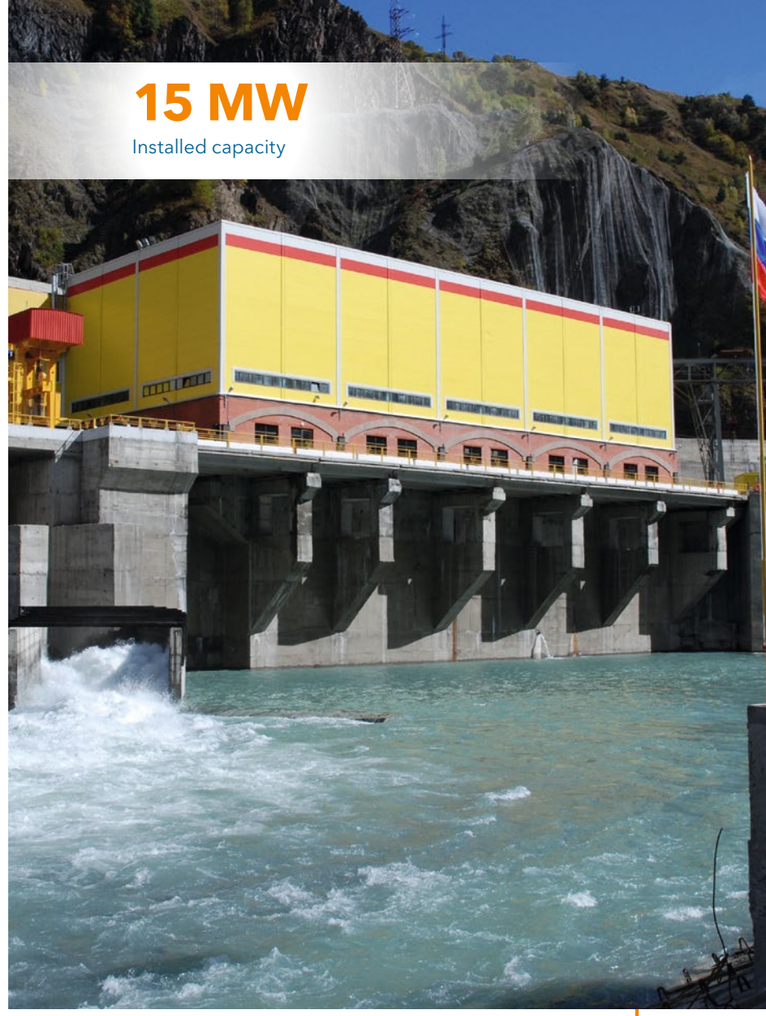
of all the electric energy, generated in the Unified Energy System of the East, is generated by Bureyskaya HPP

2009

Bureyskaya HPP, the biggest HPP in the Russian Far East, reached its design capacity

2,010 MW

Installed capacity



15 MW

Installed capacity

Head HPP of Zaramagsky Cascade on Ardon River, Republic of North Ossetia – Alania

2009

As one of the biggest energy holdings, RysHydro deservedly holds a place among the leaders in energy production. It contributes a great deal to strengthening Russia's economic power and boosting its position of authority among the international community. We highly appreciate the work the company is carrying out in North Ossetia.

Vyacheslav Bitarov,
Head of the Republic of North Ossetia – Alania

2010

Kashhatau HPP on the Cherek River, Kabardino-Balkarian Republic

65.1 MW
Installed capacity

Over the years, RusHydro has grown into one of the world's largest power generation companies and has become a leader in power production from renewable sources. We greatly value RusHydro's attention to the hydropower development issues that exist in Kabardino-Balkaria. We are deeply grateful for this warm regard for our Republic.

Kazbek Kokov,
Head of the Kabardino-Balkarian Republic

14.2 MW
Installed capacity

Egorlykskaya HPP-2,
Stavropol Territory

2011

The HPP construction was started in the mid-1990s and was conducted at low rate due to underfunding. Starting from 2006, when the plant was handed over to RusHydro, construction works were intensified.

7.5 m

is the HPP turbine diameter. These are the biggest radiaxial turbines in Russia.

Boguchanskaya HPP on Angara River, Krasnoyarsk Region

2012

2012

SPP in Batamay, Republic of Sakha (Yakutia)

In line with the renewable generation program in the Far East first two solar power plants were put into operation - in Uchugey and Batamay.

Ust-Srednekanskaya HPP on the Kolyma River, Magadan Region

2013

WPP in Nikolskoe, Kamchatka Terrritory

2013

Employees' well-coordinated work, skills, and professionalism allow the company to look to tomorrow with confidence. RusHydro proudly navigates through numerous complex and ambitious tasks. It is building new generation facilities, upgrading existing infrastructure, and introducing innovative technologies to all of the company's areas of activity. I appreciate your commitment to creating a modern and efficient energy sector in the Magadan Region, your dedication, and your employees' hard work in the harsh northern climate.

Sergey Nosov,
Acting Governor of the Magadan Region

WPP in Ust-Kamchatsk, Kamchatka Territory

WPP in Ust-Kamchatsk is the biggest wind power generation facility in the Far East.

2013

Commissioning of the Yuzhno-Sakhalinskaya CHPP-1 unit No. 4 facilitated creation of an essential flexible generation capacity margin in the isolated island energy system.

2013

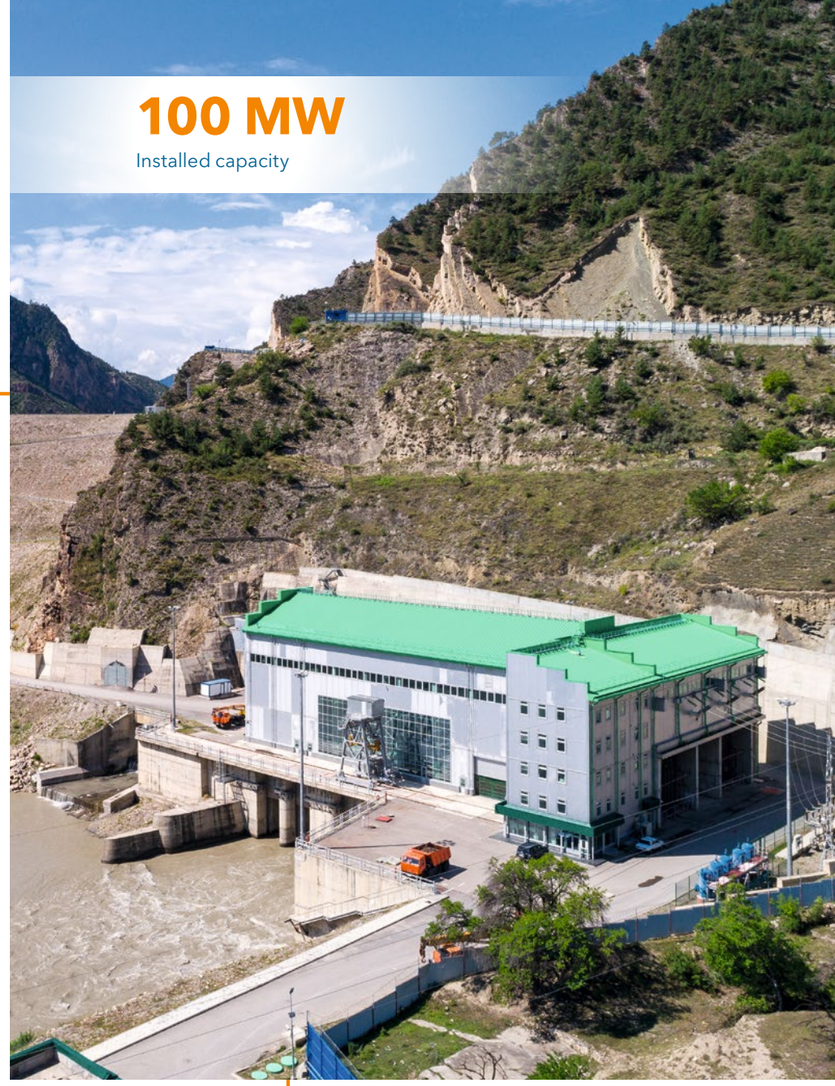
Yuzhno-Sakhalinskaya CHPP-1, unit No. 4

The second stage of the Blagoveshenskaya CHPP is the first of the four new power plants constructed by RusHydro in the Far East in accordance with the Russian President's Order.

2015

Blagoveshenskaya CHPP in Amur Region, second stage

2015



Gozatlinskaya HPP on the Avarskoe Koysu River, Republic of Dagestan

Over the past years, PJSC RusHydro has become the leading hydropower generation company in Russia. The stable supply of electricity to consumers in Dagestan, the creation of the right conditions for economic development, and the normal functioning of all areas of life in the Republic greatly depend on the company's successful operation.

Vladimir Vasilyev,
Head of the Republic of Dagestan

2015

WPP in Novikovo, Sakhalin

450 kW
Installed capacity

227 tonnes
of diesel fuel is saved annually due to WPPs commissioning.

30.6 MW
Installed capacity

2016

Zaragizhskaya HPP on the Cherek River, Kabardino-Balkarian Republic

Zaragizhskaya HPP project is compliant with the highest environmental safety standards

2016

Yakutskaya GRES-2 is the most powerful thermal power plant that was constructed in the Far East in post-Soviet times.

Zelenchukskaya HPP-PSPP on the Kuban River, Karachay-Cherkess Republic

300/156.8 MW

Installed capacity in turbine/pump mode

Yakutskaya GRES-2
Republic of Sakha (Yakutia)

2017

The stability of the energy system and the dynamic expansion of energy capacities are the keys to the regions' successful socio-economic development. For many years, the professionalism and top skills of RusHydro employees ensure that the Russian power grid runs smoothly and reliably. The desire to keep up with the times, the constant search for and implementation of modern technological solutions allow RusHydro to maintain the high bar of one of Russia's most steadfast companies.

Rashid Temrezov,
Head of the Karachay-Cherkess Republic

52

generation facilities were commissioned by RusHydro within 15 years

2018

Vostochnaya CHPP, Primorsky Krai

139.5 MW

Installed capacity

2018

900 kW

Installed capacity

WPP in Tiksi,
Republic of Sakha (Yakutia)

Today, RusHydro is the largest energy holding in Russia, a proactive participant in developing the country's fuel and energy complex, and a leader in energy production from renewable sources. This has been made possible thanks to the company's prudent management and its employees' diligent work. In the most difficult situations, RusHydro's team succeeds at tackling challenges and confidently moves forward. The result of the company's strenuous activity day in and day out is the uninterrupted supply of thermal energy and electricity to consumers, which keeps industrial, agricultural, and social facilities running smoothly throughout Russia and in Primorsky Krai in particular.

Oleg Kozhemyako,
Governor of Primorsky Krai

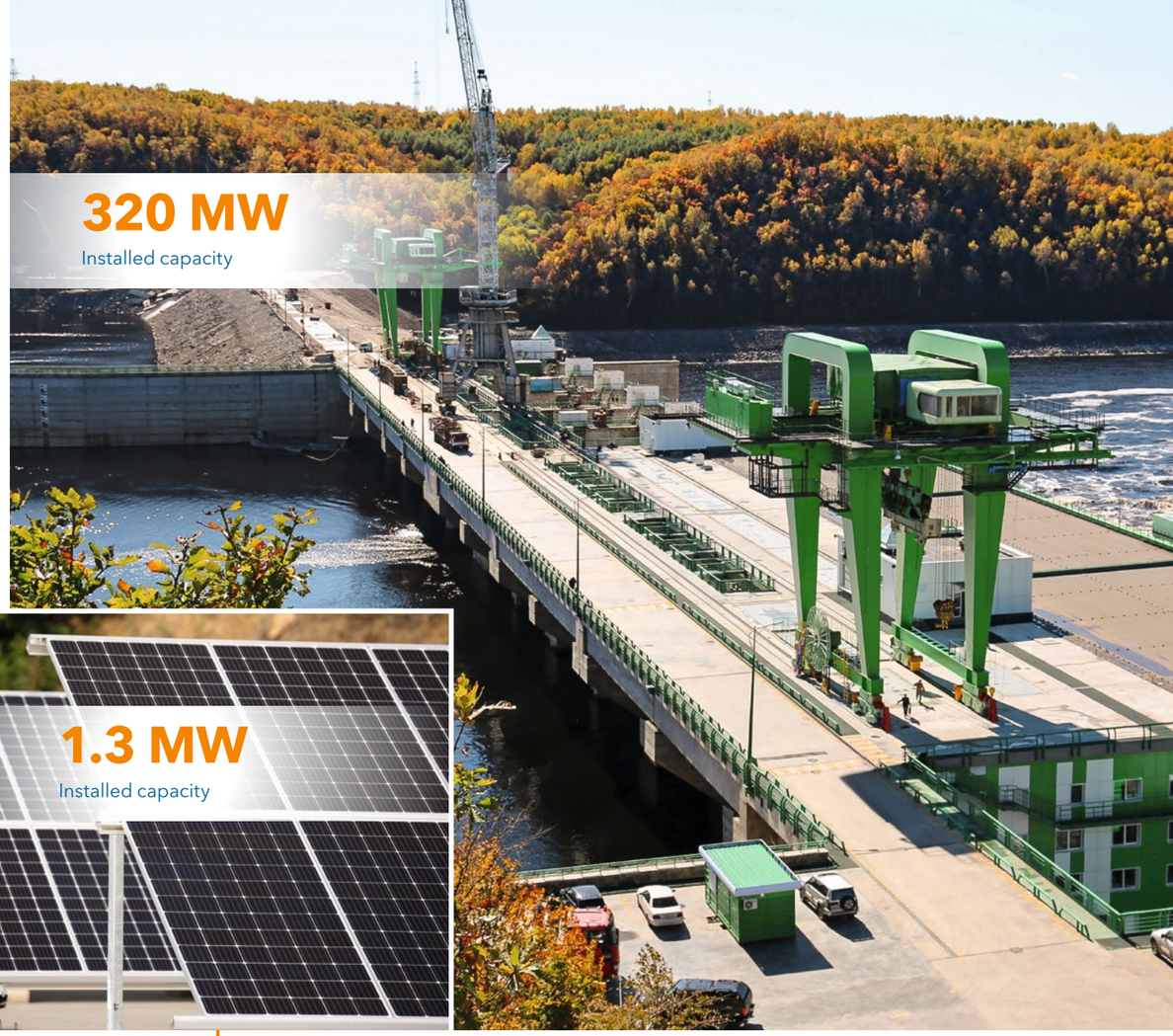
6,049 MW

of new power capacities were put into operation by RusHydro over the past 15 years

2019

Sakhalinskaya GRES-2, Sakhalin

120 MW
Installed capacity



320 MW
Installed capacity

1.3 MW
Installed capacity

Nizhne-Bureyskaya HPP, Amur Region.
Solar panels on the Nizhne-Bureyskaya HPP

2019

> One of this year's capstone was the commissioning of Sakhalin GRES-2, a strategic site for the region. Sakhalin GRES-2's operation will allow us to expand industry even more vigorously, to create new investment projects, to modernize housing and utilities, and to solve many other issues.
>
> **Valery Limarenko,**
> **Governor of the Sakhalin Region**

RUSHYDRO`S PROFILE

The Republic's hydropower potential must continue to be developed, which means that the experience and skills of the Russian hydropower industry's flagship, RusHydro, are needed in the utmost for developing successful new hydroelectricity generation projects in the region.

Yuri Borisov,
Deputy Prime Minister of the Russian Federation

2020

Zaramagskaya HPP-1 on Ardon River, Republic of North Ossetia – Alania

346 MW
Installed capacity

About Company

PJSC RusHydro is Russia's largest hydro-generating company, ranking among the world's leading hydropower players. RusHydro Group is the leading national producer of renewable energy from water flows, solar, wind, and geothermal energy. *[102-1] [102-2]*

The Company is registered in Krasnoyarsk and headquartered in Moscow. *[102-3]* RusHydro Group operates as part of the Unified Energy System (UES) of Russia. One of the Group's key assets is JSC RAO ES East Subgroup representing a major part of the Far Eastern Federal District's power grid.

Currently, RusHydro Group comprises over 400 power generation facilities, including Russia's largest Sayano-Shushenskaya HPP named after P.S. Neporozhniy (capacity of 6,400 MW), nine facilities of Volga-Kama cascade (total installed capacity of over 10,500 MW), Bureyskaya HPP (capacity of 2,010 MW), Zeyskaya HPP (capacity of 1,330 MW), Novosibirskaya HPP (capacity of 490 MW), several dozen hydroelectric power plants in the North Caucasus and highly maneuverable capacities of pumped storage power plants (PSPP). Group companies also operate thermal power plants in the Far East with a total capacity of over 8,300 MW and geothermal power plants in Kamchatka, provide electricity transmission services, and sell electricity and heat to end consumers. In addition to that, RusHydro Group includes a wide variety of R&D, planning and surveying, engineering, and construction organizations and energy retailers.

In accordance with the Russian President's Order No. 1009 dated August 4, 2004, PJSC RusHydro has been included in the list of strategic enterprises and joint-stock companies since 2012.

Since the day it was founded, RusHydro has played a significant role in Russia's electricity industry and is one of the largest electric power holdings in the country. Carrying out all types of activities RusHydro's companies operate in more than 30 regions of Russia. RusHydro is the national leader in generating renewable energy. RusHydro doesn't just supply energy to consumers and ensure the Unified Energy System of Russia operates stably. Its hydropower plants perform essential infrastructure functions, such as water supply, shipping, and flood protection for populated areas and economically vital facilities. A team of professionals – skilled experts and managers who perform diligent work every day – stand behind the energy holding's outstanding performance and achievements.

Dmitry Kozak,
Deputy Chief of Staff of the Executive Office of the President of the Russian Federation

Installed electrical capacity of RusHydro Group is[1]

39.7 GW

Total length of transmission power lines is

105.0 ths. km

Installed heat capacity of RusHydro Group is

19,021 Gcal/h

Headcount as at December 31, 2019 is

69.5 ths. employees

[1] The indicator includes the electric capacities of RAO ES East Subgroup and Boguchanskaya HPP built and jointly operated with UC RUSAL.

2019 Milestones

January

DEK was authorized to distribute electricity in Sakhalinenergo's regions of operation. Redistribution of electricity retail functions among the Group's companies helped reduce selling expenses.

The Central and Western energy hubs of Yakutia were connected to the Unified Energy System of Russia. Yakutskenergo transferred the supervision and control over the territory to the UES System Operator.

As part of its strategy to promote advanced utility payment technologies in the Russian Far East, RusHydro Group pioneered single billing and payment centers in the Primorsky Krai, specifically in Vladivostok and Artem.

4 single billing and payment centers

were launched in 2019 by RusHydro in the Far East

February

The engineering and blasting works conducted to clear a landslide at the Bureyskoye water reservoir helped bring the hydrological conditions back to normal, with Bureyskaya HPP now operating as usual.

The divestment of RusHydro's 40% share in VolgaHydro, a hydropower equipment manufacturing joint venture in the Saratov Region, to Voith. The sale price was determined by an independent appraiser and fully offset the Company's investments in the project.

450 mn RUB

estimated share of RusHydro

March

RusHydro Group and UC RUSAL commissioned, within two start-up complexes, the first train of the Boguchansky Aluminum Smelter, part of the Boguchansk Energy and Metallurgical Association project (BEMO).

The first train of the Boguchansky Aluminium Smelter was commissioned

May

Volzhskaya HPP piloted a phase angle regulator, first of its kind in Russia. This unique ground-breaking equipment manufactured by the Power Machines – Toshiba. High-Voltage Transformers JV is set to support power transmission from Volzhskaya HPP.

The phase angle regulator at Volzhskaya HPP was fully developed in Russia

April

PJSC RusHydro paid coupons on and fully redeemed its series BO-P04 exchange-traded bonds for a total of RUB 15 bn[1], which helped reduce its rouble-denominated weighted average cost of debt to 7.8% p. a. and improve its financial performance.

The Board of Directors approved an updated version of RusHydro's dividend policy aiming to enhance dividend distribution transparency and predictability. The new document suggests that 50% of its profit under the IFRS consolidated financial statements be distributed as dividends in the base-case scenario. It also sets out the minimum dividend payout determined as the average amount of dividends paid for the previous three years.

RusHydro held a public hearing on the 2018 annual report draft involving the representatives of the main groups of stakeholders.

As part of the Comprehensive Modernization Program, RusHydro started upgrading Kubanskaya PSPP in the Karachay-Cherkess Republic, Russia's longest-standing pumped storage power plant.

all 6 hydropower units

will be replaced for the newer highly-efficient equipment

June

As part of the Comprehensive Modernization Program, Novosibirskaya HPP saw all of its turbines replaced with new equipment boasting enhanced capacity and higher efficiency (94% vs 87%). The new turbines meet the latest environmental safety requirements. The upgrade is designed to increase the plant's installed capacity.

RusHydro started constructing two smaller HPPs (Krasnogorskaya HPP-1 and HPP-2) on the Kuban River in the Karachay-Cherkess Republic, each with an average annual output of 83.8 mn kWh. Both HPPs are expected to be launched in 2021–2022.

24.9 MW

is the projected installed capacity of both smaller HPPs

August

RusHydro sponsored projects to restore populations of the snow leopard in the Krasnoyarsk Territory and cranes in the Republic of Khakassia, with the Sayano-Shushensky and Khakassia nature reserves as its key partners.

RusHydro commissioned a 300 GCal/h hot water peaking boiler plant, a major heat supplier in Yakutsk. The new energy facility ensures a more stable heat supply in the capital of Yakutia, partially replacing the capacity of the decommissioned Yakutskaya GRES.

RusHydro fully paid the 2018 dividends, which amounted to RUB 15.9 bn (up 42% y-o-y), or 50% of its IFRS net profit for 2018.

50%

of net profit under IFRS was assigned for dividend payments

September

RusHydro Group launched a chain of ten fast charging stations for electric vehicles, first of its kind in the Far East. The new facilities are installed in such cities of the Primorsky Krai (the leading region in terms of EV numbers) as Vladivostok, Ussuriysk and Artem.

RusHydro Group opened shared utility payment centers in the Primorsky Krai and Khabarovsk territories. The high-tech facilities meet all the latest requirements to provide a seamless customer experience.

Zagorskaya PSPP, Russia's largest pumped storage power plant, started distributing electricity through a new 500 kV gas-insulated switchgear. Installation of the 500 kV gas-insulated switchgear at Zagorskaya PSPP was carried out as part of RusHydro's Comprehensive Modernization Program.

RusHydro Group put into operation Nizhne-Bureyskaya HPP in the Amur Region, Russia's most powerful hydroelectric plant constructed in the post-Soviet period. With the fourth hydropower unit launched, Nizhne-Bureyskaya HPP reached its design capacity of 320 MW.

320 MW

Installed capacity of the Nizhne-Bureyskaya HPP

July

The Government of Russia approved the TPP construction and upgrade projects in the Far East proposed by RusHydro, including the construction of Artyomovskaya CHPP-2, Khabarovskaya CHPP-4 and the second stage of Yakutskaya GRES-2 and the upgrade of Vladivostokskaya CHPP-2. Sufficient return on investment will be secured via a mechanism offered by the government program for the thermal power plant modernization in Russia.

As part of the Comprehensive Modernization Program, RusHydro Group started upgrading Chirkeyskaya HPP, the largest hydroelectric power plant in Dagestan and the North Caucasus. It plans to replace most of the HPP equipment and reconstruct the hydraulic structures, thus adding 100 MW to its capacity.

100 MW

will be the capacity gain of Chirkeyskaya HPP resulting from modernization

[1] In accordance with the Securities Issue Resolution (state registration number: 4B02-04-55038-E-001P dated April 1, 2016), the coupon amount totaled RUB 774.15 mn. The accumulated coupon was paid for the period from October 4, 2018 to April 4, 2019.

November

- PJSC RusHydro successfully completed the offering of its RUB 15 bn five-year rouble-denominated Eurobonds on the Irish Stock Exchange. The coupon rate was set at 6.8% per annum (an all-time low for corporate rouble-denominated Eurobonds at the time of placement) and the issue was oversubscribed by almost five times.

- RusHydro and VTB signed an agreement on amending the forward contract. The forward rate was reduced by 0.5% per annum, with the contract's term extended by three years up to 2025.

- RusHydro put into operation Sakhalinskaya GRES-2 in the Sakhalin Region. This state-of-the-art 120 MW thermal power plant was built to replace the obsolete Sakhalinskaya GRES. It is expected to produce 840 mn kWh annually, covering a third of Sakhalin's demand for electricity.

120 MW

is the capacity of Sakhalinskaya GRES-2

- RusHydro Group completed the 15th season of oBEREGAi, a nationwide charitable environmental program designed to engage the Company's employees and volunteers in cleaning up the banks of rivers, reservoirs and lakes. The total number of eco-marathon volunteers in 2019 exceeded 2,500 people from 20 regions who collected over 3,500 bags of garbage.

- RusHydro opened the first shared utility payment center in Yakutia.

- RusHydro commissioned the first charging station for electric vehicles in the Amur Region. Lessons learned from operation of the Company's charging equipment in the Far Eastern Federal District will be used in the joint project of RusHydro and the Amur Region aimed at promoting electrical vehicles and charging infrastructure.

October

- PJSC RusHydro began levelling of the Zagorskaya PSPP-2 building. The works to level the station node building at Zagorskaya PSPP-2 are scheduled to be completed in 2022, with a decision on further construction steps to be taken after that.

- RusHydro made it to the Global 2000 list of the World's Best Employers culled by Forbes and Statista. The world's top 500 employers include seven Russian companies, but RusHydro is the only power generating company on the list.

top-500

RusHydro holds a position among top-500 world's best employers

December

- RusHydro Group completed the restructuring of assets in the Kamchatka Territory by merging JSC Geoterm and PJSC KamGEK with PJSC Kamchatskenergo, the region's largest energy company. The consolidation exercise is key to enhancing our efficiency in the Russian Far East and optimising RusHydro Group's corporate structure.

- Nizhne-Bureyskaya HPP completed a unique hybrid renewable generation project, with 1,3 MW solar panels installed at a hydropower plant for the first time in the history of the Russian energy sector. The solar plant will help Nizhne-Bureyskaya HPP save on own power consumption, thus increasing net supply of electricity and enhancing the HPP efficiency.

1.3 MW

is the total capacity of solar panels

Events after the reporting date

January

- DEK was authorized to distribute heat and electricity in Kamchatskenergo's regions of operation. The redistribution of sales functions within RusHydro Group will help introduce uniform operating standards, resulting in a more efficient power supply to consumers.

The project

of consolidation of RusHydro's retail assets is implemented in the most of the Far Eastern regions

February

- RusHydro inaugurated Zaramagskaya HPP-1 in the Republic of North Ossetia. The new facility is the largest power plant in the republic and the third most powerful hydroelectric plant in North Caucasus[1]. The 346 MW power plant will produce 842 mn kWh of electricity annually. With Zaramagskaya HPP-1 commissioned, the power system of North Ossetia took a quantum leap as the region's total installed capacity quadrupled and its self-sufficiency in power increased from 20% to 70%.

346 MW

is the installed capacity of Zaramagskaya HPP-1

March

- A deal was sealed to sell RusHydro Group's stake in International Energy Corporation (CJSC MEK, Armenia) managing Sevan-Hrazdan Cascade HPP. The buyer fully refinanced the credit liabilities of CJSC MEK raised against RusHydro's surety. After the closure of the deal, RusHydro Group's financial debt went down by RUB 4 bn and the Group's loan portfolio was no longer exposed to currency risks.

By 4 bn RUB

decreased RusHydro Group's financial debt as a result of the deal

April

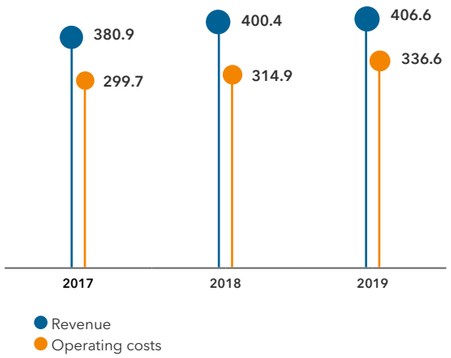
- The first turbine unit of the TPP in Sovetskaya Gavan was connected to the grid and synchronized with the United Energy System of Russia. As part of the comprehensive tests, the turbine unit pilot run was performed, and it successfully generated first kWh for the power system.

- RusHydro and the Sakhalin Region signed an agreement on the power charging infrastructure development. The parties agreed that RusHydro will start the installation of charging stations for electric cars on the territory of the Sakhalin Region in 2020.

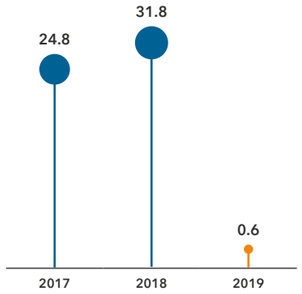
[1] Zaramagskaya HPP-1 was commissioned in December 2019, with power output as at the end of the year totaling 1.7 mn kWh.

Key 2019 figures

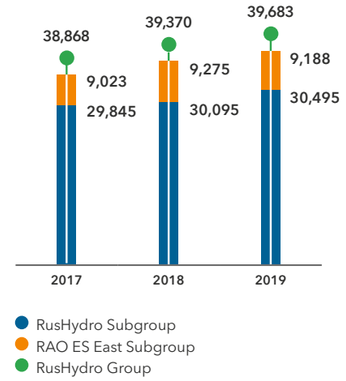
Revenue and operating costs, RUB bn



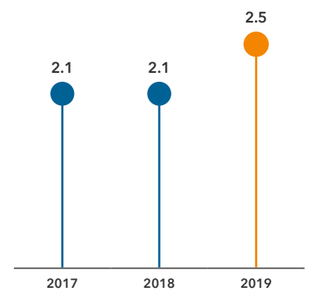
Net income, RUB bn



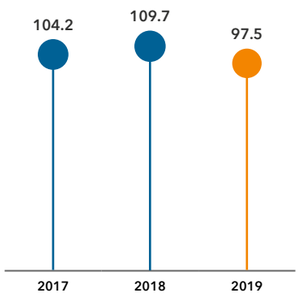
Installed capacity, MW



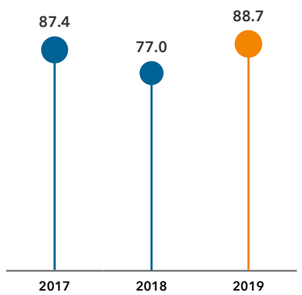
Health and safety expenses, RUB bn



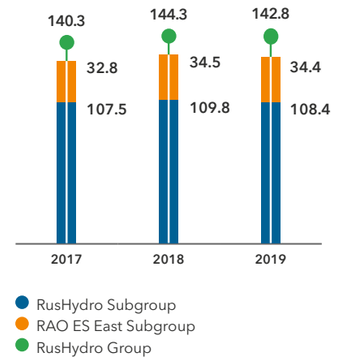
EBITDA, RUB bn



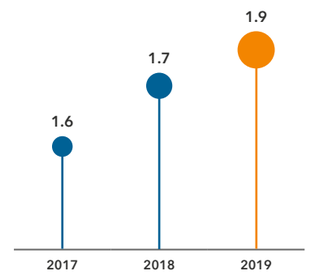
CAPEX, RUB bn



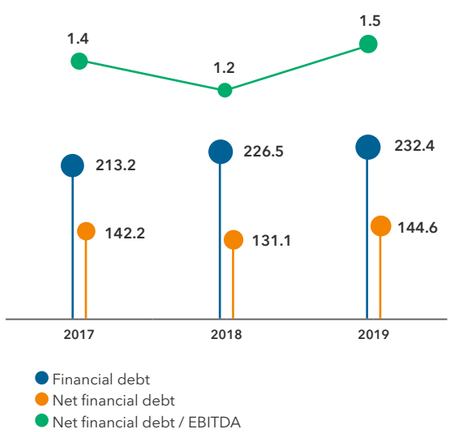
Electricity generation, bn kWh



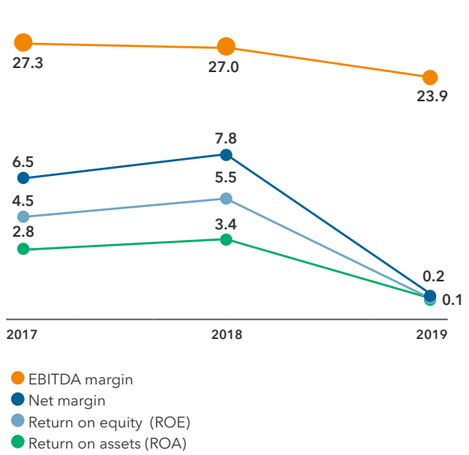
Environmental protection expenses and investments, RUB bn



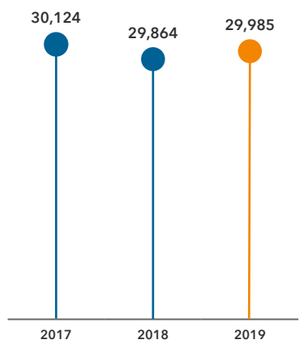
Financial and net financial debt, RUB bn



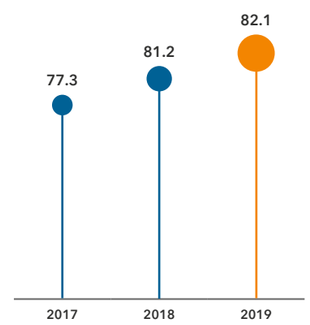
Margin indices, %



Heat supply, '000 Gcal



Tax payments to budgets of different levels, RUB bn



Awards and ratings

Credit ratings

International:

S&P Global Ratings

In 2019, the agency maintained the long-term credit ratings of PJSC RusHydro and its Eurobonds at an investment grade BBB- (stable outlook).

Fitch Ratings

In December 2019, the agency affirmed the long-term credit rating of PJSC RusHydro and the credit ratings of the Company's bonds and all of the Group's Eurobond issues at an investment grade BBB- (stable outlook).

Moody's

In February 2019, the agency upgraded the credit ratings of PJSC RusHydro and all of the Group's Eurobond issues to an investment grade Baa3 (stable outlook).

National:

ACRA

In June 2019, ACRA affirmed its long-term credit rating on RusHydro and its bonds at AAA(RU) (stable outlook), which represents the top reliability level, and also upgraded the Company's standalone creditworthiness assessment (SCA) to *aa*.

ESG ratings and rankings

FTSE4GOOD

Following a successful independent assessment, PJSC RusHydro continued to be included in this sustainability index.

RobecoSAM

The Company consistently ranks high in the agency's rating, scoring 34 points in economic, environmental and social dimensions in 2019.

Carbon Disclosure Project (CDP)

In 2019, PJSC RusHydro received a D ranking, which is a median result among Russian companies.

ISS-oekom

2019 saw the Company's rating upgraded to C.

Sustainalytics

In 2019, the international agency upgraded PJSC RusHydro's rating to 61 points.

WWF Russia

PJSC RusHydro hit the second spot in Russia's first environmental transparency ranking of heat and power generating companies. Moreover, the Company won the highest scores in two (environmental management and information disclosure/ transparency) out of three ranking criteria.

Corporate transparency rating of the largest Russian companies, RRN

PJSC RusHydro scored 94.4 points ranking second and achieving a Premium transparency level.

Leaders of Russian Business by the Russian Union of Industrialists and Entrepreneurs

In 2019, PJSC RusHydro ranked at the top of the Responsibility and Transparency and Sustainability Vector indices. In addition to that, in 2019, the Company won the *Leaders of Russian Business: Dynamics and Responsibility* award for the High Quality of Sustainability Reporting.

Employer awards

In 2019, RusHydro Group's Walking from the Far East to the North Caucasus initiative was named the best project at the contest for best socially responsible companies in the energy and oil and gas industries sponsored by the Russian Ministry of Energy. This project also won the first place at Enabling Our Future, Russia's sixth nationwide contest for best employer practices in human capital development sponsored by the Russian Ministry of Education and Science.

The corporate pension plan for employees at RusHydro's branches won the Grand Prix in the nomination for HR Solution of the Year 2019 at the Crystal Pyramid contest held by the organizing committee of the Russia & CIS HR Directors Summit and the Russian Union of Industrialists and Entrepreneurs.

RusHydro Group received an award from the Russian Ministry of Energy and the Moscow City Government at Russian Energy Week 2019 for its contribution to the promotion of the energy sector, energy conservation and engineering education.

The Presidential National Council for Professional Qualifications commended RusHydro for its participation in developing an industrial framework for professional qualifications, key approaches to professional and public accreditation in the Russian power sector, and timely initiatives aiming to debottleneck the formal procedures for occupational examinations held in the form of independent assessments.

PJSC RusHydro made it to the Global 2000 list of the World's Best Employers culled by Forbes and Statista. The world's top 500 employers include seven Russian companies, but PJSC RusHydro is the only power generating company on the list.

Annual report contests and ratings

LACP

RusHydro Group's annual report for 2018 won Vision Awards, ranking highest among global energy companies and No. 37 in the Top 100 Worldwide.

ARC

RusHydro Group's annual report for 2018 won the gold prize beating other global energy companies.

Report Watch

Report Watch maintained its rating on RusHydro Group's annual report for 2018 at B+.

Corporate & Financial Awards

RusHydro Group's annual report for 2018 was shortlisted in the best online report category and was commended for its exceptionally high quality.

MarCom Awards

RusHydro Group's annual report for 2018 received gold awards in the Best Corporate Annual Report and Best Utilities Annual Report nominations.

Moscow Exchange

RusHydro Group's annual report for 2018 won the 22nd annual competition in the Best Disclosure on Corporate Governance nomination and was one of the runner-ups in the Best Disclosure on Sustainable Development nomination.

RAEX (Expert RA)

RusHydro Group's annual report for 2018 received the highest rating of 5 stars and won the first place in the Best Annual Report (Non-Financial Sector) nomination.

Silver Threads

RusHydro Group's annual report for 2018 won the first place in the Best Annual Report category.

PR awards

RusHydro Group's Water Day initiative was named the best project in environmental education at Reliable Partner – Ecology, Russian national contest for best environmental practices held under the auspices of the Federation Council's Committee for Agrarian and Food Policy, Ministry of Energy, Ministry of Natural Resources and Environment, Ministry of Industry and Trade and Ministry of Construction, Housing and Utilities.

PJSC RusHydro won top honors at the fifth All-Russian MediaTEK competition held under the auspices of the Russian Ministry of Energy in the *Best Consumer is a Reliable Partner, Best Federal Energy Company Press Service, Social and Environmental Initiative, State-of-the-Art Production Technology and Energy Sector Development* and *Best Corporate Media* nominations. The Company's subsidiaries and branches, including Zeyskaya HPP, PJSC Yakutskenergo, JSC DGK and JSC DRSK, were also commended.

PJSC RusHydro's Most Beautiful Energy photo album published to coincide with the Group's 15th anniversary won awards at Silver Threads 2019, Russian national contest for media resources, in nominations for the Best Corporate Photo Album and the Best Infographics in Corporate Media.

PJSC RusHydro won the Leaders of Corporate Charity competition in the nomination for the Best Environmental Program Contributing to the UN Sustainable Development Goals. The Company was highly praised for its environmental project focusing on the reintroduction of the Persian leopard in North Ossetia as well as the Company's progress in annual corporate charity rankings. The competition is held by the Donors Forum, the Vedomosti business newspaper and PricewaterhouseCoopers, a global network of audit and consulting firms.

RusHydro's project for integrated information support to corporate events won a prize at the International Competition for Internal Communication Projects – Intercomm-2019.

GEOGRAPHICAL SPREAD

30

regions of presence

GEOGRAPHICAL SPREAD *[102-4]*

HPPs
1. Boguchanskaya HPP
2. Bureyskaya HPP
3. Cascade of Verkhnevolzhskiye HPPs
4. Cascade of Vilyuyskiye HPPs
5. Volzhskaya HPP
6. Votkinskaya HPP
7. HPPs of Dagestan Branch
8. Zhigulevskaya HPP
9. Zagorskaya PSPP
10. Zeyskaya HPP
11. Zelenchukskaya HPP-PSPP
12. HPPs of Kabardino-Balkarian Branch
13. Kamskaya HPP
14. Kolymskaya HPP
15. Cascade of Kubanskiye HPPs
16. Nizhegorodskaya HPP
17. Nizhne-Bureyskaya HPP
18. Novosibirskaya HPP
19. Saratovskaya HPP
20. Sayano-Shushensky Branch
21. HPPs of the Northern Ossetian Branch
22. Tolmachevskiye HPPs
23. Cheboksarskaya HPP
24. Zaramagskaya HPP-1
25. Zagorskaya PSPP-2
26. Krasnogorskiye SHPPs
27. Ust-Srednekanskaya HPP
28. Verkhnebalkarskaya SHPP
29. Ust-Dzhegutinskaya SHPP
30. Barsuchkovskaya SHPP

GeoPPs
31. Verkhne-Mutnovskaya GeoPP
32. Mutnovskaya GeoPP
33. Pauzhetskaya GeoPP

Solar PPs
SPPs in the Republic of Sakha (Yakutia), 19 power plants

Wind PPs
34. WPP in Ust-Kamchatsk
35. WPP in Nikolskoe
36. WPP in Novikovo
37. WPP in Tiksi

30 regions of presence

RusHydro Group comprises over 60 hydropower plants, thermal power and RES generating facilities, as well as electric grid, energy retail facilities, engineering and service companies, design and research institutes.

Thermal PPs
38. Amurskaya CHPP-1
39. Anadyrskaya Gas Engine CHPP
40. Anadyrskaya CHPP
41. Artemovskaya CHPP
42. Birobidzhanskaya CHPP
43. Blagoveshenskaya CHPP
44. Vladivostokskiye CHPPs
45. Kamchatskiye CHPPs
46. Komsomolskiye CHPPs
47. Kyzym Mobile PP
48. Labytnangi Mobile PP
49. Magadanskaya CHPP
50. Nerunginskaya GRES
51. Nikolaevskaya CHPP
52. Partizanskaya GRES
53. Primorskaya GRES
54. Raychikhinskaya GRES
55. Urengoy Mobile PP
56. Khabarovskiye CHPPs
57. Chulmanskaya CHPP
58. Egvekinotskaya GRES
59. Yuzhno-Sakhalinskaya CHPP-1
60. Yakutskaya GRES
61. Arkagalinskaya GRES
62. Mayskaya GRES
63. Chaunskaya CHPP
64. Yakutskaya CHPP
65. Yakutskaya GRES-2
66. Vostochnaya CHPP
67. Sakhalinskaya GRES-2
68. Sovetskaya Gavan CHPP

Retail companies
69. Far-Eastern Energy Company (DEK)
70. Krasnoyarskenergosbyt
71. Ryazan Retail Energy Company
72. Chuvash Retail Energy Company

Research and design organizations
73. Vedeneyev VNIIG
74. Hydroproject institute n. a. S. Zhuk
75. Lenhydroproject institute
76. Mosoblhydroproject
77. Khabarovsk Energy Technological Company

Electric grid company
78. Far-Eastern Distribution Company (DRSK)

RusHydro Group supports 19 specially protected natural areas, including the conservation of biodiversity programs

RusHydro Group comprises over 60 hydropower plants, thermal power and RES generating facilities, as well as electric grid, energy retail facilities, engineering and service companies, design and research institutes.

Markets served

Macroeconomic overview

In 2019, the global economy continued to slow down, growing at a mere 2.4%, the lowest rate in the last decade[1]. An escalating trade war between the USA and China, the two world's economic superpowers, pushed the growth back to the levels seen in 2015–2016, with an increased global uncertainty hitting the investment activity and demand for durables.

The deteriorating economic outlook has prompted central banks to put on hold monetary tightening, which led to the relaxation of financial conditions globally. At the same time, many emerging markets saw positive effects from resumed capital inflows offset by weaker external demand.

According to the Rosstat data for 2019, Russia's real GDP grew by 1.3%[2]. In the previous year, the GDP expanded by 2.5%.

Across industries, the non-primary sector saw the biggest y-o-y decline as regards its positive contribution to GDP, while the production input remained flat as a result of stable growth.

1.3%
was the growth of Russia's real GDP

Global GDP, %

GDP	2016	2017	2018	2019
World	**2.6**	**3.2**	**3.0**	**2.4**
Advanced economies	**1.7**	**2.4**	**2.2**	**1.6**
USA	1.6	2.4	2.9	2.3
Europe	1.9	2.5	1.9	1.1
Japan	0.6	1.9	0.8	1.1
Emerging markets and developing economies	**4.2**	**4.5**	**4.3**	**3.5**

Electricity market outlook for key global markets

According to the International Energy Agency, energy consumption worldwide will keep growing at 1.3% per annum in line with current trends. At the same time, there is a shift towards renewables, albeit too slow to match the expansion of the global economy and population.

[1] The World Bank's Global Economic Prospects report, January 2020.
[2] Statistical datamart at https://showdata.gks.ru/report/280029/

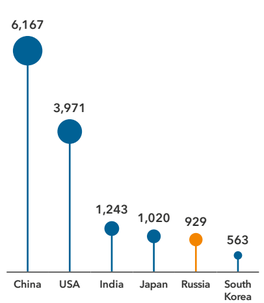
Global energy consumption: 2040 outlook[1] ('000 TWh)

Territory	2015	2020	2025	2030	2035	2040
Asia Pacific	8.8	10.6	12.4	14.5	16.8	19.0
North America	4.3	4.3	4.4	4.4	4.5	4.7
Europe	3.2	3.4	3.6	3.8	4.0	4.2
Latin America	1.3	1.4	1.5	1.7	2.0	2.2
CIS	1.0	1.1	1.2	1.3	1.5	1.7
Middle East	0.9	1.0	1.1	1.2	1.4	1.7
Africa	0.6	0.7	0.8	1.1	1.3	1.5
Total	**20.1**	**22.5**	**25.0**	**28.0**	**31.5**	**35.0**

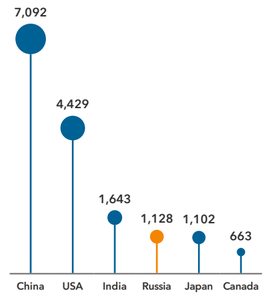
Power generation for the period until 2040 will increase by 70%, with over 85% of this growth coming from non-OECD countries. Fossil fuel will be used to generate less than 50% of the global power supplies. Global electricity capacities will almost double towards 2040.

Russia's position in the global electrical energy system

Power consumption leaders, TWh



Power generation leaders, TWh



At the end of 2019, Russia was the
4th-largest electricity producer and
5th-largest electricity consumer in the world

[1] EnerOutlook 2019.

Russian electricity and capacity market

The Russian electricity and capacity market is comprised of the wholesale electricity and capacity market (WECM) and the retail electricity market (REM).

The wholesale market is a place where a special type of commodities – electricity and capacity – are traded within the Unified Energy System across Russia's economic space. Capacity as a commodity is an obligation to properly maintain power generating facilities in order to timely meet the consumer demand for electric power. The retail market trades in only one commodity – electric power.

Under the law, all electricity and capacity facilities with an installed capacity of over 25 MW located in the price and non-price zones are required to sell their products in the WECM only. Power plants with a capacity below 5 MW are required to trade in the REM only, while power plants with a capacity between 5 MW and 25 MW can trade in both the WECM and REM.

From 2011, system services are a major instrument for maintaining reliability and high quality of the Unified Energy System of Russia in the fully liberalized electricity and capacity markets.

Regulatory framework:
- Federal Law No. 35-FZ On Electric Power Industry dated March 26, 2003;
- the Russian Government's Resolution No. 1172 On Approval of Rules for the Wholesale Electricity and Capacity Market and on Amendments to Certain Acts of the Government of the Russian Federation Concerning Organization of the Wholesale Electricity and Capacity Market dated December 27, 2010;
- the Russian Government's Resolution No. 442 On the Operation of Retail Electricity Markets, Full and/or Partial Limitation of Electricity Consumption dated May 4, 2012;
- an agreement for accession to the wholesale market trading system, and WECM regulations.

Wholesale electricity and capacity market in the first and second price zones

The WECM participants include generating companies, electric power exporters/importers, electricity retailers, electric grid companies (electricity purchases to cover transmission losses), and large consumers. The wholesale electricity and capacity market covers both price and non-price zones. The first price zone comprises the European part of Russia and Urals, while the second price zone encompasses Siberia.

The WECM has several sectors that offer different transaction terms and delivery times:
- regulated contracts (RC);
- the day-ahead market (DAM);
- the balancing market (BM);
- capacity auctions (KOM);
- capacity supply agreements (DPM);
- capacity sale contracts for must-run generating facilities;
- unregulated bilateral contracts, as well as unregulated electricity and/or capacity sales contracts (FBC, FECC, FCC).

The Market Council Non-Profit Partnership established under Federal Law No. 35-FZ On Power Industry dated March 26, 2003 is responsible for running the wholesale market's commercial infrastructure.

Trading System Administrator of the Wholesale Electricity and Capacity Market (JSC TSA) is responsible for administering electricity and capacity transactions in the wholesale market (the trading system of the wholesale market).

Financial settlements between the WECM participants are handled through the Center for Financial Settlements (CFS).

The WECM technological infrastructure is administered by the System Operator of the Unified Energy System which exercises exclusive and centralized operational management of Russia's Unified Energy System and monitors compliance with the system's technological parameters. The market's technological infrastructure is also supported by the Federal Grid Company (FGC UES), which manages the Unified National Electric Grid (UNEG), and interregional distribution grid companies (IDGC).

The activities of infrastructure operators, including their pricing policies and counterparty relations, are subject to government regulation and control.

Retail electricity markets

Companies operating within the designated price zones of the retail electricity market are guided by the retail market pricing rules based on the WECM tariffs. They also take into account approved tariffs for services subject to government regulation.

Electricity sold in the retail market is either purchased in the WECM or sourced from generating companies that do not operate in the wholesale market. In the Russian regions included in non-price zones of the wholesale market, the retail electricity price for end consumers is set based on the wholesale market prices. Prices aligned with the wholesale market apply to all end consumers, with the exception of households and equivalent consumer categories.

Households and equivalent consumer categories are supplied with power at regulated prices (tariffs) approved by the regional executive authorities in charge of tariff regulation.

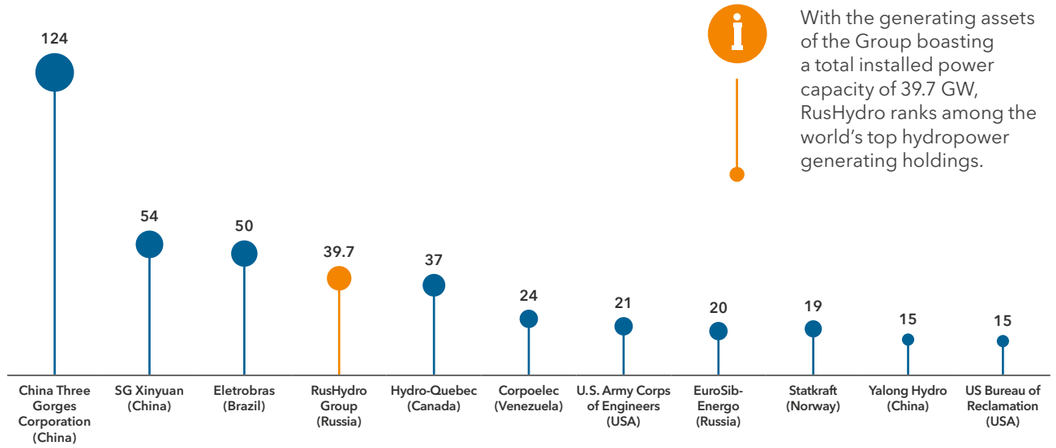
System services market

The types of services to ensure system reliability, the procedure to select power suppliers and consumers in charge of such services, applicable service provision rules and pricing mechanisms are all set out in the Russian Government's Resolution No. 117 *On Selecting Electric Power Suppliers and Consumers to Provide System Reliability Services, Rendering Such Services, and Approving Amendments to Acts of the Government of the Russian Federation Concerning the Provision of System Reliability Services* dated March 3, 2010.

Generating companies and major electricity consumers render system reliability services under the supervision of the System Operator.

RusHydro's position in the industry *[102-6] [OS]*

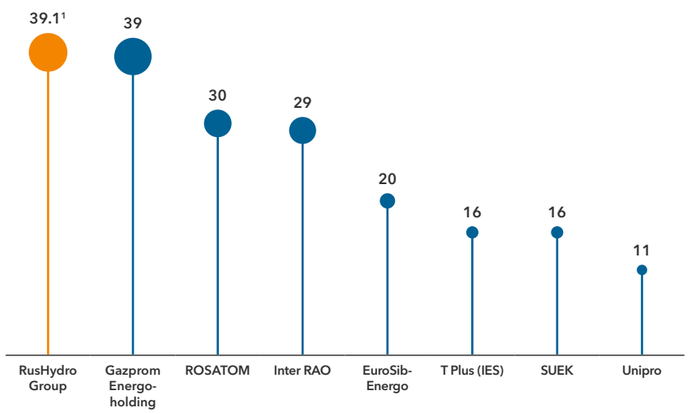
The world's largest hydro-generating companies[1], GW



With the generating assets of the Group boasting a total installed power capacity of 39.7 GW, RusHydro ranks among the world's top hydropower generating holdings.

[1] Hydropower generation has the biggest share in the installed capacity of the listed companies. The chart shows total installed capacity data for all types of generation.

Russia's top generating companies by installed capacity, GW



RusHydro Group is one of Russia's leading electric power producers, with independent energy companies acting as its main competitors.

The Group sells electricity in Russia both in the wholesale electricity and capacity market (first and second price zones and UES East's non-price zone) to major consumers and to retail consumers via its retail companies and guaranteed suppliers.

The Company also provides reactive power capacity adjustment services to the System Operator without generating electricity.

Based on the plans of the Russian Ministry of Energy, the Scheme and Program to Develop the Unified Energy System of Russia in 2019–2025[2], and analysis of RusHydro's Investment Program and Business Plan, we expect that:

- RusHydro Group's generation share will decline from 13.0% in 2019 to ca. 12.8% in 2020, with the Group's output expected to drop due to the anticipated fall in water levels;
- the share of RusHydro Group's power generating facilities in Russia's total installed capacity will remain flat at 15.5%.

The key developments affecting the Group's markets in 2019 included:

- the enactment of the Russian Government's Resolution No. 43 On Selecting Projects to Upgrade the Generating Facilities of Thermal Power Plants dated January 25, 2019. Following the upgrade, the selected facilities will generate power at a special (higher) capacity price to compensate for upgrade costs. RusHydro Group's projects were included in the list;
- the inclusion of Central and Western energy hubs of Yakutia in the non-price zone of the Far Eastern WECM effective from January 1, 2019.

The Group's key competitive advantages include high profitability, flexibility of hydropower generating facilities, eco-friendliness and economic efficiency of production processes.

RusHydro's share in Russia's electric power market[3], %

Year	Electricity output, mn kWh		Share, %	Installed capacity, MW		Share, %
	Russia	RusHydro Group		Russia	RusHydro Group	
2017	1,073,700	139,820	13.0	246,868	38,479	15.6
2018	1,091,700	143,853	13.2	250,400	38,803	15.5
2019	**1,096,200**	**142,414**	**13.0**	**251,958**	**39,122**	**15.6**

[1] Excluding the installed capacity of Armenia-based electricity generating facilities (CJSC MEK).

[2] Approved by Order of the Russian Ministry of Energy No. 174 dated February 28, 2019.

[3] Excluding CJSC MEK.

RusHydro Group SWOT analysis *[102-15]*

Strengths	Weaknesses
• strong capitalization upside; • large scale of operations, which enhances the Company's appeal in the capital markets; • power generation not requiring fuel and therefore not susceptible to fluctuations in fossil fuel prices (HPP/PSPP-based); • long lifespan of hydropower facilities; • flexibility of hydropower generation, with HPPs and PSPPs viewed as key providers of system services; • use of HPPs for river runoff control, flood risk mitigation, fresh water accumulation and other water management purposes.	• fundamental dependence on natural conditions; • physical and moral wear and tear of production assets, especially in the Far Eastern Federal District; • a long investment cycle and high capital intensity of CAPEX projects; • economically inefficient infrastructure expenditures and projects; • high leverage of JSC RAO ES East; • fundamentally undervalued shares.
Opportunities	**Threats**
• creating a market model to support the operation of the existing hydropower facilities and new growth projects; • significant untapped hydropower resources and HPP-focused development; • stronger government role in ensuring energy security; • the emergence and use of advanced equipment and technologies to achieve operational excellence; • creating a RES-favourable regulatory environment; • boosting the Company's investment appeal and potentially attracting a strategic investor(s).	• higher interest rates on long-term borrowings; • reduced government capacity to finance infrastructure projects; • shift to a market model which disregards the HPP and PSPP contribution to the UES reliability; • change in the government's regulatory activity to support energy generation from renewable sources; • slow growth of demand from the current and new industrial consumers in Siberia and the Russian Far East; • slow increase in unregulated prices in the wholesale electricity market; • suppliers and contractors lacking resources to implement large-scale industry development programs, an accelerated increase in equipment and materials prices; • risk of industrial disasters.

RusHydro Group PEST analysis

Political and regulatory factors	Economic factors
• changes in the electricity and capacity pricing mechanisms in the liberalized segment; • changes in the support framework (DPM, RES-based DPM, surcharges); • new tariff system; • launch of the EAEU common electric power market.	• electricity and heat consumption growth; • water inflow in the reservoir; • change in water taxes; • fuel prices; • change in the key interest rate; • investment activity.
Social and cultural factors	**Technological factors**
• effective demand from the current and prospective consumers; • payment discipline.	• technological emergencies; • delayed commissioning of new energy facilities; • irregular fuel supplies.

Electricity markets in the Far Eastern Federal District

The Far Eastern Federal District is one of Russia's largest regions covering 6,215.9 thousand km^2 or 36.4% of Russia's total area. RusHydro Group is the region's main electricity supplier[1].

Energy tariffs in the non-price and isolated zones of the Far Eastern Federal District are set by the federal government authorities in charge of tariff regulation (regulators) in line with the applicable pricing policies and rules for the government regulation of electricity and heat tariffs in Russia. There are no unregulated tariff zones in the Far Eastern Federal District due to systemic restrictions.

In the WECM's non-price zone, a single purchaser model has been put in place, with suppliers selling electricity and capacity to a single purchaser at set rates. Wholesale customers buy electricity and capacity from the single purchaser at prices calculated by JSC TSA.

Far Eastern Energy Company (DEK) has been designated as the single purchaser in the Far East. Accounting for over 50% of retail electricity supplies in the Far East, DEK is an electricity retailer created through restructuring of regional energy and electrification companies.[2] The company is the guaranteed supplier in the Amur Region, Jewish Autonomous Region, and Khabarovsk and Primorsky Krai. DEK's retail supplies account for over 85% of the UES East electricity consumption.

Retail electricity prices factor in the following regulated components: wholesale prices (if applicable), tariffs from the generating facilities that serve the retail market, grid transmission tariffs and the sales surcharge.

In some areas of the Far East, including the isolated energy systems of the Kamchatka Territory, Magadan Region, Chukotka Autonomous Area and the Sakhalin Region, the retail market is the only available option as these areas are not linked to the Unified Energy System of the East.

To bring electricity tariffs in the Far East in line with the Russian base (average) rate, a surcharge was added to the capacity price in the first and second price zones of the WECM. RusHydro has been designated by the Russian Government to collect and transfer the surcharge amount to the Far East governments (Magadan and Sakhalin regions, the Kamchatka Territory, the Republic of Sakha (Yakutia) and the Chukotka Autonomous Area). This measure has helped reduce the accounts receivable from current consumers in the Far Eastern Federal District and attract investments in the macroregion's energy-intensive industrial projects to help create potential effective demand for electricity.

Macroregion's social and economic development

According to Russia's social and economic development outlook to 2024, the Amur Region and the Chukotka Autonomous Area will be the fastest-growing areas in the Far East, with the biggest increase in the gross regional product (GRP), industrial output and investment activity. The Sakhalin Region will see the weakest GRP growth due to reduced oil and gas production.

GRP GAGR in 2020–2024

Region	Ranking	CAGR, %
Chukotka Autonomous Area	1	108.8
Irkutsk Region	2	108.7
Amur Region	3	106.1
Magadan Region	4	105.4
Moscow Region	5	104.9
Ulyanovsk Region	6	104.8
Republic of Sakha (Yakutia), Yamal-Nenets Autonomous Area	7	104.5
Yaroslavl Region	8	104.2
Republic of Adygeya, Sverdlovsk Region	9	104.1
Novosibirsk Region	10	104.0

[1] Excluding the Trans-Baikal Territory and the Republic of Buryatia.

[2] In accordance with paragraph 170 of the Russian Government's Resolution No. 1172 of December 27, 2010.

STRATEGIC REVIEW

SPP Batagay. Commissioned in 2015

Business model *[EC]*

Our business model is designed to illustrate RusHydro Group's key business lines and the ways we leverage the whole range of resources to achieve significant results which define the Company's short-, mid- and long-term value, and pursue our strategic goals.

The Group uses natural capital and possesses manufactured, financial, human, social and intellectual[1] capitals which are of great importance for its stakeholders. Our capital comes from internal (generating facilities, grid and sales assets, net income, personnel, in-house R&D and design organizations) and external (water resources, borrowings, contractor staff) sources. The results of capital transformation into value, namely electricity and heat generation, dividend payouts to shareholders, tax payments and job creation, are significant for both the Group and its stakeholders.

[1] As defined by the International Integrated Reporting Framework, capitals mean resources and relationships that are the sources and results of value creation.

RESOURCES

MANUFACTURED CAPITAL

39.7 **GW** installed electrical capacity

19,021 **Gcal/h** installed heat capacity

21.9 **thousand** substations

105.0 **thousand km** of transmission power lines

FINANCIAL CAPITAL

7.0 **RUB bn** raised as part of additional share issue

201.9 **RUB bn** of debt capital raised as of January 31, 2019

1.5 net debt / EBITDA

88.7 **RUB bn** CAPEX

INTELLECTUAL CAPITAL

6 R&D organizations

21 partner universities

HUMAN CAPITAL

69.5 **'000 people** headcount

In-house Corporate Hydropower University

SOCIAL CAPITAL

Leading national company by low-carbon generation

Key role in tariff adjustment in the Far East

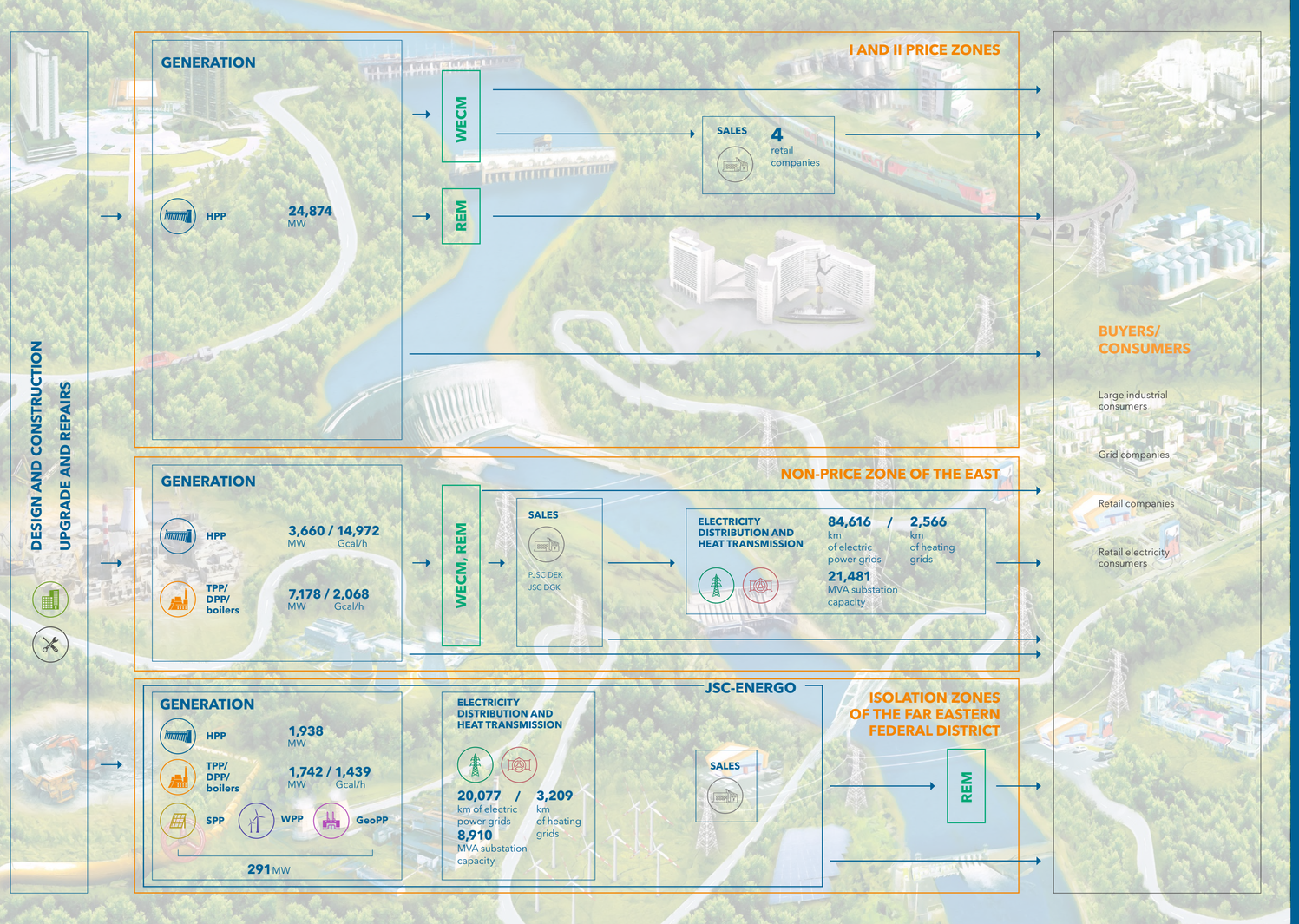
Russia's only electricity generating company in the Forbes rating of top employers

NATURAL CAPITAL

758.6 **mn m³** water used

16.3 **mn tonnes** coal used

5.6 **bn m³** gas used



RESULTS

MANUFACTURED CAPITAL

142.8 **bn kWh** electricity generated

30.0 **mn Gcal** heat generated

785 **MW** capacity for new consumers connected

FINANCIAL CAPITAL

97.5 **RUB bn** EBITDA

15.9 **RUB bn** dividend payouts

82.1 **RUB bn** tax payments to budgets of all levels

INTELLECTUAL CAPITAL

3.4 **RUB bn** FEED and R&D financing

25 **patents** obtained

18 digitalization projects

HUMAN CAPITAL

34.9 **average hours** of training per year per employee

78,575 **RUB** average salary of employees or c. 7 times higher than the statutory minimum monthly wage

34,239 trade union members

0.36 injury frequency rate

SOCIAL CAPITAL

32.1 **RUB bn** allocated to adjust tariffs in the Russian Far East

15 effective cooperation agreements with regional and municipal governments

15 socially significant facilities handed over to Russian regions and cities

>300 community projects financed

NATURAL CAPITAL

23.8 **mn tonnes** waste generated

600.2 **mn m³** water discharged

5.4 **bn kWh** electricity consumed

783.1 **tonnes of CO_2/mn kWh** intensity of emissions from electricity generation

RusHydro Group's business model highlights the continuous flow of capitals. Resource transformation within the same capital entails vertical transformation, e.g. natural into manufactured or financial into social capital.

Our comprehensive approach to value creation relies on an effective strategic and corporate governance system, which is based on a range of KPIs, fundamental valuation and factors in a changing market environment and the need to mitigate the materialized risks.

To assess the existing opportunities and management quality, we also need to compare the current and historical data on resources and results. For historical performance of the capitals and detailed comments, see the respective sections of the report.

Development strategy

Mission and values

RusHydro Group's mission is to ensure efficient use of water resources and reliability of the Unified Energy System of Russia, as well as to support the social and economic development of the Far Eastern regions by providing its existing and prospective consumers with access to energy infrastructure.

RusHydro Group's corporate values

Clean energy – ensuring environmental safety and protection of natural resources.

Engineering culture – operating assets in a safe and reliable manner.

Leading company – striving for the Company's success and leadership by combining its employees' efforts, resources and business components to achieve excellence in every aspect of the Company's operations.

Reliable business – implementing social policy which supports the Company's employees and residents across its footprint.

Prosperous society – promoting reliability and infrastructure development, efficient use of water resources, utilisation of hydropower potential and expanded use of renewable energy sources which contribute to the development of territories, economic growth and society's welfare and prosperity.

United team – providing opportunities for the development and fair remuneration of the employees to build a competitive edge across RusHydro's operations (team spirit, self-expression and unlocking employees' potential).

Developmental environment – implementing new technologies and offering infinite opportunities to foster further development.

Young energy – promoting energy-related careers among schoolchildren.

Strategy and its implementation *[102-26]*

RusHydro Group's Development Strategy until 2020 with an outlook for 2025 approved by the Company's Board of Directors[1] relies on the following documents:

- Concept of long-term social and economic development of the Russian Federation until 2020;
- National Security Strategy of the Russian Federation;
- Long-term forecast of economic development of the Russian Federation until 2030;
- Draft energy strategy of the Russian Federation until 2035;
- Scheme and program for the development of Russia's Unified Energy System;
- General layout of power generation facilities;
- Regional social and economic strategies, energy strategies;
- Industry strategies.

The strategy sets out development goals for the entire RusHydro Group along with specific objectives for their achievement.

[1] Minutes No. 238 of June 8, 2016.

RusHydro Group's strategic goals

Ensuring reliable and safe operations of the Company's facilities	Promoting stable development of electricity generation	Developing the Far Eastern energy sector	Increasing the Company's value
The Company ensures the reliable and safe operation of equipment, hydraulic structures and thermal power plant infrastructure with regard to society and environment, taking into account the economic feasibility of funds allocated for mitigating possible risks and reducing potential damage	The Company expands its electricity generation volumes by improving the efficiency of the production programs and investment projects, taking into account their economic performance	The Company ensures steady development of the Far Eastern energy sector and participates in the implementation of national goals to streamline the social and economic development of the region	The Company strives to increase its fundamental value, investment appeal and value growth while ensuring reliable and safe operation of its facilities

Key tasks

Development and improvement of perfomance of production and technological complex	Investment policy and changing approaches to the investment program development	Operating efficiency and transparency
	Improvment of the Far East assets managment and the Far East energy development	
Human resources development		

The Company has a strategic management system in place, which links strategic management processes with the incentive system. The system factors in the recommendations of the Federal Agency for State Property Management[1] on the development of key strategic documents.

The key enablers of the strategy are RusHydro Group's Long-Term Development Program, the Value Growth Plan and the Strategy Implementation Plan outlining the Company's development priorities as well as objectives and indicators aimed at achieving its strategic goals.

Long-Term Development Program

RusHydro Group's Long-Term Development Program for 2018–2022 was prepared in accordance with the instructions of the President of the Russian Federation[2] and the Russian Government[3] and approved by the Company's Board of Directors[4].

In compliance with the import substitution directives of the Russian Government, the Company's Board of Directors amended its Long-Term Development Program in 2019 to include an action plan providing for the Group's increased reliance on domestically developed software.

RusHydro Group's Long-Term Development Program relies on the Group's Development Strategy until 2020 with an outlook for 2025, the Consolidated Business Plan and the key development programs.

The progress on RusHydro Group's Long-Term Development Program is monitored in accordance with the Long-Term Development Program audit standard approved by the Company's Board of Directors[5] and the Terms of Reference for auditing the implementation of the Long-Term Development Program[6] developed in line with the recommendations of the Russian Government[7].

The system of strategic management of RusHydro

- Strategy of RusHydro Group
  - The Long-term Development Program
  - The Value Growth Plan
- Development programs in key areas:
  - Investment Program
  - Innovative Development Program
  - Production Program
  - Business Plan
- Plan for the implementation of the Strategy for the year
- KPI and motivation system

In the reporting year, RusHydro Group's Long-Term Development Program was implemented within the framework of production, investment and innovative programs. For more details, see the following sections: Key performance indicators, Investment activities, Economics and finance, Production and sales, Innovative development as well as Appendices 9 and 10.

[1] Recommendations of the Federal Agency for State Property Management No. OD-11/18576 of April 29, 2014.

[2] Instruction No. Pr-3086 of December 27, 2013.

[3] Minutes No. 3 of January 30, 2014, Directive of the Russian Government No. 4955p-P13 of July 17, 2014.

[4] Minutes No. 271 of June 1, 2018 as amended by resolutions of the Board of Directors (Minutes No. 279 of October 26, 2018, No. 294 of August 29, 2019, and No. 297 of October 21, 2019).

[5] Minutes No. 281 of December 27, 2018.

[6] Minutes No. 279 of October 26, 2018.

[7] Instruction of the Russian Government No. ISH-P13-2583 of April 15, 2014.

Value Growth Plan *[103-2]*

RusHydro Group's Value Growth Plan through to 2021 was approved by the Company's Board of Directors[1] to maximize the Company's value and its investment case for shareholders and investors.

One of RusHydro Group's strategic goals is to enhance the Company's value, which is set forth in its Development Strategy until 2020 with an outlook for 2025. The Value Growth Plan aims to increase RusHydro's fundamental and market value as the fundamental value drives market capitalization, which is particularly important in view of the fact that shares of RusHydro and other Russian power companies are currently traded with a significant discount to global majors.

To secure effective implementation of the Value Growth Plan, it is planned to introduce a cost approach in the Company's management activities for the management processes, systems and solutions to maximize value while also ensuring safe operations at generating facilities.

The efforts to improve the efficiency of operating and investing activities based on the findings of the external independent cost audit of RusHydro Group[2] in 2017–2019 brought about economic savings of RUB 24.7 bn as regards operating expenses and RUB 26.0 bn as regards investment expenses.

One of the key elements in the Value Growth Plan is cooperation with federal government authorities focusing on fostering a healthy investment climate in the energy sector of the Far Eastern Federal District and improving the tools to guarantee returns on investments in construction and upgrade projects. In 2019, following a meeting of the Government Commission on the Development of the Electric Power Industry, on July 15, 2019, the Russian Government adopted decree No. 1544-r to approve four modernization projects for the Far Eastern Federal District (1,262 MW): construction of Artyomovskaya CHPP-2 and associated off-site facilities (420 MW, 483 Gcal/h), Khabarovskaya CHPP-4 and associated off-site facilities (328 MW, 1,374 Gcal/h) and the second stage of Yakutskaya GRES-2 (154 MW, 194 Gcal/h), equipment modernization (turbo generators No. 1–3 and boiler units No. 1–8) at Vladivostokskaya CHPP-2 (360 MW, 570 Gcal/h) (for details, see the Construction and Modernization of Production Facilities section).

In order to enhance the transparency and predictability of dividend payouts, RusHydro approved an updated version of the Regulations on the Dividend Policy[3], which sets the minimum dividend payout (lower threshold) at the level of the average dividend paid for the previous three years. The Dividend Policy seeks to ensure predictability of dividend payouts given the non-monetary impairment of energy facilities commissioned in the Far Eastern Federal District and its impact on the Group's IFRS financial results.

Additionally, as part of its Value Growth Plan, the Group focuses on key operating domains with a view to increasing the transparency and predictability of the Company for market participants and bridging the gap between the fundamental and market values, including by improving the quality of corporate governance, ensuring a predictably high dividend flow, enhancing the liquidity of shares and depositary receipts, increasing our weight in the key indices, etc.

Strategic risks

The Company maintains a strategic risk register which identifies risk owners and is reviewed on an annual basis. The register is used to disclose risk-related information to shareholders, rating agencies, auditor and other stakeholders, and to further promote and control risk optimization initiatives.

The list of strategic risks and information on the risk management system are available in the Risk Management section.

Strategy Implementation Plan for 2019 *[EC]*

The Strategy Implementation Plan sets the following key goals and initiatives for 2019[4].

[1] Minutes No. 259 of October 30, 2017.

[2] The cost optimization plan based on the external independent cost audit of PJSC RusHydro and its subsidiaries (carried out by LLC Ernst & Young Assurance & Consulting Services) was approved by resolution of the Company's Board of Directors (Minutes No. 244 of November 23, 2016).

[3] Minutes of the Board of Directors No. 287 of April 22, 2019.

[4] As compared to 2018, the strategic goals for 2019 were expanded to include:
- substitution of imported products with those of Russian origin having similar specifications and usability.

Goal	Progress
Ensuring reliability of existing assets and their upgrade, enhancing management efficiency with respect to the production complex	As part of the Comprehensive Modernization, Rehabilitation and Repair Program, additions to installed capacity in 2019 amounted to: - 10 MW at Novosibirskaya HPP; - 30 MW at Votkinskaya HPP; - 12 MW at Saratovskaya HPP; - 10.5 MW at Zhigulevskaya HPP.
Enhancing the investment case and transparency	The Company's Board of Directors[1] approved a new edition of the Regulations on the Dividend Policy, which sets out 50% of RusHydro Group's IFRS net profit for the respective reporting period as the base rate for calculating dividends. Additionally, the minimum dividend payout (lower threshold) is set at the level of the average dividend paid for the previous three years.
Substitution of foreign-made products, works and services with those of Russian origin having similar specifications and usability	The Company is implementing its import substitution roadmap and corporate plan, which includes drafting proposals to stimulate domestic manufacturers. The Company's Board of Directors[2] approved the Action Plan for 2019–2021 providing for the Group's increased reliance on domestically developed software. In cooperation with the Industrial Development Fund of the Russian Ministry of Industry and Trade, the Company is implementing the defense industry diversification roadmap for the betterment of the domestic energy sector within the state industrial information system.
Improving the efficiency of the Far Eastern asset management system and developing the Far Eastern energy sector	The Company's Board of Directors[3] approved the Priority Development Program for the electric power industry in the Far Eastern Federal District with a view to promoting regional growth. The Program aims to ensure stable power supply for the consumers, including through centralized energy systems and modernization of thermal power plants in line with social and economic needs. The Russian Government's Decree No. 1544-r dated July 15, 2019 amended the list of thermal power plants to be modernized (rehabilitated) or constructed in the WECM non-price zones to include RusHydro's projects, specifically the second stage of Yakutskaya GRES-2, Artyomovskaya CHPP-2, Khabarovskaya CHPP-4, Vladivostokskaya CHPP-2.
Drafting the Company's strategic documents	The Group's Long-Term Development Program for 2018–2022 was updated. The Company's Board of Directors approved amendments to the Intelligent Systems and Digital Technology Roll-out section of the Group's Long-Term Development Program which were developed in compliance with Russian Government's Directive No. 10068p-P13 of December 6, 2018 and in accordance with the Board of Directors resolution on the Company's increased reliance on domestically developed software. As resolved by the Government Commission on the Modernization of the Economy and Innovative Development of Russia led by the Chairman of the Russian Government,[4] RusHydro Group updated its Innovative Development Program for 2020–2024 based on benchmarking vs global peers. RusHydro Group's technological capabilities and innovations are generally on a par with the leading peers and international best practices.
Improving the corporate governance system	The Company's corporate government practices were assessed. The results of the Board of Directors' performance assessment (self-assessment) and the assessment performed by the internal audit function were reviewed by the Board of Directors at a meeting held in person[5]. Based on the external assessment results, independent directors praised the Company's progress in corporate governance. The Company took notice of recommendations on improving its corporate governance following the assessment performed by the internal audit function and proposals for enhancing the Board of Directors' performance following the Board of Directors' performance self-assessment, all in line with methodology guidelines of LLC PricewaterhouseCoopers Advisory.

[1] Minutes No. 287 of April 22, 2019.

[2] Minutes No. 285 of March 26, 2019.

[3] Minutes No. 292 of June 22, 2019.

[4] Meeting minutes No. 2 of October 22, 2018.

[5] Minutes No. 287 of April 22, 2019.

Key performance indicators[1]

The system of key performance indicators ("KPI") for RusHydro's management team is based on national statutory requirements[2] and is designed to improve the Company's performance and achieve the goals set by its shareholders. Since 2017, the management KPI system includes annual KPI of the Management Board and KPI under RusHydro's Long-Term Incentive Plan ("LTIP").

In 2016, based on recommendations of an independent advisor[3], the Company developed a list of annual KPI for RusHydro's Management Board along with relevant calculation and evaluation methodologies, while also coming up with KPI for the Long-Term Incentive Plan, both of which are aimed at motivating the Company's management to achieve strategic goals and thus aligning the interests of the Company's management and shareholders. In 2019, the independent advisor updated the list of the LTIP KPI by introducing "Earnings per share (EPS), RUB/share" as a KPI with a 15% weight. The Management Board's KPI and the Company's LTIP KPI are calculated and evaluated using the calculation and evaluation methodology (approved by the Board of Directors) for the Management Board's KPI[4] and the calculation and evaluation methodology for the KPI of RusHydro's Long-Term Incentive Plan[5].

KPI of the Long-Term Incentive Plan

There are four KPI covering the first, second and third cycles of RusHydro's LTIP: three financial indicators (including total shareholder return (TSR) as a mandatory indicator required by the Federal Agency for State Property Management) and an integrated innovative KPI[5].

The achievement of target KPI for the Long-Term Incentive Plan is assessed upon expiry of the respective period.

[1] In the Key Performance Indicators section, a special methodology is used to calculate KPIs, hence, the values of indicators with the same name may differ in other sections of the report. The methodology for calculating the KPI of the Long-Term Development Program is disclosed in Appendix No. 9.

[2] Clause 4 of the List of the Russian President's Instructions No. Pr-1474 of July 5, 2013, Instruction of the Russian Government No. ISH-P13-2043 of March 27, 2014, and Directives of the Russian Government No. 2579p-P13 of April 25, 2014 and No. 7558p-P13 of November 12, 2014 in accordance with the Methodological Guidelines of the Federal Agency for State Property Management.

[3] Recommendations of the independent advisor (Ernst & Young (CIS) B.V.) on the methodology for the Management Board's remuneration system were approved by the Board of Directors (Minutes No. 241 of September 23, 2016)..

[4] Minutes No. 245 of December 26, 2016 as amended by resolutions of the Board of Directors (Minutes No. 251 of April 18, 2017, No. 269 of April 25, 2018, and No. 296 of September 25, 2019).

[5] Minutes No. 264 of December 28, 2017 as amended by resolutions of the Board of Directors (Minutes No. 283 of February 21, 2019).

[6] Approved by resolution of the Interagency Working Group for Implementing the Innovative Development Priorities of the Presidium of the Russian President's Council for Modernization of the Economy and Innovative Development of Russia (Minutes No. AD-P36-247pr of December 17, 2015). The integrated innovative KPI is listed among KPI in compliance with Directives of the Russian Government No. 1427p-P13 of March 3, 2016 and Resolution of the Board of Directors (Minutes No. 242 of October 10, 2016).

KPI of the Long-Term Development Program

RusHydro's Long-Term Development Program consists of KPI established for 2018–2022.

The target KPI were calculated in accordance with RusHydro Group's draft Consolidated Business Plan for 2018–2022 (including the Consolidated Investment Program) and subject to the initiatives stipulated in the Group's programs.

The list of KPI for RusHydro's Long- Term Development Program for 2018–2022 includes the list of annual KPI of the Management Board and the list of LTIP KPI.

Target KPI for the first LTIP cycle in 2017–2019[1]

KPI	Target	Actual	Target KPI achievement	Weight, %	KPI achievement in 2019, %
Total shareholder return (TSR), %	100	0	Not achieved	15	0
Integrated innovative KPI, %	85	95	Achieved	25	100
Free cash flow (FCF), RUB mn	-138,601	-69,093	Achieved	45	100
Earnings per share (EPS), RUB/share	0.85	0.95	Achieved	15	100

Target KPI of the Long-Term Incentive Plan

KPI	Target	
	second LTIP cycle in 2018-2020[2]	third LTIP cycle in 2019-2021[3]
Total shareholder return (TSR), %	100	100
Integrated innovative KPI, %	85	85
Free cash flow (FCF), RUB mn	-117,064	-57,454
Earnings per share (EPS), RUB/share	0.84	0.80

[1] Approved by resolutions of the Board of Directors dated December 23, 2016 (Minutes No. 245 of December 26, 2016) and June 21, 2017 (Minutes No. 254 of June 22, 2017) as amended on December 25, 2018 (Minutes No. 282 of December 12, 2018) and on February 19, 2019 (Minutes No. 283 of February 21, 2019).

[2] Pursuant to resolutions of the Board of Directors No. 301 of December 26, 2019 amending target performance indicators for the second cycle of RusHydro's Long-Term Incentive Plan for 2018–2020.

[3] Pursuant to resolutions of the Board of Directors No. 301 of December 26, 2019 amending target performance indicators for the third cycle of RusHydro's Long-Term Incentive Plan for 2019–2021.

Target and actual KPI of the Long-Term Development Program[1]

KPI	2019			2020	2021	2022
	Target	Actual	Achievement	Target		
Total shareholder return (TSR), %	100	0	Not achieved	100	100	100
ROE, %	18.24	23.03	Achieved	16.12	16.70	16.03
EBITDA[2], RUB mn	166,880	171,907	Achieved	193,795	209,894	207,698
Prevention of accidents exceeding the limit number of accidents:	0	0	Achieved	0	0	0
→ number of production-related accidents	≤ 5-year average[3]	≤ 5-year average[4]	Achieved	≤ 5-year average	≤ 5-year average	≤ 5-year average
→ number of major accidents	0	0	Achieved	0	0	0
Adherence to the capacity commissioning schedule, funding and spending plan, %	85	88	Achieved	85	85	85
Share of procurement from small and medium businesses, %	18	71	Achieved	18	18	18
including procurement from small and medium businesses only, %	15	49		15	15	15
Labor productivity, RUB '000/man-hour	5.62[5]	6.42	Achieved	5.31	5.60	5.75
Integrated innovative KPI, %	85	96	Achieved	85	85	85
Decrease in operating expenses (costs), %	2	2.02	Achieved	2	2	2
Free cash flow (FCF), RUB mn	–51,302[6]	-36,384	Achieved	25,498	54,277	56,424
Earnings per share (EPS)	0.25	0.31	Achieved	0.27	0.30	0.31

[1] Target performance indicators for the Long-Term Development Program for 2018–2022 were approved as part of RusHydro's LTDP for 2018–2022 (Minutes No. 271 of a meeting held by the Board of Directors dated June 1, 2018, as amended by resolutions of the Board of Directors (Minutes No. 297 of October 21, 2019)). The actual performance indicators for 2019 are calculated using RusHydro's calculation and evaluation methodology for the KPI of RusHydro's Long-Term Development Program approved by the Board of Directors as part of LTDP for 2018–2022.

[2] According to the applicable calculation and evaluation methodology for the KPI of RusHydro's Management Board, the EBITDA approved by resolution of the Board of Directors shall be calculated on the basis of RusHydro Group's audited consolidated financial statements under the IFRS using the following formula: EBITDA = EBT + depreciation and amortization + non-cash expenses – non-cash revenue + interest payable + fuel cost.

The EBITDA calculated using this formula is different from that used in RusHydro Group's IFRS financial statements due to different approaches to calculating the indicator. According to Note 6 to the IFRS consolidated financial statements of RusHydro Group, EBITDA is calculated as operating profit/loss net of depreciation and amortization, gain on financial assets at fair value through profit or loss, impairment of fixed assets, impairment of financial assets, gain/loss on disposal of fixed assets and other non-cash operating income and expenses.

[3] 17.6.

[4] 10.

[5] As per adjusted 2019 KPI for the Management Board approved by resolution of the Board of Directors dated September 20, 2019 (Minutes No. 295 of September 23, 2019). The pre-adjustment value is 5.72.

[6] As per adjusted consolidated Business Plan of RusHydro Group for 2019 and target KPI of the Long-Term Incentive Plan approved by resolution of the Board of Directors dated September 20, 2019 (Minutes No. 295 of September 23, 2019). The pre-adjustment value is RUB -55,710 mn.

Annual KPI of RusHydro's Management Board in 2019

The annual KPI of RusHydro's Management Board for 2019 consist of five financial and two industry-specific indicators. Financial indicators of the annual KPI for RusHydro's Management Board include a mandatory indicator required by the Federal Agency for State Property Management – return on equity (ROE). The Company's financial indicators are calculated based on the Group's financial statements prepared under the IFRS.

The target annual KPI of RusHydro's Management Board for 2019 were approved by a resolution of the Board of Directors[1].

Target and actual KPI of RusHydro's Management Board members

KPI	Period	Target	Actual	Target KPI achievement	Weight, %	KPI achievement in 2019, %
EBITDA[2], RUB mn	2018	170,932	181,526	Achieved	15	100
	2019	166,880	171,907	Achieved		
ROE, %	2018	15.86	23.88	Achieved	15	100
	2019	18.24	23.03	Achieved		
Share of procurement from small and medium businesses, %	2018	≥18	76	Achieved	10	100
	2019	≥18	71	Achieved		
including procurement from small and medium businesses only, %	2018	≥15	46	Achieved		
	2019	≥15	49	Achieved		
Prevention of accidents exceeding the limit number of accidents:	2018	0	0	Achieved	20	100
	2019	0	0	Achieved		
number of production-related accidents	2018	≤ 5-year average[3]	9	Achieved		
	2019	≤ 5-year average[4]	10	Achieved		
number of major accidents	2018	0	0	Achieved		
	2019	0	0	Achieved		
Adherence to the capacity commissioning schedule, funding and spending plan, %	2018	85	92.8	Achieved	20	100
	2019	85	88	Achieved		
Labor productivity, RUB '000/man-hour	2018	5.30	6.12	Achieved	10	100
	2019	5.62	6.42	Achieved		
Decrease in operating expenses (costs), %	2018	2	2.69	Achieved (subject to factors beyond control of the management team[5])	10	100
		2	2.02	Achieved		

[1] Minutes No. 282 of December 27, 2018 as amended by resolutions of the Board of Directors (Minutes No. 295 of September 23, 2019).

[2] According to the applicable calculation and evaluation methodology for the KPI of RusHydro's Management Board, the EBITDA approved by resolution of the Board of Directors shall be calculated on the basis of RusHydro Group's audited consolidated financial statements under the IFRS using the following formula: EBITDA = EBT + depreciation and amortization + non-cash expenses – non-cash revenue + interest payable + fuel cost.

The EBITDA calculated using this formula is different from that used in RusHydro Group's IFRS financial statements due to different approaches to calculating the indicator. According to Note 6 to the IFRS consolidated financial statements of RusHydro Group, EBITDA is calculated as operating profit/loss net of depreciation and amortization, gain on financial assets at fair value through profit or loss, impairment of fixed assets, impairment of financial assets, gain/loss on disposal of fixed assets and other non-cash operating income and expenses.

[3] 22.8.

[4] 17.6.

[5] Resolution of the Board of Directors (Minutes No. 286 of April 5, 2019).

Investment activities

Investment policy

RusHydro's investments are governed by the Regulations on Managing Investing Activities Performed in the Form of Capital Investments.

RusHydro's investment policy principles

Compliance of investment decisions and projects with statutory requirements, building codes and regulations, and environmental standards

- Compliance of investment decisions and projects with risk-return profiles approved by the Board of Directors
- Analysis of costs and benefits associated with alternative investment decisions (performed at the end of each stage in case of a change in key project metrics)

Step-by-step approach to implementation of investment projects

- Access to financing for all investment projects

Investment programs are approved by the Company's Board of Directors and respective boards of directors in RusHydro Group's subsidiaries, with the programs of electricity supplying subsidiaries additionally reviewed by the authorized government agencies. The draft investment programs of subsidiaries are based on the Group's consolidated investment program, which is approved by the Management Board and presented to the Board of Directors of PJSC RusHydro. As far as electricity suppliers are concerned, the drafts are submitted to the authorized government agencies after being reviewed by the boards of directors in respective subsidiaries.

People in Russia and abroad appreciate the professionalism and expertise exhibited by RusHydro's workers. You use modern high-tech equipment to upgrade existing hydroelectric power plants and design and construct new ones. Thanks to your work, RusHydro is a leading renewable energy producer. It is important that the company does so much to promote social development, as well as to support culture, education, and spectator sports by operating charity projects nationwide and regionally.

Vyacheslav Volodin,

Chairman of the State Duma of the Russian Federation

Investment objectives

- Ensure stable power supply with no disruptions for the consumers
- Satisfy the growing energy consumption
- Upgrade generating facilities
- Reduce grid losses
- Reduce power equipment failures and wear and tear

Role of federal and regional governments in the investment program development

In line with Investment Approval Rules for Electricity Suppliers approved by Resolution of the Russian Government No. 977 *On Investment Programs of Electricity Suppliers* dated December 1, 2009, investment programs of RusHydro's electricity supplying subsidiaries are reviewed and approved by the authorized government agencies (the Russian Ministry of Energy or regional authorities) with inputs from government agencies in the regions where such investment projects are implemented and federal government agencies, including the Ministry of Finance, Ministry of Construction, Housing and Utilities, Ministry of Industry and Trade, Ministry of Economic Development, Federal Antimonopoly Service, Market Council Non-Profit Partnership and System Operator of the Unified Energy System.

Pursuant to Resolution of the Russian Government No. 1502 *On Procedure for the Ministry of the Russian Federation for the Development of the Russian Far East and Arctic to Approve the Investment Programs and Development Plans of State Corporations, State Companies and Other State-Owned Organizations As Regards Their Implementation in the Far Eastern Federal District of Russia* dated December 27, 2016, draft investment programs of RusHydro's subsidiaries that are not electricity suppliers but engage in investment activities in the Far Eastern Federal District of Russia are subject to approval by the Ministry for the Development of the Russian Far East and Arctic.

Our cooperation with the country's federal and regional governments extends beyond developing and reviewing our investment program, with working on proposals and updates to energy policy papers (the "Policy Papers") also on our agenda. These documents include:

- schemes and programs for the future development of the power industry in Russian regions;
- schemes and programs for the development of Russia's Unified Energy System;
- general layout of power generation facilities in Russia;
- territorial planning layout for the Russian power industry.

RusHydro Group works to ensure that the Policy Papers contain only the most recent information on its generating facilities and comply with the Group's plans.

The Group's cooperation with regional governments focuses on drafting proposals and updating information on heat supply project blueprints for Russian cities and towns. For example, PJSC RusHydro's subsidiaries participated in public hearings on heat supply project blueprints for Khabarovsk, the Vladivostok and Artyom municipal districts, and other Far Eastern municipalities.

Investment program for 2019–2029

RusHydro's updated investment program for 2019 and investment program for 2020–2029 were approved by Order of the Russian Ministry of Energy No. 20@ *On Approval of RusHydro's Investment Program for 2020–2029 and Amendments to RusHydro's Investment Program Approved by Order of the Russian Ministry of Energy No. 6@ of October 22, 2018* dated December 9, 2019.

RusHydro's updated consolidated investment program for 2019 was approved as part of the Group's Consolidated Business Plan for 2019 by resolution of the Board of Directors[1]. RusHydro's consolidated investment program for 2020–2024 was approved as part of the Group's Consolidated Business Plan for 2020–2024 by resolution of the Board of Directors[2].

[1] Minutes No. 295 of September 23, 2019.
[2] Minutes No. 301 of December 26, 2019.

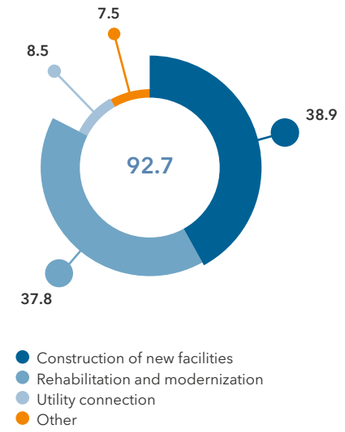
Implementation of RusHydro Group's consolidated investment program[1]

Spending on the consolidated investment program in 2019 amounted to RUB 92.7 bn, including RUB 65.5 bn for the investment projects of RusHydro Subgroup and RUB 27.2 bn for the projects of RAO ES East Subgroup.

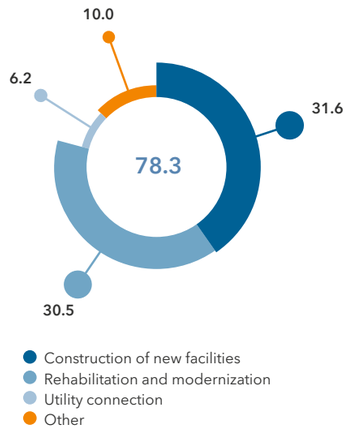
New capacities commissioned in 2019:
- 854.6 MW in electricity generation;
- 326.4 Gcal/h in heat generation;
- 399.8 MVA of transformer capacities;
- 1,549.2 km of power transmission lines.

Key investment areas under RusHydro Group's consolidated investment program in 2019[2]

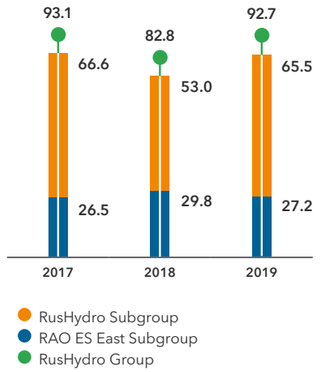
Spending, RUB bn (incl. VAT)



CAPEX, RUB bn (excl. VAT)

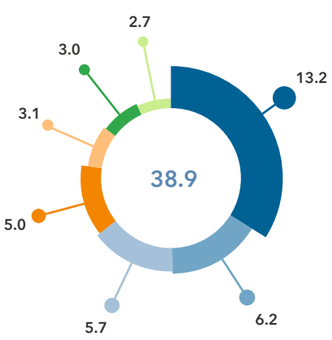


Actual spending in 2017–2019, RUB bn (incl. VAT)

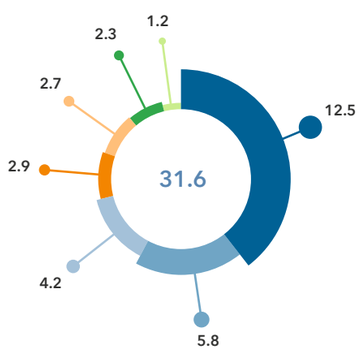


Investments in construction of new facilities in 2019

Spending, RUB bn (incl. VAT)



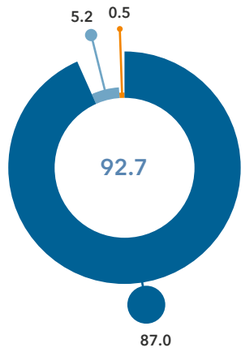
CAPEX, RUB bn (excl. VAT)



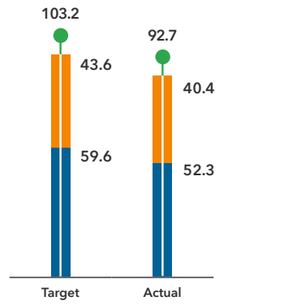
[1] Includes RusHydro's subsidiaries covered by the Consolidated Business Plan for the respective period, including SHPPs of Stavropol Territory and Karachay-Cherkess Republic, Verkhnebalkarskaya SHPP, RusHydro's R&D institutes, Pauzhetskaya GeoPP, NDES, Rodnik Zdorovya, HUA and Hydroinvest.

[2] Under the adopted management accounting standards:
- investment program spending means the total amount spent by the members of RusHydro Group to implement investment projects, including disbursements to suppliers and contractors and project administrators' expenses; and
- CAPEX means the capital investments recognized on the basis of amounts specified in delivery and acceptance certificates signed with suppliers and contractors and accounted for as the respective project administrators' expenses.

Spending by source of funds in 2019, RUB bn (incl. VAT)



Spending by region in 2019, RUB bn



The significant difference between the actual spending under the consolidated investment program and the 2019 target (– RUB 10.5 bn) was mainly attributable to:

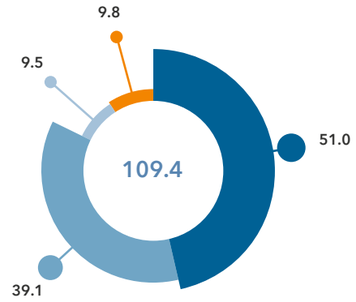
- updates on the work schedules for rehabilitation and modernization, with the reasons including more time required for contractors to complete their assignments and reductions in project costs following approval of design documentation (– RUB 4.3 bn);
- updates on the work schedules for utility connection contracts based on customer requests (– RUB 3.2 bn);
- revision of actual spending with savings achieved upon the completion of such investment projects as Construction of GTP-CHPP at the Central Steam and Water Boiler Site in Vladivostok, Construction of Hot-Water Peaking Boiler Plant at Yakutskaya GRES, and Construction of Power Distribution System at the CHPP in Sovetskaya Gavan (– RUB 1.0 bn);
- review of the contractor guarantee payment timing based on the actual acceptance certificate dates at Sakhalinskaya GRES-2 commissioned in Q4 2019, with RUB 0.9 bn worth of financing postponed until 2020.

Capacity commissioning in 2019

Type	Russian Far East		European part of Russia and Siberia	
	Target	Actual	Target	Actual
Electricity generation, MW	442.2	446.1	394.6	408.5
Heat, Gcal/h	324.0	326.4	–	–
Power lines, km	1,615.3	1,547.2	3.4	2.0
Transformer capacities, MVA	525.3	399.4	1.7	0.4

Investment plans for 2020

Planned spending, RUB bn (incl. VAT)



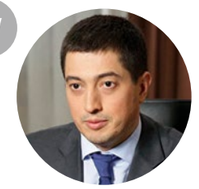
Targets for capacity commissioning

Type	Target
Electricity generation, MW	169.3
Heat, Gcal/h	202.5
Transformer capacities, MVA	614.6
Power lines, km	1,556.3

Construction and modernization of production facilities

Construction of generating facilities *[EC]*

RusHydro builds and commissions power plants and develops energy infrastructure in the Far Eastern Federal District, helping to further national goals related to supplying electricity to citizens and industrial facilities. RusHydro Group's investment projects are focused on replacing the retiring energy capacities with new ones fitted with efficient cutting-edge equipment, makeing the energy system more reliable, eliminating energy shortages, and creating a capacity margin and conditions to spur local economic development. RusHydro's investment projects in the Russian Far East are included in the Comprehensive Trunk Infrastructure Upgrade and Extension Plan until 2024 as approved by Decree of the Russian Government No. 2101-r of September 30, 2018.



We are sincerely grateful to RusHydro for our partnership, which stretches back decades. After all, the friendship between power engineers and machinists was struck up many years ago. We appreciate the trust you have in us as equipment manufacturers and strive to keep changing to improve its efficiency and quality. Each time we collaborate, we gain new invaluable experience because all stations and all machines are unique, with their own story and character.

For Power Machines, RusHydro is not just an important customer. It is, above all, the people with whom we work hand in hand to solve joint challenges. These are masters of their trade who take part in developing projects, coordinating design documentation and accepting equipment, and sharing the excitement and joy of commissioning powerful, reliable machines.

Timur Lipatov,

Chief Executive Officer at Power Machines OJSC

Key investment projects and their impact on local economies across the Group's footprint *[103-2] [203-2]*

Project	Investments, RUB mn		Indirect economic impact
	2019	Total	
Nizhne-Bureyskaya HPP Installed capacity: 320 MW Average annual output: 1,670 mn kWh Year of commissioning: 2019	3,055.2	53,409.4	**Social and economic effects:** → reducing current heat generation expenses for the Unified Energy System of the East; and → creating an opportunity for nearby settlements to use electric boiler facilities instead of expensive coal or fuel oil and lower heat tariffs for customers. → higher tax revenues at every government level. **Supply stability effects:** → managing load irregularities of Bureyskaya HPP, and contributing to power generation and supply within the Unified Energy System of the East, and ensuring flood control.
Sakhalinskaya GRES-2 Installed capacity: 120 MW Average annual output: 840 mn kWh Year of commissioning: 2019	6,183.9	35,611.3	**Social and economic effects:** → bringing about a positive social and economic effect on Sakhalin's west coast by creating new jobs and driving housing and social infrastructure development, and providing a capacity margin for connecting new customers. **Supply stability effects:** → making the isolated Sakhalin energy system more reliable; and → replacing retiring capacities at the existing Sakhalinskaya GRES.
Zaramagskaya HPP-1 Installed capacity: 346 MW Average annual output: 842 mn kWh Year of commissioning: 2019	5,025.9	47,968.7	**Social and economic effects:** → higher tax revenues at every government level. **Supply stability effects:** → addressing the electricity shortage in the Republic of North Ossetia – Alania; and → reducing exchange-related grid losses; and → addressing supply disruptions that might be experienced by remote communities.
CHPP in Sovetskaya Gavan Installed capacity: 126 MW, 200 Gcal/h Average annual output: 630 mn kWh Year of commissioning: 2020	7,066.9	33,820.8	**Social and economic effects:** → satisfying the rising local demand for electricity as a result of the sea port expansion, the construction of the the Russian Far East's largest coal terminal and the town's development as a transport hub; → providing for centralized heat supply to Sovetskaya Gavan; and → higher tax revenues at every government level. **Supply stability effects:** → replacing retiring capacities and inefficient equipment at Mayskaya GRES; and → making the Sovetskaya Gavan energy hub more reliable.
Second stage of gasification at Anadyrskaya CHPP Year of commissioning: 2020	130.9	394.2	**Social and economic effects:** → allowing a slowdown in tariff increases; and → making power generation in Anadyr more sustainable. **Supply stability effects:** → ensuring stable power and heat supply for the Anadyr energy hub; and → improving the power generation efficiency at Anadyrskaya CHPP by using a cheaper fuel.
Ust-Srednekanskaya HPP Installed capacity: 570 MW (142.5 MW third stage commissioned in 2018) Average annual output: 2,555 mn kWh Year of commissioning: 2022	5,721.2	76,927.3	**Social and economic effects:** → generating power for Matrosov Mine (the Natalka gold deposit) to support the mining industry in driving the region's economic growth; and → higher tax revenues at every government level. **Supply stability effects:** → making the isolated Magadan energy system more reliable.
Construction of two single-circuit 110 kV Pevek-Bilibino power lines (construction stage No. 1) Length: 490.59 km Year of commissioning: 2023	114.5	24,733.3	**Social and economic effects:** → supporting the development of the mining and metals cluster within the Chaun and Bilibino energy hub. **Supply stability effects:** → allowing the Chaun and Bilibino energy hub to carry out power exchange for the construction of a floating nuclear power plant; and → making the local energy system more reliable.
Upgrade of turbo generators No. 1, 2 and 3 and boiler units No. 1–8 at Vladivostokskaya CHPP-2 Installed capacity: 360 MW, 570 Gcal/h Year of commissioning: 2025	58.2	26,452.8	**Social and economic effects:** → improving the quality and reliability of energy supplies to consumers in the Far East. **Supply stability effects:** → replacing retiring power and thermal capacities of obsolete and worn-out equipment; and → improving the quality and reliability of energy supplies to consumers in the Far East.
Construction of Khabarovskaya CHPP-4 Installed capacity: 328 MW, 1,374 Gcal/h Year of commissioning: 2025	114.6	52,396.8	**Social and economic effects:** → helping to cover projected shortage of power in the region. **Supply stability effects:** → replacing retiring thermal and power capacities of Khabarovskaya CHPP-1; and → improving the reliability and efficiency of power supplies in the region and heat supplies in the southern part of Khabarovsk.
Construction of Yakutskaya GRES-2 (second stage) Installed capacity: 154 MW, 194 Gcal/h Year of commissioning: 2025	35.4	30,275.5	**Social and economic effects:** → developing centralized energy systems in line with social and economic needs of the Republic of Sakha (Yakutia). **Supply stability effects:** → replacing retiring capacities at the existing Yakutskaya GRES; → improving the reliability and efficiency of power supplies in the region, and improving the reliability of heat supplies in Yakutsk.
Construction of Artyomovskaya CHPP-2 Installed capacity: 420 MW, 483 Gcal/h Year of commissioning: 2026	122.5	130,132.8	**Social and economic effects:** → ensuring the social and economic development of the Primorsky Krai. **Supply stability effects:** → replacing retiring capacities at the existing Artyomovskaya CHPP; and → improving the quality and reliability of energy supplies to consumers in the Far East.

Two people were physically displaced due to the construction of Krasnogorskaya SHPP-2. RusHydro Group's construction projects did not involve economic migration.

As part of constructing Ust-Dzhegutinskaya SHPP, Krasnogorskaya SHPP-1 and Krasnogorskaya SHPP-2, the Group signed agreements to purchase five land plots with a total area of 20,473 m^2. The land plots are classified as urban lands for subsistence farming. No other compensations were paid with regard to RusHydro Group's construction projects.

In 2017, two people received RUB 4,170 thousand in compensations under the project to build Ust-Dzhegutinskaya SHPP. In 2018, two people received RUB 6,383 thousand in compensations under the project to build Krasnogorskaya SHPP-1. In 2019, two people received RUB 4,592 thousand in compensations under the project to build Krasnogorskaya SHPP-2. *[EU22]*

Construction projects in the Far East *[OS]*

A CHPP in Sovetskaya Gavan is one of RusHydro Group's four projects to erect new generating facilities in the Far East in line with a Decree by the President of Russia.

Under the Russian President's Decree No. 1564 dated November 22, 2012, RusHydro received RUB 50 bn as contribution to its authorized capital from the state budget to finance the construction of the following power generation facilities in the Far East:
- a CHPP in Sovetskaya Gavan;
- Sakhalinskaya GRES-2, launched;
- Yakutskaya GRES-2 (first stage), launched; and
- Blagoveshchenskaya CHPP (second stage), launched.

Three facilities have already been commissioned: Blagoveshchenskaya CHPP (second stage) in December 2016, Yakutskaya GRES-2 (first stage) in November 2017, and Sakhalinskaya GRES-2 in November 2019.

The CHPP construction site in Sovetskaya Gavan currently has over 1,500 employees and over 50 units of equipment. The bulk of construction and installation work has been completed, with the key equipment already installed. Efforts are now underway to install auxiliary equipment, tank farm, fuel supply systems, complete interior finishing, put in place engineering systems, and construct on-site access roads. Pre-commissioning has entered its active stage, including energization of 110 kV outdoor switchgear equipment and balance-of-plant switchgear, and boiler plant No. 1 has gone through test runs to fine-tune modes of combustion using diesel fuel.

The new CHPP will require a lot of municipal consumers in Sovetskaya Gavan to be transitioned to centralized heat supplies, making it advisable to have the plant commissioned in 2020 after the peak load period of 2019–2020 autumn and winter season is over.

Commissioning is projected for Q3 2020[1].

Measures being taken to accelerate the construction process:
- contracting and delivery processes are in place to ensure that there are no shortages leading to potential idle time;
- additional personnel have been recruited to work on the construction site;
- all staff work in two shifts;
- a detailed project design group operates on the site.

[1] Commissioning is projected for Q3 2020: Minutes No. 4 of December 23, 2019 of a meeting by the Government Commission on the Development of the Electric Power Industry led by Deputy Chairman of the Government of the Russian Federation, Chairman of the Government Commission on the Development of the Electric Power Industry Dmitry Kozak approved the postponement of the facility commissioning to 2020 due to objective reasons. The commissioning of the facility in 2020 was approved by RusHydro's Board of Directors as part of signing off on the consolidated business plan (including the consolidated investment program) of RusHydro Group for 2020–2024 (Minutes No. 301 of a meeting held by the Board of Directors dated December 26, 2019).

Construction quality assurance

Construction and installation quality assurance at RusHydro's facilities aims to:
- ensure compliance of works, materials, products and structures with the design documentation, construction and other applicable regulations, and construction and installation agreements under capital construction projects; and
- prevent violation of laws and regulations governing construction procedures.

Key quality assurance activities include:
- monitoring the scope and timeliness of incoming inspections performed by contractors and controlling the accuracy of their inspection reports;
- monitoring contractor compliance with the warehousing and storage requirements for materials and equipment and controlling the accuracy of relevant documents;
- monitoring the scope and timeliness of contractor controls focusing on the sequence of capital construction procedures and controlling the accuracy of respective reports;
- inspecting hidden works jointly with the field supervisors and contractors and conducting interim acceptance of critical structures that may affect safety of capital construction facilities;
- controlling, jointly with contractors, compliance of completed construction facilities with design and construction documents and technical specifications.

Regulation and supervision

Our quality assurance procedures for construction and installation, materials, structures and assemblies are compliant with Russian laws, industry standards and regulations, internal engineering standards, and regulatory requirements for design documentation.

In addition to primary and secondary federal legislation, all construction works are subject to both industry and RusHydro own internal quality assurance standards. Our key design quality management principles and the employees in charge are specified in the Regulations on Managing and Monitoring Investment Projects during the Development of Documentation for Construction of RusHydro Group's New Facilities as approved by RusHydro's Order No. 1021 of December 28, 2018.

The Supervisory Board of the Uniform System of Conformity Assessment for Health, Safety and Environment, and Safety in the Energy and Construction Industries is developing the Uniform System of Conformity Assessment in Construction (Modernization and Renovation of Immovable Property) and requirements in respect of the corresponding control activities. Compliance monitoring is performed by the Federal Environmental, Industrial and Nuclear Energy Supervision Service.

Before a power plant is commissioned, it receives an automated diagnostic control system that will read and process measurements to help analyze the status of facilities across the hydrotechnical complex. After completion of a hydraulic structure, its measuring equipment, along with all data collected, is handed over by the construction company to the project administrator.

Quality assurance systems for new energy facilities are developed individually under agreements with the respective general contractors.

For the CHPP in Sovetskaya Gavan,
- the project administrator and developer (JSC CHPP in Sovetskaya Gavan) has adopted construction and installation quality assurance guidelines for building control; and
- contractors (JSC Ust-SrednekanGESstroy, JSC Hydroremont – VCC, ARSENAL PLUS, and Corporation of JSC ESKM) have developed a quality assurance system to facilitate planning and management in the corresponding domain.

For Zagorskaya PSPP-2 and Ust-Srednekanskaya HPP, the respective project administrators have developed acceptance regulations and quality assurance systems.

For the smaller HPPs in the Stavropol Territory and Karachay-Cherkess Republic, the respective project administrators have adopted construction and installation quality assurance guidelines.

Both JSC Chirkeigesstroy and JSC Ust-SrednekanGESstroy have developed and implemented quality management systems for all hydropower facilities they have been assigned to as the general contractor. The systems are now certified under ISO 9001:2008 and ISO 14001:2004 (GOST R ISO 14001-2007).

Program to develop the energy system in the Far Eastern Federal District with a view to accelerating local economic growth *[EU23]*

In 2019, RusHydro produced a program to develop the power system in the Far Eastern Federal District with a view to promoting economic growth (the Program)[1].

The Program's key objective is to offer optimal solutions for the development of the power system in the Far Eastern Federal District as a way to achieve projected demand for electricity and capacity in the context of large-scale investment projects (including projects in priority development areas, the Far Eastern Hectare program, and plans to develop energy clusters) that are inherently linked to the construction of generating facilities.

The 10-year Program is designed as one of the key elements in the mid- and long-term planning strategy for the energy sector of the Russian Far East.

It also provides a list of first priority facilities required to replace the retiring capacities and meet the demand of the Far Eastern energy systems going forward[2]:

- construction of Artyomovskaya CHPP-2 to replace Artyomovskaya CHPP-1 slated for decommissioning (project details: 420 MW, 483 Gcal/h, to be commissioned in 2026);
- construction of Khabarovskaya CHPP-4 to replace Khabarovskaya CHPP-1 slated for decommissioning (project details: 328 MW, 1,374 Gcal/h, to be commissioned in 2025);
- construction of the second stage of Yakutskaya GRES-2 to replace Yakutskaya GRES slated for decommissioning (project details: 154 MW, 194 Gcal/h, to be commissioned in 2025);
- upgrade of turbo generators No. 1, 2 and 3 at Vladivostokskaya CHPP-2, rehabilitation of boiler units No. 1–8 (upgrade/rehabilitation details: increases up to 360 MW and 570 Gcal/h, to be commissioned in 2025).

The above projects were approved by Decree of the Russian Government No. 1544-r of July 15, 2019 and included in the Comprehensive Trunk Infrastructure Upgrade and Extension Plan until 2024 as approved by Decree of the Russian Government No. 2101-r of September 30, 2018. The work on relevant design and cost estimates is currently underway.

Today, RusHydro Group is rightly considered one of the largest electric power companies in the world. Throughout the country, including in the Far East, it implements large-scale projects that define how a region develops for decades to come. RusHydro Group offers a considerable contribution to Russia's energy security. All of the company's success is the result of the daily painstaking work of a team of professionals wholeheartedly dedicated to their cause. This is who works at RusHydro.

Alexander Kozlov,

Ministry for the Development of the Russian Far East and Arctic

In 2019, PJSC RusHydro intensely participated in the implementation of a project by the Association "Hydropower of Russia", targeting the development of an assessment system of operated hydropower facilities' compliance with the sustainable development criteria, taking into account the requirements of current Russian legislation regarding the analysis of existing methods. The project implementation will be resumed in 2020, with the assistance of the International Hydropower Association. *[OS]*

[1] Based on instructions from Yury Trutnev, Deputy Prime Minister of the Russian Federation and Presidential Plenipotentiary Envoy to the Far Eastern Federal District (Minutes No. YuT-P9-2454 of April 25, 2018). The Program was reviewed at a meeting of the Board of Directors (Minutes No. 292 of June 24, 2019).

[2] The commissioning details and schedules may be adjusted after the final versions of design and cost estimates are approved.

Sustainable development

As the largest Russian energy holding fully aware of its responsibility to the government and society, RusHydro Group is focused on the development of socially responsible business, while pursuing a consistent policy of introducing sustainable development principles into its operational and management processes, keeping in line with Russian and international best practices. Sustainable development is an important value outlined in the Company's strategic goals.

The Company adheres to the corporate social responsibility concept as defined by ISO 26000. According to the standard, a company is responsible for the impact of its decisions and operations on society and the environment and must act in a transparent and ethical way that:

- promotes sustainable development, including public health and well-being;
- takes into account the expectations of stakeholders;
- complies with applicable laws and international standards of conduct;
- is integrated into the operation of the entire company and is applied with regard to its stakeholders.

One of RusHydro Group's strategic goals is to ensure the reliable and safe operation of its facilities, taking into account the economic feasibility of funds allocated for mitigating possible risks and reducing potential damage.

The Company is committed to increasing the share of renewables in the country's energy mix by means of commissioning new facilities and increasing the generation of clean energy, while also improving energy efficiency.

RusHydro Group's another priority is the development of the regions where it operates. RusHydro facilitates the growth of welfare, creating new jobs, paying taxes, and delivering positive multiplier effects by developing energy infrastructure (connection of new consumers to power grids, water supply, etc.). The Group companies support education, culture, sports, and environmental protection and provide assistance to socially vulnerable population groups across their footprint.

RusHydro Group has made an invaluable contribution to developing hydropower in Russia and to guaranteeing the country's energy security. RusHydro is the undisputed leader among energy companies in Russia and is also one of the world's largest organizations operating in the hydropower space.

The company places particular emphasis on developing the power industry in the Far East, a region with huge hydropower potential. If this potential is not harnessed, further economic and infrastructural development in this region of such significance to the Russian Federation would not be possible. RusHydro Group invests considerable funds in creating social infrastructure and implementing resource-saving and environmental technologies.

Naturally, RusHydro is a source of support and development for the industry's science and education. It presents an exemplary corporate culture, but, above all, it embodies the hard work of a cohesive team of true professionals.

Oleg Lushnikov,

Executive Director, Hydropower of Russia Association

Sustainable development governance *[102-31]*

The responsibility for providing control, methodology support and regulation of RusHydro Group's steady low-carbon development, as well as preserving cultural heritage sites and biological diversity is assigned to member of the Management Board, First Deputy General Director – Chief Engineer[1] *[102-19]*.

Sustainable development activities are carried out by specialized units within the area of their functional responsibility *[102-20]*:

- social responsibility – personnel management unit (Deputy General Director for Personnel Management and Organizational Development);
- cooperation with government authorities in the regions of the Company's footprint and creation of a favorable social environment for the Company's efficient development – corporate communications unit (Director of Corporate Communications), Far East Division (Deputy General Director – Director of the Far East Division);
- economic responsibility – unit of economic planning and investments (Member of the Management Board, First Deputy General Director), unit of production activity (Member of the Management Board, First Deputy General Director – Chief Engineer), unit of capital construction (Deputy General Director for Capital Construction), and unit of financial and corporate law management (Member of the Management Board, First Deputy General Director);
- power generation, improvement of energy efficiency and environmental responsibility – unit of production activity (Member of the Management Board, First Deputy General Director – Chief Engineer);
- charity – corporate communications unit (Director of Corporate Communications).

Operation of RusHydro's different subdivisions and subsidiaries is coordinated at regular meetings of the working group on sustainable development to monitor the efficiency of implementation of key tasks in sustainable development for the period through to 2020 approved by RusHydro's Order No. 614 of September 11, 2017.

Key sustainable development issues are reviewed at the meetings of the Board of Directors and the Company's Management Board. The Committee on Reliability, Energy Efficiency and Innovation under RusHydro's Board of Directors plays an important role in RusHydro's sustainable development management and preliminarily reviews matters of long-term development of hydropower and energy based on other renewables ("RES"), as well as development of functional policies (technical, environmental, etc.), corporate standards in technical regulation, etc.

The Company has adopted a number of internal regulations outlining and governing the approach to sustainable development and corporate social responsibility ("CSR").

Internal regulations

CSR area	Internal regulations
Sustainable production	- RusHydro Group's Development Strategy until 2020 with an outlook until 2025; - RusHydro Group's Long-term Development Program for 2018–2022; - RusHydro Group's Technical Policy; - RusHydro's Regulations on the Working Group on Technical Standards; - Regulations on Managing Investing Activities Performed in the Form of Capital Investments; - RusHydro's Regulations on the Standardization System; - RusHydro's Regulations on Internal Controls.
Procurement	- The Uniform Regulations on RusHydro Group's Procurements and other internal regulations developed to provide further details, including the Methodology for Reviewing the Reliability (Business Reputation) and Financial Standing of the Bidders.
Corporate ethics and anti-corruption	- RusHydro's Code of Corporate Ethics; - RusHydro's Anti-Corruption Policy; - RusHydro's Regulations on the Prevention and Management of Conflicts of Interest; - Regulations on the Procedure to Report Presents Received by RusHydro's Employees during Official Events, Business Trips, etc.; - RusHydro's Regulations on the Committees for Compliance with the Corporate Ethics Standards and Management of Conflicts of Interest; - Rules of RusHydro's Line of Trust Operation; - RusHydro's Comprehensive Program of Anti-Corruption Activities for 2016–2019.
Environmental impact	- RusHydro Group's Environmental Policy; - Implementation Program for the Environmental Policy; - RusHydro's Program of Energy Saving and Increased Energy Efficiency through to 2020; - RAO ES East Subgroup's Energy Saving and Energy Efficiency Improvement Policy.
Health and safety	- RusHydro's Health and Safety Policy; - Policies on occupational health and safety of RusHydro's subsidiaries.
Charity	- The Company's Charity and Sponsorship Policy; - Charity and Sponsorship Policy of the Company's Subsidiaries.
Innovative development	- Innovative Development Program of RusHydro Group for 2016–2020 with an outlook until 2025; - RAO ES East's Innovative Development Program for 2016–2020 with an outlook until 2025; - Regulations on Design and Implementation of RusHydro's Innovative Development Program; - Regulations on R&D Management Process in RusHydro's Operations; - Regulations on the Intellectual Property Management Process in RusHydro Group; - Regulation on Planning and Monitoring the Progress of Activities as Part of the Innovative Development Programs of RusHydro Group and RAO ES East; - Regulation on Preparation, Adjustment and Monitoring of Implementation of Procurement Plans for Innovative and/or High-Tech Products; - Methodology for Assessment of Technical and Economic efficiency of Innovative Projects and the Temporary Procedure for Assessment of Technical and Economic Efficiency of Innovative Projects Implemented as R&D.
Personnel management	- RusHydro's Social Policy; - Regulations on RusHydro's Employee Training; - Regulations on Personnel Certification at RusHydro's Branches; - Regulations on the Database Formation of Candidates to Be Recruited at RusHydro's Branches; - Regulations on RusHydro's Talent Pool; - Concept of advanced human resource development From School to Workplace; - Regulations on RusHydro Group's Young Employees Community; - Employee Handbook for RusHydro's Executive Office; - Model Employee Handbook for RusHydro's branches; - RusHydro's Regulations on the Formalization System; - RusHydro's Regulations on the Management of Subsidiaries' Organizational Structures; - RusHydro's Guidelines on the Calculation of Meal Reimbursements for Branch Employees Working Multiple Shifts a Day; - Regulations on Improving Employee Housing Conditions at Branches of RusHydro; - Regulations on the Corporate Incentives (Benefits) for Employees of RusHydro's Executive Office; - Regulations on Private Pension Plan for Employees of RusHydro's Branches.

[1] Order No. 420 On Distribution of Tasks, Powers and Responsibilities among RusHydro's Managers dated June 15, 2018 (as amended by Order No. 688 dated August 22, 2019).

Commitment to UN Sustainable Development Goals

In 2015, the United Nations Member States adopted the 2030 Agenda for Sustainable Development (the "Agenda"), which set out 17 Sustainable Development Goals (SDGs) and 169 targets on the way to achieving them. The progress towards these goals and targets is monitored and expressed in quantifiable terms based on a set of global metrics. Member states follow the Agenda's principles to draw up national targets and metrics that are based on global benchmarks but take into account local conditions.

At the same time, the SDGs cannot be achieved through the efforts of governments and public organizations alone, so the UN encourages businesses, especially large and transnational companies, to adopt sustainable practices and include sustainability information in their reporting cycle.

RusHydro Group is fully in support of the Agenda, consistently integrating the most relevant SDGs into its operations. In 2019, the Company revised the list of relevant SDGs and worked out a number of quantitative indicators that will be disclosed going forward, helping to track RusHydro Group's contribution to the achievement of SDGs.

RusHydro's quantitative metrics are based on UNCTAD's Guidance on core indicators for entity reporting on contribution towards implementation of the Sustainable Development Goals[1], as well as certain GRI Standards disclosures that are annually disclosed by the Company[2]. RusHydro did not aim to disclose the maximum possible number of indicators; instead, the Company determined the ones that bear the most relevance to its operations and ensure zero overlap when it comes to SDG achievement.

The development status for national SDG achievement metrics is available on the Federal State Statistics Service website at: https://eng.gks.ru/

The Company shares ten principles on human rights, labor, anti-corruption, and the environment, and strives to ensure that the needs of the current generation will not compromise the opportunities of those who will come next. In 2017, RusHydro joined the UN Global Compact, the largest business initiative in sustainable development[3].

In June 2018, RusHydro joined the Association "National Network of the Global Compact", and Boris Bogush, Member of the Management Board, First Deputy General Director – Chief Engineer, was elected member of the Governing Board.

RusHydro Group's contribution towards the achievement of SDGs in 2019 *[EC] [OS]*

SDGs, targets	Relevant SDGs indicators	
	Disclosure	**Details**
1 NO POVERTY 1.2	**GRI 202-1** Ratios of standard entry level wage by gender compared to local minimum wage	Depending on the region of operation, the entry level wage either **exceeds the minimum wage 14-fold** or at least equals it
3 GOOD HEALTH AND WELL-BEING 3.8	**C.3.1.** Expenditures on employee health and safety	**RUB 2,464.7 mn**
	GRI 403-9 Occupational Health and Safety	26 accidents to RusHydro's staff that resulted in 28 injuries, including one fatality. The accidents caused injuries to two managers (men), four specialists (women), and 20 workers (men).
	GRI 403-10 Work-related ill health	Three cases of work-related ill health
	GRI 203-2 Infrastructure investments and services supported (partially)	Healthcare investments of **RUB 17.3 mn**
4 QUALITY EDUCATION 4.3	**C.2.2.** Expenditure on training per year per employee	**RUB 3.7 thousand**
	GRI 404-1 Average hours of training per year per employee	Management: **102 hours** White-collar employees: **56 hours** Blue-collar employees: **50 hours**
6 CLEAN WATER AND SANITATION 6.3, 6.4	**B.1.1.** Water recycling and reuse	**4.5 bn m³** recycled water supply **21.2 mn m³** reused water supply
	B.1.2. Water use efficiency	The ratio between water withdrawal and net added value is **3.9 thousand m³/ RUB mn**
	B.1.3. Water stress	No water is withdrawn in water-scarce areas
	GRI 303-4 Water discharge (by treatment type)	Waste water discharge into water bodies – **594.9 mn m³**, including: - 348.6 mn m³ standard clean - 203.4 mn m³ untreated - 33.7 mn m³ insufficiently treated - 9.2 mn m³ treated to standard quality at treatment facilities
7 AFFORDABLE AND CLEAN ENERGY 7.1, 7.2, 7.b	**A.3.1.** Green investment	**0.5%** of consolidated revenue
	GRI EU1 Installed capacity	**39,683 MW** For a breakdown by primary energy source and by regulatory regime, see Key production assets
	GRI EU2 Net energy output	**142.8 bn kWh** of electricity **30.0 mn Gcal** of heat For a breakdown by energy source and by regulatory regime, see Electricity and heat generation
	GRI EU23 Programs, including those in partnership with government, to improve or maintain access to electricity and customer support services	The Group's businesses were involved in implementing the Target Model for Utility Connection to Electrical Grids approved by the Russian Government's Decree No. 147-r On target models for simplifying business procedures and enhancing investment appeal of the Russian regions dated January 31, 2017
	GRI EU28 Power outage frequency (SAIFI)	**0.74** For a breakdown by subsidiary, see Accident rate at RusHydro Group's facilities
	GRI EU29 Average power outage duration (SAIDI)	**1.03 h** For a breakdown by subsidiary, see Accident rate at RusHydro Group's facilities

[1] https://unctad.org/en/PublicationsLibrary/diae2019d1_en.pdf

[2] To compare certain GRI items and SDGs, the Company used, among others, SDG Compass (https://sdgcompass.org/)

[3] Resolution of the Board of Directors (Minutes No. 259 dated October 30, 2017).

SDGs, targets	Relevant SDGs indicators	
	Disclosure	**Details**
8.2, 8.8	**A.1.1.** Revenue	**RUB 406.6 bn**
	C.4.1. Percentage of employees covered by collective agreements	**96%**
	GRI 401-1 New employee hires and employee turnoverв	**13,173 employees;** for turnover by age and gender, see Recruitment
	GRI 401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	– voluntary health insurance; – insurance against accidents and diseases; – disability / temporary disability compensation; – maternity/paternity leave; – one-off financial aid; – other payments and benefits in accordance with collective bargaining agreements and in-house rules and regulations.
9.3, 9.4, 9.5, 9.b	**A.1.2.** Added value	**RUB 190.4 bn**[1]
	A.3.3. Total expenditures on research and development	**RUB 2.8 bn**
	A.4.1. Percentage of local procurement	**99.9%**
	GRI 203-2 Infrastructure investments and services supported (partially)	RusHydro Group handed over **15 socially significant facilities** to Russian regions; for the results of construction activities under key investment projects, see Construction and modernization of production facilities
11.a	**C.2.3.** Employee wages and benefits with breakdown by employment type and gender	The average salary stood at **RUB 78,575** The benefits package that includes private pension plans, VHI, insurance against accidents and diseases, and support in housing conditions improvement amounted to **RUB 31,667** thousand There is no statistics on wages and benefits by labor contract type, employment type, or gender
12.5, 12.6	**B.2.1.** Reduction of waste generation	The aggregate waste generated by RusHydro Group's power facilities totaled **23.8 mn tonnes**, **down 19.6%** y-o-y.
	B.2.2. Waste reused, re-manufactured and recycled	Accumulated waste is collected by specialized contractors duly licensed to collect, transport and treat such waste.
	GRI 302-4 Reduction of energy consumption	**877 thousand m³** in gas savings **123 tonnes** of natural fuel in diesel fuel savings **46,535 tonnes** of equivalent fuel in savings of various fuel types **19,991 Gcal** in heat savings **74,610 thousand kWh** in electricity savings
	GRI EU12 Transmission and distribution losses as a percentage of total energy	**9.8%**

SDGs, targets	Relevant SDGs indicators	
	Disclosure	**Details**
13.2	**B.3.1.** Scope 1 GHG emissions	**35.3 mn tonnes**
	GRI 305-7 Nitrogen oxides (NO_x), sulfur oxides (SO_x), and other significant air emissions	**231.7 thousand tonnes**
15.1, 15.5	**GRI 304-3** Habitats protected or restored	Rehabilitated area – **4.0 ha**
	GRI 306-5 Water bodies affected by water discharges and/or runoff	**44 bodies** For a breakdown by water body size, see Biodiversity conservation
16.5	**D.2.2.** Average hours of training on anti-corruption issues per year per employee	**653 employees** underwent training No records are kept on the length (in hours) of anti-corruption training; for a breakdown by region and employee share, see Anti-corruption efforts
	GRI 205-3 Confirmed incidents of corruption and actions taken	No corruption cases were confirmed at RusHydro Group during the reporting period
17.1, 17.17	**A.2.1.** Taxes and other payments to the Government	**RUB 82.1 bn** For a breakdown by budget level and for the structure, see Tax payments
	A.3.2. Community investment	**0.4%** of consolidated revenue
	GRI 203-1 Significant indirect economic impacts	**RUB 1.48 bn**

Rushydro group's contribution to low-carbon economy in Russia *[103-2] [OS]*

A comprehensive approach to addressing RusHydro Group's sustainable development objectives ensures the most efficient transition to low-carbon development with minimal environmental impact.

The focus on a low-carbon economy above all relies on the development of renewable sources of energy. Using RES is a top priority for RusHydro Group, which keeps ramping up installed capacities by building new facilities and commissioning new generation units.

RusHydro, which is the operator of most of the country's HPPs, was among the first in Russia to start developing projects relying on geothermal, solar and wind power generation. One of RusHydro Group's objectives for 2016–2020 with an outlook until 2025 is to improve energy efficiency by using renewable energy sources. Most of the projects are implemented in isolated energy hubs of the Far Eastern Federal District outside of the Unified Energy System.

RusHydro Group's clean energy structure includes smaller HPPs with a capacity of up to 25 MW, geothermal, wind, and solar power plants.

Large HPPs, which make up 74% of RusHydro Group's total installed capacity, are also classified as sources of power generation with low per unit emissions of greenhouse gases.

Plans to finance construction of generation facilities for a low-carbon economy

Project	Start year	End year	Estimated total cost of investment project, RUB mn	Planned investments in 2020–2025 in forecast prices, RUB mn
Ust-Srednekanskaya HPP	1991	2023	76,927.3	23,369.4
Solar generation unit at Nizhne-Bureyskaya HPP	2019	2020	155.7	155.5
Ust-Dzhegutinskaya SHPP	2012	2020	1,684.2	433.8
Barsuchkovskaya SHPP	2012	2020	1,551.3	495.0
Krasnogorskaya SHPP-1	2017	2021	7,310.9	6,758.0
Krasnogorskaya SHPP-2	2017	2022	7,454.3	6,887.6
Verkhnebalkarskaya SHPP	2011	2020	3,706.1	483.9
Photovoltaic power system (Vladivostok, Primorsky Krai, Russky Island)	2020	2020	5.0	5.0
Development and testing of a hybrid container-type energy storage system as part of a distributed network with renewable energy sources (Vladivostok, Primorsky Krai, Russky Island)	2020	2020	18.0	18.0
Construction of a 0.3 MW wind turbine in Ust-Kamchatsk	2019	2021	185.3	150.8
Construction of a 900 kW wind power plant in Tiksi, Bulunsky District	2017	2020	290.0	12.7
Construction of a 3,000 kW diesel power plant with an energy storage unit for the wind diesel power station in Tiksi, Bulunsky District	2018	2021	1,458.7	704.4

1 Use of solar and wind power in isolated energy hubs

Since 2012, RusHydro Group has commissioned 19 solar power plants with a total capacity of 1.6 MW and four wind power plants with a total capacity of 3.6 MW in the Far Eastern Federal District.

Given the local specifics, none of the projects is standard by design, the 1 MW northernmost SPP in Batagay is not an exception. Our R&D specialists have designed prototype wind diesel and solar diesel power stations and tested a range of equipment, including energy storage units, all to be used in isolated energy hubs of the Far Eastern Federal District.

In 2019, RusHydro Group continued working on its project to erect a wind-diesel power plant in Tiksi, Republic of Sakha (Yakutia), including a new 3 MW diesel power plant, a wind turbine, and an energy storage system. The wind diesel power plant has a total capacity of 3.9 MW. In 2019, the project's second stage was underway to construct a modular diesel power plant with energy storage. Design, delivery of power generation equipment, and construction of the foundation for the power plant were all successfully completed.

Construction and upgrade of energy efficient hydropower facilities delivers savings in potential greenhouse gas emissions. In 2019, RusHydro Group's hydroelectric power plants generated a total of 110.1 bn kWh, helping to avoid consumption of up to 38 mn tonnes of equivalent fuel, or GHG emissions of more than 40 mn tonnes (around 2.3% of the total volume of emissions in Russia).

As part of a memorandum of understanding signed in 2017 with Japanese companies on the wind power project in Ust-Kamchatsk, Kamchatka Territory, the design phase was competed for the erection of the fourth cold climate resistant wind turbine from Komai with a single capacity of 300 kW. The automated process control system was also upgraded.

The construction of a 1.27 MW solar power plant at the site of Nizhne-Bureyskaya HPP is in the completion phase. The commissioning is scheduled for 2020. The project will help pilot test the technology for using RES at hydraulic structures as a way to reduce own consumption costs for HPPs.

In line with action plan No. 7456p-P9 dated August 15, 2019 to modernize diesel (coal and fuel oil) power generation in remote and isolated areas approved by Dmitry Kozak, Deputy Chairman of the Russian Government, work was initiated to organize contests for selecting RES-based upgrade projects in RusHydro Group using energy service agreements. The RES facilities covered by seven pilot modernization projects in the Republic of Sakha (Yakutia) have a planned capacity of 3.15 MW (to be updated after the competitive process is over).

For more information on plans to finance the construction of power generation for a low-carbon economy, see Appendix No. 22

2 Smaller HPPs

Smaller HPP projects are implemented and supported by many countries. Their benefits include a lower capital intensity, as compared to large HPPs, and availability of multiple suitable dam sites and watercourses.

RusHydro Group takes steps to develop minor HPPs, with capacity below 50 MW, in order to use their significant environmental potential, as lon as such projects can make maximum contribution to the protection of the environment. *[OS]*

In Russia, smaller HPPs have a potential of around 7,000 MW.

In 2019, the Government of the Russian Federation decided to extend the framework for RES support beyond 2024, with the single capacity of SHPPs growing to 50 MW and investments of RUB 30 bn allocated to smaller HPP projects. In 2020, the Government is expected to draft a list of regulations to support RES beyond 2024.

In 2019, RusHydro's Management Board approved the smaller HPP development program for 2020–2025, which aims to increase the company's value by making SHPP projects more competitive in the long run. The program's key focuses are project preparation and R&D, reduction in construction CAPEX, operational efficiency improvements, development and implementation of project support mechanisms.

Planned schedule for project commissioning as part of the existing RES support framework until 2024, MW

Project	2020	2021	2022	Total
Barsuchkovskaya SHPP	5.3	–	–	**5.3**
Verkhnebalkarskaya SHPP	10	–	–	**10**
Krasnogorskaya SHPP-1 and SHPP-1	–	24.9	24.9	**49.8**
Ust-Dzhegutinskaya SHPP	5.6	–	–	**5.6**
Total	**20.9**	**24.9**	**24.9**	**70.7**

3 RusHydro Group's EV charging infrastructure

Pursuant to decisions adopted by the Management Board in September 2019, RusHydro launched the first network of electric vehicle (EV) fast charging stations in the Far East. The EV charging network project is in line with the instructions issued by the President of the Russian Federation in his May 2018 Decree, and with the Russian Government's instructions on the development of the energy infrastructure in the Far East.

Ten charging stations were installed in Vladivostok, Ussuriysk and Artem of the Primorsky Krai (the leading region by number of electric vehicles), as well as in Blagoveshchensk of the Amur Region. For the convenience of EV owners, charging stations are located in the parking lots of supermarkets and shopping and entertainment centers, near the offices of RusHydro Group's single settlement centers, and at filling stations.

RusHydro's EV charging stations are hardware and software units powered by the latest technology such as remote process control, mobile application, and payment system. RusHydro is the first provider in Russia offering a comprehensive fast charging service for mass market EVs, which enables a partial battery top-up in just a few minutes and a full charge cycle of under 30 minutes.

The stations support a range of charging connectors, including: Japanese standard (DC) of 50 kW, European standard (DC) of 50 kW, and connector Type 1 / Type 2 (AC), 22 kW. A single station can charge two EVs simultaneously.

Strong demand and extensive positive feedback from our clients, who would like to see the charging network expand going forward, confirmed the popularity of the new service.

To this end, in December 2019 RusHydro's Management Board resolved to further develop this high-tech line of business and approved the roadmap on expanding RusHydro's EV charging network in the Primorsky Krai, Amur and Sakhalin regions, Khabarovsk Territory, and other regions of Russia. In line with the roadmap, we are looking into potential locations of charging stations to enable EV travel between the key cities of the Far East and to provide people with access to the seashore during the summer vacation period.

Since the launch, RusHydro's EV charging stations have provided about 10,000 charging sessions. The aggregate amount of charge has allowed electric vehicles to travel over 300,000 km in total, saving more than 3,000 liters of hydrocarbon fuel,[1] which translates into some 70,000 kg savings in CO_2 emissions into the air.

On an annual basis, electric cars charged at RusHydro's operating charging stations will be able to travel more than 500,000 km annually, saving more than 5,000 liters of hydrocarbon fuel.

4 Cooperation to combat climate change

Ratification of the Paris Agreement on climate change

One of the 2019 milestones was Russia's ratification of the Paris Agreement on climate.

The Paris Agreement was adopted in 2015 by 195 participants of the Paris forum. At that time, the parties agreed that they needed to mitigate global warming and hold the increase in the global average temperature by 2100 to well below 2°C above pre-industrial levels (19th century). The document also aims to limit the average temperature increase to 1.5°C. In 2015, scientists said that a larger temperature increase could lead to irreversible changes in the earth's ecosystem.

The Paris Agreement does not require the signatories to abandon the burning of fossil fuels (oil, gas and coal) for industrial purposes. However, it does require the countries to work on emission reduction and treatment, upgrade existing facilities with improved treatment systems, and adapt industrial production to climate change developments.

Back in late 2015, RusHydro supported an initiative to unite the efforts in Russia to reduce the impact on the environment and prevent climate change, signing the Statement of the Russian Business on the Negotiation Process and Adoption of a New Climate Agreement at the 21st session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC).

Since 2015, RusHydro has been a member of the Climate Partnership of Russia, which seeks to unite the efforts of businesses in the interests of transition to environmentally friendly technologies.

The Company annually reports on its greenhouse gas emissions under the Carbon Disclosure Project (CDP). The key objective of the CDP is to promote solutions that contribute to improvements in climate change by raising awareness of businesses, policy makers, and investors.

In 2019, RusHydro also continued its work, together with EuroSibEnergo, within the working group on developing a methodological approach to understanding global climate change processes in terms of greenhouse gas emissions from the surface of HPP freshwater reservoirs and evaluating their absorbing capacity.

[1] Compared to gasoline-powered cars of the same class.

Stakeholder relations

RusHydro Group strives to balance the interests of all the stakeholders. The Company keeps in touch with its stakeholders and systematizes and analyzes their requests, making sure that any relevant information is disclosed in full and on time. This approach allows for a timely response to probable risks associated with stakeholder relations.

In building a framework for successful relations with stakeholders, RusHydro Group follows four fundamental principles of the AA1000 *[102-43]* Series of Standards:
- **inclusivity** – relates to identifying stakeholders and their needs and arranging interaction with them on material sustainability topics;
- **Materiality** – relates to identifying and prioritizing the most relevant sustainability topics, taking into account the effect each topic has on the stakeholders;
- **Responsiveness** – relates to providing timely reaction from the Company to events related to material sustainability topics, expressed in specific actions or communication with the stakeholders;
- **impact** – relates to assessing the Company's positive and/or negative effect on sustainable development aspects and stakeholders' interests.

Given that each stakeholder group has and will continue to have a major impact on the Company's business, taking their interests into consideration when operating and planning across various timeframes is crucial for RusHydro Group's sustainable development.

In 2019, stakeholder relations were in line with Order No. 949 dated December 10, 2018 by the Chairman of the Management Board – General Director of RusHydro, which details the schedule, ways of interaction, and actions planned for stakeholders in 2019. *[102-43]*

In 2019, during the 2018 reporting campaign, a stakeholder map was compiled for the purposes of this annual report based on a survey of external and internal stakeholders. *[102-42]*

More details on actions adopted for relations with stakeholder groups are available in the following documents approved by the Company's executive documentation:
- list of key public events;
- Charity and Sponsorship Program;
- schedule of internal regulations development;
- IR Calendar.

Based on the 2019 performance, RusHydro issued a report on implementation of actions under the approved schedule.

Public hearings and stakeholders' opinions

When drafting its annual reports, RusHydro Group strives to ensure that the information it provides meets expectations of the stakeholders. In line with this principle, the Company holds annual public hearings to discuss the forthcoming report.

In April 2020, the draft 2019 Annual Report of RusHydro Group was presented at the public hearings attended by representatives of the Company, its partners in the energy sector, subsidiaries, environmental and public entities, trade unions, universities, local authorities, media, as well as consultants and auditors.

At the hearings, the stakeholders made proposals regarding information to be disclosed in the report.

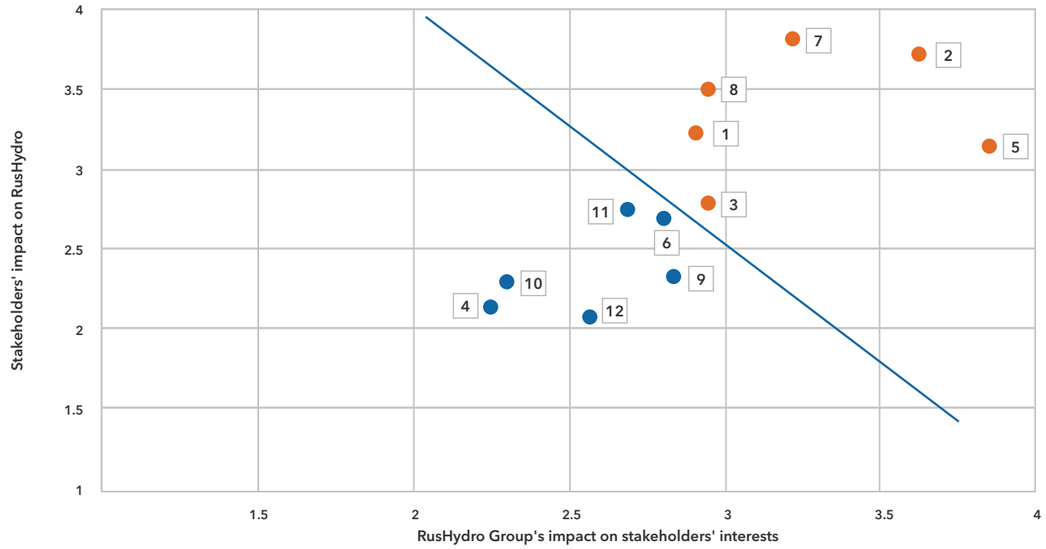
In addition, this report publishes the information (marked by special symbols) proposed for disclosure in previous reporting campaigns (including tendering results and public reporting ratings) or identified by surveying stakeholders as part of determining material topics of the 2019 Annual Report.

EC – taking into account recommendations of the expert community;

OS – taking into account recommendations of stakeholders other than the expert community.

Information on consideration of stakeholders' recommendations submitted at public hearings is available in Appendices No. 18 and No. 19; for Opinion on Public Assurance, see the Additional Information section.

Stakeholder map *[102-40]*



1 Shareholders and investors
2 Customers and consumers
3 Business partners, suppliers and contractors
4 Environmental organizations
5 Employees and trade unions
6 Professional associations and expert community
7 Government authorities
8 Regulators and infrastructure organizations
9 Educational institutions
10 Local communities
11 Media
12 Public social and charitable organizations

● Key stakeholders

RusHydro Group's stakeholder relations in 2019 *[102-21] [102-31] [102-33] [102-43] [102-44] [EC]*

Key mechanisms	Responses to requests and results of stakeholder relations in 2019
1. Shareholders and investors	
Key interests: dividend payouts, economic efficiency, business resilience, business process transparency	
- preparing and holding Annual General Meetings of Shareholders; - preparing IR presentations and arranging IR activities; - public reporting; - maintaining business contacts with analysts of investment banks and other financial institutions; - preparing press releases and information materials about the Company; - arranging meetings between investors and the Company's management; - preparing and conducting roadshows; - disclosing information on the Company and its subsidiaries' websites in accordance with the disclosure rules as per resolutions of the Government of the Russian Federation; - updating the relevant section on the Company's website at http://www.rushydro.ru/investors/.	The interaction focused on discussing RusHydro Group's strategic priorities and plans, including those related to the updated dividend policy, inclusion of the four Far Eastern projects in the TPP modernization program with a guaranteed rate of return, implementation of value growth initiatives, management efforts aimed at improving operational efficiency, and plans for asset modernization. For more information, see the Shareholder and investor relations

Key mechanisms	Responses to requests and results of stakeholder relations in 2019
2. Customers and consumers	
Key interests: reliable power supply, improved quality of products and services, high standards of service	
• Line of Trust; • mobile service centers; • online reception desk; • contact center; • personal accounts for consumers of guaranteed suppliers; • single information and settlement centers; • feedback on RusHydro Group's EV charging stations.	Agreements were implemented related to regional energy development, ensuring sustainable power and heat supply to consumers, as well as social and economic activities. For more information, see the Consumer interaction section In 2019, the majority of requests received through the Trust Line were about sales (36%) and procurement (34%). For more information on the Line of Trust, see the Providing for transparency and availability of information In line with its strategy to improve customer experience, RusHydro Group has been launching single settlement and information centers. The centers provide clients with a single payment document, which reflects charges for electricity, heating, cold water supply, sewage, removal of solid household waste and other utility services. As at the end of 2019, 45 centers were operational, including nine centers that opened during the reporting period. This project, along with the introduction of single payment documents, translates into a 20–30% increase in utility payment collection practice. Within the regions of their operation, companies of ESC RusHydro Subgroup provide services to about 60% of clients through internal and external interactive channels. Customers of ESC RusHydro Subgroup are actively exploring alternative ways of getting in touch with sales units, including through the Contact Center, which operates remotely. Consumers have the opportunity to ask a question directly to the operator or use the voice service powered by speech recognition and synthesis technology. Most of the inquiries focus on reporting utility meter readings (70%), while the second most popular area of interest is amounts due, incurred and recalculated under the client's personal account (15%) and requests for information are the third most popular reason for contact (5%). Clients that use RusHydro's EV charging network can benefit from a dedicated website (charge.rushydro.ru) with a detailed description of the project, charging instructions for electric cars, prices, answers to frequently asked questions and other useful information. Technical assistance is provided through the telephone support line accessible at 8-800-222-18-32 and a WhatsApp group where RusHydro experts are available online to provide assistance.
3. Business partners, suppliers and contractors	
Key interests: fair competition and responsible market behavior, transparent operations, including procurement	
• forums, exhibitions, conferences, dialogues; • open and competitive procurement procedures; • joint projects.	In 2019, RusHydro was a partner of the 16th Krasnoyarsk Economic Forum, "Arctic: Territory of Dialogue" 5th International Arctic Forum, Eastern Economic Forum, and was actively engaged in the Russian Energy Week International Forum (REW 2019), Second Russian-Chinese Energy Business Forum, and the St. Petersburg International Economic Forum. RusHydro Group signed several agreements with its partners, including: • PowerChina – on cooperation for the construction of pumped storage power plants in Russia and collaboration in third countries on design and engineering projects; • Osnova Holding – on implementation of projects for processing and disposal of ash and slag waste currently generated at coal-fired power plants in the Far Eastern Federal District; • Rosatom State Atomic Energy Corporation – on cooperation for the development and application of composite materials; • Far East Development Fund and Hevel Energoservice – on cooperation for the development of renewables and creation of autonomous hybrid power plants in the Far Eastern Federal District areas with decentralized power supply. For more information on the implementation of bidding procedures, see the Procurement

Key mechanisms	Responses to requests and results of stakeholder relations in 2019
4. Environmental organizations	
Key interests: environmental protection	
• environmental impact assessments; • environmental projects in the regions of operation; • interaction with specially protected natural areas; • charitable assistance to biodiversity conservation programs	In 2019, RusHydro Group supported 19 specially protected areas across the regions of its operation. The Company's donations help the areas implement a wide range of environmental measures aimed primarily at biodiversity conservation and environmental awareness raising for the younger generation, as well as actions that ensure regulation and sustainable use of biological resources important for biodiversity conservation; and assistance in protecting ecosystems and natural habitats of species maintaining viable populations in natural conditions. As part of the Ecological Paths project, seven tourist trails were laid out in 2019 in the Republic of North Ossetia – Alania, Perm and Stavropol territories, Amur, Volgograd, Saratov and Samara regions, with a total of 30 nature trails operating in 15 regions of RusHydro's operation as of date (as well as in Karachay-Cherkessia, Chuvashia, Kabardino-Balkaria, Yaroslavl, Novosibirsk, Moscow and Nizhny Novgorod Regions). PJSC RusHydro takes part in activities of the Ministry of Natural Resources working group, which addresses entrepreneurship and biodiversity preservation issues. Thus, Company representatives inform the participants of meetings on the efforts made to preserve the biodiversity. One of the working group's objectives is to establish methodological approaches to preserving the biodiversity. The said initiative will be implemented together with leading academic institutions. *[OS]* For more information, see the Environmental protection
5. Employees and trade unions	
Key interests: professional and career development, safe working conditions, remuneration	
• further professional training; • social support of employees; • communication through internal channels; • interaction with trade unions	In 2019, RusHydro Group conducted more than 56,300 training courses while also holding regular professional skills competitions and providing career guidance. RusHydro Group provides voluntary health insurance and non-government pension insurance plans. Employees receive support as part of existing collective bargaining agreements and internal documents. For more information, see the Ensuring good working conditions Employees have access to a dedicated intranet platform (portal.rushydro.ru), which publishes Group-wide news, covers developments at RusHydro's branches and subsidiaries, announces essential corporate events and actions, and posts vacancies and information on new appointments. In 2019, 12 issues of a corporate newsletter were published with a circulation of 11,000 copies, distributed across branches and subsidiaries of RusHydro Group. Most of RusHydro Group's companies have trade unions in place, with a total of 34,239 members in 2019 (49% of the total headcount). Interaction with trade unions in branches and subsidiaries runs as follows: • establishment of commissions for drafting collective bargaining agreements and monitoring their implementation, social policy commissions with the participation of the employer and trade union representatives; • taking into account the union's opinion when adopting internal regulations on social and labor relations; • holding joint meetings of heads of local trade unions with RusHydro's management on relevant aspects of social and labor relations. • holding joint cultural, sports and festive events; • timely informing trade unions about decisions made on reorganization, layoffs and other cases stipulated by labor legislation and collective bargaining agreements

Key mechanisms	Responses to requests and results of stakeholder relations in 2019
6. Professional industry associations and expert community	
Key interests: energy science development, development of innovative technologies, partnership prospects, transparent operations	
– forums, conferences, exhibitions; – joint programs; – public reporting; – implementation/association programs.	RusHydro Group participates in committees and working groups of a number of non-profit partnerships and international organizations, including: – Russian Union of Industrialists and Entrepreneurs (RSPP), where Nikolay Shulginov, Chairman of the Management Board – General Director of RusHydro, holds a Board member position; – Hydropower of Russia Association; – Council of Energy Industry Veterans Non-Profit Partnership; – Market Council Non-Profit Partnership; – International Hydropower Association; – Global Sustainable Energy Partnership (GSEP). For more information on forms of participation in non-profit organizations, see Appendix No. 3
7. Federal and local executive authorities	
Key interests: ensuring reliable and uninterrupted power supply and heat supply, tax revenues, development of regions of operation, improvement of the regulatory framework for energy, control over investment program implementation and financial and business operations	
– agreements on social and economic cooperation with government authorities; – involvement in developing investment programs; – arranging and holding public hearings on facilities construction projects; – engagement in joint committees, commissions, and expert groups on energy sector development; – development of proposals on improvement of laws and regulations that cover activities of RusHydro Group's companies; – interaction with external regulators during their audits of RusHydro Group.	In 2019, the Company had effective agreements with the Russia's Ministry of Civil Defence, Emergencies and Disaster Relief, and the Federal Fishery Agency. RusHydro worked with committees of the Federal Assembly of the Russian Federation on matters related to the Company's interests. Representatives of the Company participated in all significant events (parliamentary hearings, roundtables, emergency response sessions, meetings) organized by the executive and legislative authorities. In 2019, RusHydro had effective agreements and memoranda signed with the authorities of the following regions and municipal entities: Republic of Dagestan, Karachay-Cherkess Republic, Republic of Sakha (Yakutia), Republic of Tatarstan, Republic of Khakassia, Kamchatka Territory, Primorsky Krai, Amur Region, Volgograd Region, Magadan Region, Moscow Region, Chukotka Autonomous Area, Artem Urban District, Vladivostok Urban District, and Yakutsk Urban District. RusHydro developed the program to develop the energy system in the Far Eastern Federal District with a view to accelerating local economic growth. For more information, see the Program to develop the energy system in the Far Eastern Federal District with a view to accelerating local economic growth Together with the Government of the Sakhalin Region, the Company established the Program of Stable Power Grid Operation in the Sakhalin Region, approved by the Ministry of Energy. For more information, see the Accident rate at RusHydro Group's facilities Also in 2019, the management of RusHydro participated in commissions and working groups under the Government of the Russian Federation established for the development of the energy sector and social and economic development of Russian regions. Upon review by the Government Commission on the Development of the Electric Power Industry on May 29, 2019, the list of thermal power plants to be modernized (rehabilitated) or constructed in the WECM non-price zones was approved by Order of the Russian Government No. 1544-r dated July 15, 2019. A number of key issues related to the development of the energy sector in the Republic of Dagestan were discussed by the working group on the development of hydropower generating facilities, ensuring safety and effective operation of hydraulic facilities, which includes representatives of the Government of the Republic of Dagestan and RusHydro. *[OS]*

Key mechanisms	Responses to requests and results of stakeholder relations in 2019
8. Regulators and infrastructure organizations	
Key interests: compliance with Russian and international laws	
– reporting; – development of proposals to improve legislation.	The Company regularly discloses information in accordance with the requirements of the Bank of Russia and other regulators. RusHydro Group is actively involved in policy-making in the industry. The main achievement of RusHydro Group's engagement in legislative improvement efforts in 2019 was the adoption of several regulations which set forth: – legal grounds for introducing long-term tariff regulation in the Far Eastern Federal District[1]; – possibility of implementing a mechanism for upgrading thermal power plants[2]; – size of fees charged for the use of water bodies[3]; – requirements to reliability and safety in the electric power industry (orders of the Ministry of Energy of Russia). *[OS]* In 2019, PJSC RusHydro continued developing the national standardization system by ensuring operation of the specialized subcommittee – Hydropower Plants (hereinafter, SC-4) of the Technical Committee 016 "Power Sector". The National Standardization Program, approved by Rosstandart based on the propositions of SC-4 (NSP 2015–2019), includes nine national standards initiated by SC-4. In late 2019, by Order of Rosstandart No. 1339-st dated December 4, 2019, the national standard (GOST R) "Instrumentation systems and equipment. Manufacturing conditions. Norms and requirements" (executed by the Branch JSC Institute Hydroproject – NIIES). In 2016–2019, the total number of GOST R national standards initiated by SC-4 and approved by Rosstandart amounted to 4. *[OS]*
9. Educational institutions	
Key interests: targeted training programs, energy science development, development of innovative technologies, including those which reduce the environmental impact	
– cooperation in R&D; – training, retraining, and skills improvement for employees; – orders for R&D projects.	Implementation of From School to Workplace, a program of advanced human resource development: – launch of the tenth energy class in total and the first energy class in the North Caucasus in 2019 with the support of RusHydro and the Ministry of Education of the Karachay-Cherkess Republic; – participation in the organization of various events, including Energy for Education Industry contest, ProeKTOriYa, a national career guidance forum, and project sessions in the Russian Children's Education Centers (Sirius, Ocean, Smena, Orlyonok); – Energy for Development contest for university undergraduates; – spring energy school for students; – cooperation with partner universities in organizing internships at RusHydro Group enterprises; – providing charitable assistance to partner universities. Two engineering centers dedicated to thermal power generation and wind power competencies have been established at the Far Eastern Federal University. For more information, see the Ensuring good working conditions

[1] The Russian Government's Resolution No. 64 dated January 30, 201 On Amendments to Certain Acts of the Government of the Russian Federation Concerning Regulation of Prices (Tariffs) for Electricity (Capacity) Supplied to Technologically Isolated Local Electric Power Systems and in Areas not Technologically Linked with the Unified Energy System of Russia and Technologically Isolated Local Electric Power Systems, and Declaration of Some Acts of the Government of the Russian Federation as Invalid, as well as the Russian Government's Resolution No. 837 dated June 29, 2019 On Amendments to Pricing Basis in the Field of Regulated Prices (Tariffs) for Electric Power.

[2] The Russian Government's Resolution No. 43 On Selecting Projects to Upgrade Generating Facilities of Thermal Power Plants dated January 25, 2019.

[3] The Russian Government's Resolution No. 1211 dated September 18, 2019 On Amending Clause 1 of Russian Government's Resolution No. 1509 dated December 26, 2014.

Key mechanisms	Responses to requests and results of stakeholder relations in 2019
10. Local communities and regions of presence	
Key interests: local development	
→ job creation; → conducting public hearings on energy construction projects; → implementation of charity projects aimed at social and economic development of the regions where RusHydro Group operates; → participation in educational and environmental projects of high social importance.	RusHydro Group builds and commissions energy facilities that help create new jobs. In 2019, 1,569 new jobs were provided, mainly in the Far Eastern Federal District. In 2019, under the Charity and Sponsorship Program more than 300 charitable projects were implemented in the regions of RusHydro Group operation, providing support in the following key areas: education, environment, health care, sports, culture, support of social institutions, charitable foundations, non-profit organizations, low-income and vulnerable citizens. The Company also supported a number of state-run projects of public importance. In addition, RusHydro subsidiaries implemented more than 320 charity projects in 2019. For more information, see the Social initiatives and contribution to the growth of local communities
11. Media	
Key interests: receiving full reliable information on the Company's operations, quick informed responses to media inquiries	
→ preparing and providing the media with press releases, statements, and comments of the Company; → publishing information on the corporate website and social media; → preparing and providing background, analytical information and presentations to the media; → organizing and holding briefings, press conferences, interviews, media scrums, press tours and other media events; → providing information in a timely manner in response to media inquiries	As a result of interaction with the mass media, publications mentioning RusHydro Group totaled over 76,000 in 2019, with PJSC RusHydro mentioned 36,600 times. More than 15,000 items were published in federal outlets, while 258 pieces were broadcast on TV and radio. RusHydro has official accounts in three social networks: VKontakte, Facebook and Instagram with over 26,000 followers in total. The Company's corporate website (www.rushydro.ru), which is open to all Internet users and contains information on all lines of business of RusHydro Group, attracted 533,000 unique visitors in 2019.
12. Public social and charitable organizations	
Key interests: support for social activities and securing financial assistance, volunteers' assistance	
→ social and charitable programs; → corporate volunteering; → public reporting on corporate social responsibility; → systematic communication with charitable foundations and non-governmental organizations.	Regular meetings were held with charitable foundations and non-governmental organizations. At the request of charitable foundations and organizations, the Company conducted a screening, upon which it decided on feasibility of the charitable assistance to be provided within the budget of the RusHydro's Charity and Sponsorship Program and in accordance with the Regulations on the Organization of Management of Charitable and Sponsorship Activities of RusHydro Group and the Charity and Sponsorship Policy. The Company rendered targeted aid to those in need through charitable organizations upon receiving formal requests and supporting documents. For more information, see the Charity and social projects In cooperation with charitable foundations, volunteering campaigns were arranged to help the disadvantaged. For more information, see the Corporate culture and volunteering

PERFORMANCE RESULTS

Sakhalinskaya GRES-2. Commissioned in 2019

Economics and finance

Key financial indicators[1] *[103-2]*

RusHydro Group's financial results reflect a decrease in electricity generation in 1H 2019 due to lower water inflow to the majority of HPP reservoirs, a drop in DAM prices in Siberia during 2H 2019, and the impairment of fixed assets reaching its peak as a result of commissioning of large hydropower plants in the Far East.

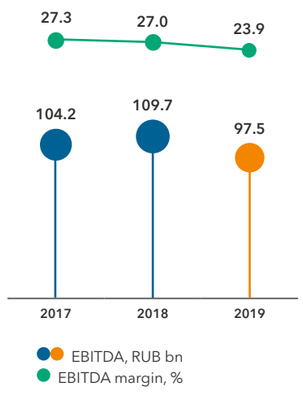
Income indicators

Metric[2]	2017	2018	2019	2019-2018
EBITDA, RUB mn	104,180	109,673	97,544	-12,129
EBITDA margin, %	27.3	27.0	23.9	-3.1 p.p.
Net income, RUB mn	24,774	31,837	643	-31,194
Net margin, %	6.5	7.8	0.2	-7.6 p.p.
Earnings per share (EPS), RUB	0.0656	0.0739	0.0121	-0.0618
Return on assets (ROA), %	2.8	3.4	0.1	-3.3 p.p.
ROE, %	4.5	5.5	0.1	-5.4 p.p.
Adjusted net income, RUB mn	65,738	70,757	51,547	-19,210

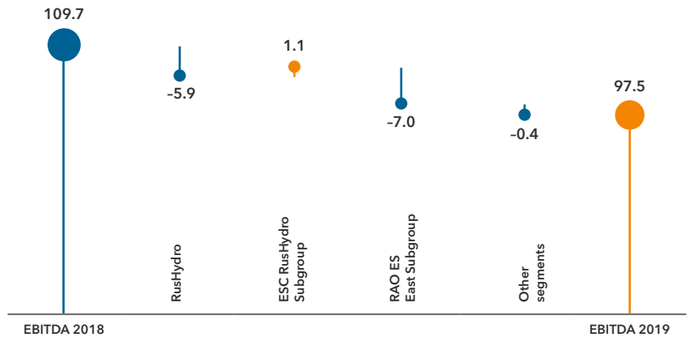
In the reporting period, EBITDA declined by 11.1% y-o-y to RUB 97.5 bn.

Net income amounted to RUB 643 mn (down by 98.0%), while adjusted net income totaled RUB 51,547 mn (down by 27.1%).

EBITDA and EBITDA margin



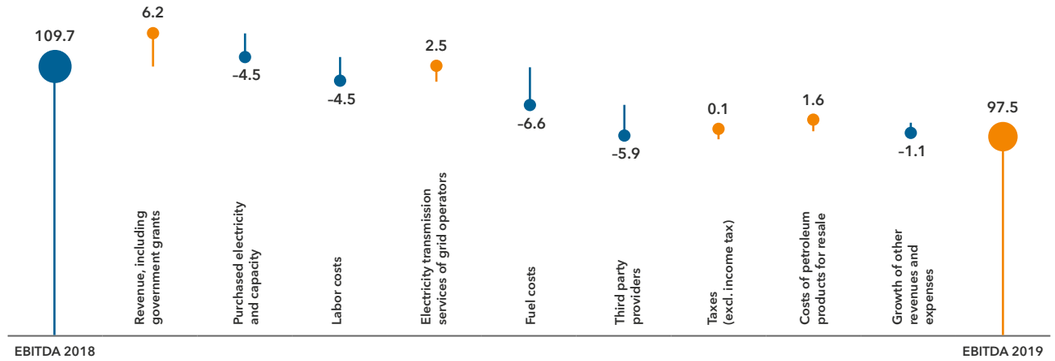
Factor analysis of EBITDA by segment, RUB bn



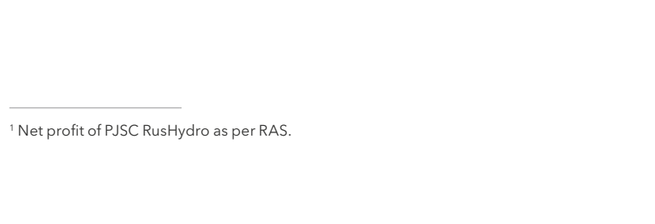
[1] This section provides data in line with RusHydro Group's 2018 and 2019 IFRS consolidated statements (unless stated otherwise) incorporating the changes in the Group's accounting policy following the adoption of IFRS 16 Leases *[102-48]*.

[2] Net margin and EBITDA margin indicators factor in other operating income generated by RusHydro Group in 2017 (RUB 0.7 bn), in 2018 (RUB 5.5 bn) and in 2019 (RUB 1.2 bn) and are calculated as gain on financial assets at fair value through profit or loss, income from court rulings awarded, and dividends received.

Factor analysis of EBITDA (expenses), RUB bn



Margin performance, %



Profit distribution for 2018[1], %

Detailed information on the distribution of profit allocated, inter alia, to the Company's development is available on the Company's website at http://www.eng.rushydro.ru/

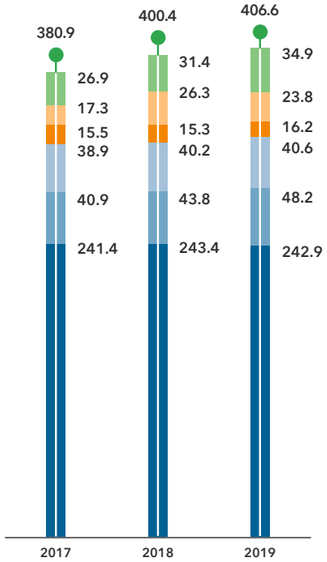
[1] Net profit of PJSC RusHydro as per RAS.

Total revenue

The Group's total revenue (including government grants) in 2019 increased by 1.6% y-o-y to RUB 406.6 bn against RUB 400.4 bn in the previous reporting period.

Revenue
Key drivers behind the change in revenue include:
- a 0.2% decrease in total revenue from electricity sales associated with lower power generation by RusHydro's HPPs (down by 4.4%);
- growth in revenue from electricity sales by RAO ES East Subgroup by 4.7% as a result of higher average sales prices and volumes;
- a 1.9% increase in ESC RusHydro Subgroup revenue from the sale of electricity following the conclusion of new contracts with customers and due to higher average sales prices;
- growth in revenue from capacity sales by 9.9% on the back of higher actual prices and volumes;
- growth in revenue from heat and hot water sales by 1.2%, mainly attributable to increased heat tariffs and net supply;
- an 11.1% increase in other revenue due to substantial revenue growth on the back of the utility connection to the grids of Far Eastern Distribution Company (DRSK). At the same time, revenue from resale of petroleum products to VOSTEC and electricity transmission to Yakutskenergo dropped considerably.

Total revenue performance and breakdown, RUB bn



Government grants *[201-4]*
In accordance with applicable laws of Russian regions, some companies of the Group received government grants to fund the costs for difference between the approved electricity and heat tariffs and tariffs in the economic feasibility study, as well as the costs for fuel and purchased electricity.

In 2019, RusHydro Group received RUB 39,983 mn in government grants.

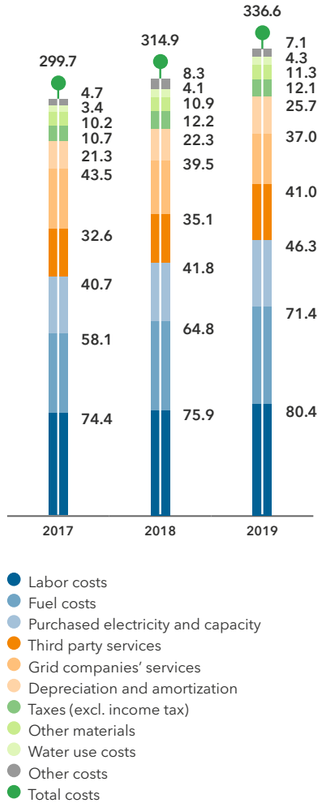
The total grants received by the Group's guaranteed suppliers under the Russian Government's Resolution No. 895 On the Establishment of Base Electricity (Capacity) Rates (Tariffs) for in the Far Eastern Federal District dated July 28, 2017 amounted to RUB 23,794 mn in 2019.

The amount of regional government grants received by RusHydro Group in 2019 totaled RUB 16,189 mn. The grants were provided to companies in the following regions: Kamchatka Territory, Republic of Sakha (Yakutia), Magadan Region, Chukotka Autonomous Area, and the Sakhalin Region.

Operating expenses

In 2019, total operating costs increased by 6.9% year-o-year, from RUB 314.9 bn to RUB 336.6 bn.

Operating costs by year and type, RUB bn



The change in operating costs was driven by:
- a 5.9% increase in labor costs due to indexation of rates and salaries according to the effective collective bargaining agreements;
- a 10.3% rise in fuel costs resulting from higher fuel prices following procurement procedures at DGK, and the growth of purchase prices for petroleum products and their increased use due to imposed restrictions on the use of gas at Kamchatskenergo;
- a 10.8% increase in costs of purchased electricity and capacity (covered by incremental revenue) at RAO ES East Subgroup following a change in volumes and tariffs (as a result of, inter alia, Yakutskenergo entering the WECM);
- growth in costs for third party services by 16.8% as a result of a rise in costs of utility connection to the grids of DRSK (covered by revenue) and repair and maintenance expenses at Yakutskenergo amid the lowering of lease costs (due to the adoption of IFRS 16 *Leases* starting January 1, 2019) and heat purchase and transportation costs;
- a 6.4% decrease in costs of electricity transmission services of grid operators, mainly at Yakutskenergo, on the back of lowered costs of electricity transmission to Far East Energy Management Company (as its grids became part of the Unified National Electric Grid starting January 1, 2019 and were transferred to FGC UES, resulting in a substantial reduction in the transmission tariff);
- a 15.1% rise in depreciation and amortization costs due to the commissioning of Vostochnaya CHPP and off-site facilities of Sakhalinskaya GRES-2 in 2H 2018, the launch of Nizhne-Bureyskaya HPP in 2H 2019, and the adoption of IFRS 16 *Leases* starting January 1, 2019, and depreciation of right-of-use assets;
- a 15.0% decrease in other expenses, including at VOSTEC as a result of reduced costs of petroleum products for resale.

Direct economic value generated and distributed *[201-1]*

Metrics, RUB bn	2017	2018	2019
Economic value generated	**383.6**	**402.1**	**405.6**
Operating profit	342.2	353.4	362.2
Interest income and dividends received	32.7	8.9	7.1
Losses/gains from sale of assets and indemnity payments	9.6	(1.8)	(1.6)
Government grants	(0.9)	41.6	37.9
Economic value distributed	**300.8**	**316.6**	**335.7**
Operating costs	190.5	201.3	215.2
Salaries, allowances and other benefits	74.4	75.9	80.4
Payments to capital providers	10.4	11.9	11.7
Payments to government	23.7	26.1	26.9
Investments in communities	1.8	1.4	1.5
Economic value retained	**82.8**	**85.5**	**69.9**

Assets and liabilities

As at December 31, 2019, RusHydro Group's assets declined by 0.7% (RUB 6.8 bn) y-o-y to RUB 925.1 bn.

The change in assets is mainly driven by:
- an increase in the cost of fixed assets due to the implementation of the Group's investment program (including impairment);
- an increase in other current assets due to a larger share of funds placed on deposits with maturities of over 90 days (amid a decrease in cash equivalents);
- a decline in receivables and advances paid as a result of payments under agreements on the sale of Inter RAO shares and the offset of advance payments for the utility connection of FGC UES to DRSK.

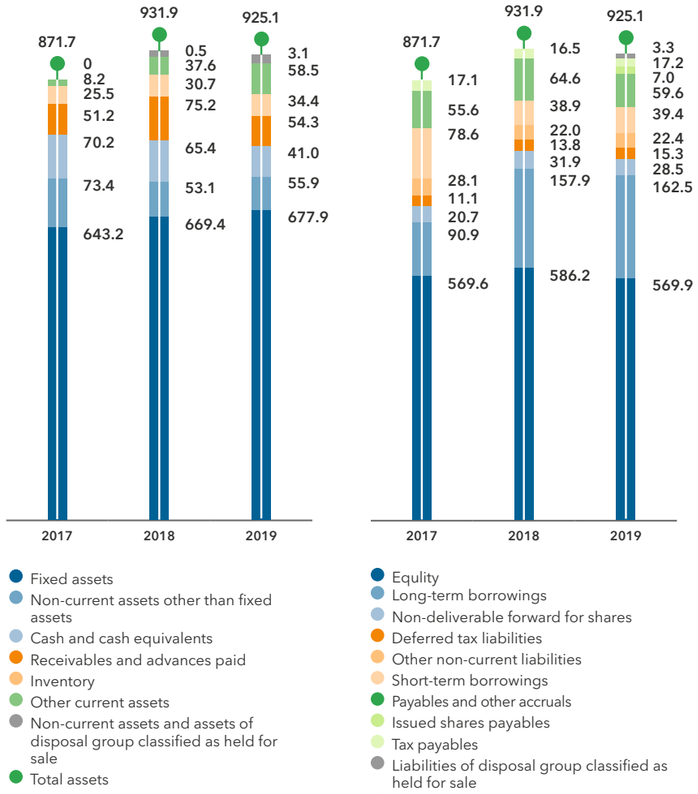
As at the end of the reporting period, the Group's liabilities grew by 2.8% (RUB 9.5 bn) y-o-y to RUB 355.2 bn.

The ratio of own and borrowed funds in 2019 amounted 62.3%.

In November 2019, RusHydro Group placed Eurobonds issued by special purpose entity RusHydro Capital Markets Eurobonds DAC. The issue size totaled RUB 15.0 bn. The Eurobonds have a maturity of five years and a coupon rate of 6.8% per annum.

As at December 31, 2019, the Group recorded a liability of RUB 7.0 bn associated with the issue of additional shares registered by the Bank of Russia on August 27, 2018. In April–May 2019, as part of the pre-emptive right exercise, RusHydro placed 7,000,092,298 additional shares among its shareholders (49.95% of the additional offering) with a par value of RUB 1,0 per share.

Assets, RUB bn



Equlity and Liabilities, RUB bn

In December 2019, RusHydro Group signed an agreement on the sale of 90% of MEK shares to RazTES for consideration of RUB 173 mn. In accordance with the agreement, the shares were transferred to the buyer in March 2020 after MEK refinanced its obligations to the European Bank for Reconstruction and Development and Asian Development Bank and after RusHydro's surety contracts with respect to these obligations were terminated in full[1]. After the closure of the deal, RusHydro Group's financial debt went down by RUB 4 bn[2] and the Group's loan portfolio was no longer exposed to currency risks.

The fair value of the non-deliverable forward transaction for RusHydro's shares recognized in the Company's liabilities went down from RUB 31,986 mn (as at December 31, 2018) to RUB 28,510 mn (as at December 31, 2019), which helped to reduce RusHydro's leverage. The change in fair value of the non-deliverable forward is mainly attributable to improvement in RusHydro's share price throughout the reporting period. Should the Company's share price continue on its upward trend, a further reduction in forward transaction liabilities is expected, with gains from the forward contract recognized in RusHydro Group's financial statements under the IFRS.

Debt portfolio management *[103-2]*

Total and net financial debt, RUB bn**, and leverage**

RusHydro Group continues to maintain a balanced debt profile. In 2019, short-term debt remained almost flat y-o-y (an increase of 1.4%), while long-term debt wen up by 2.9%. At the end of 2019, RusHydro Group's total and net financial debt[3] stood at RUB 232.4 bn and RUB 144.6 bn respectively.

The level of leverage confirms RusHydro Group's strong financial position. At the end of the reporting period, net financial debt / EBITDA stood at 1.48x, which is more than comfortable for RusHydro Group given the internal limit of 2.0x.

2019 saw a y-o-y decrease in long-term borrowings (down by 36%), mainly due to a reduction in the Group's activities in international capital markets following the peak year of 2018, when RusHydro completed three issues of Eurobonds for RUB 35 bn and 1.5 bn offshore Chinese renminbi, compared to just one issue of Eurobonds for RUB 15 bn in 2019.

Short-term debt demonstrated a slight increase (of 1.4%). In 2019, RusHydro Group honored all its obligations under coupon payments, loan agreements, and debt securities redemption. In April 2019, the Company fully redeemed its series BO-P04 exchange bonds for a total of RUB 15 bn.

During 2019, companies RusHydro Group worked on refinancing more expensive debt. The weighted average rate of ruble-denominated borrowings at the end of the year stood at about 7.6% per annum, compared to 8% per annum at the end of 2018.

[1] As at December 31, 2019, assets and liabilities of MEK are recognized as assets and liabilities of disposal group classified as held for sale.

[2] Based on the USD exchange rate as at the closure date (March 11, 2020).

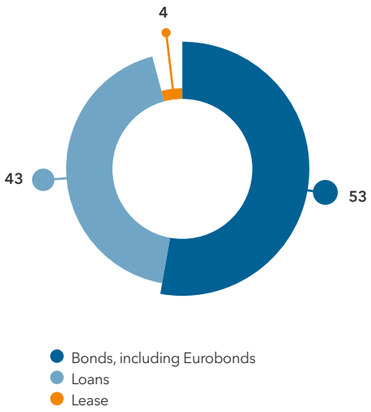
[3] Net financial debt is calculated as financial debt less cash and cash equivalents (including bank deposits for up to one year) under the Group's IFRS financial statements at the end of the reporting year. Financial debt includes long-term and short-term liabilities (less accrued interest payable), including liabilities of disposal group, liabilities under the non-deliverable forward for shares, and cross currency swap liabilities in accordance with the Group's financial statements under the IFRS at the end of the reporting year.

In terms of currency and stability of the interest rate, the Group's financial debt (excluding liabilities on the non-deliverable forward for shares, cross currency swap, and lease obligations) as at December 31, 2019 had the following structure: 98% was represented by ruble-denominated debt[1], with 90% comprised by fixed-rate debt, which indicates minimum levels of currency and interest rate risks for RusHydro Group's financial debt[2].

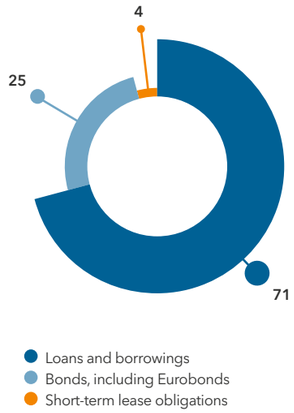
In 2019, the long-term part of the Group's borrowings increased by RUB 4.6 bn (2.9%) to RUB 162.5 bn, mainly driven by long-term financing raised through a ruble-denominated Eurobond issue in 2019.

At the end of the reporting period, the short-term part of the Group's borrowings was virtually flat y-o-y and amounted to RUB 39.4 bn (an increase of RUB 536 mn, or less than 1.4%). The Group has a balanced debt repayment schedule, including debt due in 2020. Current short-term liabilities reflect maturing long-term loans and bonds (including local bonds totaling RUB 10 bn). As the remaining drawdown for the Group's current loan agreements amounted to more than RUB 206 bn at the end of 2019 and substantially exceeds the need for short-term debt refinancing, financial risks are considered insignificant.

Structure of the long-term debt to be redeemed after twelve months from the reporting date, %



Structure of the short-term debt to be redeemed within twelve months from the reporting date, %



Bonds

Local bonds

As at December 31, 2019, the outstanding bonds of RusHydro include six issues for a total of RUB 55.0 bn (the aggregate value of outstanding bonds is RUB 13.2 bn).

Eurobonds

As at December 31, 2019, the outstanding bonds of RusHydro include five issues of Eurobonds for a total of RUB 70 bn and 1.5 bn offshore Chinese renminbi placed by RusHydro Capital Markets Eurobonds DAC company on the Irish Stock Exchange under Reg S. All issues have confirmed long-term ratings from at least two leading international rating agencies and ACRA aligned with RusHydro's credit rating.

Key parameters of RusHydro's bond issues

Issue parameters			Series 01 and 02 bonds	Series 07 and 08 bonds	Series 09 bonds	Series BO-P05 exchange bonds
Bond type	Non-convertible certificated interest-bearing bearer bonds with mandatory centralised custody	State registration number	4-01-55038-E 4-02-55038-E	4-07-55038-E 4-08-55038-E	4-09-55038-E	4B02-05-55038-E-001P
Face value	RUB 1,000	Registration date	23.09.2010	27.12.2012	27.12.2012	09.06.2017
Nominal amount of each issue	Series 01 – RUB 10 bn Series 02 – RUB 5 bn Series 07, 08, 09 – RUB 10 bn each Series BO-P05 – RUB 10 bn	Placement date /	25.04.2011	14.02.2013	28.04.2015	16.06.2017
		Offer date /	22.04.2016	13.02.2018	27.10.2017 21.04.2023	
		Maturity date	12.04.2021	02.02.2023	15.04.2025	12.06.2020
Offering price	100%	Coupon rate	Coupons 1–10 – 8.0% p.a. Coupons 11–20 – 9.5% p.a.	Coupons 1–10 – 8.5% p.a. Coupons 11–20 – 0.1% p.a.	Coupons 1–5 – 12.75% p.a. Coupons 6–16 – 7.5% p.a. Coupons 17–20 – coupon rate to be determined by the issuer	Coupons 1–6 – 8.2% p.a.
Form of offering	Open subscription, bookbuilding	Yield	8.16%	8.68%	13.16%	8.37%
Coupon payments	Semi-annual	Last trade yield as at December 31, 2019	Series 01 – 7.85% Series 02 – 5.12%	Series 07 – 4.12% Series 08 – 4.45%	Series 09 – 6.47%	Series BO-P05 – 5.80%

Key parameters of Eurobond issues

Offering date	Maturity date	Issue currency	Amount, bn	Coupon rate, % p. a.	Coupon payments	ISIN
28.09.2017	28.09.2022	RUB	20.0	8.125	Semi-annual	XS1691350455
15.02.2018	15.02.2021	RUB	20.0	7.40	Semi-annual	XS1769724755
21.11.2018	21.11.2021	CNH	1.5	6.125	Semi-annual	XS1912655054
27.11.2018	27.01.2022	RUB	15.0	8.975	Semi-annual	XS1912654677
25.11.2019	25.11.2024	RUB	15.0	6.80	Semi-annual	XS2082937967

[1] Including hedging FX liabilities to issue Eurobonds denominated in offshore Chinese renminbi

[2] Following the sale of the Group's 90% stake in MEK in March 2020, RusHydro's loan portfolio is no longer exposed to currency risks.

Cash flows

As at December 31, 2019, RusHydro Group's cash and cash equivalents amounted to RUB 41.0 bn (compared to 65.4 bn as at December 31, 2018).

In 2019, RusHydro Group's key sources to finance its investing activities were income, depreciation charges, VAT refunds, other own funds of the Company, borrowings, and the federal budget.

In 2019, cash flow from operating activities decreased by RUB 8.9 bn, or 10.5% y-o-y. The Group's cash flows from operating activities before changes in working capital declined by RUB 12.2 bn, or 11.1%, as a result of a lower operating income.

In 2018, RusHydro Group sold its 4.9% stake in PJSC Inter RAO to Inter RAO Group for RUB 17.2 bn. RusHydro Group received the cash in several tranches: RUB 2.2 bn in 2018 and RUB 15.0 bn in 2019. The amounts were used to finance the Group's investing activities. As a result of these proceeds, total cash outflows in investing activities in 2019 decreased by RUB 11.4 bn, or 13.2%, y-o-y.

The ten-fold y-o-y increase in cash used in financing activities in 2019 (by RUB 22.2 bn) was mainly due to a decrease in long-term borrowings and higher dividend payments.

Cash flow from operating, investing and financing activities, RUB bn

Cash flows	2017	2018	2019
Cash flows from operating activities	78.1	84.6	75.7
Cash flows used in investing activities	(60.0)	(87.0)	(75.6)
Cash flows used in financing activities	(15.1)	(2.3)	(24.4)

Tax payments

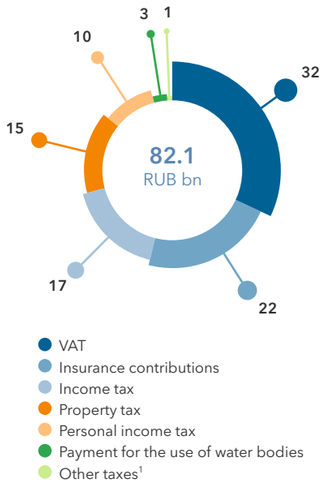
RusHydro Group is one of the main taxpayers in the regions of its operation. In 2019, tax payments to budgets of all levels totaled RUB 82.1 bn, including RUB 35.1 bn to regional budgets.

In 2019, RusHydro Group paid taxes to regional and local budgets in 43 Russian regions.

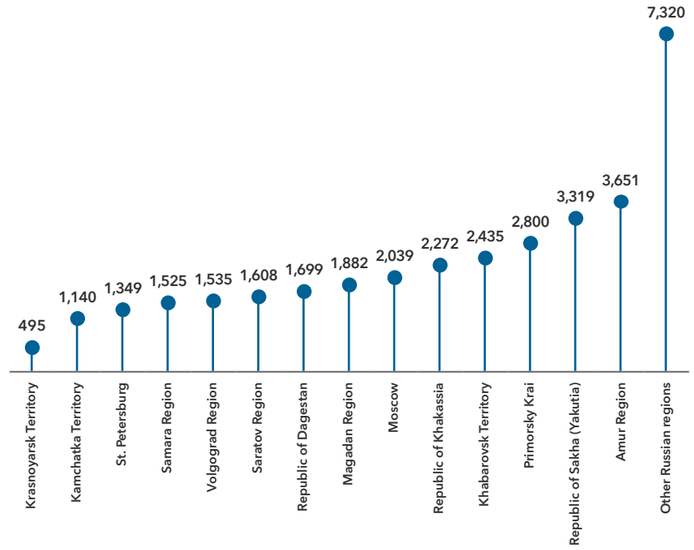
Tax payments to budgets of different levels, RUB mn

Level of budget, RUB mn	2017	2018	2019
Federal	42,904	46,168	46,458
including insurance contributions	15,963	16,864	18,043
Regional	33,653	34,275	35,069
Local	788	733	594
Total	**77,345**	**81,176**	**82,121**

Tax payments by RusHydro Group in 2019, %



Tax payments to regional budgets in 2019, RUB mn



For more information on taxes paid to regional and local budgets with a breakdown by Russian region, see Appendix No. 22.

[1] Other taxes include:
- tax on income received by Russian entities from Russian and foreign agents;
- mineral extraction tax;
- water tax;
- transport tax;
- land tax;
- pollution charge;
- land rent.

Production and sales

Key production assets

Generating facilities

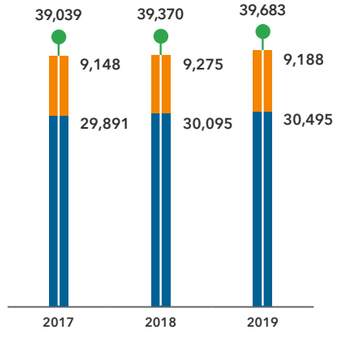
Electricity and heat production is the key business of RusHydro Group. The Group's asset structure includes over 90 renewable energy facilities in Russia, along with some thermal power plants and electrical grid assets in the Far East.

As at January 1, 2020, the installed capacity of RusHydro power plants, including Boguchanskaya HPP, totaled 39,683 MW[1], up 313 MW[2] y-o-y. The installed heat capacity increased to 19,021 Gcal/h, up 97.3 Gcal/h.

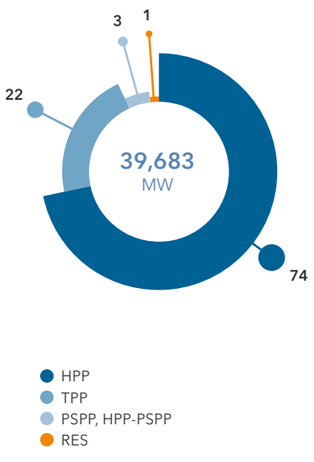
The growth in the installed capacity of the Group's facilities was driven also by the commissioning of Nizhne-Bureyskaya HPP (320 MW) and Sakhalinskaya GRES-2 (120 MW) as well as the implementation of the Comprehensive Modernization Program at Saratovskaya HPP (+12 MW), Novosibirskaya HPP (+10 MW), Votkinskaya HPP (+30 MW) and Zhigulevskaya HPP (+10,5 MW).

The installed capacity structure shows the prevalence of large HPPs generating 29,370 MW[3], or 74.0% of the total installed capacity, while 8,506 MW, or 21.4% of the installed capacity, is generated by the TPPs of RAO ES East Subgroup. The Group's assets also include 1,200 MW Zagorskaya PSPP, 300 MW Zelenchukskaya HPP-PSPP and 16 MW Kubanskaya PSPP. The Group's renewable energy facilities, including SHPP (up to 25 MW), GeoPP, WPP and SPP, account for a total installed capacity of 291 MW.

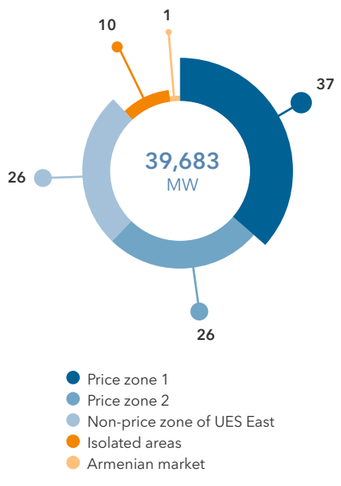
Installed capacity, MW



Installed capacity structure by generation type, % *[EU1]*



Installed capacity structure by regulatory treatment, % *[EU1]*



Electric grid

The businesses of JSC RAO ES East ensure power transmission and distribution both in UES of the East and in isolated energy systems.

As at the end of 2019, the total length of DRSK and PJSC Yakutskenergo transmission power lines in UES East and 35–220 kV isolated energy systems increased by 463 km and reached 35,429 km.

At the end of 2019, the total length of 0.4–10 kV overhead and cable power lines made up 69,592 km, down 190 km y-o-y.

At the end of the reporting period, the total number of transformer substations decreased to 21,953, down 47, with their total capacity hitting 30,514 MVA, up 1,197 MVA. The changes in the length of transmission power lines and in the number and capacity of transformer substations are primarily associated with the housing construction in large cities of the Far East, grid upgrade, and reduction of PJSC Sakhalinenergo grid capacities.

When managed by RusHydro, grid facilities of the Far East, including JSC DRSK, have been demonstrating a robust improvement in both its operating and production performance. Net profit increased from the negative RUB 1 bn in 2012 to RUB 2.7 bn in 2019.

Measures put in place by the Company helped to bring losses down to 7.31% for 2019 (compared to 9.41% in 2007). The target by 2024 is 7.08%, which is considerably below the average across IDGCs that are part of Rosseti Group.

Per unit metrics at JSC DRSK (output per employee of RUB 5,704 thousand per employee and productivity of RUB 3.26 thousand per man-hour) are also significantly above the average Russian levels calculated for IDGCs.

Between 2011 and 2019, JSC DRSK provided utility connections to 92 thousand applicants to the total maximum capacity of 2,716 MW. Since 2016, Far Eastern Hectare, a large-scale program, has been run across the Far Eastern Federal District. As part of the project, JSC DRSK has provided connections to electrical grids for 693 applicants, with another 457 facilities to be connected going forward.

As a result of Yakutskenergo entering the WECM in 2019, RusHydro updated the information on the length of transmission power lines and the number and capacity of transformer substations, provided below.

Length of overhead and underground transmission power lines by regulatory regime[1], km *[EU4]*

Grid class	2017		2018		2019	
	WECM	REM	WECM	REM	WECM	REM
Length of transmission power lines						
Overhead power lines						
220 kV	–	5,179.9	–	5,179.9	2,041	3,241.9
110 kV	7,939.7	5,903.7	7,975.2	5,898	10,568.8	3,482.5
35 kV	8,806.9	6,997.1	8,856	6,916.5	1,2479	3,471.9
Cable power lines						
110 kV	40.1	1.6	40.1	4.7	41.2	4.6
35 kV	83.5	4.0	91.6	4.0	91.6	6.1
Length of distribution power lines						
Overhead power lines						
6 (10) kV	20,539.6	10,957.3	20,621.8	11,025.4	28,035.4	3,596.2
0.4 kV	20,531.9	11,458.8	20,503.1	11,677.3	28,020.8	4,109.2
Cable power lines						
6 (10) kV	1,155.7	2,040.8	1,267.9	2,085.8	1,880.2	1,317.2
0.4 kV	1,120.4	1,450.7	1,119.7	1,480.4	1,785.6	847.2
Total	**104,211.7**		**104,747.4**		**105,020.4**	

[1] Including PJSC Boguchanskaya HPP (a joint venture of PJSC RusHydro and RUSAL) and HPP-1, HPP-2 and HPP-3 of PJSC KamGEK, assets held in trust.

[2] Changes related to both commissioning and decommissioning of existing capacities

[3] HPPs with an installed capacity of over 25 MW.

[1] Measured by chain.

Number and installed capacity of 6–220 kV transformer substations *[EU4]*

Metric	Unit	2017		2018		2019	
		WECM	REM	WECM	REM	WECM	REM
Number of 220 kV transformer substations	pcs	1	28	1	27	8	24
Capacity of 220 kV transformer substations	MVA	80	3,652	80	3,351	1,152	3,117
Number of 110 kV transformer substations	pcs	242	140	246	139	317	73
Capacity of 110 kV transformer substations	MVA	7,371	4,496	7,667	4,694	10,119	2,596
Number of 35 kV transformer substations	pcs	476	383	479	386	656	228
Capacity of 35 kV transformer substations	MVA	4,381	1,613	4,446	1,715	4,965	1,365
Number of 6 (10) kV transformer substations	pcs	10,943	9,451	11,121	9,601	16,542	4,105
Capacity of 6 (10) kV transformer substations	MVA	3,512	3,672	3,565	3,799	5,368	1,832
Total substations	**pcs**	**21,664**		**22,000**		**21,953**	
Total capacity of substations	**MVA**	**28,777**		**29,317**		**30,514**	

In 2019, total electricity fed to the grids of the Far Eastern Federal District stood at 35,282 mn kWh, up 145 mn kWh y-o-y. The grid losses amounted to 9.8%, up 0,2% y-o-y. The change in relative losses in 2019 was driven by a different operating environment following PJSC Yakutskenergo's accession to WECM – large consumers of Yakutia power grid switched to WECM. This resulted in lower electricity inflow in the Western energy hub of the Republic of Sakha (Yakutia) and PJSC Yakutskenergo, while the absolute losses remained flat y-o-y. *[EU12]*

RusHydro Group regularly implements initiatives to reduce energy losses, including meter testing and replacement, switching to less powerful transformers, installing higher accuracy class equipment, etc.

Operating performance

Electricity and heat generation

In 2019, the Group's power generation, including Boguchanskaya HPP, declined by 1.0% y-on-y and amounted to 142.8 bn kWh. According to the System Operator[1] of the Unified Energy System, last year saw the growth in Russia's electricity generation and consumption by 0.9% and 0.4%, respectively. The Group's electricity generation made up 13.0% of the Russian total power generation.

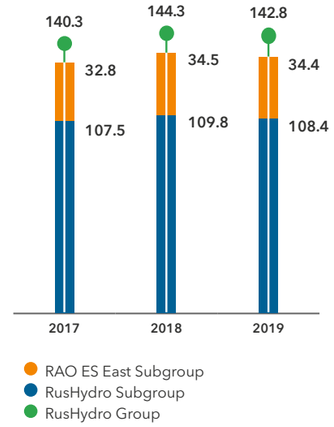
RusHydro Subgroup's electricity generation amounted to 108.4 bn kWh, down 1.3% y-o-y due to a less favorable hydrological situation. In 2019, electricity generation at the Subgroup's Sevan–Hrazdan Cascade HPPs in Armenia grew by 2.9% y-o-y and totaled 0.4 bn kWh.

During the same period, PJSC RAO ES East power plants generated 34.4 bn kWh, down 0.3% y-o-y. The decline was attributable to an increase of generation by PJSC RusHydro HPPs in UES East by 1.2 bn kWh (+10.2%), coupled with a 3.3% total energy consumption increase in the Far Eastern Federal District (to 48.6 bn kWh) and a 0.1 bn kWh decrease in the energy outflow to UES Siberia and China (-2.7%). the heat supply stood at 30.0 mn Gcal.

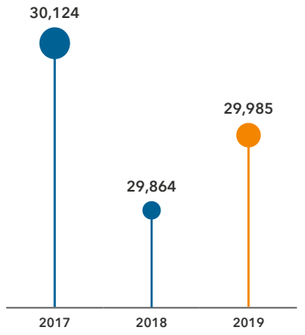
In 2019, the main factors affecting the Group's electricity generation and heat supply included:
- water inflow to reservoirs of Siberia below the previous year's level;
- lower power generation by the TPPs of the Far East due to a higher generation by the PJSC RusHydro HPPs in UES East and higher consumption in the Far East;
- lower energy outflow to UES Siberia and China;
- lower outdoor temperatures.

[1] https://www.so-ups.ru/fileadmin/files/company/reports/disclosure/2020/ups_rep2019.pdf

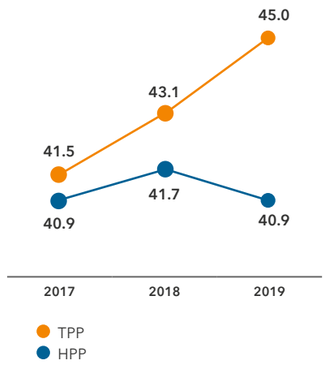
Electricity generation, bn kWh



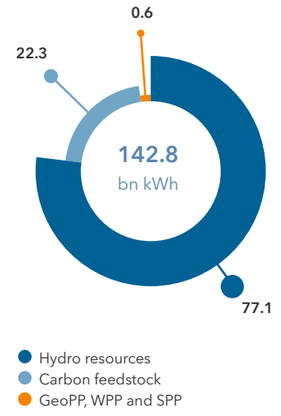
Heat supply, '000 Gcal



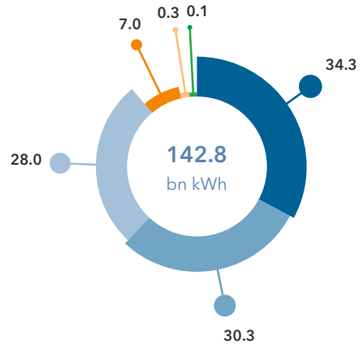
HPP and TPP installed capacity utilization factor (ICUF), %



Generation structure by primary energy source, %



Generation structure by regulatory regime, % *[EU2]*



Measures for simplifying utility connection to electrical grids *[EU23]*

In 2019, the Group's businesses were involved in implementing the Target Model for "Utility Connection to Electrical Grids" approved by the Russian Government's Decree No. 147-r "On target models for simplifying business procedures and enhancing investment appeal of the Russian regions" dated January 31, 2017 (the "Program").

The project seeks to simplify the procedure for utility connection (the "UC") for legal entities or sole proprietors requesting the power of up to 150 kW with receiver reliability category 2 and 3 (shorter timing, enabling interaction with the grid company via a personal account without a need to visit the client office). The Group's participants in the Program comprise JSC DRSK, PJSC Kamchatskenergo, PJSC Sakhalinenergo, PJSC Magadanenergo, JSC Chukotenergo and PJSC Yakutskenergo.

The Program made it possible to introduce an online service to the energy companies' websites featuring personal accounts for the applicant to interact with the grid company and to make preliminary calculations of the UC cost (UC tariff calculator), apply for a UC, receive a UC contract and sign the necessary UC documents, including their electronic versions.

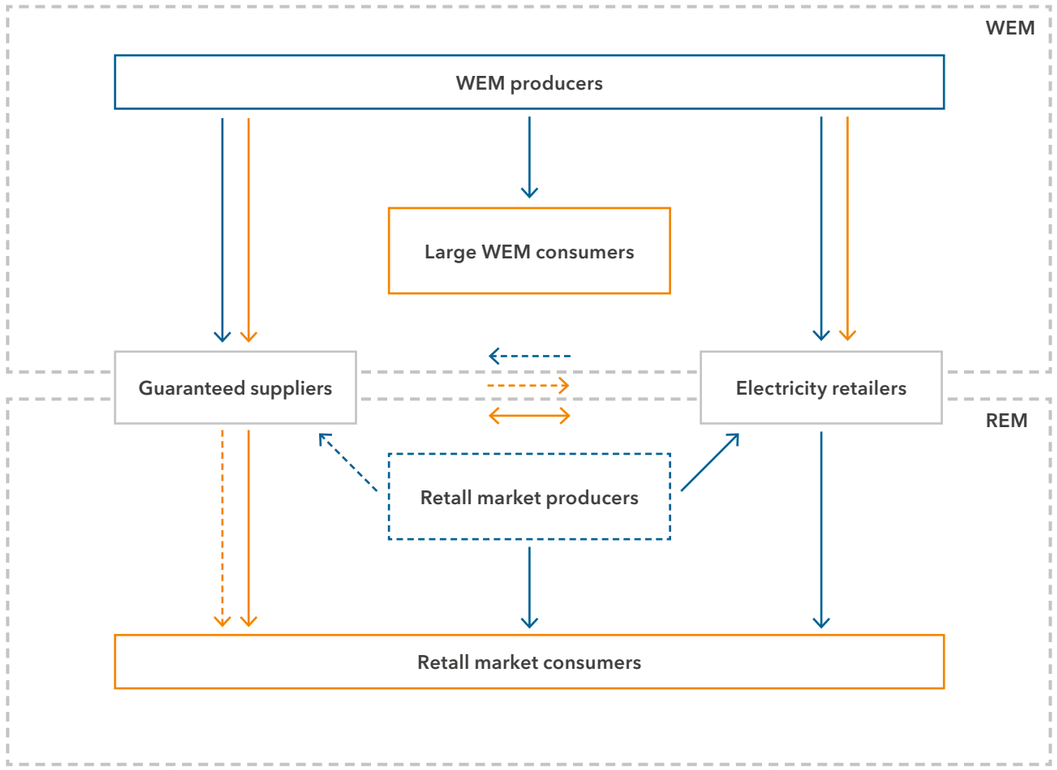
The applications filed by the applicant through the Personal Account differ in their share across regions of the Far Eastern Federal District, with, for example, 1% at JSC Chukotenergo, 22% at JSC DRSK and 48% at PJSC Sakhalinenergo.

Electricity and heat sales

Efficient electricity and capacity sales in the wholesale market (WEM) and the growing retail business remain among the Group's priorities and have a major impact on its financial performance.

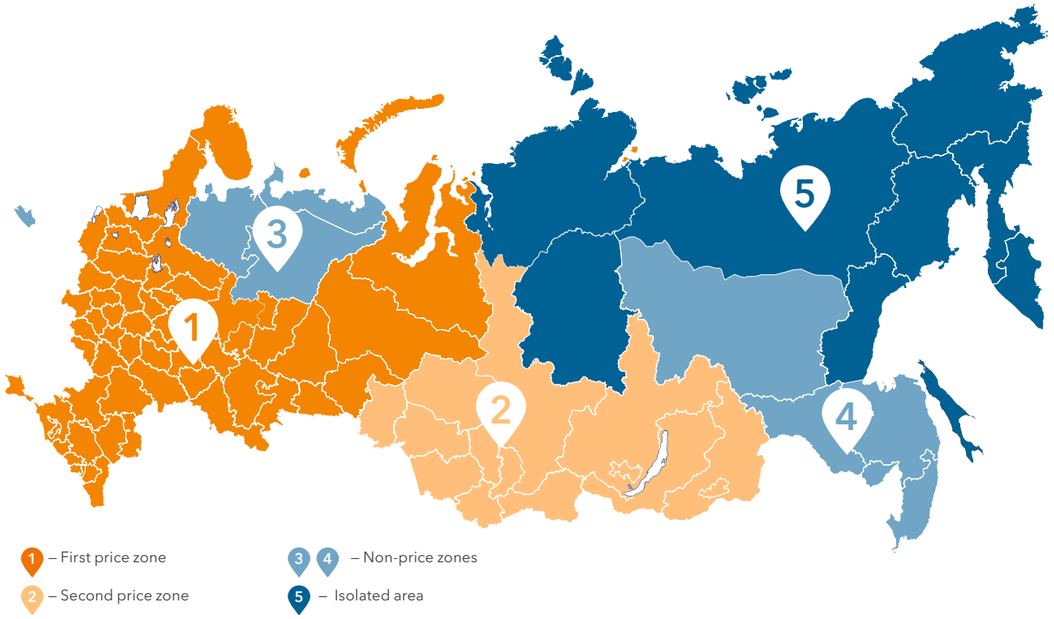
The Group sells electricity in Russia both in the wholesale electricity and capacity market (first and second price zones of the wholesale market and UES East's non-price zone) to major consumers and to retail consumers via its retail companies and guaranteed suppliers.

Pricing principles on the key markets[1]



[1] Maximum unregulated prices.

WECM zones



Performance in the first and second price zones

WECM sales
RusHydro directly sells electricity and capacity in the WECM's first and second price zones.

In 2019, total sales dropped y-o-y following a decline in net electricity supply as a result of lower water inflow to the key reservoirs of Siberian HPPs and to the Volga-Kama cascade reservoirs in 1H 2019.

In 2019, the average weighted DAM (day-ahead market) price was RUB 1,287.3 per MWh (+3.2%) for the European part of Russia and RUB 896.4 per MWh (+0.7%) for Siberia.

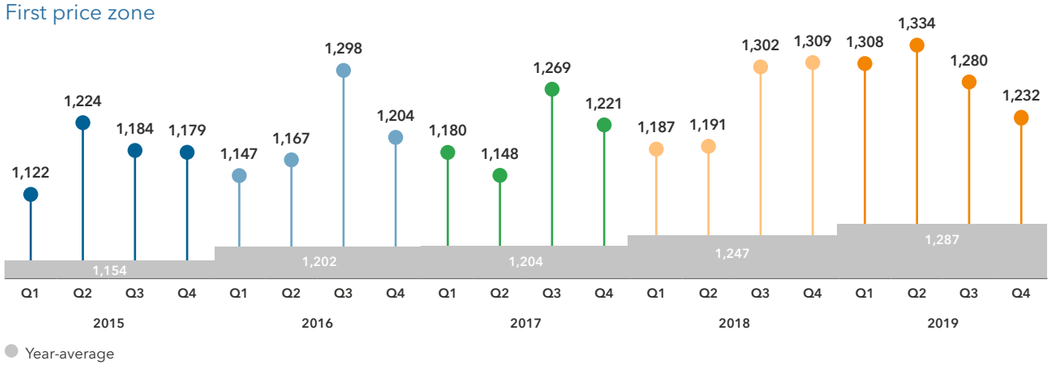
Net supply of electricity and capacity by RusHydro in the first and second price zones of WECM

Metric	2018	2019	2019/2018, %
Net supply, mn kWh	91,684	87,313	–4.8
Electricity purchased, mn kWh	10,116	9,716	–4.0
Total electricity sales, mn kWh	99,093	94,436	–4.7
Capacity sales, MW[1]	21,423	21,716	1.4

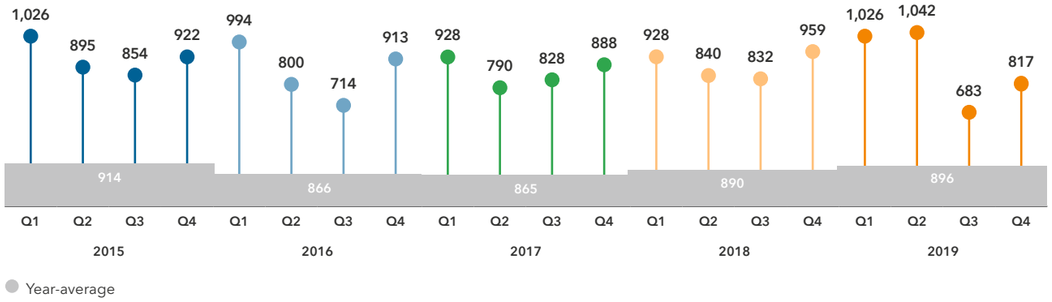
[1] Including Zeyskaya and Bureyskaya HPPs.

Electricity prices in the first and second price zones, RUB/MWh[1]

First price zone



Second price zone



The growth of the DAM price in the first price zone in 2019 (+3.2% y-o-y) was driven by:
- lower HPP output following a decline in hydropower resources;
- higher price bids from suppliers as a result of a 3.4% increase in wholesale gas prices.

The growth of the DAM price in the second price zone in 2019 y-o-y was driven by:
- higher price bids from suppliers as a result of the coal price increase starting 2H 2018;
- lower HPP output (primarily Yenisey cascade HPPs) in May–June 2019;
- restrictions on capacity exchange between parts of the second price zone.

Capacity sales price changes vs 2018 were attributable to the lower surcharge[1] to KOM prices in the WECM price zones.

In 2019, electricity and capacity sales declined y-o-y due to:
- lower capacity price surcharge leading to lower KOM price;
- 4.7% decline in power generation;
- 6.3% decrease in the DAM price in the second price zone.

REM sales *[EC]*
REM sales in the first and second price zones are consolidated within ESC RusHydro Subgroup (JSC ESC RusHydro, PJSC Krasnoyarskenergosbyt, PJSC Ryazanenergosbyt, JSC Chuvashskaya Electricity Sales Company). Electricity is supplied both directly by JSC ESC RusHydro and via its retail subsidiaries acting as guaranteed suppliers in three Russian regions.

In 2019, ESC RusHydro Subgroup supplied electricity to 1,952,167 consumers in the retail market, including 1,892,519 households on direct contracts. The number of contracts remains stable across consumer groups, except for households and utility service providers. These groups demonstrate both positive and negative trends. Individual customers grew in number as households started signing direct contracts with RusHydro's subsidiaries under Federal Law No. 59-FZ, while consumers among management companies, condominiums and housing associations shrank as disreputable utility service providers were leaving the market and other management companies were taking over their housing stock. Total sendout of electricity by ESC RusHydro Subgroup amounted to 19,445.8 mn kWh in 2019.

Performance in non-price and isolated zones of the Far East

Non-price and isolated zones of the Far Eastern Federal District are covered by RAO ES East Subgroup and Bureyskaya and Zeyskaya HPPs.

Electricity tariffs and supply *[OS]*
Federal Law No. 35-FZ On Electric Power Industry dated March 26, 2003 outlines the basic principles and methods of state regulation in the electric power industry and the regulators' scope of authority. The basic principles and methods of price (tariff) regulation in the electric power industry and the procedure for setting tariffs are set out in the Russian Government's Resolution No. 1178 On Pricing in the Field of Regulated Prices (Tariffs) for Electric Power dated December 29, 2011.

RusHydro's electricity and capacity sales prices in the first and second price zones of WECM

Metric	2015	2016	2017	2018	2019	2019/2018, %
Weighted average DAM price, RUB/MWh	1,096	1,080	1,094	1,114	1,107	-0.6
1 PZ DAM price, RUB/MWh	1,207	1,267	1,224	1,285	1,298	1.0
2 PZ DAM price, RUB/MWh	883	793	824	825	774	-6.2
Weighted average KOM price, RUB / MW per month	127,564	139,781	580,558	783,822	725,757	-7.4
1 PZ KOM price, RUB / MW per month	125,524	111,628	3,212,516	4,312,779	2,922,353	-32.2
2 PZ KOM price, RUB / MW per month	131,696	178,724	283,873	342,675	347,730	1.5

Number of households and corporates in service in the first and second price zones *[EU3]*

Consumer	2017	2018	2019
Manufacturing industry	2 714	2 680	2 653
Transport and communications	1,226	1,232	1,282
Agriculture	2,053	2,168	2,300
State-financed	7,903	7,654	6,880
Management companies, condominiums, housing associations, etc.	2,042	1,997	2,529
Wholesalers-resellers	74	83	98
Housing and utilities	456	456	419
Heat suppliers	124	132	137
Other	41,683	42,513	43,350
Households	1,779,929	1,808,857	1,892,519
Total	**1,838,204**	**1,867,772[2]**	**1,952,167**

[1] TSA data.

[1] For more details, see the Tariff adjustment mechanism in the Far East section.

[2] Total accounts were updated from the 2018 annual report to include direct contracts signed in early 2019 with effect from December 2018.

Tariffs for electricity (capacity) supplies in the WECM are set by the FAS in line with a methodology developed by the Federal Tariff Service (FTS)[1].

The primary tariff calculation methodology for generating facilities located in the WECM non-price zone is the one based on indexation. It was approved by FTS Order No. 210-e/1 dated August 28, 2014. The base tariff calculated in 2007 is annually adjusted to factor in the index of changes in semi-fixed costs as determined by the Russian Ministry of Economic Development. The 4.3% deflator index in the 2019 tariff was in line with the PPI (excluding contribution from the energy sector). This methodology is also used for new generating facilities starting from the second year of their operation.

During the first year in the wholesale market, the tariff for generating facilities located in non-price zones is set in line with the guidelines approved by FTS Oder No. 199-e/6 dated September 15, 2006. This methodology determines the economically justified amount of financial resources a company needs to operate at regulated tariffs within a specific regulation period (the return on investments, which is accrued through amortization, is not taken into consideration).

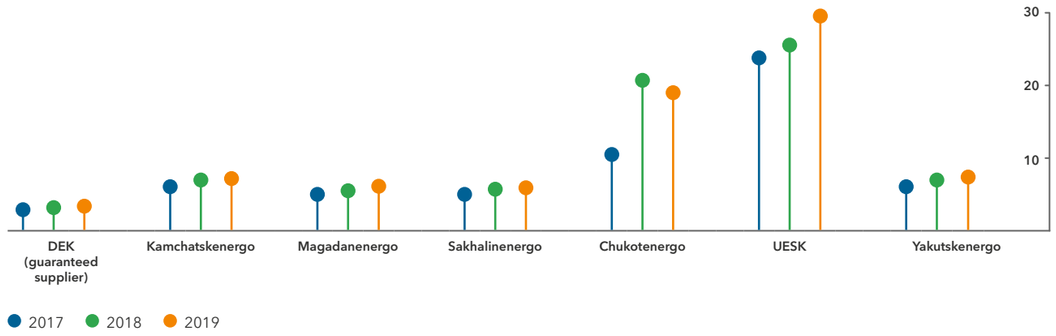
Key WECM tariff drivers in 2019:
- tariff indexation, with the deflator index standing at 4.3%;
- increase in the fees paid for using federal water bodies for the purpose of hydropower generation with no water withdrawal operations in accordance with the Russian Government's Resolution No. 876 dated December 30, 2006[2].

REM sales in isolated zones are covered by RusHydro's subsidiaries which are 100% regulated since there is no free electricity (capacity) market in the region. The REM tariffs for generating facilities operating in isolated zones are set by the regional authorities in charge of tariff regulation based on economically justified expenses approved by FTS Order No. 20-e/2 dated August 6, 2004.

For the purpose of tariff determination in 2019, regulators used the following regulation methods:
- tariffs for DGK electricity (capacity) supplies in the WECM non-price zones (as approved by FAS Order No. 1565/18 dated November 16, 2018) were calculated using the indexation methodology;
- DRSK electricity transmission tariffs for services provided by branches of DRSK – Amur Power System were determined based on the regulatory asset base method (RAB), while tariffs for services provided by Primorsky Krai, Khabarovsk and South-Yakutsk Power Systems as well as Electric Networks of the Jewish Autonomous Region were set using long-term indexation of required gross revenue;
- sales surcharge for PJSC DEK was determined using the comparative method;
- electricity tariffs for end consumers in isolated zones were determined using the method of economically justified expenses.

Since July 1, 2016, numerical tariff values are no longer set for other consumers in the WECM non-price zone. In accordance with the estimated tariff values determined based on indicative prices, the uniform transmission tariff and the sales surcharge approved by the regulator, the tariff increase in the WECM non-price zone ranged from 0.46% to 3.24%.

Average electricity tariffs in the Far Eastern Federal District, RUB/MWh



[1] Abolished in 2015 to be succeeded by the Federal Antimonopoly Service of Russia (FAS).

[2] As revised by the Russian Government's Resolution No. 1690 dated December 29, 2017.

In 2019, the overall increase in average electricity tariffs for consumers in isolated energy hubs of the Far Eastern Federal District amounted to 7.6% y-o-y. The smallest increase was registered by Kamchatskenergo (2.8%), while the largest one (16.0%) was delivered by UESK. Chukotenergo reported a tariff decline by 7.8% due to the exclusion of RUB 1,063.0 mn from the required gross revenue in 2019 used to offset the cost of electricity purchased from Bilibino NPP in 2017.

DGK's weighted average electricity prices in the wholesale market rose by 9.6% in 2H 2019 over 1H 2019, while its average annual energy prices in 2019 remained flat at 0.028% y-o-y.

The weighted average energy rate for all of the DGK stations was: RUB 1,315.94 per MWh in 1H 2019 and RUB 1,366.11 per MWh in 2H 2019 (an increase of 3.8% in 2H 2019 over 1H 2019).

The key factors behind changes in the DGK electricity tariff rates in 2H 2019 compared to the rates approved for 2H 2018 included:
- 2019 gas prices under the Consortium-1 project;
- application of growth indices for coal and fuel oil in 2019.

The average DGK capacity tariff rate was RUB 272,829 / MW per month in 1H 2019 and RUB 294,717 / MW per month in 2H 2019 (an increase of 8% over 1H 2019).

Power transmission tariffs

In 2019, the branches of JSC DRSK (Primorye Power System, Amur Power System, Khabarovsk Power System, and Electric Networks of the Jewish Autonomous Region (ES EAO)) entered into the second year of the second long-term regulation period. During this period (2018–2022), electricity transmission tariffs for Amur Power System will be regulated using the ROIC method, while tariffs for Primorye Power System, Khabarovsk Power System and Electric Networks of the Jewish Autonomous Region will be set using long-term indexation of required gross revenue.

For South-Yakutsk Power System, 2019 was the first year of the long-term regulation period, with tariffs for 2019–2023 set using the long-term indexation method.

In 2019, DRSK's required gross revenue in power transmission rose by 0.9% y-o-y.

Tariff subsidization in the Far East

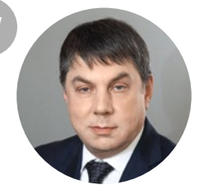
[103-2] [EU23] [OS]

Federal Laws No. 508-FZ dated December 28, 2016 and No. 129-FZ dated June 30, 2017 On Amendments to the Federal Law On Electric Power Industry introduced a surcharge to the capacity price in the first and second price zones, helping to bring tariffs in the Far East down to the Russian base (average) rate.

These amendments provide for a surcharge to be applied to the capacity price in the WECM price zones, with proceeds from the surcharge transferred to the regional budgets of the Far Eastern Federal District in the form of target non-repayable contributions.

As part of the effort to bring electricity (capacity) prices (tariffs) for the Far Eastern consumers other than households to the base rate, the Government issued Decree No. 2739-r dated December 10, 2018 to set the base electricity (capacity) price (tariff) for 2019 at RUB 4.69 per kWh.

As part of the effort to align prices in the Far East with the Russian base rate, the surcharge amount for 2019 was approved by the Russian Government at RUB 32,076.56 mn.



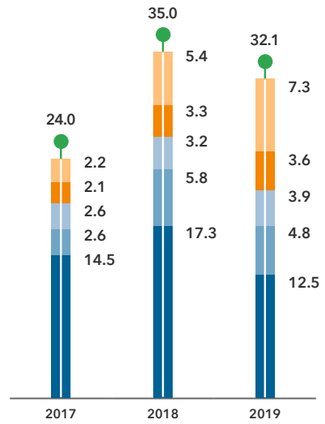
RusHydro and System Operator of the Unified Energy System have successfully partnered for many years, primarily on ensuring that the country's energy system continues stable operation. Our constructive business relationship has also become the foundation for joint work on improving the industry's regulatory framework, developing standardization, and putting in place a youth policy and a number of other activities.

RusHydro employs real professionals whose knowledge, experience, skills, and responsibility help guarantee the reliable and safe operation of existing hydropower plants, as well as the development of hydropower and renewable energy in Russia overall. The RusHydro team's success is the most crucial factor in ensuring a reliable energy supply to Russian consumers and the country's sustainable industrial growth.

Boris Ayuev,

Chairman of the Management Board of JSC SO UES

Amount of the surcharge with a breakdown by regions of the Far Eastern Federal District, RUB bn



In 2019, the alignment mechanism was used in five out of nine regions of the Far Eastern Federal District. In all of those regions, the average electricity tariff for consumers was higher than RUB 4.69 per kWh. Tariff reduction does not result in lower revenue, as it is fully offset by government subsidies paid from the budget funds generated by surcharge to the capacity auction rate.

As a result of changes made in tariff regulation, the electricity (capacity) prices (tariffs):
- in the WECM non-price zones are set using the annual indexation method until July 1, 2020 (commencement date of the long-term indexation of required gross revenue, as provided for by the Russian Government's Resolution No. 837 dated June 29, 2019);
- in isolated energy systems are set using the method of economically justified expenses (for 2020 and beyond as provided for by the FAS Order No. 686/19 On Approval of Guidelines for Calculation of Regulated Electricity (Capacity) Prices (Tariffs) in Technologically Isolated Local Energy Systems as well as Areas not Linked to the Unified Energy System of Russia and Technologically Isolated Local Energy Systems except for Electricity (Capacity) Generated by Qualified Generating Facilities dated May 29, 2019, which was developed in pursuance of the Russian Government's Resolution No. 64 dated January 30, 2019; the long-term indexation of required gross revenue to be introduced going forward).

Electricity sales in non-price and isolated zones

In 2019, PJSC DEK, acting as the single purchaser in the non-price zone of the Far East's wholesale electricity and capacity market, purchased 36.3 bn kWh. Its commercial purchases of electricity and capacity in the WECM amounted to RUB 62.4 bn in 2019.

Electricity sales stood at 15.9 bn kWh. DEK's commercial sales of electricity and capacity in the WECM came in at RUB 28.6 bn in 2019.

On a y-o-y basis, DEK achieved considerable gains in terms of volumes and cost of electricity (capacity) purchases and sales following the integration of the Central and Western energy hubs of the Republic of Sakha (Yakutia) into the UES of East effective from January 1, 2019. In 2019, local guaranteed suppliers Yakutskenergo and Viluyskaya HPP-3, which used to service isolated energy hubs on their own, started selling electricity in the WECM via DEK as the single purchaser. In 2019, Yakutskenergo and Viluyskaya HPP-3 sold 2,988.4 mn kWh and 685.7 mn kWh, respectively, in the WECM via DEK. Transneftenergo increased consumption by 921.0 mn kWh, also contributing to DEK's higher sales.

DEK's electricity purchases and sales in the WECM non-price zone

Metric	2018	2019	2019/2018, %
WECM electricity purchases, bn kWh	31.0	36.3	17.0
Cost of WECM electricity (capacity) purchases, RUB bn	51.6	62.4	20.8
WECM electricity sales, bn kWh	11.2	15.9	42.8
Cost of WECM electricity (capacity) sales, RUB bn	20.2	28.6	41.7

Number of households and corporates in service in non-price and isolated zones of the Far Eastern Federal District *[EU3]*

Consumer	2017	2018	2019
Manufacturing industry	3,494	3,230	3,274
Transport and communications	2,219	2,295	2,292
Agriculture	1,725	1,712	1,783
State-financed	11,969	12,142	12,274
Management companies, condominiums, housing associations, etc.	9,287	12,154	12,960
Wholesalers-resellers	24	28	32
Housing and utilities	1,852	957	1,019
Other	56,616	56,592	56,843
Households	2,464,149	2,478,200	2,504,738
Total	**2,551,335**	**2,567,310**	**2,595,215**

In accordance with the Russian Government's Resolution No. 1496 dated December 8, 2018, the Western and Central energy hubs of the Republic of Sakha (Yakutia) are included in the non-price zone of the Far Eastern WECM effective from January 1, 2019.

In 2019, JSC DGK supplied 21.5 bn kWh in the non-price zone of the Far East's wholesale electricity (capacity) market. Its commercial sales of electricity and capacity in the WECM amounted to 49.4 bn kWh in 2019.

The volumes of electricity (capacity) supply declined by 4% y-o-y, mainly due to the rising electricity sales volumes by Zeyskaya and Byreyskaya HPPs.

Total sendout of electricity under RAO ES East Subgroup's retail contracts amounted to 30.1 bn kWh in 2019. In 2019, RAO ES East Subgroup served retail market consumers under 2,595,215 electricity supply contracts, including 2,504,738 households.

Heat market in the Far East

RAO ES East Subgroup generates and distributes heat in the Far Eastern Federal District.

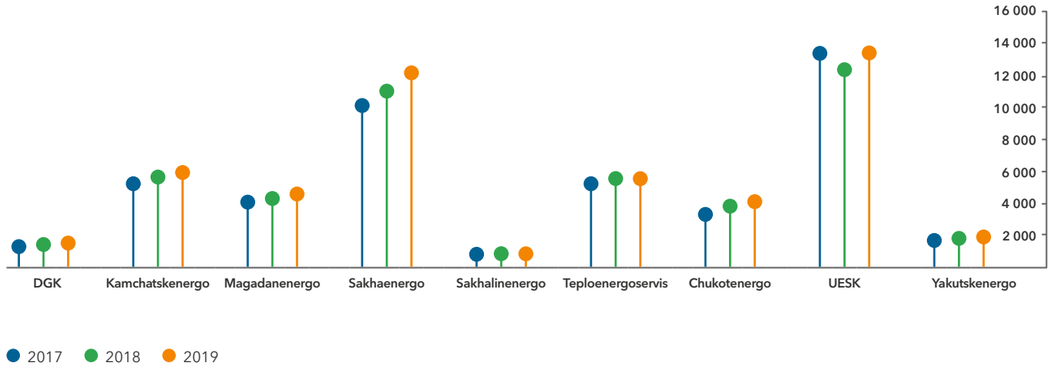
Heat is supplied on a centralized basis from thermal power plants and boiler stations operated by energy companies. Some energy companies engage in both heat production and distribution, while others do not go beyond production operations.

Heat sales are fully regulated under the Russian law.

Federal Law No. 190-FZ On Heat Supply dated July 27, 2010 sets out the basic price (tariff) regulation principles for heat supply and the scope of authority of regulators in charge of heat supply price (tariff) regulation. The Russian Government's Resolution No. 1075 On Pricing in the Field of Heat Supply dated October 22, 2012 outlines the main regulation principles and procedures for calculating and approving heat tariffs.

In the Far East, heat tariffs in 2019 were set using the long-term indexation method in line with the Guidelines for Calculation of Regulated Prices (Tariffs) for Heat Supplies approved by FTS Order No 760-e dated June 13, 2013.

Consumer tariffs for heat supplies in the Far Eastern Federal District, RUB/Gcal[1]



The average tariff in DGK zones of operation rose by 4.4%, with the smallest increase (1.9%) registered by the LuTEK branch in the Primorsky Krai and the largest increase (9.4%) recorded by Neryungrinskaya GRES in the Republic of Sakha (Yakutia).

In isolated energy hubs, average consumer tariffs for heat supplies added 4.4%, with the smallest increase (0.2%) reported by Teploenergoservis and the largest increase (9.6%) delivered by JSC UESK. Sakhalinenergo reported an average tariff decline of 0.4% compared to the rate approved for 2018 due to the exclusion of Sakhalinskaya GRES operating costs from the required gross revenue after Sakhalinskaya GRES-2 was commissioned in 2019.

Total sendout of heat under RAO ES East Subgroup's retail contracts amounted to 23.601.9 mn Gcal in 2019. In 2019, RAO ES East Subgroup served retail market consumers under 886,960 heat supply contracts, including 865,952 households.

Number of households and corporates in service in non-price and isolated zones of the Far Eastern Federal District *[EU3]*

Consumer	2017	2018	2019
Manufacturing industry	445	443	406
Agriculture	33	33	30
State-financed	3,493	3,378	3,293
Management companies, condominiums, housing associations, etc.	2,334	2,516	2,463
Heat suppliers	7	10	11
Other	13,926	14,164	14,805
Households	848,529	874,030	865,952
Total	**868,767**	**894,574**	**886,960**

[1] Sakhalinenergo and Chukotenergo supply heat from power plants and boiling stations to the wholesale reselling consumers.

Consumer interaction *[103-2]*

Reduction in the accounts receivable is one of RusHydro Group's top priorities across its footprint.

To prevent receivables from growing any further, RusHydro Group relies on all remedies legally available to it to recover debts and make sure current bills are paid as they fall due.

As at December 31, 2019, RusHydro Group's receivables from buyers and consumers grew by 0.3% to RUB 65.4 bn.

RusHydro and ESC RusHydro Subgroup sell electricity and/or capacity in the first and second price zones, while RAO ES East Subgroup covers the non-price and isolated zones.

The principal debt owed to RusHydro for electricity and capacity supplies stood at RUB 7.7 bn. Total payments received by RusHydro for electricity and capacity supplies to the wholesale and retail markets amounted to 99.8% in 2019 vs 99.1% in 2018.

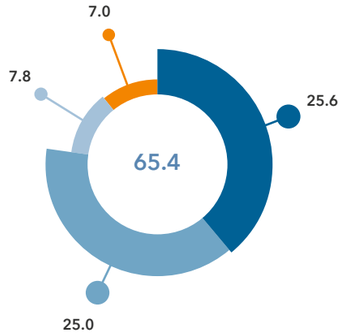
Debt reduction in 2019 y-o-y was driven by:
- the exclusion of Chelyabenergosbyt, Roskommunenergo and Novouralskaya Electricity Sales Company from the list of market participants and payment of their debt in full to RusHydro by successful bidders to become guaranteed suppliers in their stead;
- voluntary debt payment;
- out-of-court settlement and debt recovery through court, including enforcement proceedings.

As at December 31, 2019, ESC RusHydro Subgroup's receivables stood at RUB 9,699.2 mn, thus adding RUB 222 mn, or 2.3%, in 2019 y-o-y. 99.9% at Krasnoyarskenergosbyt (RUB 41,033 mn), 98.1% at Chuvashskaya Electricity Sales Company (RUB 14,160 mn), 99.1% at Ryazanenergosbyt (RUB 12,731 mn), and 99.1% at ESC RusHydro (RUB 6,669 mn).

In 2019, ESC RusHydro Subgroup's receivables generally saw a decline in current bills and debts overdue for 1 month to 2.5 years and an increase in moratorium debt. The latter was expanded to include 83% of the debt of Concern Tractor Plants (consumer of Chuvashskaya Electricity Sales Company) after its subsidiaries were placed under bankruptcy management, supervision or receivership.

At RAO ES East Subgroup, as at December 31, 2019, total payments received for electricity and heat totaled 98.4%, with receivables of RUB 35,102.7 mn. The company received 99.2% of payments for electricity and 96.7% for heat in retail markets. The receivables for electricity and heat amounted to RUB 15,518.0 mn and RUB 19,584.7 mn, respectively.

Receivables from buyers and consumers, RUB bn



RusHydro Group's retail companies use the following three approaches to improve debt recovery:
- interacting with consumers and executive authorities and introducing outreach measures aimed at improving payment discipline;
- recovering debt through court;
- disconnecting the electricity supply for non-payment.

Improvement of payment discipline through outreach measures

Drawing attention to systemic non-payment of energy bills is an effective way to improve payment discipline among households, businesses and public sector.

The prompt payment culture is created through measures encouraging regular and timely payment. Given that utility service providers are among the biggest debtors, these initiatives seek to incentivize those management companies, condominiums and housing associations that fulfil their payment obligations promptly.

Other actions include regular posting of "black lists" of persistent non-payers featuring organizations with the worst payment discipline and the highest debt levels.

With a view to strenghthen the payment discipline and motivate consumers to fulfil their debt obligtions (legal entities), Subgroup ESC RusHydro has been actively participating in the arrangement of the regional stage of the annual federal event "Reliable Partner" for a number of years. The regional stage is meant to encourage the most diligent and responsible consumers, to set a high status for reliable consumers of power resources, as well as to support and to maintain the partnership between suppliers and consumers. The contest winners across Russian regions help to sum up the results of the event, which is arranged annualy on the basis of the Federation Council. *[OS]*

Debt recovery through court

As part of its efforts to reduce receivables under contracts related to electricity (capacity) sales, RusHydro Group works to enforce debt recovery through court action.

In 2019, RusHydro's debt recovery actions for non-payments translated into court awards for a total of RUB 1,586.9 mn, including arbitration awards of RUB 693.9 mn. Based on the arbitration awards, 29 writs of execution were issued in 2019 for RUB 1,249 7 mn. Of those, debt outstanding in the amount of RUB 638.105 mn was repaid in the reporting period.

In 2019, ESC RusHydro Subgroup filed 48,704 claims as part of its debt collection efforts to recover debt on electricity bills for a total of RUB 3,706 mn, of which 4,313 claims were against legal entities, including grid companies purchasing electricity to offset grid losses (76 claims of RUB 499.4 mn). Most of the non-payment cases that resulted in court action were in the utilities sector, represented in particular by utility service providers, which had 1,421 claims filed against them; a total of 609 claims were lodged against utilities companies. The combined debt of these two groups came in at RUB 1,381.9 mn. Compared to 2018, the number of claims filed against state-funded organizations dropped two-fold, reflecting improved payment discipline in this consumer group. The Group's subsidiaries lodged claims with magistrates courts against 44,391 individuals for RUB 252 mn in 2019. Courts of different instances satisfied 43,820 claims for RUB 2,493.7 mn, and issued 40,348 writs of execution for over RUB 2,470 mn. The measures that bailiffs may use for non-payment include direct debiting, freezing injunction, travel restriction, and restriction on disposal (sale, transfer by gift, etc.) of cars and real estate.

In 2019, RAO ES East Subgroup filed 227,571,000 claims to recover debt on electricity and heat bills for a total of RUB 11,454 mn, including 7,419 claims of RUB 7,464 mn against legal entities, of which 1,166 claims of RUB 1,430 mn were against state-funded organizations, and 220,152 claims of RUB 3,990 mn against individuals. Courts of different instances satisfied 204,357 claims for RUB 9,387 mn.

Limitations on energy supplies to consumers for failure to pay for electricity and heat

Limitation of electricity and heat consumption for non-payment is an effective measure, but a last resort in ensuring debt recovery.

The procedures of notifying consumers in arrears of any limitations in consumption and actual implementation of the same are in full compliance with applicable laws (Procedure for Consumption Limitations in Circumstances Other Than Power Facility Repairs or (Risk of) Emergency Operating Modes as per the Russian Government's Decree No. 624 dated May 24, 2017).

Electricity supply can be recovered in full only after the debt is fully settled (or a restructuring agreement is signed), the penalties and reconnection charges are paid.

In 2019, 581,150 notices for RUB 23,455 mn were sent to consumers of ESC RusHydro Subgroup. RUB 16,825 mn of debt was repaid by 345,119 consumers after receiving notices, and RUB 478 mn by 27,613 consumers after limitation of consumption, including RUB 88 mn by households. The total number of consumers affected by the sanctions for non-payment amounted to 90,685 in 2019, including 88,335 consumers from the Households group.

RAO ES East Subgroup saw a total of 265,069 disconnections for non-payments in 2019, including 259,357 consumers from the Households group.

Comprehensive modernization, rehabilitation, and upgrade programs *[103-2]*

Comprehensive Modernization Program

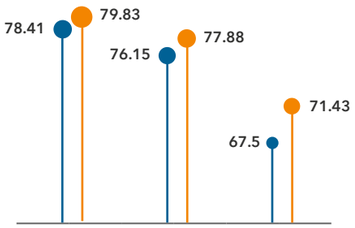
As many large HPPs were commissioned in the 1950s and 1960s, the need arose in the early 2000s to upgrade or replace the existing equipment. Tough economic conditions prevented HPPs from replacing obsolete and worn-out equipment and forced it to focus on maintenance and partial replacements instead.

Since mid-2000s, a number of RusHydro's HPPs began replacing equipment on a case-by-case basis, but the overall trend of ageing prevailed.

This was true until December 2011, when the Board of Directors approved the Comprehensive Modernization Program to upgrade the Company's power generation facilities by 2025. Its key priority is to ensure that no core generation equipment with expired safe operation life remains in place by then.

In 2019, Votkinskaya HPP's hydropower unit No. 5 was upgraded as part of RusHydro's

Health of RusHydro's core equipment



Key results of RusHydro's Comprehensive Modernization Program in 2019

Equipment type and HPP	2019	2020 E
Units of equipment replaced or modernized		
Turbines	11	6
Generators	9	5
Transformers	4	7
Additions to installed capacity, MW		
Zhigulevskaya HPP	10.5	0.0
Saratovskaya HPP	12.0	0.0
Novosibirskaya HPP	10.0	0.0
Votkinskaya HPP	30.0	0.0
Cascade of Verkhnevolzhskiye HPPs	0.0	10.0
Total installed capacity	**62.5**	**10.0**

Comprehensive Modernization Program, becoming the third fully modernized hydropower unit at the plant.

At Volzhskaya HPP, new hydropower units No. 3 and 7 were launched. In addition, the plant saw Russia's first ever commissioning of unprecedented innovation: a phase angle regulator, designed to support power transmission from Volzhskaya HPP. The phase angle regulator will enable redistribution of output between 200 kV and 500 kV and increase transmission via a 500 kV power line.

Kamskaya HPP celebrated the completion of a turbine upgrade at hydropower units No. 3 and 6, and Saratovskaya HPP had turbines at hydropower units No. 1 and 9 successfully replaced.

At Novosibirskaya HPP, the turbine replacement was followed by commissioning of the hydropower unit No. 2. A new main control board was also put into operation at the plant, boasting the latest digital technologies. The original main control board of Novosibirskaya HPP was commissioned back in 1957 for the plant's personnel to operate all of the HPP's equipment. After more than 60 years of operation, the board's equipment, which had still relied on electro-mechanical switches and relays, became worn-out and obsolete and needed to be replaced. The new board consists of seven sections with a total length of 14 m and two video panels, providing personnel with all the information they require. In addition, a new control desk with automated workplaces was installed and the control room was repaired to replace power supply and HVAC systems.

Cheboksarskaya HPP put into operation hydropower units No. 3 and 11 following their upgrade, which included the recovery of the adjustable blade pitch, the replacement of the iron piece of the rotor rim, tachogenerator and stator of generator No. 3, as well as tachogenerator and stator of generator No. 11. On top of that, obsolete oil circuit breakers of the plant's 220 kV outdoor switchgear equipment were replaced with the latest gas-insulated ones.

At Rybinskaya HPP, an upgrade of hydropower unit No. 3 was completed, with a turbine and a generator replaced.

RusHydro's efforts also focused on modernizing electrical equipment at other plants. One example is the commissioning of modern switchgear at Zagorskaya PSPP.

Following the upgrade, the hydropower units underwent the re-labeling procedure to formally document their new capacities. This added 62.5 MW to the capacity of RusHydro Group's existing HPPs: 30 MW at Votkinskaya HPP, 12 MW at Saratovskaya HPP, 10.5 MW at Zhigulevskaya HPP, and 10 MW at Novosibirskaya HPP.

Rehabilitation and modernization program

The rehabilitation and modernization program of RusHydro's branches draws upon the Comprehensive Modernization Program and focuses on extending the lifespan of the core generation equipment, reducing production costs and enhancing the overall economic efficiency of hydroelectric power plants.

Driven by the need to ensure long-term reliability throughout its technological complex, JSC RAO ES East Subgroup runs its own rehabilitation and modernization program (as part of its investment program). The development and implementation of this initiative is regulated by RusHydro Group's Technical Policy.

In 2019, the rehabilitation and modernization program of RAO ES East Subgroup saw completion of several important projects, including:

- second stage of the Anadyrskaya CHPP gasification project focusing on the conversion of BKZ-160-100-20 boiler No. 1 at Anadyrskaya CHPP to combined combustion of coal and natural gas (completion of construction and installation works at boiler No. 1 in 2020 as per the contract; conversion of boiler No. 2 to gas combustion completed in 2018);
- rehabilitation of Khabarovskaya CHPP-3 with PTVM-180 boiler No. 1 of the hot-water peaking boiler plant converted to natural gas combustion (completion of construction and installation works in 2020 as per the contract);
- expansion of ash dump No. 2 (stage 1) at Khabarovskaya CHPP-3 by 1,800,000 m^3 (completion of construction and installation works in 2021 as per the contract);
- modernization of power unit No. 2 at Neryungrinskaya GRES;
- modernization of the fuel supply system at Magadanskaya CHPP (completion of construction and installation works in 2022).

The Company also paid close attention to the rehabilitation of heat supply networks and the modernization of substations and transmission lines to ensure stable power supply for existing consumers and new customers.

In October 2019, results of the comprehensive modernization, technical re-equipment and HPP and PSPP reconstruction programs were presented by PJSC RusHydro at the International Forum "Russian Energy Week" (REW-2019), arranged by the Ministry of Energy of the Russian Federation and the Moscow Government as part of the meeting dedicated to "Energy Efficiency and Energy Safety of Hydropower Faciliets regarding Modernization of the Energy Equipment and Digital Transformation." *[OS]*

Reliability and safety of production facilities *[103-2]*

RusHydro Group's reliability and safety policy

One of RusHydro Group's strategic goals is to provide a reliable power supply and ensure safe operation of equipment, hydraulic structures, and production facilities. RusHydro's Technical Policy[1] plays a crucial role in this process.

The document aims to identify key operations of RusHydro Group suitable for developing and applying technical solutions and technologies designed to boost reliability, safety and efficiency of production facilities in the short and long term.

The Technical Policy comprises a range of mandatory technical solutions enabling planned changes in production facilities in line with laws and regulations in the power industry, goals of RusHydro Group's Development Strategy, and latest developments in technology.

Key objectives of RusHydro's Technical Policy are as follows:

- upgrade of production facilities and their effective operation as a way to ensure reliability and safety;
- fulfilment of presidential and government instructions focusing on the development of energy infrastructure and envisaging the creation of economically and environmentally efficient, reliable and safe production facilities;
- development of the energy sector in the Russian Far East, including by tapping into the potential of renewables.

RusHydro Group's Technical Policy defines requirements imposed on the reliability and safety management system for equipment and structures (RSMSES) governed by the Regulations on the Reliability and Safety Management System for Hydraulic Structures and Hydroelectric Power Plants[2]. As part of the RSMSES, dedicated operating procedures have been put in place for the Analytical Center, one of the key elements in the system assessing the state of equipment and structures, to liaise with the Company's Headquarters, branches and subsidiaries[3].

RusHydro Group's Technical Policy defines requirements for the integrated process safety management system, including the industrial safety management subsystem.

The following documents were developed and adopted as part of the industrial safety management system:

- Standard Regulations on In-Process Monitoring of Compliance with Industrial Safety Requirements at Subsidiary's Hazardous Production Facilities[4];
- RusHydro's In-Process Monitoring Information System[5] (fully implemented across the Company's branches).

To oversee preparation of RusHydro's facilities for special operating conditions and control corrective actions designed to eliminate gaps identified by government, institutional and internal supervisory bodies, the Company has implemented the following information systems:

- the supervisory information system put into operation by Order of the Company No. 451 of May 28, 2019 and Decree of the Company No. 358r On Supporting the Operation of the Supervisory Information System dated August 26, 2019 (the system has been rolled out across the Company's branches);
- the integrated recorder for the analytical database of supervisory activities (KRAB-3) put into operation by Decree of the Company No. 467r On Using a Data Reporting Form – Integrated

[1] RusHydro's Technical Policy was approved by the Board of Directors of PJSC RusHydro (Minutes of the Board of Directors No. 307 of April 9, 2020).

[2] Approved by RusHydro's Order No. 515 of August 8, 2017.

[3] Approved by RusHydro's Orders No. 430 of June 20, 2018 and No. 862 of November 9, 2018.

[4] Approved by RusHydro's Order No. 190 of March 11, 2015.

[5] Commissioned by RusHydro's Order No. 1170 of November 27, 2013.

Recorder for the Analytical Database of Supervisory Activities dated December 8, 2015 as amended by Decree No. 157r On Using a Data Reporting Form – Integrated Recorder for the Analytical Database of Supervisory Activities dated May 14, 2018 (KRAB-3 has been rolled out across the Company's subsidiaries).

The Company's industrial safety priorities are:
- to continuously enhance and improve industrial safety of the Company's hazardous production facilities in line with the global best practices by ensuring timely upgrades of process equipment and its safe, reliable and trouble-free operation;
- to establish and maintain an efficient on-site safety monitoring system to enable industrial safety planning and tackling major challenges faced by the Company.

Meeting the above industrial safety goals helps reduce industrial risks associated with hazardous production facilities as a result of better process control, quality of repairs and industrial safety audits.

Ways of ensuring reliable and safe facility operation include:
- quality assurance at design and construction phase;
- external regulatory supervision;
- internal process monitoring;
- compliance with industry and corporate operating standards and procedures;
- implementation of the Technical Policy and engineering system controls.

In pursuance of RusHydro's Decree No. 42r On the Approval of Target Audit Schedule dated February 1, 2019, the Production Unit departments performed target audits of RusHydro's branches and subsidiaries to improve the effectiveness and control of production process compliance with applicable safety requirements.

The dual control and monitoring of compliance with industrial safety requirements at hazardous production facilities – both internally and externally (by state supervisory bodies) – secures efficient control over safety and reliability of existing assets.

All of RusHydro Group's production facilities have put in place regulations on in-process monitoring of compliance with industrial safety requirements at hazardous production facilities. RusHydro Group has 517 hazardous production facilities registered in the State Register of Hazardous Production Facilities, including 174 facilities owned by PJSC RusHydro and 343 facilities owned by its subsidiaries.

Allocation of industrial safety responsibilities

Responsible	Functions
Member of the Management Board, First Deputy General Director – Chief Engineer	- General control of compliance with industrial safety requirements at hazardous production facilities of RusHydro and production subsidiaries; - Methodological support and coordination of industrial safety efforts at the Company's hydropower facilities, including recording of violations, emergency prevention and response.
Industrial and Fire Safety Office of the Industrial and Occupational Safety Department	- Setting up and running internal controls of compliance with industrial safety requirements at hazardous production facilities and hydropower facilities of RusHydro and its production subsidiaries; - Coordination and control of HQ units, branches and subsidiaries as regards in-process monitoring and compliance with industrial safety requirements; - Methodological support of the Company's branches and subsidiaries as regards in-process monitoring of compliance with industrial safety requirements and industrial safety management system operating procedures; - Control over the efforts of the Company's branches and subsidiaries to develop and implement annual industrial safety action plans and action plans eliminating industrial safety gaps identified by supervisory bodies.
Directors of RusHydro's branches and subsidiaries	- General management of in-process monitoring and financing procedures; - Management of the development team working on initiatives to improve industrial safety and prevent environmental damage; - Coordination of efforts to prevent and manage emergencies and accidents at hazardous production facilities and to deal with their consequences; - Maintenance of buildings, structures and technical devices at hazardous production facilities to ensure their operability and safety, enforcement of occupational safety as required by the Russian Labor Code.
First Deputy General Directors – Chief Engineers of RusHydro's branches and subsidiaries	- Management of the in-process monitoring function and commission; - Control over experts and employees working at hazardous production facilities to make sure they promote compliance of production technologies, equipment, buildings and structures with the applicable legal requirements, standards, regulations and rules, and fulfil improvement orders issued by supervisory bodies with respect to industrial safety; - Management of the efforts to identify hazardous production facilities and include them in the relevant State Register, develop an industrial safety statement with respect to class I and II hazardous production facilities, and draft a fire safety statement and emergency response plans; - Arrangement of technical inspections, tests and expert reviews to confirm industrial safety of technical devices, buildings and structures and examine the technical documentation of hazardous production facilities; - Staff training to ensure accident and emergency preparedness at hazardous production facilities; - Implementation of action plans to eliminate industrial safety gaps at hazardous production facilities identified by the Federal Environmental, Industrial and Nuclear Supervision Service of Russia, assessment of industrial safety, control of compliance with the technical safety requirements at hazardous production facilities.
Industrial and occupational safety functions in RusHydro's branches and subsidiaries	- Organization and enforcement of in-process monitoring to ensure compliance with the industrial safety requirements at hazardous production facilities; - Development and implementation of industrial safety action plans; - Methodological stewardship of in-process monitoring; - Assessment of industrial safety at hazardous production facilities and analysis of accident causes; - Staff training and certification in industrial safety; - Organization of expert reviews for technical devices, buildings and structures at hazardous production facilities to ascertain their industrial safety; - Control over: • compliance with license requirements for operators of hazardous production facilities; • fulfilment of improvement orders issued by supervisory bodies with respect to industrial safety; • elimination of causes for emergencies, accidents and incidents at hazardous production facilities; • timely testing and inspection of technical devices, buildings and structures at hazardous production facilities, equipment maintenance and validation of check measurement units; • certification of technical devices used at hazardous production facilities for compliance with the industrial safety requirements; • availability and accuracy of operating and technical documentation for hazardous production facilities; • employee compliance with industrial safety requirements.

Accident rate at RusHydro Group's facilities *[103-2] [OS]*

In 2019, RusHydro Group's accident rate was down 16% y-o-y.

Most accidents (61%) were caused by recurrent natural hazards, third parties not engaged in operations, and animal or bird activity.

Stable Power Grid Operation in the Sakhalin Region

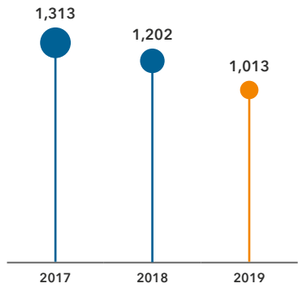
The electricity system is the backbone of the Sakhalin Region's economy. Given the island's isolated location, the electricity system is key to ensuring its sustainable social and economic development, as well as the adequate living conditions for its population.

Its stability is affected by local climatic conditions, including strong cyclonic activity, hurricanes with a speed of up to 56 m/s, high seismicity (magnitude 8–9), aggressive salt deposits, off-season icing of power lines, and frost heave. Coupled with high wear and tear of the grid infrastructure, these factors lead to frequent power failures.

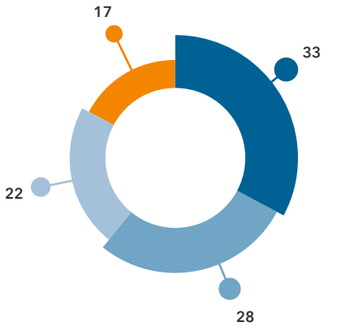
As instructed by the Russian Government's Decree No. YUT-P9-13pr dated March 18, 2016, the Government of the Sakhalin Region and RusHydro Group developed the Program of Stable Power Grid Operation in the Sakhalin Region[1].

In 2019, Sakhalinenergo launched a number of initiatives funded from the available sources, including design works at eight facilities and construction and installation works at three facilities.

Number of accidents involving RusHydro Group's generating facilities, electrical equipment and 110+ kV power lines



Cause of accidents in 2019, %



System Average Interruption Frequency Index (SAIFI)[2] *[EU28]*

Subsidiary	2017	2018	2019
JSC DRSK	1.18	0.87	1.64
PJSC Yakutskenergo	2.34	2.97	0.10
JSC Sakhaenergo	0.15	0.51	0.19
PJSC Magadanenergo	1.02	0.73	1.71
PJSC Sakhalinenergo	5.76	2.34	2.83
PJSC Kamchatskenergo	2.04	1.32	1.37
JSC UESK	0.20	0.18	0.05
JSC Chukotenergo	1.82	1.03	0.51

[1] The Program's priority initiatives falling within PJSC Sakhalinenergo's area of responsibility and operations are approved by the Ministry of Energy's Letter No. AT-2669/09 dated March 15, 2019, Minutes No. AN-114pr of April 2, 2019).

[2] The System Average Interruption Frequency Index (SAIFI) is calculated using the formula (∑li*Ni)/NT, where li is the total number of interruptions per annum for a group of customers Ni, and NT is the total number of customers served. The index is calculated for the entire location served.

System Average Interruption Duration Index (SAIDI), h[1] *[EU29]*

Subsidiary	2017	2018	2019
JSC DRSK	1.34	1.08	2.04
PJSC Yakutskenergo	4.24	6.02	0.14
JSC Sakhaenergo	1.67	0.57	0.34
PJSC Magadanenergo	1.10	1.44	1.13
PJSC Sakhalinenergo	13.22	4.93	3.85
PJSC Kamchatskenergo	5.08	1.86	2.14
JSC UESK	2.14	0.36	0.94
JSC Chukotenergo	10.14	8.16	7.45

Emergencies

Preparedness for natural disasters and emergencies

RusHydro Group is responsible for reliable and uninterrupted operation of its facilities. To this end, a dedicated system was implemented at the Company's production sites to prevent and respond to natural disasters and emergencies. In particular, efforts are made to prevent process upsets and accidents, and if an interruption occurs, the Company does its best to bring the facility operation back to normal as soon as reasonably possible. Furthermore, employees of RusHydro have regular trainings in civil defense and emergency response.

Key potential sources of natural disasters and industrial emergencies at RusHydro Group's production facilities:

- high magnitude low-frequency (once every 100 years) flood may result in boosting the headrace, overflowing hydraulic structures, waterfront destruction in junction areas, and a hydrodynamic accident followed by the flooding of adjacent areas, including flooding of power line pylons and transformer substations;
- during natural disaster alerts, there is a risk of electrical grid accidents caused by wire breaks or overlapping and short circuits at transformer stations followed by power outages for electricity consumers;
- technological emergencies affecting the equipment of power plants and grid infrastructure, which may cause interruptions or failures of power and heat generation or supply to households and economic assets;
- accidental oil spill affecting economic assets and people.

In RusHydro Group, the following functions and officials are responsible for the protection of population and territories from emergencies:

- the Situation Analysis Center and Industrial and Occupational Safety Department (as regards fire safety) at the Headquarters. They report to member of the Management Board, First Deputy Director General – Chief Engineer of the Company;
- first deputy directors – chief engineers with the direct involvement of civil defense and emergency response engineers reporting to them – at the Group's branches;
- employees authorized to deal with the issues of civil defense and protection of population from natural and industrial emergencies – at RusHydro's subsidiaries.

RusHydro Group prevents and responds to emergencies in full accordance with applicable Russian laws on hydraulic structures and hazardous production facilities. For the purpose of rescue and emergency recovery operations, the Company has established a back-up fund of documentation on RusHydro Group's hazardous facilities, which is maintained by the government.

All RusHydro Group's facilities have:

- action plans for natural and industrial emergency prevention and response, as well as action plans for oil and petrochemicals spill prevention and response approved by local bodies of the Russian Ministry for Civil Defense, Emergencies and Elimination of Consequences of Natural Disasters (EMERCOM);
- hydraulic structures safety statements updated (revised) at least once in every five years

[1] The System Average Interruption Duration Index (SAIDI) is calculated using the formula (∑ti*Ni)/NT where ti is the total duration of interruptions per annum for a group of customers Ni, and NT is the total number of customers served. The index is calculated for the entire location served.

subject to obligatory audit of such hydraulic structures by ad hoc commissions in collaboration with design and R&D institutions;
- facility safety certificates;
- special machinery for prompt response to potential damage or accidents (for facilities with own (or contractor's) fire stations);
- emergency and rescue equipment.

Volunteer emergency response teams, local warning systems and contracts for professional emergency response services have been put in place across RusHydro Group's facilities operating extremely dangerous and highly dangerous hydraulic structures or hazard class II and class III facilities duly assigned to respective civil defense categories.

To fulfil the requirements of HTS safety legislation, the Company provides for the mandatory insurance of public liability of those who own hazardous facilities, in respect of their harmful impact as a result of emergency (the insurance limit under the mandatory insurance contract on the HTS owner's public liability is stated by legislation in the amount of RUB 6.5 billion), as well as for the voluntary insurance of public liability, increasing the insurance amount up to RUB 35.5 billion, which corresponds to the public liability insurance level of leading Russian power companies. *[OS]*

Functional subsystem of the National Emergency Management System

In pursuance of the Order of the Russian Ministry of Energy[1], RusHydro Group established a functional subsystem of the National Emergency Management System (NEMS).

The Company's emergency prevention and response and fire safety commission (the "Commission") is the supervisory body of the subsystem responsible for the timely situation assessment and decision-making on emergency prevention. The Commission's annual action plans stipulate efforts to facilitate the safe passage of flood water during the spring and summer period, prepare for the fall and winter peak loads, and secure the stable operation during the fire and storm seasons. The Commission manages and coordinates the operations of standing bodies and management bodies responsible for the day-to-day operation of the functional subsystem.

Permanent management bodies of the Company's functional subsystem – the Emergency Management Unit of the Situation Analysis Center's team specializing in civil defense, emergency prevention and response, and civil defense and emergency engineers at RusHydro's generating branches and subsidiaries – are responsible for the planning of emergency prevention and response, coordination of emergency prevention and response activities in accordance with laws and regulations of the Russian Federation and internal documents of the Company.

Management bodies responsible for the day-to-day operation of the Company's functional subsystem – the Emergency Management Unit's duty shift and duty shifts at RusHydro's generating branches and subsidiaries – conduct 24/7 situation monitoring at facilities, give warnings of identified equipment failures, and carry out priority emergency prevention activities.

For the purpose of emergency prevention and response, RusHydro put in place resource stockpiles at its branches operating hydraulic structures and a dedicated financial reserve at RusHydro. The dedicated financial reserve for emergencies was established on a centralized basis in the interests of RusHydro's branches by transferring 1% of the average monthly revenue from electricity and capacity sales. All subsidiaries have established the required financial reserves and resource stockpiles for emergency prevention and response.

Emergency recovery exercises

Employees are trained in emergency recovery as part of the corporate civil defense and emergency response training program. The list of persons to be trained was made in accordance with Russian laws and regulations.

In line with the schedule for 2019, RusHydro Group conducted:
- 5 comprehensive exercises;
- 527 facility-based exercises;
- 109 table top exercises and training sessions;
- 37 tactical training exercises.

In 2019, 66 people took training or advanced professional training at training centers and as part of civil defense courses, including one civil defense manager and 22 chairmen and members of emergency prevention and response and fire safety commissions (with nine such members coming from the Headquarters).

Prevention of injuries and fatalities involving RusHydro Group's assets *[EU25] [OS]*

A special emphasis in occupational safety is placed on the prevention of injuries among local residents arising from contact with the Group's facilities.

This issue is primarily covered through mass media (articles published in printed and online media) and school safety lessons on hazardous and harmful health impact of various power installations in the event of exposure within a hazardous distance.

In 2019, there were 16 accidents, including 11 third-party fatalities involving RusHydro Group assets. Of this number, nine fatalities resulted from approaching energized parts of power installations or overhead power lines closer than the minimum approach distance. Another two were due to traffic accidents involving vehicles of the Olekminsky electricity distribution zone (Sakhaenergo) and DRSK's branch Primorye Power System. The accidents were caused by driving under the influence and a third-party traffic violation, respectively.

Additionally, legal proceedings were launched in connection with injuries at RusHydro Group facilities. There were no legal actions lodged in response to fatalities.

As a leader among Russian energy companies, RusHydro Group is one of the world's largest organizations operating in hydropower and maintains the smooth, reliable operation of the Russian Federation's power systems.

Yevgeny Zinichev,

Ministry of Civil Defense, Emergencies and Disaster Relief of the Russian Federation

[1] Order No. 792 On the Functional Emergency Management Subsystem at Organizations (Facilities) of the Energy Industry and Organizations (Facilities) Subordinate to the Russian Ministry of Energy dated September 24, 2018.

Procurement

Procurement management *[103-2]*

As part of its operating activities, RusHydro Group purchases large quantities of third-party works and services, feedstock (including fuel) and materials.

Procurement operations in RusHydro Group are governed by the applicable Russian laws, including Federal Law No. 223-FZ On Procurement of Goods, Works and Services by Certain Types of Legal Entities dated July 18, 2011, and other internal regulations (by-laws) on procurement in RusHydro Group, including the Uniform Regulations on RusHydro Group's Procurement Policy[1], whereby:
- the Company's Board of Directors oversees procurement management, approves RusHydro's annual comprehensive procurement program and its progress report.
- the Central Procurement Commission (CPC) is the Company's permanent collective body which shapes and carries out the uniform procurement policy as well as exercises control and coordination of procurement activities. The CPC Chairman is responsible for procurement management across RusHydro Group.
- the CPC appoints standing procurement commissions which are directly authorized to arrange for and carry out procurement procedures. Depending on the scope of powers, there are procurement commissions of level 1 and level 2 as well as ad hoc commissions.

RusHydro Group has in place a number of internal regulations to prevent inappropriate and inefficient use of funds.

The objectives and principles of the Uniform Regulations on RusHydro Group's Procurement Policy

The Regulations on Procurement set out the following objectives and principles:
- procurement regulation aims to ensure timely and efficient supply of goods, works and services to the customer as well as prudent use of the customer's funds.
- procurement regulation relies on rational use of special procedures to make purchases on an arm's length basis as closely as practicable and provides for mandatory procedures to be followed by the officers in charge of procurement.

These procedures ensure:
- careful demand planning;
- market research;
- procurement transparency;
- focus on equality and fairness, with no discrimination or unreasonable restrictions on competition among participants where possible, or, if impossible, enhanced internal control;
- intended and efficient use of funds allocated for purchasing goods, works and services (including their life cycle cost, where applicable), and implementation of cost-cutting initiatives;
- absence of restrictions on participation in the procurement in the form of non-measurable requirements for participants;
- efficient and fair selection of preferred suppliers following a comprehensive SWOT analysis (with price and quality being the key factors); and
- follow-up on contracts and use of goods, works and services purchased.

Procurement regulation is based on a systemic approach which ensures that uniform corporate rules are administered and followed, with officers in charge of procurement possessing the necessary authority and responsiblity. In the light of above mentioned, the customer enjoys the following:
- benefits of a regulatory framework;
- effective platform for procurement management and follow-up control;
- qualified procurement professionals;
- well-established procurement infrastructure (information support, e-commerce tools, certification, professional consultants, etc.).

[1] Approved by resolution of RusHydro's Board of Directors No. 277 dated October 4, 2018 and amended by resolutions No. 292 dated June 24, 2019 and No. 300 dated December 4, 2019.

RusHydro Group publishes information on planned procurement activities and places up-to-date official announcements describing the scope of procurement (item name), material terms of the competitive procurement and other details on official Russian website at www.zakupki.gov.ru, as well as on the electronic trading platform at https://rushydro.roseltorg.ru. Following the competitive procedure, the Company publishes the procurement results specifying the winning bidder and the respective price.

The material terms and other details of RusHydro Group's competitive procurement can be found on the official website of the Russian Federation at https://zakupki.gov.ru/

Electronic trading platform:: https://rushydro.roseltorg.ru/

Procurement improvement plans in 2020

RusHydro Group's key procurement improvement initiatives include:
- optimization of procurement processes;
- further automation of the Group's procurement processes, including the development of an automated analytical reporting system;
- development of a reference data system;
- fine-tuning of category management tools in procurement.

Implementation of the annual comprehensive procurement program *[102-9]*

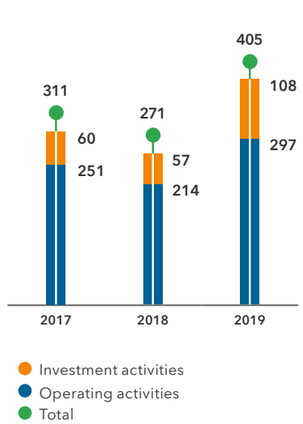
In 2019, total value of contracts awarded under procurement procedures at RusHydro Group amounted to RUB 405.3 bn (including VAT), up by 49.4% y-o-y, mainly due to:
- an increase in procurement under loan agreements by RUB 22.0 bn;
- acquisition of assets at Gotsatlinskaya HPP (RUB 10.1 bn) and Zaragizhskaya HPP (RUB 3.5 bn);
- procurement of works to complete the construction of Ust-Srednekanskaya HPP (RUB 18 bn);
- procurement of main construction and installation works and manufacturing of hydropower equipment for Krasnogorskaya SHPP-1 and Krasnogorskaya SHPP-2 (RUB 7.4 bn);
- procurement of comprehensive transport services and motor vehicle leases valid for three years (RUB 4.8 bn);
- long-term contracts signed for major and minor repairs on property, plant and equipment (RUB 7.87 bn);
- an increase in the cost of DGK's procurements in fuel by RUB 6.2 bn and in heat by RUB 8.9 bn.

At the same time, the number of procurement procedures rose by 14% to 19,900. Open bidding accounts for over 50% of all procurement procedures, of which 99% run on an electronic trading platform.

In money terms, the largest portion of procurement focuses on works and services related to repair and investment programs (upgrade, capital construction projects) of the companies within RusHydro Group.

The procurement items include goods usually purchased by energy companies: core equipment (boilers and turbines), transformers, switchgear cells, package transformer substations, isolation valves, control valves, line accessories, cable fittings, pipelines, steam pipelines and spare parts, cabling and wiring, electrical appliances, metal goods, insulators, heat insulators, etc.

Procurement,
RUB bn (incl. VAT)



Procurement by method, %

Procurement type	2017	2018	2019
Competitive procurement, including:	51.47	49.42	50.76
electronic procurement	93.94	99.46	99.40
Non-competitive procurement, including:	48.41	49.76	21.10
single-source procurement	99.00	98.47	96.56
Procurement from related parties[1]	0.00	0.13	28.12
Procurement from related parties	0.12	0.69	0.02

One of the Group's most important strategic priorities in procurement is timely and efficient competitive awarding of contracts for fuel supplies. Following the competitive procurement procedures in 2019, the cost of coal supplies to RAO ES East Subgroup's thermal power plants rose by no more than 1.3% y-o-y as a result of the coal mix reshuffling, lower electricity and heat generation and quality discounts driving down the fuel prices. At the same time, the coal price added 10.3% y-o-y driven by higher prices for export-oriented coal grades.

In 2019, the cost of natural gas supplies grew by 9.6% y-o-y, mainly due to US dollar exchange rate fluctuations pushing up prices for natural gas supplied under the contract between DGK and the Sakhalin-1 Consortium.

The cost of fuel oil supplies to RAO ES East Subgroup rose by 33.5% following the fuel mix reshuffling at Kamchatskenergo, which started substituting natural gas with fuel oil as its supplier, Gazprom Mezhregiongaz Far East, was facing a decline in natural gas production. On top of that, the fuel oil price added 5.3% in 2019 on the back of higher prices for petroleum products prevailing in the domestic market when procurement was underway.

In 2019, the cost of diesel fuel supplies grew by 9.0% y-o-y driven by rising consumption. At the same time, the diesel fuel price increased marginally by 1.5% y-o-y, which is in line with the Russian Ministry of Economic Development's forecast.

In 2019, the cost of crude oil supplies dropped by 3.2% y-o-y driven by falling consumption. At the same time, the crude oil price increased marginally by 2.4%, also in line with the forecast.

Sustainable procurement *[EC]*

As one of Russia's largest purchasers of goods, products, services and raw materials, RusHydro Group is fully aware of its responsibility to the regions where it operates, communities and environment, and therefore amended its Uniform Regulations on RusHydro Group's Procurement Policy. According to the regulation, any design works (including pre-feasibility studies) for new hydropower and thermal power projects, their construction and modernization, any core equipment and technical specifications and the terms of contracts awarded under procurement procedures must be aligned with the customer's approved internal sustainability regulations to ensure:

- compliance with environmental requirements;
- protection of cultural heritage sites;
- industrial and occupational safety;
- protection of indigenous peoples and socially vulnerable groups;
- control over negative footprint on climate change and environment; and
- biodiversity conservation and restoration.

Procurement procedures based on tenders or requests for bids may include relevant sustainability criteria.

Procurement through small and medium-sized businesses

To facilitate competition and development of SMEs, RusHydro Group seeks to partner with small and medium-sized businesses (SMES) as part of its procurement activities.

RusHydro launched a partnership program with small and medium-sized businesses (the "Partnership Program")[1], which was developed in accordance with the Russian Ministry of Economic Development's guidelines[2].

The Partnership Program and the register of small and medium-sized businesses included in the Program are available online. The register is updated as necessary.

RusHydro's target for contracts awarded to SMEs in 2019 was determined by Russian Government's Resolution No. 1352 On Special Aspects of Participation of Small and Medium Enterprises in Procurement of Goods, Works and Services for Certain Types of Legal Entities dated December 11, 2014. As at December 31, 2019, the Group significantly exceeded the target.

Partnership Program is published on RusHydro's website at : http://zakupki.rushydro.ru/

The list of goods, works and services purchased from SMEs can be found on the website of the Unified Information System for Procurement at : http://zakupki.gov.ru

Procurement from SMEs in 2019[3]

Indicator	Target, %	Actual[4], %	Procurement[5], RUB bn (incl. VAT)
Procurement through businesses including SMEs, % of annually awarded contracts	18	77.9	66.1
Procurement only through SMEs, % of annually awarded contracts	15	27.5	23.3

[1] A related party is a legal entity which is deemed related to the customer in accordance with the Russian Tax Code and included in the customer's list of related parties (Appendices 2 and 3 to the Uniform Regulations on RusHydro Group's Procurement Policy). In 2017, the relevant item was not calculated, while in 2018 it was calculated for the period from November 1, 2018 to December 31, 2018.

[1] Approved by RusHydro's Order No. 568 of July 16, 2014.

[2] Letter No. 23941-EE/D28i dated November 1, 2013.

[3] Procurement through SMEs is calculated as a % of total contracts awarded in 2019 by 38 companies of RusHydro Group subject to Russian Government's Resolution No. 1352 dated December 11, 2014.

[4] Calculated based on financing.

[5] Calculated based on financing.

Import substitution

As part of the Comprehensive Modernization Program of RusHydro's generating facilities, the Company plans to increase supplies from domestic machinery producers given that, among other things, certain types of equipment and components will be produced in Russia.

To increase supplies from local manufacturers in 2019, RusHydro implemented the following initiatives:

- RusHydro Group's Technical Policy was amended to include the requirements for increased reliance on domestic solutions starting from the design phase;
- the Uniform Regulations on RusHydro Group's Procurement Policy was amended to:
  - determine a price preference for prioritizing domestic bids when purchasing radio-electronics included in the State Register of Russian Radio-Electronics in accordance with the Russian Government's Resolution No. 878 dated July 10, 2019 On Measures for Stimulating Manufacture of Radio-Electronic Products within the Russian Federation Applied to Public Procurements of Products, Works and Services for State and Municipal Needs, on Amending Russian Government's Resolution No. 925 dated September 16, 2016, and on Recognizing Null and Void Certain Acts of the Russian Government (altering the preference from 15% to 30% in a similar way to the Russian Government's Resolution No. 925 dated September 16, 2016, all other things being equal).
  - prioritize Russian manufacturers when purchasing aluminium and/or aluminium-based products in accordance with Russian Government's Directive No. 6574p-P13 dated July 18, 2019.
- the Company's internal regulations were amended to bring the preparation of procurement specifications into line with RusHydro Group's Technical Policy;
- resolution of RusHydro's Board of Directors[1] providing for the Company's increased reliance on domestically developed software:
  - approved the Action Plan for 2019–2021 providing for the Company's increased reliance on domestically developed software;
  - approved KPIs to monitor the Company's migration to domestically developed software.
- the Company joined efforts with the Industrial Development Fund of the Russian Ministry of Industry and Trade to implement the defence industry diversification roadmap for the enhancement of the domestic energy sector within the state industrial information system and also partnered with the Russian Energy Agency of the Russian Ministry of Energy to coordinate import substitution initiatives with the defence industry, specifically:
  - developing the list of required hardware and software to be supplied in 2020–2024 and sent it to the Industrial Development Fund of the Russian Ministry of Industry and Trade;
  - arranging for the initial population and testing of the state industrial information system;
  - signing a non-disclosure agreement with the Russian Energy Agency of the Russian Ministry of Energy to coordinate import substitution initiatives with the defence industry;
  - sending proposals for manufacturing civil purpose products to the pilot list of defence industry enterprises.

RusHydro is justly one of the largest Russian power generating companies and third-largest hydropower company of the world. A powerful foundation was built over 15 years to enable stable operations and possibility to realize ambitious projects. Due to its accumulated experience and unique technologies the Company tackles broad-scale tasks, implements automated management systems that always conform to environmental and safety requirements.

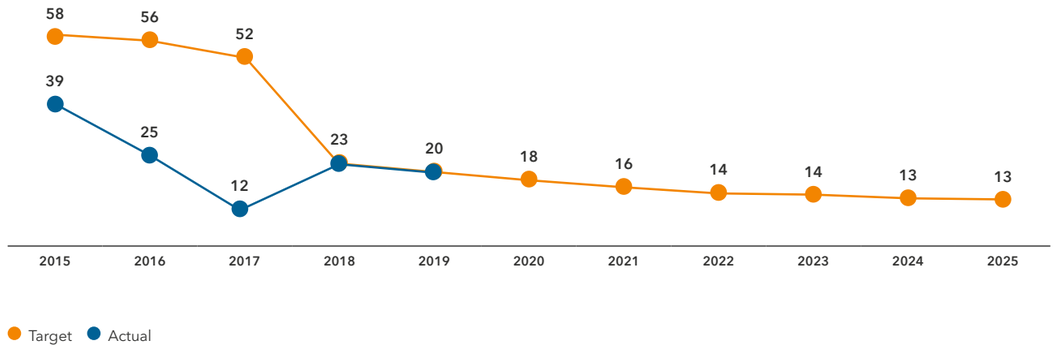
Igor Artemjev,

Head of FAS Russia

In 2019, the actual share of imported equipment under the TR&M program stood at 20%, which is in line with the import substitution roadmap target.

As part of efforts to gradually substitute purchases of foreign-made goods, works and services with those of Russian origin having similar specifications and usability, the Company amended its import substitution roadmap until 2025[1].

Share of imported equipment in procurement, %



[1] Minutes No. 285 of March 26, 2019.

[1] The roadmap was amended along with RusHydro Group's updated Long-term Development Program for 2018–2022 (Minutes of the Board of Directors No. 271 of June 1, 2018).

Innovative development

Innovative Development Program and its implementation *[103-2]*

The Innovative Development Program of RusHydro Group for 2016–2020 with a Prospect up to 2025[1] sets out the focus and framework of the Group's innovations and specifies the amounts and sources of funds to be spent on its innovative projects.

In the medium term, it aims to improve RusHydro Group's economic and operational efficiency by using innovative engineering, technical and management solutions focused on:

- extending lifespans and improving performance of equipment;
- enhancing reliability and economic efficiency of equipment;
- improving the quality of equipment diagnoses coupled with proactive identification and mitigation of operational risks;
- import substitution and reducing the dependence on imported equipment;
- reducing the environmental footprint;
- improving energy efficiency and cutting losses.

In the long term, the Innovative Development Program of RusHydro Group aims to:

- Assure the Company's position as one of the most technologically advanced energy companies, both domestic and international, via:
  - development of efficient construction, modernization and repair processes for power generation facilities;
  - development of real-time monitoring technologies for the core equipment;
  - automation and robotization of maintenance and repair; and
  - development of new innovative products based on RusHydro's know-how and expertise (e.g. energy efficiency and storage solutions, EV infrastructure, and advanced materials).
- Ensure deeper engagement in green energy via:
  - development of hydropower potential in certain regions of Russia;
  - development of RES-based alternative energy infrastructure (geothermal power generation);
  - analysis and development of mini-hydro solutions.

In 2019, as resolved by the Government Commission for Economic Modernization and Innovative Development of Russia[1], RusHydro Group updated its Innovative Development Program for 2020–2024 with a prospect up to 2029 (the Updated Innovative Development Program of RusHydro Group).

The Updated Innovative Development Program of RusHydro Group results from benchmarking of RusHydro's technological capabilities and innovation KPIs vs global peers[2] and factors in follow-up proposals prepared and approved by the Company's Board of Directors[3].

On December 11, 2019, RusHydro Group duly submitted its Updated Innovative Development Program for review to the relevant federal executive authorities[4]. It obtained affirmative opinions from the Russian Ministry for the Development of the Russian Far East and Arctic and Ministry of Education and Science. Its review is slated for Q2 2020 by the Interdepartmental Commission

KPI for the Innovative Development Program of RusHydro Group

KPI	Target		Progress	
	2019	2020	2019	Delivered or not
R&D expenses, % of revenue	0.25	0.25	0.26	Achieved
Growth in the quantity of IP assets on the balance sheet, %	6.5	7	6.25	Delivered[2]
Efficiency of hydropower capacity management, employees per 100 MW	20.36	20.13	21.14	Delivered[3]
Innovative products purchased, % of total volume	1.33	1.46	0.69	Not achieved
HPP repair expenses, '000 RUB/MW (at 2000 prices)	19.8	19.6	17.58	Achieved

Key innovative projects in 2019

Description	Objective
Development of a hardware and software system for monitoring and predicting the reliability of HPP hydraulic structures in geologically challenging environments.	Test and implement a hardware and software system for safety and reliability monitoring of hydraulic structures at Zagorskaya PSPP and Zagorskaya PSPP-2.
Research into new processes to repair and restore hydraulic structures, extend their lifespans and enhance their reliability, and draft implementation guidelines.	Develop robust techniques for repair and restoration of hydraulic structures.
Development of recommendations on how to assess human impact in the tailrace on the condition of machinery and hydraulic structures and HPP energy efficiency;	Develop and justify an action plan to raise and stabilize the water levels in separate outlets for better performance of HPP turbine equipment.
Modernization of reinforced-concrete penstock encasements, including application of protective coatings.	Insulate penstocks with waterproofing coatings based on advanced materials, extend time between repairs and cut repair expenses.
Development of a gravity-type energy storage driven by solid loads for a solid-state storage power plant (SSPP), including prototypes of mechanic arms required for its construction.	Develop engineering solutions to construct an industrial SSPP and automate installation works.
Development of an automated warning system to detect ruptures and measure turbine flows at RusHydro's diversion and impoundment HPPs.	Enhance safe operations across HPPs.
Reliability analysis of gas turbine units and development of a database and guidelines to assess their health.	Develop a hardware and software system for remote monitoring of gas turbine units.

[1] Approved by RusHydro's Board of Directors (Minutes No. 244 dated November 23, 2016).

[2] Growth of 6.5% y-o-y means that in 2019 in absolute values 17.04 IP assets were to be created and booked on the balance sheet. The actual value of the IP assets created and put on the balance sheet amounted to 17 assets, so this indicator is deemed fulfilled.

[3] Having regard to the fact that the approved calculation and evaluation methodology for this KPI was meant to cover the headcount involved in core operations (i.e. HPP operation). However, the Group's operations in the Far East were later reorganized, with RAO ES East transferring many of its regional management functions in charge of heat generation facilities and grids to RusHydro. As a result, RusHydro is now overstaffed with those employees who are not involved in HPP operation. Excluding such staff, this KPI may be deemed delivered. The 2019 report on progress against the Innovative Development Program deems this KPI as delivered.

[1] Meeting minutes No. 2 of October 22, 2018.

[2] Conducted in line with the Russian Government's Directive No. 3262p-P13 dated April 27, 2018.

[3] Minutes No. 294 of August 29, 2019.

[4] Russia's Ministry of Economic Development, Ministry of Energy, Ministry for the Development of the Russian Far East and Arctic, Ministry of Education and Science.

for Technological Development under the Government Commission for Economic Modernization and Innovative Development of Russia (the Interdepartmental Commission). Once approved by the Interdepartmental Commission, the Updated Innovative Development Program will be reviewed and approved by the Company's Board of Directors in May 2020.

Based on benchmarking of RusHydro's technological capabilities vs global peers, new solutions coming into play and potential economic efficiency benefits, the Company identified the focus of its efforts while implementing the Innovative Development Program in the reporting period and also seeking to improve its global ranking.

Integrated innovative development management for RusHydro and RAO ES East Subgroup

The innovative development programs of RusHydro Group and RAO ES East have been aligned to contribute in the same way to the following components of RusHydro's integrated KPI for innovations:

- R&D expenses, % of revenue;
- growth in the quantity of IP assets on the balance sheet in the reporting period, %;
- heat efficiency, %.

In addition, RusHydro's Board of Directors reviews and approves the innovative development programs of RAO ES East as part of the Innovative Development Program of RusHydro Group.

The Updated Innovative Development Program of RusHydro Group now covers both RusHydro and RAO ES East, which helps align innovative development priorities across the Group's footprint and save resources previously required to develop, approve and monitor two separate programs.

Amounts spent on the Innovative Development Program, RUB mn[1]

	2017	2018	2019
Total, including:	**2,189.4**	**2,372.9**	**2,751.1**
RusHydro (including funding by design institutions)	586.7	655.4	483.3
RAO ES East Subgroup	1,602.7	1,717.5	2,267.8

Program for Intellectual Property Rights Management

The Program for Intellectual Property Rights Management within RusHydro Group is a policy paper that determines key initiatives aiming to create favorable conditions for sustainable development of the Company and its subsidiaries while implementing the Innovative Development Program of RusHydro Group as well as to achieve integrated KPI targets in innovations while fostering a framework for intellectual property rights management.

This Program assumes that intellectual property rights management is part of innovative development with a focus on:

- promoting and identifying creations of the human mind;
- providing legal protection of intellectual property rights;
- protecting exclusive intellectual property rights;
- commercializing intellectual property rights.

To this end, the Company and its subsidiaries successfully implemented a number of initiatives in 2019, with improvements covering:

- organizational structures;
- regulatory framework;
- contracting process;
- employee incentives (motivation) and professional development.

In accordance with the Russian Government's directives and the resolution of the Company's Board of Directors, detailed progress reports on the Program for Intellectual Property Rights Management within RusHydro Group are available on Rosimushchestvo's interagency portal (https://mvpt.rosim.ru/sitepages/enter.aspx).

[1] The Innovative Development Program of RusHydro Group is funded solely with its own capital.

R&D projects

RusHydro Group is committed to ramping up its R&D investments.

In 2019, R&D spending totaled RUB 618.8 mn[1].

2019 R&Ds were aimed at addressing RusHydro Group's most important (critical) technology issues related to preventing potential process upsets that may result in undersupply of electricity.

R&D spending, RUB mn (incl. VAT)

R&D spending by area in 2019, RUB mn (incl. VAT)

[1] Including VAT.

PJSC RusHydro's professional staff made the company a global energy market leader. At the heart of your activity lies a desire for continuous growth and improvement of the company, the Russian economy, and industry overall. This is a unique and well-deserved occasion for each of you because the success of your confident, driving movement forward depends solely on coordinated teamwork.

Andrey Murov,

First Deputy Director General – Executive Director of PJSC Rosseti

Key R&D projects implemented by RusHydro Group to ensure sustainable development

Description	Progress in 2019
Development and implementation of a process to partially restore heat transfer surface elements of cogeneration heat exchange equipment (tubes) instead of replacing the entire tube bundle	
Objective: → to develop and implement a process to partially restore heat transfer surface elements of cogeneration heat exchange equipment (tubes) instead of replacing the entire tube bundle and thereby improve its performance, which includes exploring the properties of a set of thermal conductive materials and developing a process and a commercial prototype for application of a protective coating to damaged elements (tubes) of a heat exchanger's tube bundle. Solution: → to apply specialty epoxy coating (BLOKOR-MKK115).	Pilot testing (application of the protective coating and in situ tests) underway at Khabarovskaya CHPP-3. 2019 activities included: → submitting patent applications; → drafting proposals for its implementation and rollout at other power generation facilities.
Design of a composite power line conductor core based on thermoplastic resins	
Objectives: → to achieve a 50% higher current-carrying capacity and reliability vs ACSR conductors without adding weight (resulting in savings on account of the increased quantities of transmitted power); → to make overhead power lines and the entire grid more reliable by reducing the ice and wind load on pylons (resulting in extended conductor lifespans); → 15% to 40% lower costs of building new crossings as fewer pylons will be required. Solution: → to design a composite power line conductor core based on thermoplastic matrices along with manufacturing equipment.	In 2019, RusHydro developed and launched an experimental pultrusion machine and tested core prototypes.

R&D effect on the Company's risks

Damage caused by natural and industrial disasters outside RusHydro Group's facilities is one of the key risks for the Company. This risk results from the underprotection of RusHydro Group's production assets against natural disasters.

The risk management initiatives provided for by the 2019 calendar plan include the following R&D projects:

→ development and testing of a technology to monitor structural stress in case of a tensiometer failure;
→ development of a hardware and software system for monitoring and predicting the reliability of HPP/PSPP hydraulic structures in geologically challenging environments;
→ development of an automated warning system to detect ruptures and measure turbine flows at RusHydro's diversion and impoundment HPPs;
→ development of recommendations on assessing the human impact on tailraces with regard to the HPP equipment, hydraulic structures and energy efficiency;
→ research into new processes to repair and restore hydraulic structures, extend their lifespans and enhance their reliability, and draft implementation guidelines;
→ introduction of an expert system to support decision-making in response to incidents, accidents and emergencies at RusHydro Group's production facilities.

Research and Design Complex

The Research and Design Complex is RusHydro Group's asset which renders services to high-tech industries in Russia and consists of the Design Complex and the R&D Complex.

RusHydro Group's Design Complex includes JSC Lenhydroproject, JSC Hydroproject Institute, JSC Mosoblhydroproject and JSC KhETC which engage in:
→ design of new hydropower generation facilities as well as rehabilitation and modernization of existing ones (as general designer);
→ design of RES-based generation facilities;
→ integrated design of water infrastructure providing for the construction of dams, impoundments, pump stations, diversion channels and penstocks, embankments, fish passing and protection facilities, port and navigation facilities, including water infrastructure for nuclear power plants;
→ integrated on-site and table-top design and survey works when assessing various project stages, including power generation, hydraulic structures and water infrastructure;
→ development of detailed design documentation and project support at all life cycle stages;
→ field supervision over the ongoing energy, hydraulic and water infrastructure projects;
→ construction oversight at energy, hydraulic and water management infrastructure facilities;
→ use of local and regional water resources, development of local strategies for power generation and water infrastructure construction;
→ advanced training programs (postgraduate studies);
→ comprehensive engineering services including testing, modernization, reconstruction, design and rehabilitation of power plants and heat supply networks at JSC DGK;
→ development of new activities related to converting equipment at power plants to gas – a promising fuel for the development of the energy sector in the Far East.

The R&D Complex includes JSC Vedeneyev VNIIG, JSC KhETC (the Far Eastern Analytical Center) which engage in:
→ research and development covering hydropower generation and the wider energy industry, industrial and civil construction, engineering protection, surveys, materials, technologies, technical regulations, etc.;
→ competencies of the Analytical Center for the Safety and Reliability of Hydraulic Structures and Core Equipment of Hydropower and Heat Generation Facilities (under the Chief Engineer);
→ research support to hydraulic projects in the energy sector and beyond, development of related project documentation (instrumentation and controls, specifications, etc.);
→ research and engineering support to construction projects and other life cycle stages;
→ development of technical regulations;
→ advanced training programs (postgraduate and doctoral studies), including in core and unique competencies (with no similar curriculum offered elsewhere).

Achievements of RusHydro Group's design institutions in 2019

Design institution	Project	Achievements
JSC Lenhydroproject	Nizhne-Bureyskaya HPP	Adjustments made to the Adjusted Nizhne-Bureyskaya HPP Project with Updated Cost Estimates for the Hydrotechnical Complex, Including the Water Reservoir, with Russia's State Expert Review Board issuing an affirmative opinion with regard to its design documentation and results of engineering surveys. Adjusted. Detailed design documentation developed to support completing construction and commissioning of Nizhne-Bureyskaya HPP.
	Chirkeyskaya HPP	Affirmative opinion obtained from Russia's State Expert Review Board with regard to design documentation and results of engineering surveys, as well as validation of cost estimates for capital construction, modernization and renovation.
	Construction of two single-circuit 110 kV Pevek-Bilibino power lines	Adjustments made with Russia's State Expert Review Board issuing an affirmative opinion with regard to design documentation and results of engineering surveys, as well as validation of cost estimates for capital construction, modernization and renovation.
	Commissioning of the third hydropower unit at Ust-Srednekanskaya HPP	Detailed design documentation developed.
	Replacement of hydropower unit No. 5 at Votkinskaya HPP	
	Completion of Zaramagskaya HPP-1	

Design institution	Project	Achievements
Hydroproject Institute	Advanced water impounding project at the Volga-Akhtuba Floodplain	Design documentation is being developed to construct a waterway, an HPP and a water reservoir with two dams.
	Construction of engineering protection facilities in Nizhneudinsk and Tulun	Design documentation is being developed to construct flood control facilities on Iya and Uda rivers as part of Irkutsk Region's Environmental Protection Program for 2019–2024.
	Design of coastal hydraulic structures and a process water supply system for Kudankulam NPP, India	Design documentation is being developed to construct coastal hydraulic structures and a process water supply system for units 1 to 6 at Kudankulam NPP and field supervision is ongoing at units 3&4.
	Design of external hydraulic structures for El Dabaa NPP, Egypt	Mathematical model of water intakes and disposals is being developed to project sediment movements in the headrace and retention basin, avoid recirculation of cooling water between water disposals and intakes and assess environmental effects. Detailed design documentation is being developed for external hydraulic structures. Engineering support to the overseas project owner with a view to obtaining an affirmative opinion and building permit from local authorities. Pressure meter tests running on rock ground.
	Paks-2 NPP, Hungary	Design and survey works underway to expand and deepen the existing headrace and water intakes, the bridgework and conjugation structures and to construct pump stations, an open tailrace and a water discharge facility at Paks-2 NPP.
	Zagorskaya PSPP and Zagorskaya PSPP-2	Design and survey works underway on the headwater pond dam, intake channel and penstocks at Zagorskaya PSPP. Works underway to upgrade the automated diagnostic control system. Detailed design documentation is being developed, with geotechnical control in place and works underway to level the station node building at Zagorskaya PSPP-2.
	Arctic LNG-2	Design documentation is being developed to construct a plant to process liquefied natural gas (LNG) and stable gas condensate (SGS), including storage facilities, the Utrenny shipping terminal, supporting coastal infrastructure and port facilities.
	Detailed design documentation for Bokang-Baling HPP, India	Detailed design documentation is being developed in cooperation with India-based SAI.
Mosoblhydroproject	Comprehensive rehabilitation and modernization of the Cascade of Kubanskiye HPPs	Affirmative opinions obtained from Russia's State Expert Review Board with regard to design documentation and results of engineering surveys covering some of Mosoblhydroproject's facilities and structures. Detailed design documentation is being developed for PSPP and Sengileevskaya HPP.
	Krasnogorskaya SHPP-1 (Krasnogorskaya SHPP): new construction	Affirmative opinion obtained from Russia's State Expert Review Board with regard to design documentation. Detailed design documentation is being developed and field supervision is ongoing.
	Krasnogorskaya SHPP-2 (Pravokubanskaya SHPP): new construction	Affirmative opinion obtained from Russia's State Expert Review Board with regard to design documentation. Detailed design documentation is being developed and field supervision is ongoing.
	Adygeyskaya WPP	Affirmative opinion obtained from Russia's State Expert Review Board with regard to design documentation. Detailed design documentation is being developed and field supervision is ongoing.
KhETC	Vladivostokskaya CHPP-2	The power supply system upgraded at the onshore pump station of Vladivostokskaya CHPP-2. Affirmative opinion obtained from Russia's State Expert Review Board with regard to design documentation and results of engineering surveys. Adjustments made to design and cost estimates with Russia's State Expert Review Board issuing an affirmative opinion with regard to the Rehabilitation Project for the Heat Supply Network between Vladivostokskaya CHPP-2 and the Heat Pipeline to Patroclus in Vladivostok.
	Anadyrskaya CHPP-2	Adjustments made to design and cost estimates for the Gasification Project at Anadyrskaya CHPP.
	Khabarovskaya CHPP-1	Affirmative opinion obtained from Russia's State Expert Review Board with regard to design documentation and results of engineering surveys for the Cooling Tower Upgrade Project at Khabarovskaya CHPP-1 (Innovative Development Program). Boiler No. 8 upgraded at Khabarovskaya CHPP-1.
	Khabarovskaya CHPP-3	Adjustments made to design and cost estimates for the Rehabilitation Project at Khabarovskaya CHPP-3 with Hot-Water Peaking Boiler Plant Converted to Natural Gas Combustion. Boiler feed water pumps upgraded at Khabarovskaya CHPP-3.
	Heat supply networks	Heat supply networks of CHPP-1 and CHPP-2 connected ranging from point No. 212 to point No. 1 in Petropavlovsk-Kamchatsky. Affirmative opinion obtained from Russia's State Expert Review Board with regard to design documentation and results of engineering surveys.

Achievements of RusHydro Group's R&D institutions in 2019

Research institute	Project	Achievements
Vedeneyev VNIIG	Assessing the human impact on tailraces with regard to the HPP equipment, hydraulic structures and energy efficiency	Key factors of the human impact on tailraces identified, including their effect on the reliability and safety of the HPP equipment and hydraulic structures. Current environmental and social effects assessed, including the effect of water levels and peak discharges on tailrace processes. Mathematical model developed to project tailrace processes and river bed evolution in a high-water season and as a result of daily runoff. Selected HPPs analyzed to assess the impact of current changes to river morphometry and tailrace processes on the operation of the HPP equipment and hydraulic structures, including the effect of tailrace levels on turbine operation. 3D model developed to project tailrace conjugation in case of flood discharge. Algorithm developed to plan tailrace protective works given the current state of river beds.
	Fostering smaller HPPs	The existing array of data and prior deliverables on hydropower potential of small and medium rivers, including suitable dam sites and watercourses, was analyzed and updated based on advanced information technologies, data modeling, processing and presentation tools and methodologies. Some 300 prospective dam sites scrutinized resulting in a selection of about 20 suitable sites meeting the required criteria, including their front-end engineering design.
	Arctic LNG-2: Wave model tests	Pilot tests run to assess the wave impact on gravity-based structures (GBS) for Arctic LNG-2. Tests were run in a wave tank to assess the wave impact (3D view of wave forces and wave force moment) and runup on GBSs, helping Arctic LNG-2 determine the maximum GBS exposure to wave impact and runup as a result of storms reoccurring once in 10, 100 and 1,000 years.
	Arctic LNG-2: Selection and validation of lightweight concrete and modified normal-density concrete mixtures, including laboratory and field studies	Lightweight and modified concrete mixtures developed and tested at the SAREN construction site in Belokamenka. Concrete pouring tests run to apply commercial batches to a dummy (prototype). Guidelines developed for concrete works on GBSs. Engineering support to concrete works at the GBS construction site. Research conducted to assess the impact of gas condensate on modified concrete used in GBSs and select the best possible protective coating.

Research institute	Project	Achievements
KhETC (the Far Eastern Analytical Center)	DGK, Kamchatskenergo (including Geoterm), Magadanenergo, Sakhalinenergo, Chukotenergo, Yakutskenergo	The health of core equipment analyzed covering 923 units of equipment. 333 power transformers (the highest voltage category of 110 kV and above) and electric power grids evaluated across the above subsidiaries, as well as 29 power lines (ranging from 35 to 110 kV) examined for Chukotenergo (pilot project). In 2019, the Far Eastern Analytical Center issued 544 equipment-related recommendations seeking to significantly improve the health of core equipment, enhance its reliability and reduce breakdowns. Draft guidelines developed to calculate and project the health of TPP equipment (steam boilers, steam turbines, turbine-type generators) and its evolution over time with or without any impact factors, which provides for better repair planning in the medium term.

International activities *[OS]*

Across its international operations, RusHydro Group focuses on attracting innovative technologies contributing to its accelerated development, as well as promoting services of its Research and Design Complex in international markets, including by enhancing competencies in target segments of the global energy sector.

RusHydro Group is committed to long-term and mutually beneficial cooperation with foreign partners in line with Russia's strategic interests.

The key areas of RusHydro Group's international activities include:
- cooperation with foreign energy companies and power equipment manufacturers in the field of construction and modernization of conventional energy projects, maintenance projects;
- implementation of advanced RES-based technologies providing for power supply to isolated areas in the Far Eastern Federal District;
- monitoring of global energy developments.

In December 2019, Hydroinvest and RazTES, part of Tashir Group, signed an agreement (dated December 5, 2019) on the sale of 90% of its shares in MEK which owns Armenia-based Sevan-Hrazdan Cascade HPPs with a total installed capacity of 565 MW. The transaction was approved by both PJSC RusHydro's Board of Directors and Armenia's Public Services Regulatory Commission. On December 12, 2019, Hydroinvest received full payment for its shares. In Q1 2020, we made the required steps and efforts to close the transaction, including refinancing of the EBRD and ADB loans made to MEK, RusHydro's surety contracts with respect of MEK's loans.

On March 10, 2020, with the conditions precedent being satisfied, Hydroinvest transferred 90% of its shares in MEK to the buyer – RazTES. Therefore, RusHydro Group ceased to be a shareholder in MEK. Following the transaction, RusHydro Group covered its historical acquisition costs in full and reduced its consolidated debt by USD 4 mn (on the prevailing exchange rate). As a result, FX risks in RusHydro Group's loan portfolio were eliminated.

International cooperation

RusHydro Group joined efforts with Japan-based Mitsui&Co, Ltd, KOMAIHALTEC Inc and NEDO to construct wind power installations with a single capacity of 300 kW in Ust-Kamchatsk, Kamchatka Territory, in addition to its existing WPPs with a total capacity of 900 kW. RusHydro Group also continued working on its project to erect a 3.9 MW wind-diesel power plant in Tiksi, Republic of Sakha (Yakutia), using wind turbines designed by Komai (Japan) to operate in an Arctic climate and diesel generators made by Yanmar (Japan).

RusHydro Group continued cooperating with Voith Hydro on modernization projects for Saratovskaya HPP and with General Electric on equipment supply for the first stage of Yakutskaya GRES-2.

On a global scale, RusHydro Group is represented by its research and design institutions operating in 12 countries: Uzbekistan, Kyrgyzstan, Tajikistan, Laos, Vietnam, Angola, Turkey, India, Egypt, Hungary, Georgia, and Azerbaijan.

RusHydro Group's research and design institutions focus on:
- hydropower (construction of HPPs and hydraulic structures);
- nuclear power (construction of ancillary hydraulic structures).

Their services also span thermal power, construction of electric power grids, construction of oil and gas production and transportation facilities, including offshore facilities.

In the reporting year, RusHydro entered into an agreement with PowerChina (China) on cooperation for the construction of pumped storage power plants in Russia and collaboration on design and engineering projects.

Interaction with international organizations

RusHydro Group actively cooperates with international governmental and non-governmental organizations, and integration associations, including the Eurasian Economic Commission of the Eurasian Economic Union, CIS Electric Power Council, the Asia-Pacific Economic Cooperation, the Shanghai Cooperation Organization, the BRICS, etc.

Representatives of RusHydro Group participate in committees and working groups of a number of non-profit partnerships and international organizations, to which it is a member, including:
- Global Sustainable Electricity Partnership;
- International Hydropower Association;
- International Commission on Large Dams;
- World Energy Council.

RusHydro is an active contributor to major international forums, exhibitions and conferences related to hydro and heat power, renewable energy, heat supply, and sustainable energy.

In 2019, RusHydro Group acted as a partner of the Eastern Economic Forum which is a reputable platform for establishing and strengthening relations with foreign partners, especially from the Asia-Pacific countries, and attracting investors to energy infrastructure projects in the Far East. RusHydro's representatives took part in the Russian Energy Week international forum and the 2nd Russian-Chinese Energy Business Forum. The St Petersburg International Economic Forum is another traditional platform for RusHydro's presence.

RusHydro Group participates in intergovernmental commissions on trade, economic, scientific, and technical cooperation between Russia and other countries.

RusHydro Group in the International Electrotechnical Commission

The International Electrotechnical Commission (IEC) is an international standards organization made up of all national committees (NCs). It promotes international cooperation on all matters relating to electrical and electronic standards.

As an active contributor, RusHydro Group continued to send its experts to the IEC's working groups. In 2019, the Company's representatives took part in such working groups as WG 25, WG 30, MT 31, WG 14, MT 28, MT 34, and the vibration working group.

Voith Hydro and RusHydro have enjoyed a wonderful partnership for years. We are extremely proud to participate in RusHydro's comprehensive modernization program for hydroelectric power plants the company owns. We're equally pleased to take part in projects to build new hydropower plants by providing our know-how, supplying our top-notch equipment, and sharing our knowledge. By doing so, we can make a considerable contribution to developing Russian hydropower. In 2019, the VolgaHydro plant opened in Balakovo. This company was established by RusHydro and Voith Hydro as a joint venture, and it serves as a good example of our long-lasting successful cooperation.

Dr. Leopold Heninger,

CEO & President of Voith Hydro Europe

Business process digitalization

RusHydro Group approved its Digitalization Program[1] to cut costs on the development and operation of its facilities by revolutionizing, intellectualizing and streamlining governance models based on the analysis of the Company's underlying business processes.

The Program includes 18 digital projects covering virtually all business lines of the Group. Key achievements in 2019:

- digital controls, i.e. modernization of collective output controls across RusHydro's HPPs with a view to making dispatch schedules from the System Operator of the Unified Energy System autoexecutable;
- remote control over switchgears;
- information system up and running to support the Situation Analysis Center.
- closer monitoring of substations.

In 2019, the Company prepared a draft Digital Transformation Blueprint (the Blueprint). The Blueprint is aligned with the Digital Power Industry national project initiated by he Russian Ministry of Energy which aims to leverage digital technologies and platform solutions to revolutionize the energy infrastructure.

RusHydro Group's digital transformation seeks to improve operational efficiency of its core and supporting processes through:
- digital end-to-end technologies;
- all-inclusive digital ecosystem;
- digital corporate culture.

RusHydro Group's objectives for digital transformation are to:
- arrange for generating, selecting and implementing digital initiatives;
- develop a talent pool with required skills;
- implement decision making tools driven by data analytics.

The Blueprint describes the target component model and architecture for RusHydro Group's digital transformation towards 2030. The target model relies on digital end-to-end technologies which help the Company achieve operational excellence.

Its focus areas include establishing the Center of Excellence for Digital Transformation which will be seeking opportunities to improve business processes, analyse data and implement technological initiatives, i.e. options to use and combine end-to-end technologies in business solutions aimed at enhancing transparency, flexibility and efficiency of the Company's underlying processes.

Cooperation for digitalization

RusHydro and Sberbank entered into a strategic cooperation agreement covering, *inter alia*, transactions and investment banking operations whereby the parties intend to learn from experiences of blockchain management, software robotization, cloud solutions, and AI technologies. The agreement also provides for the collaboration on learning software for innovative development.

[1] Order No. 952 of December 10, 2018.

Ensuring good working conditions

HR policy and employee overview

At RusHydro, we place great emphasis on human capital, as we believe that highly skilled, responsible, and diligent employees are key to the Group's successful development. *[103-2]*

The Company's generating facilities in Russia and abroad are staffed with professionals with extensive operational experience and superior technical expertise. RusHydro's HR policy aims to ensure ongoing improvement of labor relations and social development, create efficient and safe work environment, facilitate career growth, and ensure decent living standards and well-being for employees across the Group and its subsidiaries.

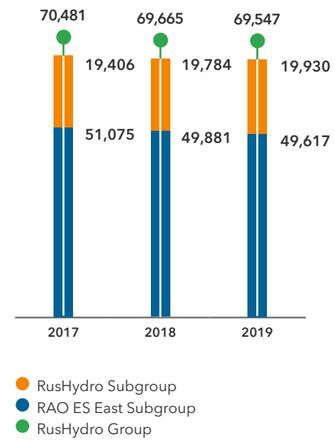
The Company's stable performance allows it to maintain its employee headcount. As at December 31, 2019, RusHydro Group employed 69,547 people, down by 0.17% as compared to the previous reporting period.

RusHydro's workforce structure breakdown by gender, age, and expertise reflects the nature of the industry. Men represent the majority of all employees (68.1%). In the management cohort, there are 3.5 times as many men as women; in the blue-collar category – 4.6 times as many men as women.

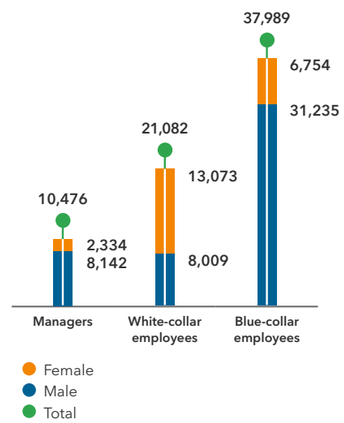
69.5 thousand employees

ensure the robust operation of RusHydro facilities

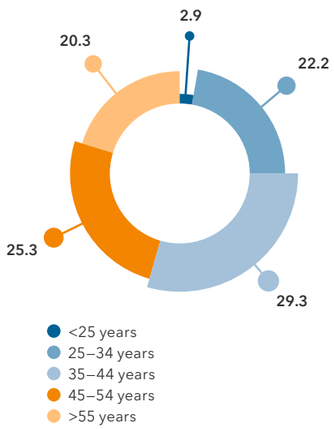
RusHydro Group – headcount, people



Headcount by gender and employee category, people *(405-1)*



Workforce structure by age, % *(405-1)*



Nonetheless, women make up 62.0% of all employees in the white-collar category. 25.1% of RusHydro Group's employees are aged 35 or younger. One of RusHydro Group's priority tasks the area of personnel management is attracting young talent.

Over 76% of RusHydro employees work in the Far Eastern Federal District, where the Group's facilities account for three fourth of total power generation providing electricity and heat transmission and distribution to end users.

Headcount by country and region in 2019 *[102-7], [102-8]*

Region, country	Headcount, people
Russia	
Central Federal District	4,001
Southern Federal District	655
North-Western Federal District	893
Far Eastern Federal District	52,961
Siberian Federal District	3,322
Volga Federal District	3,571
North Caucasian Federal District	3,712
Foreign countries	
Republic of Armenia[1]	402
Republic of Tajikistan	29
Republic of Uzbekistan	1

Percentage of employees who will reach retirement age in the next 5 and 10 years by category[2] *[EU15]*

Indicator	5 years		10 years	
	people	%	people	%
RusHydro Group, including:	**5,481**	**7.9**	**10,356**	**14.9**
Management	822	1.2	1,721	2.5
White-collar employees	1,126	1.6	2,220	3.2
Blue-collar employees	3,533	5.1	6,415	9.2

Seasonal employment

RusHydro Group hires seasonal labor. In 2019, 70 seasonal workers were hired

- to manage children's recreation camp Energetik and for the summer season at the Mukhinka training ground;
- 15 workers were hired for the heating season;
- 1 seasonal worker was hired to control water flows from Lake Sevan;
- 13 workers were hired to restore ice fields and ski trails.

Most of RusHydro employees work full-time (98.6% for RusHydro Subgroup and 99.8% for RAO ES East Subgroup) and under permanent employment contracts (88.7% for RusHydro Subgroup and 97.7% for RAO ES East Subgroup). *[102-8]*

Recruitment *[103-2]*

RusHydro Group recruits staff, including management, on a competitive basis. This approach enables the Company to recruit motivated people who meet the qualification requirements.

Candidates regardless of gender, age and nationality compete for vacancies, where professional skills is the main selection criterion.

In 2019, RusHydro Group hired 13,173 people and created 1,569 new jobs following inauguration of additional generating capacities, increased scope of service projects, and transition to direct contracts with electricity consumers. On top of that, the Company increased electricity sales and opened single billing and payment centers in the Far East.

The employee departure rate[3] varies by region of operation from 3.7% in the Republic of Armenia to 25.8% in the North Caucasus Federal District.

13.2 thousand employees

were recruited in 2019 with **1,569** new workplaces created

[1] In March 2020, RusHydro Group completed the sale of its stake in CJSC MEK in Armenia.

[2] Age of retirement on general or special terms.

[3] Calculated as the number of employees who left the Company divided by the total headcount as at December 31, 2019 and then multiplied by 100.

Total number of employees hired and dismissed at RusHydro Group in 2019, people[1] *[401-1]*

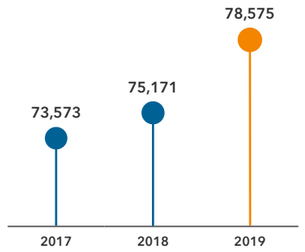
Region	<25 years		25–34 years		35–44 years		45–54 years		>55 years		Total
	M	F	M	F	M	F	M	F	M	F	
Hired											
Central Federal District	48	22	79	59	115	71	61	38	67	31	591
Southern Federal District	8	2	13	0	30	5	15	6	8	1	88
North-Western Federal District	7	7	8	8	5	5	8	1	6	5	60
Far Eastern Federal District	983	301	1,993	862	1,892	1,057	1,321	598	940	490	10,437
Siberian Federal District	24	21	84	79	49	78	59	43	39	35	511
Volga Federal District	68	11	142	26	106	30	50	11	21	8	473
North Caucasian Federal District	166	4	288	15	196	22	181	17	98	5	992
Republic of Armenia	0	0	3	0	4	1	6	0	2	0	16
Republic of Tajikistan	0	0	3	0	0	0	1	0	0	0	4
Republic of Uzbekistan	0	0	0	0	0	0	1	0	0	0	1
Total	**1,304**	**368**	**2,613**	**1,049**	**2,397**	**1,269**	**1,703**	**714**	**1,181**	**575**	**13,173**
Dismissed											
Central Federal District	28	16	112	72	117	92	52	33	128	78	728
Southern Federal District	4	2	17	3	34	8	21	2	21	2	114
North-Western Federal District	1	2	11	12	13	7	4	6	12	17	85
Far Eastern Federal District	531	174	1,538	818	1,662	942	1,064	632	1,544	835	9,740
Siberian Federal District	11	12	82	58	87	89	86	52	108	71	656
Volga Federal District	40	9	101	16	93	20	58	22	70	24	453
North Caucasian Federal District	114	3	269	21	175	26	133	25	169	21	956
Republic of Armenia	0	0	0	1	1	1	1	0	10	1	15
Republic of Tajikistan	0	0	2	0	2	0	2	0	0	0	6
Republic of Uzbekistan	0	0	0	0	0	0	0	0	0	0	0
Total	**729**	**218**	**2,132**	**1,001**	**2,184**	**1,185**	**1,421**	**772**	**2,062**	**1,049**	**12,753**

[1] The indicator does not include subsidiaries with headcount reduction due to reorganization in 2019, in particular: PJSC KamGEK and JSC Geoterm, because the companies (JSC Zaramagskiye HPPs, JSC Blagoveshchenskaya CHPP, and JSC Yakutskaya GRES-2) have not operated after commissioning the projects that are on their balance sheet but are used by respective region's operators. This table does not cover employee movement in the above entities, as they terminated their operations before the end of the reporting period or had no staff as at the end of the reporting period.

Financial motivation and remuneration

RusHydro Group's motivation and remuneration policy seeks to maintain a competitive salary level.

Average monthly salary of employees at RusHydro Group, RUB[1]



The remuneration systems in RusHydro's subsidiaries are in compliance with the Russian labor legislation. They ensure increase in real wages of employees by means of annual wage indexation and financial incentives (bonuses) conditional on the company's results (key performance indicators) and employee performance (individual bonus indicators).

Depending on the region of operation, entry-level wages at RusHydro Group are equal to or 14 times higher than the statutory minimum monthly wage. *[202-1]*

RusHydro Group adheres to the principle of equality and non-discrimination on the basis of gender. We ensure equal base salary for all categories of male and female employees.

Development of employee potential *[103-2]*

Continuous employee training and development has always been a major priority for RusHydro. Our people play an important role in strengthening the Company's internal stability and help us achieve our strategic goals.

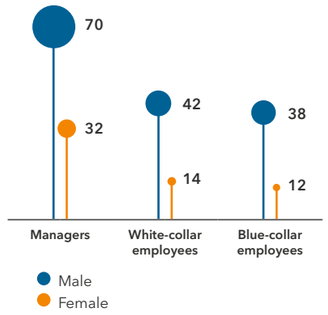
The continuous training system is in place to develop employee competencies to meet their current job requirements and be promoted as part of the talent pool arrangement. The Company offers employees professional retraining opportunities, including in accordance with occupational standards.

Key areas of employee training

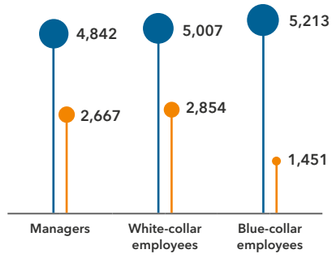
- Statutory training under the requirements of the Federal Environmental, Industrial and Nuclear Supervision Service of Russia, the Federal Service for Labor and Employment, and other controlling authorities
- Technical training required for performing job duties
- Management and leadership trainings
- Project management training
- Corporate governance training
- Graduate degrees
- Second professional degree

[1] Including PJSC RusHydro.

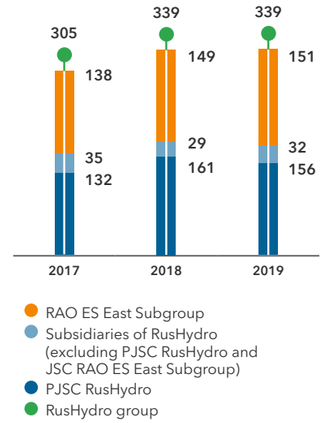
Average hours of training per employe *[404-1]*



Average training expenses, RUB/person



RusHydro Group's personnel development costs, RUB mn



In 2019, RusHydro Group's personnel development costs amounted to RUB 339 mn.
The training is provided by the Corporate Hydropower University, a branch of RusHydro, which helps ensure an extensive personnel coverage and reduce per-course costs.

A total of 3,945 RusHydro and subsidiary employees received training at 97 courses, including:
- professional retraining – 215 employees (15 courses)
- professional development based on industry standards – 615 employees (27 courses);
- professional development – 1,512 employees (11 courses);

As many as 19,559 employees attended distance-learning courses (46 courses).

In addition to training, the Corporate Hydropower University holds competitions

19.6 thousand employees

passed the distant training in **46** courses

and professional excellence contests among RusHydro Group employees. These events are intended to facilitate best practice sharing, identify best performers, and demonstrate the latest technologies. The reporting year saw:
- the second corporate competition for operations staff at cross-connection thermal power plants, which included 40 employees (five teams comprised of eight people each) from DGK, Kamchatskenergo, Magadanenergo, Sakhalinenergo, and Chukotenergo;
- corporate professional excellence competition in maintenance and repair of protective relaying and automation equipment based on WorldSkills standards at RusHydro's branch Volzhskaya HPP and the Volga Training Center of the Corporate Hydropower University. The event involved 21 RusHydro employees and 6 students from industry-oriented universities (Novosibirsk State Technical University, Moscow Power Engineering Institute and its branch in Volzhsky);
- the first corporate engineering case championship of innovation and work improvement proposals called Ratsenergy. Contestants included 137 employees (37 teams) from Yakutskenergo, DGK, and Far Eastern Distribution Company (DRSK).

In 2019, RusHydro Group provided a total of 56,561 training courses to its employees under corporate training programs, further professional education and occupational training programs. The increase in the number of courses compared to 2018 came on the back of large-scale introduction of distance-learning options and implementation of professional standards in RusHydro's operations. The respective action plan for introducing professional standards was developed and approved by RusHydro's Board of Directors for the 2016–2019 period in line with the Russian Government's Directive No. 5119p-P13 dated July 14, 2016. Following initiatives implemented under the action plan, by the end of 2019, 93% of employees met the professional standard requirements introduced in the Company.

Learning and training programs *[404-2]*

Form of training	Frequency
Further professional training	At least once every five years
Occupational training	As required by regulators, in case of retraining for a new career
Occupational retraining	As required for operational reasons to enable employees to do a new type of work or to receive additional qualifications as well as for talent pool training
Corporate trainings	On an as-needed basis when required to solve specific tasks
Internal training in production and technical skills	Annually
Short-term training programs (seminars, conferences, forums)	Annually, with the content depending on business needs
Distance learning	Annually, with the content depending on business needs

The Corporate Hydropower University

The Corporate Hydropower University was founded in December 2007 as a branch of RusHydro. It is a unique institution whose purpose is to build a pool of highly skilled employees by providing educational services and comprehensive specialised training programs for energy industry professionals.

Today, the Corporate Hydropower University serves as RusHydro Group's research, information, and educational (license No. 9472-l dated December 22, 2017) center, while also providing methodological and consulting services for the Group.

Since its inception, the concept of effective knowledge management has been the key focus of the university. It serves as a link between RusHydro Group's branches, contributes to the formation and strengthening of a unified corporate culture, offers training to Company experts and uses experience sharing as an educational tool.

Training at the university unlocks career development opportunities for employees and introduces them to a wide network of industry professionals.

Talent pool

RusHydro Group pays great attention to building a talent pool and training its management staff. Our management talent pool programs seek to:

- ensure a seamless and continuous management succession;
- improve the management recruitment and appointment process;
- encourage personnel to pursue career development;
- incentivize employees to enhance their professional skills and competence.

In 2019, the Company arranged and conducted the following talent pool training modules:

- Professional training in hydropower;
- Professional training in heat power engineering;
- Personal performance improvement;
- Safety culture and occupational safety;

Twenty-nine young professionals were included in RusHydro Group's talent pool based on the results of the Internal Source of Energy-4 competition in 2019. They will be trained under the first Project Management module.

In addition, the talent pool members took part in the 9th International Forum of Young Power Professionals and Industrialists called the Fast and the Furious 2019. The events also included a conference of RusHydro Group's young talent community, during which the project leaders presented the results of their work, formulated new ideas, formed a pool of projects for inclusion into the 2019–2020 work plan, and elected community leaders. The community operates on a voluntary basis to implement joint projects, share experience and practices, and search for new, more efficient approaches and solutions to deliver on RusHydro Group's strategic priorities. The community set the key project streams as follows: Technology Leadership, Professional Development, Health and Safety, Comfortable Environment in the Regions of Operation. Stream coordinators assessed the results of a number of federal and local projects implemented under their stream.

In addition to offering training modules for talent pool candidates, RusHydro Group arranged a number of other events for young employees in 2019, including participation in industry-wide competitions in innovation, the engineering training initiative Technological Leadership School, the Youth Days at the St. Petersburg International Economic Forum, and the 2019 Russian Energy Week International Forum.

The programs are divided into two levels:

Talent pool for any given position

a specially trained group of employees from the headquarters and branches who combine strong leadership competencies and professional skills commensurate with corporate requirements for a particular managerial position

Young talent pool "Internal Source of Energy"

a group of young specialists up to 30 years old, who have been assessed and selected as potential professionals and/or leaders and receive regular targeted training to improve their qualifications

Training of future employees *[OS]*

As a responsible employer, RusHydro Group is interested in developing young professionals in the regions where it operates. The Company makes every effort to generate interest in the industry among young people and create various incentives for young professionals to join the hydropower sector.

To this end, RusHydro interacts with educational institutions all across the regions.

An important part of that interaction is cooperation agreements. In 2019, the Company entered into a cooperation agreement with the Financial University under the Government of the Russian Federation to establish long-term mutually beneficial partnership to train young professionals for RusHydro and conduct methodological and research work aimed at improving educational programs and integrating innovative technologies in the educational process.

RusHydro Group offers career guidance for hydropower students to familiarize them with their future occupation by arranging practical training and helping them to take part in corporate and national competitions and events.

In 2019, 11 post-graduate students and instructors took internships at RusHydro's production facilities as part of the effort to improve the education quality at partner universities. Over 1,700 vocational school and university students (years 3–6) received practical training. In the reporting year, the Company hired 27 university graduates.

More than 50 highly qualified RusHydro staff members teach at universities and take part in the state graduation commissions for the Electrical and Heat Power Engineering discipline. RusHydro's representatives are members of the Federal educational and methodological association for the integrated group of disciplines 13.00.00 Electrical and heat power engineering.

RusHydro Group's Young Employees Community comprises around 100 people.

Personnel assessment

The Corporate Hydropower University and RusHydro's Qualifications Assessment Center established in 2018 conduct employee assessment to create a talent pool.

In 2019, assessment was conducted to select potential candidates for the position of RusHydro Branch Director. Four candidates were identified and included in the talent pool for the director's position, three potential candidates were identified for the position of first deputy branch director – chief engineer, two candidates for the position of deputy chief operations engineer, and two candidates for the position of deputy chief technical engineer.

The Company's employees are tested for adequacy to the job and have their professional, business and personal qualities and achievements assessed. Managers and white-collar employees, regardless of gender, are assessed once every three years.

The Energy Sector Occupational Qualifications Council approved three tools for assessing professional qualifications to be used by RusHydro's Qualifications Assessment Center. RusHydro Group experts took part in the development of the tools.

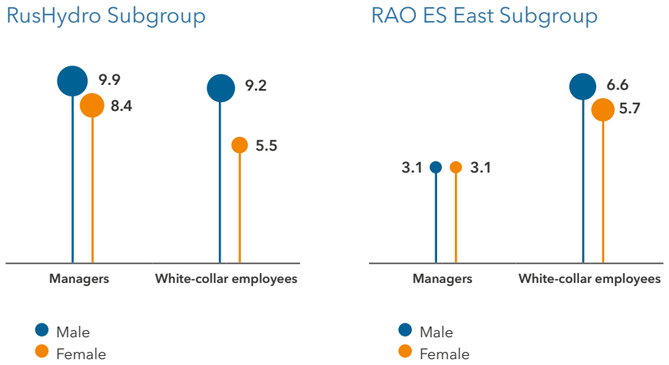
Eighty employees from RusHydro's branches and subsidiaries were assessed by the Qualifications Assessment Center, with 63% successfully passing the test. In 2019, the Energy Sector Occupational Qualifications Council authorized the Qualifications Assessment Center to conduct assessments at two additional sites in the Far Eastern Federal District: RusHydro's Sakhalinenergo and Magadanenergo training centers.

Personnel management system development plans

In 2020, the Qualifications Assessment Center will open additional assessment sites, contribute to the development of the national qualification system by establishing qualification standards in electrical and heat power engineering, provide training for experts, and conduct tests.

Talent pool and personnel development plans for 2020 include:
- the 9th All-Russia HPP Operations Staff Competition;
- professional skills competitions in the repair and maintenance of 110 kV overhead power lines;
- the 2nd Corporate Engineering Case Championship of Innovation and Work Improvement Proposals called Ratsenergy;
- the 3rd Corporate Championship WorldSkills Russia Juniors in Electrical Installations among the children from orphanages sponsored by RusHydro;
- a conference of RusHydro Group's Young Employees Community;
- Corporate Championship WorldSkills Russia Juniors in Smart Electricity Metering Systems;
- the 10th Summer Energy School for high school students interested in hydropower;
- the 11th Energy for Development national contest of students' projects.

Percentage of RusHydro Group employees who undergo periodic performance and career development appraisal (% of total headcount across the specified category), 2019. *[404-3]*



Social policy[1]

RusHydro's Social Policy is an important incentive for furthering the Company's social agenda, promoting social partnership practices, and making the Company a more attractive employer.

Tasks of the social policy:
- creation of an institutional environment for attracting and retaining young talent;
- maximization of employee commitment to RusHydro's goals and principles;
- improvement of occupational relations taking into account the interests of the employer, employees and shareholders, , including the government as the major one.

In its social policy, RusHydro Group follows international standards and best practices in the field of human rights, labor relations, environmental protection, anti-corruption initiatives and stakeholder relations. The Company relies on the Guidance on Social Responsibility (ISO 26000) and the universal principles enshrined in the UNGC Guide to Corporate Sustainability in the field of human rights, labor relations, environmental protection and anti-corruption initiatives, as well as the Social Charter of the Russian Business and the Tariff Agreement for the Electrical Power Industry of the Russian Federation. *[102-12]*

RusHydro Group grants the following benefits to full-time employees *[401-2]*:
- voluntary health insurance;
- insurance against accidents and diseases;
- disability/temporary disability compensation;
- maternity/paternity leave;
- one-off financial aid;
- other payments and benefits in accordance with collective bargaining agreements and in-house rules and regulations.

Corporate pension plans

Private pension coverage is in focus of the Company's social policy. It was introduced in 2008 to employees at RusHydro's branches by offering several pension plans designed to finance the pension savings of different employee groups.

In 2019, the Company revised its pension plan in line with changes in the Russian pension system and approved its new Regulations on Private Pension

Social policy

Work with young people, training programs	Support for families and mothers	Healthcare and healthy lifestyle promotion
Pension coverage	Housing program	Social and professional guidance for orphans

[1] Approved by the Board of Directors (Minutes No. 177 dated April 1, 2013)

Plan for Employees at RusHydro's Branches by Order No. 670 of August 15, 2019.

The private pension plans include:

- The parity plan is jointly financed by an employee and the Company, with their contributions dependant on the employee's period of participation in the program. To support soon-to-retire employees in accumulating pension capital, increased parity ratio has been established.

- The corporate plan (financed by the Company) consisting of:
  - the "Supporting" option – the Company accumulates pension contributions on registered pension accounts of employees who, as a result of the reform of the state pension system, do not receive or have a limited opportunity to form the funded part of the work pension (for employees born before 1966);
  - the "Well-deserved pension" option – the Company accumulates pension savings for employees retiring in 5 years and having a track length of service of at least 10 years in the industry and state awards, including those of the President and Government of the Russian Federation, state agencies, and corporate awards for working on energy facilities during recent 10 years;
  - the "Veterans" option – the Company accumulates pension savings on the pension accounts of its former employees as a supplementary pension for retired employees.

PJSC RusHydro continues to offer its "Co-financing" option where an employee, the Company, and the government jointly finance his or her pension savings.

Private pension plans are in place at 24 subsidiaries, including Hydroremont – VCC, Transport Company RusHydro, Kolymaenergo, DGK, Far Eastern distribution company (DRSK), Far Eastern Energy company (DEK), Kamchatskenergo, etc. The parity plan is underway in 20 subsidiaries, 13 subsidiaries have corporate plan options, predominantly the "Supporting" one, financed, while seven have elected the government's "Co-financing" option.

Improving housing conditions for employees

RusHydro continues implementing a program to improve housing conditions for employees. The priority right to participate in the program is given to young professionals under the age of 30, who do not have their own apartment or house, relocated specialists, key and highly qualified specialists, as well as employees with many children, and single parents.

In 2019, pursuant to Regulations on Improving Employee Housing Conditions at Branches of PJSC RusHydro[1], 109 employees received compensation of interest payments on mortgage loans and lease expenses. Furthermore, in 2019 employee housing programs were introduced at Yakutskenergo, Sakha Energy, and Kolymaenergo.

Security for RusHydro Group's liabilities under pension plans[2] *[201-3]*

Indicator	Value
Net pension liabilities as at December 31, 2019, RUB mn	8,732
Estimated coverage ratio of special assets vs. liabilities under the scheme (fair value of plan assets / current value of plan liabilities), %	10.4

[1] Approved by RusHydro's Order No. 398 of May 13, 2019.

[2] Liabilities under IFRS as appraised by Actuarial and Financial Services LLC.

Corporate culture and volunteering *[OS]*

RusHydro Group's corporate culture is an essential tool reflecting its values and strategic business priorities, as well as leveraging employees' initiatives to deliver on the Company's long-term goals.

RusHydro Group is focused on unlocking the creative potential and promoting strong social commitment of employees. Over 1,000 employees contributed to RusHydro Planet, a video flash mob contest held as part of celebrating the Company's 15th anniversary. As many as 22 creative videos featuring flash mobs participated in the contest to demonstrate both talent and team spirit of the Group's employees on the background of its impressive energy facilities. Awards were conferred following online voting on YouTube.

The Power of Talent, another contest held to celebrate the 15th anniversary, attracted over 160 employees who made 70 stage appearances in three nominations – singing, dancing, and performance art. Online voting determined the final six and the audience award winner, while the jury of experts – prominent art professionals, directors, and actors – chose the winners.

Another important focus is health and healthy lifestyle promotion. Employees of RusHydro Group take part in all kinds of sports events – national projects (Russian Ski Track, Cross-Country Race of the Nation, GTO physical fitness tests), regional competitions (marathons, bicycle and ski races), team sport tournaments (soccer, volleyball, basketball, ice hockey, etc.), spartakiads organized by local trade unions, such as All-Russian Electric Trade Union.

To facilitate communication among employees and award the best athletes, corporate spartakiads were introduced in 2017. Around 1,000 employees of the Headquarters, 18 branches, and 25 subsidiaries took part in the Spartakiad 2019. The Spartakiad program included the Soccer Cup of the Chairman of the Management Board.

Volunteering

RusHydro Group's corporate volunteering has been growing rapidly by attracting more and more engaged employees in events held across Russia. The volunteers greatly contribute to the Company's annual initiatives, such as Charity Fair, Blood Donor's Day, Suitcase of Goodness, The Brightest Christmas Tree, Get Ready for School, and oBEREGAi environmental program.

Suitcase of Goodness 2019

The Suitcase of Goodness is a charity project popular among volunteers from RusHydro Group. The initiative is focused on giving a helping hand to people in distress, including children with serious health conditions and lonely seniors placed in care homes or shelters.

In 2019, employees of RusHydro's Headquarters, the Company's design institutes – NIIES and Hydroproject Institutes, Hydroremont-VCC and RESK united their efforts to contribute to the Suitcase of Goodness.

The volunteers partnered the Gift of Life foundation to provide suitcases of goodness full of toys for kids battling cancer at Dmitry Rogachev National Medical Research Center of Pediatric Hematology, Oncology, and Immunology.

In the run-up to the new school year, suitcases of goodness with stationery were presented to children in need.

Employees of RusHydro Group collected gifts to cater for the basic needs of lonely elderly people from remote care homes and shelters under custody of the Joy in Old Age Foundation.

The Suitcase of Goodness initiative was acclaimed by many employees eager to help others.

PJSC RusHydro is the only company with employees volunteering to train youngsters from orphanages for the WorldSkills Junior championships.

As part of the volunteering and charitable Young Energy program, the Group's employees facilitate social integration and provide professional guidance for children from orphanages. The volunteers mentor the kids, introducing them to power facilities and energy sector, giving them the basic knowledge of electrical installations, and offering career guidance. The Young Energy covers twelve orphanages and involves over 120 volunteers from RusHydro Group.

RusHydro's employees also arrange tours of the Group's facilities. In 2019, more than 4,000 tours were organized for students in an attempt to stir interest in engineering and energy sector professions among the youth.

Annually, RusHydro's volunteers come to schools from across the Company's footprint to give over 15,000 schoolchildren lessons about energy saving technologies and energy security.

Employee rights, trade unions *[103-2] [OS]*

At RusHydro Group, employees are free to fully exercise their right to freedom of association. Most of RusHydro Group's companies have trade unions in place. In 2019, 34,239 employees of RusHydro Group (49% of the headcount) were members of trade unions. *[407-1]*

All of RusHydro Group's generation branches and 40 subsidiaries (96% as at 2019) have collective bargaining agreements in place. *[102-41]*

RusHydro and its 12 subsidiaries are members of the All-Russian Industry Association of Electrical Power Industry Employers "ERA of Russia", while one more subsidiary has joined the Industry Tariff Agreement for the Electrical Power Industry of the Russian Federation.

The Industry Tariff Agreement is crucial for establishing and developing a uniform social partnership framework in the energy sector. The Agreement provides a single standard for regulating social and labor relations in the industry and sets a minimum level of guarantees for employees. All companies that are "ERA of Russia" members comply with the key provisions of the Industry Tariff Agreement pertaining to:

- the amount and frequency of indexation of the minimum monthly rate of pay;
- one-off payments made prior to a paid leave;
- financial assistance provided in the face of certain events (marriage, childbirth, death of close relatives);
- one-off payments to retiring employees;
- compensation to families in cases of work-related fatalities and deaths caused by common diseases or home accidents; and
- other benefits provided for by the Industry Tariff Agreement if the company is financially able to make the payments (50% discount of the regular charge for electricity and heat, compensation of childcare expenses, monthly compensation payments to employees on childcare leave, etc.).

RusHydro provides employee benefits and guarantees that are higher than those set forth in the Industry Tariff Agreement in terms of both scope and amounts paid.

For more details on the Industry Tariff Agreement, visit the website of the "Era of Russia" at: http://www.era-rossii.ru/

The Company complies with the Russian Labor Code specifying the minimum notice period regarding operational changes (at least two months prior to the commencement of relevant events or, where the headcount or staff reduction may result in mass dismissals, at least three month prior to the commencement of relevant events). *[402-1]*

In addition, under the Industry Tariff Agreement, employers must notify trade unions of the expected reorganization within 20 days after the meeting of shareholders adopts relevant resolution, and disclose the schedule of such reorganization. Under collective bargaining agreements of branches and subsidiaries, appropriate provisions of the Industry Tariff Agreement apply to reorganization, and either party may initiate mutual employment consultations.

Occupational health and workplace injuries

Workplace safety management framework

[103-2] [403-1] [403-7]

As RusHydro Group prioritizes health and safety over operating performance, its key occupational safety goals are:

- protecting the life and health of employees in the workplace;
- preventing occupational injuries and diseases;
- creating safe employee behavior patterns and hazard prevention skills;
- improving working conditions on an ongoing basis.

The key areas, directives, and commitments regarding employee safety are set forth in RusHydro Group's Health and Safety Policy[1]. The Company also has the following internal regulations in place:

- Regulations on Occupational and Fire Safety Day at RusHydro's branches[2];
- Temporary Regulations for Authorization of Building and Fitting Contractors and Seconded Staff to Operate at RusHydro's Sites[3];
- other regulations governing RusHydro's production operations and processes[4].

RusHydro Group's occupational health and safety management framework covers management decisions on organizational, technical, sanitary and hygienic, treatment and preventive, medical and social measures aimed at ensuring safety, protection of employee capability, health and life in the workplace, monitoring of employee compliance with occupational safety, fire prevention and industrial safety requirements.

VHI forms a part of the benefits package and covers all the staff. All Group's employees are insured against accidents and diseases. The insurance coverage applies 24/7.

Distribution of responsibility for occupational health and safety management[5] *[403-3]*

Member of the Management Board, First Deputy General Director – Chief Engineer	Industrial and Occupational Safety Department	Health and safety functions at branches and subsidiaries
Management of health and safety activities at hydropower facilities Setting up and ensuring oversight over health and safety activities, including preventive measures to minimize operational risks and protect employee health	Development, oversight and control of occupational health and industrial safety measures at the Company level	Development, oversight and control of occupational health and industrial safety measures directly at branches and subsidiaries

[1] Approved by RusHydro's Order No. 372 of April 20, 2015.
[2] Approved by RusHydro's Order No. 300 of April 25, 2016.
[3] Approved by RusHydro's Order No. 736 of November 13, 2008.
[4] Approved by RusHydro's Order No. 730 of September 10, 2019.
[5] Approved by RusHydro's Order No. 420 of June 15, 2018.

In RusHydro Group, there are no instances of unfair treatment as a result of health condition. No health condition data (personal data) are disclosed to third parties. *[403-3]*

To control and monitor contractors and subcontractors operating at its facilities, RusHydro Group:
- collects data on their employees for granting access to the facilities;
- holds health and safety briefings (including fire safety and safe work practices) for contractors' employees;
- assesses the knowledge of employees authorised to issue instructions and requests, manage and supervise operations; prepares regulatory documents for them;
- develops and implements corrective actions based on the monitoring of contractors' operations. *[OS]*

Key focus areas in health and safety management

Occupational safety training and knowledge assessment *[403-5]*

- Free-of-charge occupational safety training and knowledge assessment for employees and labor safety officers[1]
- Employee training for a new job with internship in the workplace
- Emergency and fire response drills
- Occupational health and safety briefings for in-house and contractor staff
- Special and advanced staff training
- Demonstrations for crews before work authorization
- Occupational Safety Days on a monthly basis
- Thematic events, including those aimed at:
  - preventing injuries in electrical installations, work at height, confined spaces, pressure equipment, construction work, loading and unloading operations, lifting equipment, appliances and mechanisms;
  - improving production safety culture, ensuring traffic safety, training staff for autumn and winter seasons;
  - training staff for maintenance campaigns;
- staff training in safe work methods, adequate use of tools and personal protective equipment;
- assessing training effectiveness based on tests and knowledge checks (protocols) by trainees and managers, training officers, teachers, experts and dedicated assessment teams.

Identification of occupational hazards, assessment of occupational risks and investigation of accidents *[403-2]*

- Special assessment of working conditions to identify occupational hazards Assessment of workplace conditions, definition of their class (subclass)
- Operational control of compliance with sanitary rules as well as sanitation and epidemic prevention measures (laboratory tests, working environment surveys)
- Staff interviews and meetings
- Overviews of injuries in electrical installations and development of injury prevention measures *[403-4]*
- Workplace rounds to identify violations of occupational, industrial and fire safety rules by in-house and contractor staff
- Reviews of proposals from employees, trade unions or other employee authorized bodies aimed at improving working conditions and occupational safety *[403-4]*
- (Occupational) health and safety provisions in formal agreements with trade unions *[403-4]*

Occupational healthcare *[403-6]*

- Social guarantees and compensations to employees working in hazardous (occupational hazards conditions following the special assessment (reduced hours, additional leave, hazard pay)
- Mandatory regular medical and psychiatric examinations (check-ups)
- As part of our VHI coverage:
  - organization and provision of healthcare services in line with the outpatient and inpatient care, and emergency medical aid programs;
  - outpatient care, emergency and routine inpatient treatment, emergency medical aid and foreign travel insurance;
  - preventive measures (employee vaccination and examinations) to reduce threats to human life or health.

[1] Note: except for part-timers and probationary employees.

Plans to improve the H&S management framework

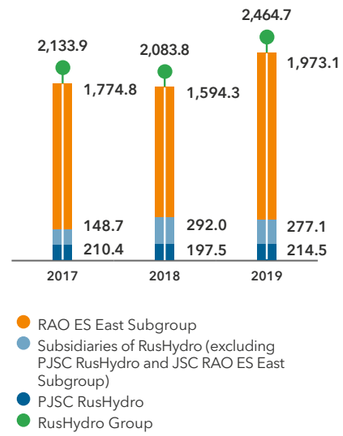
The 2020 calendar plan provides for the following initiatives:
- update the Health and Safety Policy in line with the risk-based approach;
- actively engage employees in occupational health and safety improvements to boost performance and reduce occupational diseases and workplace accidents;
- maintain strong employee competencies, leverage innovative health and safety practices, ensure collaboration and exchange of information between health and safety experts and employees;
- develop and implement effective initiatives to identify, eliminate or limit hazards and risks and preserve employee life and health throughout the employment period.

Health and safety expenses

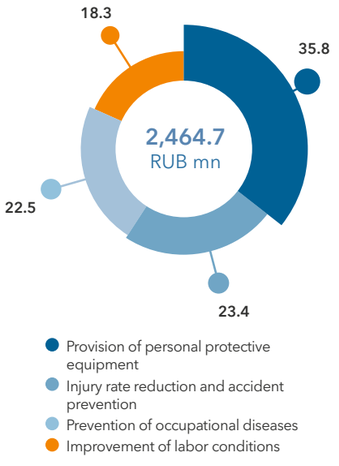
The Company consistently provides funding for health and safety and workplace injury prevention initiatives, including RUB 2,464.7 mn invested during the reporting period.

Higher health and safety expenses are due to an increased supply of personal protective equipment for employees and measures to improve labor conditions and prevent occupational diseases and workplace accidents.

Health and safety expenses, RUB mn



Health and safety expenses in 2019, %



Health and safety measures

In 2019, RusHydro Group's health and safety measures included:
- on-site control of occupational hazards to reduce their impact on employees;
- ensuring compliance with health and safety requirements by contractors' teams engaged by the Company's branches;
- drafting RusHydro Group's accident response guidelines to prevent injuries;
- monthly and quarterly group-wide occupational safety (including fire safety) days with progress reviews;
- measures to prevent occupational injuries;
- mandatory medical examinations of employees working in hazardous and harmful conditions, and implementation of measures recommended in post-examination reports;
- mandatory psychiatric examination of employees engaged in certain activities, including high-hazard operations (with exposure to harmful substances and occupational hazards), or working in a high-risk environment;
- purchasing and restocking first-aid kits;
- potable water supply to employees;
- infectious disease prevention;
- personnel preventive vaccination;

Employee training in occupational health and safety *[403-5]*

In 2019, the Company conducted two 40-hour on-site and off-site training programs:

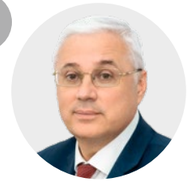
1. occupational health and safety for managers and specialists (28 hours of theory and 12 hours of practice);
2. safe practice of high-altitude operations (18 hours of theory and 22 hours of practice).

The first program is intended for employees responsible for health and safety measures, while the second one is for those in charge of organizing safe high-altitude operations, holding briefings, and drafting the plan for employee evacuation and rescue in case of emergency.

The above programs covered a total of 6,731 people, including 634 employees trained at the Corporate Hydropower University, a branch of RusHydro. The knowledge absorption was assessed as 9.47 and 9.55 out of 10 for each of the programs respectively.

The training is free for employees of the Group's branches and Headquarters. On-site training is conducted during office hours, while for off-site training the employees can choose some working time within a specified period at their convenience.

- health and safety briefings;
- inspections of workplaces;
- setting health and safety rooms and areas across the Company, purchasing stands, equipment and simulators, visual aids, learning software;
- buying technical standards documents, including their electronic versions;
- holding health and safety trainings and employee knowledge checks;
- training employees on first aid to the injured using robot simulators and distance learning;
- overviews of injuries in the Russian electric power industry;
- arranging for employee visits to sports facilities and swimming pools;
- centralized procurement of protective clothing and footwear in the uniform corporate style for the Company's subsidiaries;
- providing employees with protective clothing, footwear and personal protective equipment (PPE);
- organizing PPE storage, care, repair and replacement;
- providing employees with detergents and decontaminants;
- providing milk or equivalent products to employees working in hazardous conditions;
- disinsection and deratization measures;
- assessment of working conditions and implementation of follow-up action plans to provide better and healthier working conditions.



Hydropower and electricity generation from renewable sources are key components of the technological core of the future of the business. That means that RusHydro's role in Russia's energy production will only expand. With RusHydro's support, the Institute of Hydropower and Renewable Energy Sources was established at the National Research University Moscow Power Engineering Institute (MPEI). RusHydro's strong ties with our university in training personnel for responsible production activities strengthen the position of Russia's leading energy holding. Many MPEI graduates have gone on to enjoy successful careers at RusHydro Group, working in electricity generation, networks, and engineering centers.

Nikolay Rogalev,

Dean of National Research University Moscow Power Engineering Institute

Assessment of workplace conditions and identification of occupational hazards

One of the Company's priorities is to make sure that workplaces comply with statutory health and safety requirements. The assessment of 100% workplaces takes place as scheduled.

According to the special assessment of working conditions in 2019, 29,846 employees of RusHydro Group had workplaces with occupational hazards exceeding the regulatory (hygienic) threshold.

In 2019, RusHydro Group recorded three occupational diseases affecting one skilled specialist (a man) and two workers (a man and a woman). Occupational diseases (hazards) are caused by noise and labor severity. *[403-10]*

In each case, the Company issued a relevant report followed by stricter control over medical examinations to enable early diagnosis and minimize the risks of developing chronic diseases.

No occupational diseases were recorded by RusHydro's contractors in the reporting period.

Number of casualties

Year	Indicator	PJSC RusHydro	RusHydro (excluding JSC RAO ES East Subgroup)	RAO ES East Subgroup	Total
2017	Number of injuries, employees	0	12	21	33
	incl. fatalities	0	1	3	4
	Rate of recordable work-related injuries	0.00	0.96	0.43	0.49
2018	Number of injuries, employees	5	12	24	41
	incl. fatalities	0	2	4	6
	Rate of recordable work-related injuries	1.07	0.89	0.52	0.64
2019	Number of injuries, employees	3	5	20	28
	incl. fatalities	0	0	1	1
	Rate of recordable work-related injuries	0.039	0.065	0.263	0.368

[1] In accordance with Article 14 of Federal Law No. 426-FZ On the Special Assessment of Working Conditions dated December 28, 2013

Injuries and occupational diseases *[OS]*

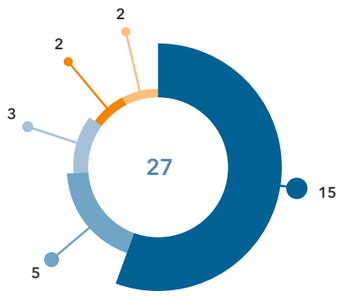
In 2019, RusHydro Group had 26 accidents to their own staff that resulted in 28 injuries, including one fatality. The accidents caused injuries to two managers (men), six skilled specialists (women), and 20 workers (men). *[403–9]*

Injuries mainly occurred due to breaches of work management requirements by persons in charge. Each accident was investigated, with urgent preventive measures put in place.

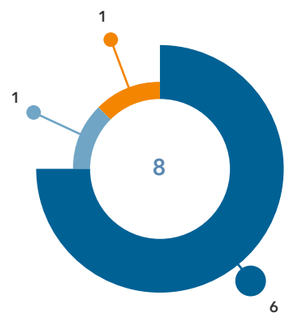
In 2019, the hazards that resulted in severe injuries included:
- mechanical hazards (four severe injuries);
- electrical hazards (two severe injuries);
- thermal hazards (two severe injuries).

In 2019, five injuries (bruising and bone fractures) were recorded among workers (men) of Contractors operating at RusHydro Group's facilities where the Company is responsible for ensuring safe working conditions.

Number and types of injuries in 2019



Categories of employees with fatal and severe injuries in 2019



In connection with all the accidents, the Company took urgent measures and developed an action plan to eliminate the impact on others.

Social initiatives and contribution to the growth of local communities

Charity and social projects *[103-2] [203-1]*

RusHydro Group plays a significant role in the development of the regions where it operates. The projects we initiate or sponsor for the benefit of the communities target tangible problems, help boost economic and social development, and contribute to improved standards of living.

The key objective of RusHydro's social and charity activities is to set the stage for sustainable development in the Group's regions of operation, foster a favorable social environment and help unlock Russia's spiritual, scientific, technical and intellectual potential.

RusHydro's charitable priorities include:

- Education
- Environment
- Healthcare
- Sports
- Culture
- Support of social institutions and organizations
- Initiatives promoting social and economic development of Russian regions
- Support of charitable foundations and non-profit organizations
- Improving the living standards of low-income households and people in need

The Company's charitable activities are governed by its Charity and Sponsorship Policy[1].

Every year, the Board of Directors approves the Company's Charity and Sponsorship Program[2], as well as the progress and spending report[3].

In 2019, RusHydro allocated RUB 1.38 bn to its Charity and Sponsorship Program. In addition to the Program, the Company's subsidiaries provided more than RUB 100 mn in charity support.

Education

Support for educational institutions translates into technical upgrade initiatives and implementation of educational projects. In 2019, RusHydro provided financial support to over 80 educational institutions for kids and teenagers, including kindergartens, secondary schools, music schools and community centers, and centers of additional education and leisure for children and youth.

In 2019, RusHydro rendered financial aid to Russian Children's Center Ocean in Vladivostok and Educational Center Sirius in Sochi to help them arrange energy project contests and educational programs for gifted youth from across the country. The Company also contributed to renovating the Renewable Energy educational platform in the children's career guidance center Masterslavl.

During the reporting year, RusHydro provided financial support to six industry-oriented universities. Among other things, the Company implemented the project to create corporate information zones in the National Research University Moscow Power Engineering Institute and Far Eastern Federal University,

RusHydro staged the 10th edition of the Energy for Development contest for undergraduates and postgraduates of technical universities, aiming to put in place a long-term framework for consistent professional training in the energy sector and facilitate industry-specific education.

Over the years, more than 1,000 undergraduates and postgraduates submitted their applications to take part in the contest, with dozens of winners opting to pursue a career in the energy sector after the competition.

[1] Approved by the Board of Directors, Minutes No. 280 of December 7, 2019.

[2] Minutes No. 283 of February 21, 2019, updated Program based on minutes No. 285 of March 29, 2019, No. 289 of May 20, 2019, No. 292 of June 21, 2019, and No. 29 of September 23, 2019.

[3] Minutes No. 304 of February 12, 2020.

which allow students to relax between classes while learning about the energy industry and RysHydro's activities.

Environment

In the reporting period, the Company provided assistance to 19 specially protected natural areas, including nature reserves, protected areas and national parks. RusHydro Group allocates funds to support:

- initiatives aimed at protecting ecosystems and natural habitats, and saving rare and endangered animal and bird species (the Siberian tiger, snow leopard, Persian leopard, wisent, Caucasian tur, Siberian musk deer, white-tailed eagle, Manchurian, Japanese and white-naped cranes, grus, etc.);
- efforts to raise environmental awareness;
- research;
- infrastructure and facilities of specially protected natural areas.

For details on progress under environmental initiatives,see the Biodiversity Conservation section

Healthcare

Every year, in the run-up to the Energy Worker's Day, RusHydro holds an Energy Born charity event, aiming to provide maternity hospitals, perinatal care centers and maternity wards of inpatient facilities from across the Company's footprint with state-of-the-art medical equipment.

In 2019, the Group purchased, delivered and installed advanced equipment and supplies for laboratories and diagnostics, intensive care, midwifery and neonatology units in 23 healthcare institutions from 17 regions. RusHydro also procured ventilators, neonatal incubators, cardiotocographs / fetal monitors, neonatal phototherapy and intensive care units, and bactericidal irradiators as required by the healthcare facilities. Thanks to the help of RusHydro, doctors now have access to state-of-the-art hysteroscopic resectoscopes, electrical diagnostic and treatment tools complete with video recorders and monitors, ultrasound equipment, etc.

In the reporting year the Group also provided financing for other dedicated healthcare institutions to purchase medical equipment and carry out maintenance works.

Sports

In 2019, more than 30 sports schools and football, basketball, hockey, tennis, chess, water sports and martial arts clubs from the Company's regions of operation became eligible for charitable assistance.

RusHydro Group provided financial and organizational support for an interregional table tennis tournament, the Cup of the Rybinsk Sea sailing competition, Golden Puck children's hockey contest and Interregional Swimming Tournament.

Financing was also granted to the Russian Union of Martial Arts, the Russian Judo Federation, the Russian Whitewater Slalom Federation, the Yenisei-STM Rugby Club and the Perm Territory's Sports Foundation for Promotion of the Kyokushin.

Culture

Over 100

libraries, boarding schools, orphanages and educational institutions received books as a gift from the Company

Cooperation with the Russian Geographical Society is one of RusHydro's major projects in the realm of culture. In 2019, RusHydro Group provided financial assistance for the Society to put in place a grant fund designed to promote research on natural phenomena and rare animal species, while also supporting the organization's publishing activities and environmental and geographical expeditions.

Financing was also allocated to ensure the preservation of cultural and historical heritage by upgrading 13 cultural institutions from ten Russian regions, including museums, community centers, and libraries. The financial assistance provided by the Company made it possible to stage a large number of creative festivals, contests and exhibitions, and to promote book publishing.

In partnership with Dom Detskoy Knigi, a foundation promoting children's literature and reading culture, we published our seventh book for kids titled "Princess Water".

The book is a compilation of legends on rivers scattered throughout the Group's regions of operation in Russia – everywhere from Murmansk to Petropavlovsk-Kamchatsky. More than 100 libraries, boarding schools, orphanages and educational institutions received these books as a gift from the Company.

Support of social institutions and organizations

RusHydro pays close attention to the problems of children without parental care and kids with special needs.

In 2019, more than 90 social establishments for children received financial aid from the Group. The Company's charitable assistance helped upgrade and refurbish the institutions' facilities, prepare orphan undergraduates for adult life, furnish playgrounds, including those for children with special needs, purchase special learning equipment, set up rehabilitation courses, and organize educational excursions and sports competitions.

On top of that, in 2019, the Group provided assistance to a number of social and rehabilitation centers, nursing homes for lonely seniors and disabled people, and geriatric centers. By tapping into RusHydro's funds, the social institutions were able to implement a variety of nursing and recreational initiatives, provide support in the management of mental health conditions and adjustment to the social environment, organize leisure activities, and offer help in seeking employment and addressing ot her problems of socially vulnerable groups.

In 2018, RusHydro Group launched a partnership with Live Now, a foundation supporting patients suffering from ALS and other motor neuron diseases.

To receive financial aid, the Foundation sends a request to the Company. After having considered the request, RusHydro enters into a donation agreement to sponsor the Foundation's statutory activities in line with the Charity and Sponsorship Program approved by the Group's Board of Directors. This framework enables the Company to control all stages of project implementation.

The allocated funds are used to organize medical consultations for patients from Russian regions, finance inpatient and home-based nursing services and purchase, maintain and repair special medical equipment.

Upon the completion of projects, the Foundation submits a report on appropriate use of allocated funds. *[EC] [OS]*

Initiatives promoting social and economic development of Russian regions

In 2019, the Company provided financing to purchase educational equipment and furniture for a pre-university school and a boarding school for gifted children in Saratov, refurbish a pedestrian area in a municipal park of Balakovo, and support a number of socially significant events scheduled to coincide with landmarks in the history of RusHydro and regions of its operation. Additionally, hundreds of municipal and regional healthcare, educational, cultural and sports facilities annually become eligible for RusHydro's support under social infrastructure development programs. Educational institutions benefit from the Company's financial aid to make repairs, buy necessary equipment and materials, office machinery and furniture, and stage dedicated events.

Support of charitable foundations and non-profit organizations *[EC]*

RusHydro Group allocated funds to support more than 30 charitable foundations and non-profit organizations at the regional and national levels.

In 2019, charitable foundations benefiting from the Company's financial assistance included the Vera Hospice Charity Fund, Center for Humanitarian Programs, Live Now, Joy in

Old Age, and Creation charity organizations, regional charitable foundation “Illustrated Books for Little Blind Children”, and regional branches of the Russian Childhood Foundation.

In its regions of operation, the Company supports local charitable foundations such as Your Choice, Pure Heart, Prometheus, Dedmorozim Children's Charity Foundation, Cheremushki Sports and Creativity Promotion Foundation, Primula Environmental Foundation, etc.

Improving the living standards of low income households and people in need

As part of this initiative, financial assistance was provided to people in distress from RusHydro’s regions of operation, including adults and children with serious health conditions who needed urgent or costly medical help or rehabilitation, and veterans of war and labor. Targeted aid is allocated to the veterans of the energy sector and workers with outstanding achievements to help them purchase medications, pay for their rehabilitation therapies, and buy home appliances. Every year, RusHydro stages festive events and purchases gifts to mark the World War II Victory Day, Energy Worker's Day, New Year and other celebrations.

Investments in socially significant infrastructure *[203-2]*

15

socially significant facilities were gratuitously transferred to the property of Russian Regions in 2019

In 2019, RusHydro’s Board of Directors approved a gratuitous transfer of rights over an infectious disease clinic (part of the Srednekanskaya Central District Hospital in the settlement of Seymchan) to the government of the Magadan Region.

The clinic had been built as a social extension of the Ust-Srednekanskaya HPP construction project. The transfer helped improve the quality of medical services in the area and overcome the shortage of inpatient beds.

The building had been designed and constructed to meet the latest healthcare and technical requirements.

Energy facilities constructed by RusHydro Group represent an important contribution to the development of social infrastructure in the regions of operation. By eliminating energy shortages, reducing generation costs and minimising grid losses, the Company ensures a stable supply of energy and heat for its consumers and higher tax revenues at every government level, while also addressing local unemployment issues by creating additional jobs at new facilities.

In addition to energy facilities that are socially significant by their very nature, RusHydro transfers the rights over social and infrastructure facilities constructed or financed by the Company to regions of its operation, producing a considerable positive impact on local communities and economies.

In 2019, RusHydro Group transferred ownership of 15 socially significant facilities to regions of the Russian Federation. The transferred infrastructure facilities included a dam, motorway bridges, pedestrian and cycling lanes, a motorway, an infectious disease clinic, and heat supply networks, while the social facilities included two modular shift camp dormitories, a firefighting depot and buildings accommodating a variety of establishments, including laboratories of the Siberian Federal University. *[EC]*

For details on construction activities under key investment projects, see the Construction and modernization of production facilities section

Environmental protection

As the largest Russian energy holding and a major user of national water resources, RusHydro Group takes a responsible approach to operating and developing power generation capacities, working to preserving the environment and biodiversity.

Ongoing modernization initiatives together with energy conservation and higher energy efficiency, advancement of renewable energy and innovative development are set to reduce negative environmental footprint and increase the Company’s shareholder value.

Environmental policy and compliance

Environmental impact management

RusHydro Group adheres to environment protection and sustainable use of natural resources while observing the approved Environmental Policy, which is based on Russia's national policy for environmentally sustainable development and safety, the Constitution of the Russian Federation, federal laws and regulations, and international treaties of the Russian Federation governing the same.

RusHydro Group also takes into account global standards for environmental management and international best practices applicable to energy projects.

While planning and carrying out its operations, the Group abides by the precautionary approach adopted by the UN Conference on Environment and Development in 1992[1].

The Environmental Policy takes into account the specific operating environment of RusHydro Group’s hydropower and heat assets. The Policy sets out KPI seeking to increase the installed capacity of low-carbon generation, reduce direct and per unit greenhouse gas emissions, prevent species elimination as a result of operating activities, additionally train staff in environmental protection, etc.

The plan by 2025 is to increase the installed capacity of low-carbon generation by 632.3 MW and reduce greenhouse gas emissions by more than 6% as compared to 2015 (base year recommended by the Russian Ministry of Economic Development). The intensity of CO_2 emissions is set to decrease 7.7% in the electricity generation segment and 6.4% in the heat production segment. *[OS]*

The Environmental Policy also addresses today's challenges and trends in environmental protection. The document incorporated proposals by federal government authorities: Ministry of Energy, Ministry of Economic Development and the Ministry of Natural Resources and Environment, as well as the UN Sustainable Development Goals.

The Environmental Policy is binding on all companies within RusHydro Group perimeter as well as entities that collaborate with the Group on contractual terms.

Environmental impact management framework

RusHydro Group

RusHydro's Executive Office

↓

Member of the Management Board, First Deputy General Director – Chief Engineer

↓

Department of Technical Regulation and Ecology

↓

Environmental protection specialists of the Groups branches and subsidiaries

[1] “Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.” (Rio Declaration on Environment and Development, 1992).

Enablers of Environmental Policy

In 2019, RusHydro Group approved the Implementation Program for the Environmental Policy, which details measures and activities of the Headquarters, branches, and subsidiaries. The program was developed for the three-year period from 2019 to 2021.

Also, as part of the Rehabilitation and Modernization Program, RusHydro procures to upgrade and replace hydropower units and repair HPP turbines, including to prevent environmental contamination in the course of its operations. Bank protection efforts are ongoing to maintain water conservation zones in good repair. RusHydro Group seeks to replace oil-filled electrical equipment with vacuum or SF6 gas, which contains no oil, or with that with lower oil content.

Some of RusHydro's subsidiaries undergo an annual audit to confirm their compliance with the ISO 14001 environmental management system. The ISO 14001:2015 compliance certificates are held by DGK, DRSK, Yakutskenergo, and Sakhaenergo.

2019 saw no incidents or accidents causing environmental damage within RusHydro Group.

For key environmental achievements of 2019 as part of RusHydro Group's Implementation Program for the Environmental Policy, see Appendix No. 22.

RusHydro Group also employs other initiatives to reduce its negative environmental footprint, including:

- construction of scrap collection sites;
- rehabilitation of storm drains at HPP buildings;
- collection of floating rubbish and transfer to waste disposal facilities;
- landscaping and planting of greenery;

Technical regulations for environmental safety

RusHydro adheres to a number of technical standards providing for environmental safety. The standards also apply to RusHydro's subsidiaries.

To assess the impact on environment and ensure industrial control, RusHydro introduced corporate standards such as Hydroelectric Power Plants: Environment Protection, Environmental Impact Assessment. Guidelines and Hydroelectric Power Plants: Industrial Environmental Control. Standards and Requirements.

National Standard GOST R 58 224-2018 Hydroelectric Power Plants. Loss Allowance for Turbine Oil While in Operation. Method of Calculation for Turbine Oil Losses While in Operation applies to both the Company's day-to-day management and state supervision.

Environmental impact assessment

RusHydro Group ensures environmental safety at all stages of the life cycle of its industrial facilities. Prior to starting a new project or modifying the existing facilities (at the project initiation and design stages), the Company procures to assess their impact on environment.

In 2019, public hearings were held to discuss the deliverables from the assessment of the environmental impact of Artyomovskaya CHPP-2 construction, following which it was concluded that the assessment deliverables and the construction design required no further change.

For information on assessment and controls over environmental impact at life cycle stages for RusHydro Group's projects, see Appendix No. 22.

Ensuring compliance with environmental laws

It is mandatory for the Company to develop and obtain government approvals for standards applicable during the construction and operation of its facilities which establish permissible pollutant emission and discharge limits, waste generation and disposal limits as well as design documentation related to environmental protection, which comprise initiatives to prevent and reduce negative environmental footprint, including measures to preserve biodiversity.

These documents are to be approved by the respective government agencies in charge of environmental protection, including *[103-2]*:

- Ministry of Natural Resources and Environment of the Russian Federation;
- Federal Service for Supervision over Natural Resources Management;
- Federal Agency for Water Resources;
- Federal Fishery Agency;
- Federal Service for Supervision over Consumer Rights Protection and Human Welfare.

The Company relies on the documents so approved to carry on its business in compliance with environmental protection standards.

Cooperation in environmental protection

RusHydro Group actively cooperates with international organizations on matters of environment protection and conservation of biological diversity. The Group supports industry-specific and international initiatives to reduce the man-made load on the environment and strives to adopt best practices for the successful implementation of its environmental projects.

Scientific and Technical Council

RusHydro Group has a permanent expert collective body, the Scientific and Technical Council (STC), which provides for a unified system of technical expertise ensuring that R&D solutions, projects and programs are examined for compliance with the Technical Policy and applicable technical regulations.

To ensure environmental safety while developing new technical solutions, the Company established the STC's task force on water reservoirs and environmental protection. It includes representatives of R&D institutions, Institute for Water Problems of the Russian Academy of Sciences, Department of Land Hydrology of the Moscow State University, Papanin Institute for Biology of Inland Waters Russian Academy of Sciences, and the Federal Agency for Water Resources.

PJSC RusHydro also acted as an initiator and an active participant of the project implemented by the Association "Hydropower of Russia" to develop the Methodological Guidelines for Assessing Impacts on Water Bioresources in the Construction and Operation of Hydropower Plants. The project, executed by the Analytical Center under the Government of the Russian Federation and the B.E.Vedeneev VNIIG, was completed in December 2019 after its consideration and approval at RTC of PJSC RusHydro. *[OS]*

In 2019, RusHydro continued its membership in international industry associations such as the Centre for Energy Advancement through Technological Innovation (CEATI), the International Hydropower Association (IHA) and the International Commission on Large Dams (ICOLD). Membership in these organizations enables the Company to interact with the world community on the safe, innovative and sustainable development of hydropower.

To promote the principles of sustainable development in Russia, the Company contributes to the implementation of the Hydropower Sustainability Assessment Protocol (HSAP) as a statutory instrument.

In 2019, RusHydro was named among the leaders of environmental transparency and responsibility ranking of Russian heat and power generating enterprises compiled by World Wide Fund for Nature (WWF) Russia.

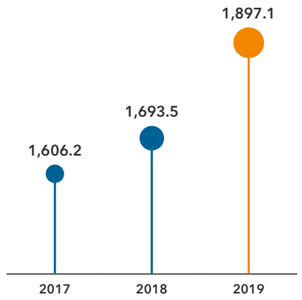
In 2013–2014, RusHydro was testing the HSAP with respect to some HPP facilities being designed or constructed. This helped identify a number of inconsistencies which require the improvement of internal decision-making processes. First of all, changes should affect such processes as stakeholder relations, protection of cultural heritage sites and biodiversity conservation.

To this end, the Company established a working group tasked with developing a methodological approach to ensuring and evaluating compliance of HPP projects with the criteria for sustainable development. RusHydro intends to prepare a local protocol ensuring compliance with the above criteria and start promoting its adoption as a statutory instrument in Russia.

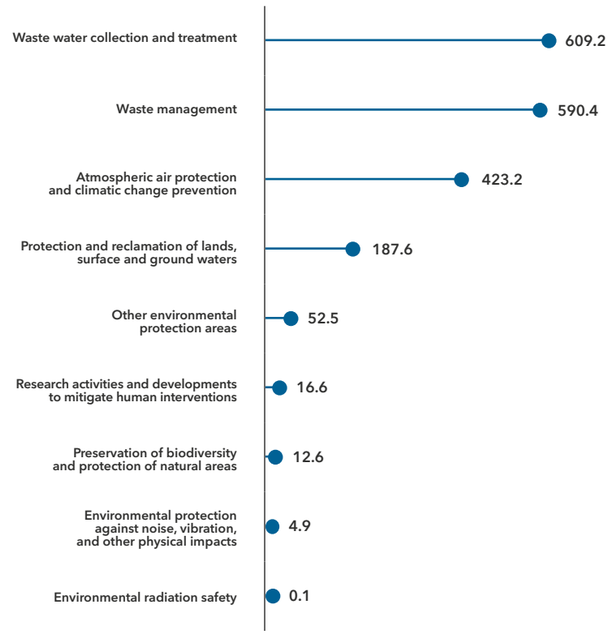
Investments in environmental protection

In 2019, total investments in environmental protection stood at RUB 1,897 mn (an increase of 12.0% y-o-y), reflecting expanded focus on making operational processes more environmentally friendly and on preventing a negative impact on the nature.

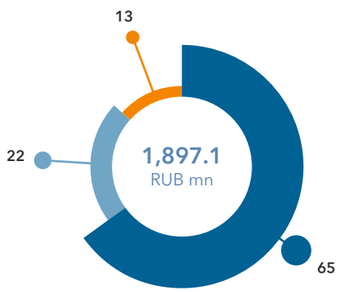
RusHydro Group's environmental protection expenses and investments, RUB mn



RusHydro Group's environmental expenses and investments by area, RUB mn



RusHydro Group's expenses and investments by type of costs in 2019, %



Environmental penalties and non-financial sanctions

Metric	2017	2018	2019
Penalties, RUB mn	1.4	2.3	1.6
Number of non-financial sanctions	60	58	35

RusHydro Group's pollution charges in 2019, RUB mn

Metric	2018	2019
Charges for air pollutant emissions by on-site facilities, including:	**27.8**	**22.2**
for volume or amount of air pollutant emissions within permissible limits	16.9	18.0
for volume or amount of air pollutant emissions within temporary permissible limits	0.7	-
for volume or amount of emissions in excess of approved limits	10.2	4.2
Charges for pollutant discharges into water bodies, including:	**7.3**	**13.5**
for volume or amount of discharges within permissible limits	0.4	0.5
for volume or amount of discharges within temporary permissible limits	0	0
for volume or amount of discharges in excess of approved limits	6.9	13.0
Charge for industrial and consumer waste disposal, including:	**63.8**	**56.1**
for waste disposal within permissible limits	56.9	52.7
for industrial and consumer waste disposal in excess of approved limits or limits set forth by the environmental impact statement and reports on industrial and consumer waste generation, usage, decontamination, and disposal.	6.9	3.4
Total	**98.9**	**91.8**

Energy consumption and efficiency

Energy consumption and efficiency

The Energy Efficiency and Development national program[1] sets out three key areas for improving energy efficiency across all types of energy resources:
- energy saving and improving energy efficiency;
- development and modernization of the electric power industry; and
- promotion of renewables.

RusHydro Group's energy saving initiatives are governed by Federal Law No. 261-FZ On Energy Saving and Improving Energy Efficiency and Amendments to Certain Legislative Acts of the Russian Federation dated November 23, 2009 and the respective programs of energy saving and increased energy efficiency (ESEEP).

In 2019, RAO ES East's companies engaged in regulated activities[2] updated and approved their programs of energy saving and increased energy efficiency for 2020–2025[3].

Energy efficiency of hydropower

Hydropower is a clean source of energy, causing no emissions of combustion products into the air and no greenhouse effect. By relying on water as a renewable source of energy, hydroelectric power plants are able to generate considerable amounts of power while maintaining relatively low per unit costs and sparing the use of fossil fuel.

Also, HPPs have a number properties that drive their efficiency:
- high flexibility: ability to cover peak loads in power consumption schedules, which is a mandatory condition for joint operations with thermal and nuclear power plants as the basic sources of generation;
- use of highly reliable equipment with superior energy conversion efficiency;
- water resources of HPP water reservoirs are used for the purposes of water transportation, irrigation, water supplies, recreation, and fishery;

[1] Approved by the Russian Government's Resolution No. 321 dated April 15, 2014.

[2] JSC DGK, JSC DRSK, PJSC Kamchatskenergo, PJSC Magadanenergo, PJSC Mobile Energy, PJSC Sakhalinenergo, JSC Sakhaenergo, JSC Teploenergoservis, JSC Chukotenergo, JSC UESK, PJSC Yakutskenergo.

[3] Based on the updated Regulations for Developing, Negotiating, Approving, Implementing and Monitoring Programs for Energy Saving and Improving Energy Efficiency for Subsidiaries Engaged in Regulated Activities (approved by the Company's Order No. 462 of July 2, 2018).

- hydraulic facilities provide for river runoff control and mitigate the risk of severe floods, while water accumulation in the reservoirs helps to guarantee water supplies in periods of drought.

Because of their many functions, hydroelectric power plants and water reservoirs sometimes have to meet direct opposite water requirements, which makes efficiency analysis a challenge. For example, discharge of water reduces the overall energy efficiency but provides a vital river runoff. Moreover, the generators operating in the synchronous compensator mode also reduce the overall efficiency but ensures the stability of the energy system as a whole.

The focus in energy efficiency assessments for HPPs is on their own consumption, since no fuel is required for power generation.

Key areas for improving RusHydro's energy efficiency:
- modernization of interior and exterior, routine and emergency lighting systems (partially based on automatic controls);
- modernization of HVAC systems for powerhouses and auxiliary buildings (including weather controls);
- rehabilitation of heated buildings and facilities, elimination of warm air leaks, reduction in indoor infiltration;
- rehabilitation of heating and hot water supply systems, electric boiler houses, modernization of pump stations, elevators (replacing mechanisms for frequency-regulated drives);
- replacement of hydropower units with ones with a higher efficiency rate, modernization of automatic control and excitation systems;
- modernization and rehabilitation of hydraulic structures, including service, emergency and repair gates, phased rehabilitation of water intakes and industrial water disposal areas;
- replacement of power transformers with energy saving ones, replacement of air circuit breakers with gas-insulated ones (as compressors are phased out).

Better use of water resources

Better usage of water resources is another way to improve the HPP energy efficiency to reduce water discharge above turbine flows, which contributes to increased hydropower generation.

RusHydro, JSC SO UPS and PJSC FGC UES teamed up to optimize the repair schedules for power generation facilities and grids at Sayano-Shushenskaya HPP, which translated into an additional output thanks to the ruling out of water discharge above turbine flows.

RusHydro efficiently redistributed automatic load-frequency control (ALFC) reserves at the Volga-Kama cascade in a high-water season, which translated into additional output of power.

Energy efficiency of heat

The Group's key ESEEP initiatives in 2019 included:
- rehabilitation of power generation facilities (turbo generators, boiler units, secondary equipment) for better cost effectiveness, including steam path improvement, heating surface replacement, sealing off air gas ducts, etc.;
- rehabilitation of boiler houses, including boiler replacement;
- rehabilitation of heat pipelines using heat proof materials;
- replacing existing inefficient capacities through construction and rehabilitation of diesel power plants;
- modernization of lighting systems based on high-performance illuminants and light control systems;
- modernization and scheduled maintenance with a view to extending the operational life of the equipment.

To reduce grid losses and optimize energy consumption, the Company kept on installing commercial-grade electricity and heat meters while also modernizing and introducing the automated electric power accounting system.

In 2019, the key initiatives aimed at better energy efficiency and implemented at other subsidiaries not engaged in regulated activities included:
- modernization of lighting systems based on high-performance illuminants and light control systems;
- replacement of heating elements at new electric boiler houses with induction based ones;
- heat insulation of pipes in the building heating system;
- building facade repairs;
- air sealing of door and window openings;
- replacement of obsolete radiators.

Key technical arrangements for improving energy efficiency in 2019 focused on optimizing operating modes for the equipment and systems by redistributing loads and matching the plant mix to its operating mode.

Energy efficiency of electrical grids

The Group's key ESEEP initiatives in 2019 included:
- process improvements:
  - disconnection, under light load conditions, of transformers at substations that have two or more transformers;
  - disconnection of transformers at substations with seasonal load;
  - phase load balancing in 0.38 kV transmission grids;
  - optimization of break points at 10 kV lines with two-way feed;
  - bringing voltage in grid parts to the nominal level;
  - rebalancing the main grid load by switching;
  - reductions in the duration of grid maintenance and repairs (works at power lines);
- optimization of energy consumption modes:
  - separation of heating circuits for drives and tanks of 35–110 kV circuit breakers;
  - installation of LED lighting to replace existing installations;
  - optimization of the heating mode for substation equipment and building;
- rehabilitation and modernization of power units:
  - replacement of wires with heavier-gauge ones at overloaded power transmission lines;
  - replacement of underloaded and overloaded transformers;
  - replacement of branch lines from 0.38 kV power lines with self-supporting insulated wires;
- improvement of energy metering means and systems.

Also, to reduce grid losses and optimize energy consumption, the Company kept on installing commercial-grade electricity and heat meters while also modernizing and introducing the automated electric power accounting system.

Energy efficiency of heating grids

The Group's key ESEEP initiatives in 2019 included:
- comprehensive equipment modernization at heat substations;
- replacement of boiler units;
- replacement of heat exchange equipment and outlet headers;
- installation of frequency control equipment for the pumping equipment of boiler stations;
- rehabilitation of disturbed heat insulation at trunk pipelines of heat grids;
- reductions in heat energy losses through leaks by timely eliminating any leakages in equipment and pipelines as a result of regular heat grid inspections.

Energy efficiency

2019 saw electricity and heat consumption across the Group totaling 5,428 mn kWh and 1,100,220 Gcal respectively.

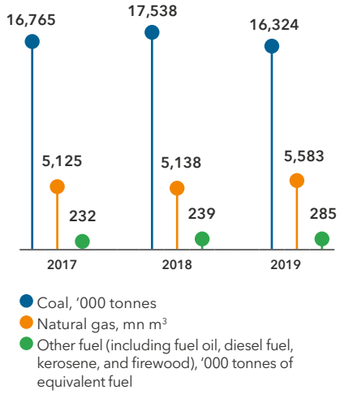
TPPs heavily rely on electricity for own consumption accounting for a hefty 10–16% of RusHydro Group's electricity generation. In 2019, HPPs consumed 1.3% of the electricity their produced.

The main non-renewables used by the companies of JSC RAO ES East Subgroup to produce energy include coal, natural gas, and fuel oil. In addition, they consume some other non-renewables, including diesel fuel and firewood. As for renewables, geothermal steam from the Mutnovskoye

Own electricity consumption in 2019 *[302-1]*

Source type	In-kind	In money terms, RUB mn
Non-renewables		
Electricity consumption, mn kWh	5,428	1,539.7
Heat consumption, Gcal	1,100	219.8
Coal, '000 tonnes	16,331	38,699.4
Fuel oil, '000 tonnes	159	3,718.3
Motor gasoline, '000 l	6,290	168.6
Natural gas, mn m^3	5,583	28,475.3
Other fuel (including diesel fuel, kerosene, and firewood), '000 tonnes of equivalent fuel	149	8,210.6
Renewables		
Geothermal energy, Gcal	412,249	119.9

Fuel consumption by JSC RAO ES East Subgroup



hydrothermal deposit in the Kamchatka Territory is used.

The fuel mix of JSC RAO ES East Subgroup's TPPs remained virtually unchanged.

In general, 2019 saw a marginal increase (0.6%) in TPPs' consumption as the electricity supply from TPP busbars and heat supply were up 0.1% and 0.4% y-o-y – to 28 bn kWh and 29,771,000 Gcal – respectively.

In 2019, PJSC RusHydro's ESIEEP helped the Company save 26,730,000 kWh on own consumption and additionally generate 62,103,000 kWh, having spent RUB 7,027 mn on energy saving and energy efficiency initiatives.

RAO ES East Subgroup's companies spent RUB 1,884.0 mn in 2019 under their respective programs for energy saving and improving energy efficiency, with annual economic benefits amounting to RUB 464 mn, or 63,000 tonnes of equivalent fuel.

Plans to improve energy efficiency in 2020

In 2020, RusHydro and its subsidiaries (HPPs) plan to spend RUB 5,893 mn on energy saving and energy efficiency initiatives, which is set to save 33,636,000 kWh during the first year.

In 2020, JSC RAO ES East companies plan to invest RUB 2,783 mn in a number of energy efficiency initiatives which are expected to bring an annual benefit of 205,671,000 kWh of electricity, 73,462.92 Gcal of heat, 2,684,352 cu m of gas, 383.5 tonnes of coal, and 294.4 tonnes of diesel fuel.

Building a lean consumer behavior model

RusHydro Group promotes energy saving awareness arranging for training events at schools.

For example, in line with the national policy for energy saving and improving energy efficiency, RusHydro's PJSC RESK assists Ryazan Region in implementing the Development of Utilities Infrastructure, Energy Saving and Improving Energy Efficiency for 2015–2020 state program approved by Resolution No. 314 of the Government of Ryazan Region of October 29, 2014.

RAO ES East Subgroup's consumption per unit of equivalent fuel *[302-3]*

Indicator	2017	2018	2019
Consumption per unit of equivalent fuel for electricity generation, g/kWh	385.2	385.9	388.7
Consumption per unit of equivalent fuel for heat generation, kg/Gcal	159.9	160.1	159.7

Energy savings by RAO ES East Subgroup *[302-4]*

Type of energy resources saved	2017	2018	2019
Natural gas, '000 m^3	270	4,328	877
Diesel fuel, tonnes of natural fuel	45	46	123
Other fuel, tonnes of equivalent fuel	27,467	29,322	46,535
Thermal power, Gcal	27,868	28,443	19,991
Electricity, '000 kWh	87,151	91,099	74,610

Water use and discharge *[103-2] [303-1]*

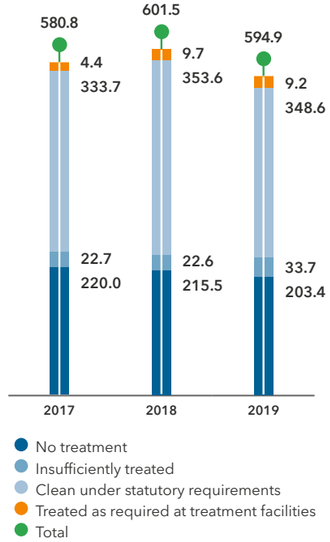
RusHydro Group operates more than 70 hydropower generation facilities making it a major user of national water resources with a footprint all over Russia.

RusHydro strictly adheres to the applicable Russian laws and timely obtains all necessary permits and licenses for water use and protection of water bodies from the authorised government agencies. The Company's water withdrawal activities have no significant impact on water sources. *[303-2]*

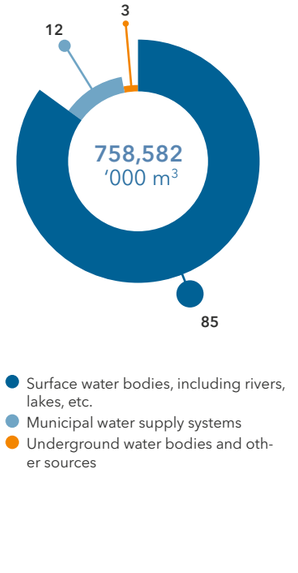
758,582,000 m^3 of water was taken in 2019, down 3.6% y-o-y, with 93% of water used for operational purposes. *[303-5]*

In 2019, circulating water supply systems and recycling water supply systems consumed 4.5 bn m^3 and 21.2 mn m^3 of water respectively.

Waste water discharge into water bodies by treatment method, '000 m^3 per annum *[303-4]*



Water withdrawal in 2019, % *[303-3]*



RusHydro Group has a dedicated webpage with updates on water level in reservoirs of its HPPs: http://www.rushydro.ru/

The Group discharges water in strict compliance with the applicable Russian laws. The rights to use water bodies for such purposes are confirmed by relevant permits and licenses issued by authorized government agencies. The same permits and licenses set out the applicable discharge limits.

In 2019, waste water discharges totaled 600.2 m³, down 3.3% y-o-y, including 594.9 mn m³ discharged into water bodies and 5.3 mn m³ underground.

The general volume of RusHydro Group waste waters (93%) includes waste water produced after cooling the equipment which, due to the specific nature of the technological process, do not provide for the treatment, as it is not contaminated when passed through the plant cooling loop. Over 55% of the volume is recognized as "clean under statuory requirements" due to re-use of the same water body for uptake and discharge of waste waters; 34% of the volume is recognized as "contaminated without treatement", due to uptake of salt water for cooling and its discharge in a fresh water body. Insufficiently treated waste waters account for only 6% of the total waste water volume. *[OS]*

Air pollutant emissions

Greenhouse gas emissions *[103-2]*

No greenhouse gas is directly emitted when operating hydropower generation facilities and those based on renewables. The Group records CO_2 emissions for JSC RAO ES East Subgroup using carbon feedstock.

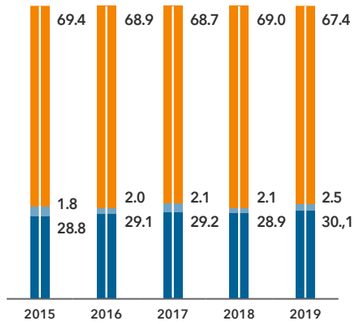
Still, emissions of greenhouse gas are calculated in accordance with Order No. 300 issued by the Ministry of Natural Resources and the Environment of the Russian Federation on June 30, 2015, Guidelines for Calculation of Gross Carbon Dioxide Emissions by TPPs and Boilers (RD 153-34.0-02.318-2001), and data from the Carbon Fund.

Greenhouse gas emissions are calculated per facility based on the fuel consumption of each facility.

In 2019, emissions of greenhouse gas went up 0.55% The higher emissions in 2019 are attributable to CHPP Vostochnaya commissioned in 2018, while a 4.19% increase in CH_4 emissions was driven by a greater percentage of coal with a higher carbon content in JSC DGK's annual volume of solid fuel combustion.

2019 saw a 1.7% decline in the aggregate greenhouse gas emissions generated by solid fuel combustion and a significant decrease in N_2O emissions by 1.9%.

Breakdown of JSC RAO ES East Subgroup's direct greenhouse gas emissions by source type (scope 1), %



Direct greenhouse gas emissions by JSC RAO ES East Subgroup (scope 1), '000 tonnes *[305-1]*

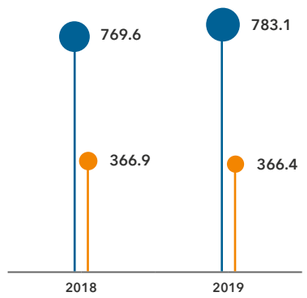
Indicator	2015	2016	2017	2018	2019
CO_2 emissions	36,182.3	34,096.4	34,457.1	34,942.3	35,137.1
N_2O emissions in CO_2-eq.	125.3	119.1	117.2	120.2	117.9
CH_4 emissions in CO_2-eq.	14.4	14.4	13.9	14.6	15.3
Total	**36,322.0**	**34,229.9**	**34,588.2**	**35,077.1**	**35,270.3** [1]

[1] Around 2% of the total volume of emissions in Russia. [OS]

One of the key challenges accounted for by RusHydro Group in its updated Environmental Policy is the global climate change and need to adapt to global warming effects threatening human life and health, flora and fauna, and causing changes in long-standing hydrological and meteorological patterns.

Low-carbon development is therefore a primary objective for RusHydro Group. Its Environmental Policy sets a number of 2025 targets, including reduction of greenhouse gas emissions and emission intensity and expansion of low-carbon installed capacity.

Intensity of greenhouse gas emissions by JSC RAO ES East Subgroup, tonnes[1] *[305-4]*



Commissioning of 10 RusHydro's EV charging stations helped achieve a nearly 70,000 kg reduction in CO_2 emissions in 2019 and early 2020, or 103 500 kg in annual terms.

Reduction of greenhouse gas emissions is expected to be achieved through:
- replacement of retiring TPP capacities in the Far East with more advanced and environmentally friendly thermal power plants, now under construction. For example, the modernization program provides for construction, upgrade and retrofit of four power plants, including construction of gas-fired Khabarovskaya TPP-4 and conversion of Vladivostokskaya TPP-2 to gas;
- commissioning of new smaller HPPs;
- TPP efficiency improvement programs;
- expansion of RES (solar and wind generation) projects;
- commissioning of EV charging stations.

The Expansion of Installed Low-Carbon Capacity target is planned to be achieved with the Comprehensive Modernization Program (Long-Term Development Program for 2012–2020 with a prospect up to 2025) providing for retrofit of RusHydro Group's generating facilities. In addition, the Group consistently implements and intends to continue its renewable energy projects, including the construction of smaller HPPs currently underway in Northern Caucasus.

Pollutant emissions

Air pollution is monitored at all production facilities of RusHydro Group.

In 2019, significant air emissions totaled 231,707 tonnes, down 2.2% y-o-y.

Significant air emissions across RusHydro Group, '000 tonnes *[305-7]*

[1] Net of Cascade of Viluysky HPPs and solar power plants producing no greenhouse gas emissions. The CO_2-equivalent emission intensity is calculated as a ratio of total emissions (tonnes CO_2-eq.) to electric power (mn kWh) and heat ('000 Gcal) produced.

Waste *[103-2]*

In 2019, the aggregate waste generated by RusHydro Group's power facilities totaled 23.8 mn tonnes, down 19.6% y-o-y.

Most wastes are those belonging to hazard classes IV and V (low risks or practically no risks), such as soil stripped during coal mining, bottom coal ashes, and waste from construction and repairs.

In the reporting period, the aggregate waste reduction was attributable to a significant decline in class V waste at JSC DGK (reducing solid fuel combustion due to lower electricity generation) and JSC LUR (reducing soil stripping operations).

Accumulated waste is collected by specialized contractors duly licensed to collect, transport and treat such waste. *[306-4]*

In addition, RusHydro approved Regulations on its liaising with subsidiaries in bottom ash disposal.

Total waste, tonnes *[306-2]*

Hazard classes	2017	2018	2019
RusHydro Subgroup			
Hazardous waste class I and II	31	18	21
Hazardous waste class III, IV and V	29,191	23,178	20,688
Total	**29,222**	**23,196**	**20,709**
RAO ES East Subgroup			
Hazardous waste class I and II	39	45	50
Hazardous waste class III, IV and V	26,570,307	29,596,949	23,807,706
Total	**26,570,346**	**29,596,995**	**23,807,756**
RusHydro Group			
Hazardous waste class I and II	70	63	71
Hazardous waste class III, IV and V	26,599,498	29,620,127	23,828,393
Total	**26,599,568**	**29,620,190**	**23,828,465**

Biodiversity conservation *[103-2] [EC]*

RAO ES East's grid infrastructure extends to specially protected natural areas, sharing them with rare plant and animal species. *[304-1]* However, none of the Company's power generation facilities is located within such areas.

As RusHydro Group seeks to minimize its impact on biodiversity and protected natural areas, none of its activities cause reduction of species, habitat conversion, or introduction of invasive species, pests or pathogens. *[304-2]*

Protected species' habitats affected by activities of RusHydro Group *[304-4].*

As part of the United Nations Development Programme, the Global Environmental Facility and the Ministry of Natural Resources and the Environment of the Russian Federation, RusHydro collaborated on a unique project titled "Bureysky Compromise" during the construction of the Nizhne-Bureyskaya HPP. Other project participants included Directorate for Wildlife Protection and Management and Specially Protected Natural Areas (state-financed entity, Amur Region), JSC Nizhne-Bureiskaya HPP, research and environmental organizations and mass media. The project "Bureysky Compromise" pulled together a number of measures aimed at protecting biodiversity such as the establishment of the Bureysky Nature Park, installation of over 25 self-feeding stations for ungulates with food enriched with minerals and vitamins, placement of over 100 nest boxes for mandarin ducks and replanting of over 400 endemic species.

The rare species affected by the activities of Far Eastern Distribution Company is the Far Eastern stork (Ciconia boyciana). The Far Eastern stork is on the Russian Red List and the 1996 IUCN Red List of Threatened Animals, and mentioned in Appendix 1 to the CITES and migratory bird protecting appendices to bilateral agreements between Russia, Japan, the Republic of Korea and the DPRK. In 2019, AO DRSK proposed an initiative to install supports for stork nests.

In 2019, the Company provided assistance to

19

specially protected natural areas

Water bodies affected by wastewater discharges of RusHydro Group *[306-5]*

JSC RAO ES East Sub-group's Subsidiaries	Water body[1]	Volume of average discharge, mn m³	Biodiversity value
PJSC Kamchatskenergo	Avacha Bay	3,800	supreme
	Khalaktyrka River	–	supreme
	Lake Halaktyrskoye	11	supreme
	Lake Sypuchka	–	supreme
JSC UESK	Bystraya River	43.2	high
PJSC Magadanenergo	Magadanka River	43.8	supreme
	Kamenushka River	37.9	high
	Myaunja River	127.5	supreme
PJSC Sakhalinenergo	Gulf of Patience (Sea of Okhotsk)	211,250	supreme
PJSC Yakutskenergo	Lena River	515,610	supreme
	Vilyuy River	48,250	supreme
JSC Chukotenergo	Kazachka River	22	medium
	Lake Okhotnichye	0.25	medium
	Chaun Bay	–	supreme
JSC DGK	Kivdinskoye reservoir	9.6	high
	Kontrovod River	–	supreme
	Unnamed stream discharging into Knevichanka River	–	supreme
	Promezhutochnaya Bay	–	supreme
	Obyasneniye River	–	high
	Lozovy Klyuch Stream	–	high
	Partizanskaya River	–	high

[1] No water body is a protected natural reserve.

JSC RAO ES East Sub-group's Subsidiaries	Water body[1]	Volume of average discharge, mn m³	Biodiversity value
	Rudka Stream	–	medium
	Olongoro River reservoir	43.2	high
	Semyonovskiy Stream	–	medium
	Bezymyanny Stream	–	medium
	Amnunakta River	–	high
	Amurskaya Anabranch	–	supreme
	Amur River	–	supreme
	Lake Khorpy	–	supreme
	Galbon Anabranch (Old Amur)	–	supreme
	Zapadnaya Bay	–	supreme
	Nante Stream	–	supreme
	Pravaya Beryozovaya River	–	medium
	Chernaya River	–	medium
	Polezhaevka Stream	–	medium
	Gnilaya Pad Stream	–	medium
	Malaya Sita River	–	high
JSC Teploenergoservis	Vilyuy River	72,400	supreme
	Yana River	29,297	supreme
	Aldan River	154,683	supreme
	Indigirka River	14,002	supreme
	Allakh-Yun River	5,550	supreme
	Nera River	3,658	supreme
JSC LUR	Kontrovod River (area used by JSC LUR)	–	high

Biodiversity conservation *[EU13]*

Biodiversity conservation is one of the key elements in RusHydro Group's Environmental Policy which sets a zero plant and animal extinction target for 2025.

RusHydro Group's Implementation Program for the Environmental Policy[1] has a dedicated section on biodiversity conservation initiatives, including both charitable support to specially protected natural areas and steps to be taken in order to prevent extinction of certain plant and animal species.

Animal protection *[OS]*
In 2019, RusHydro Group helped the Republic of Khakassia launch a research project on demoiselle cranes (Anthropoides virgo), a rare bird species. The Khakassia Nature Reserves is the Company's key partner in this charitable initiative.

Apart from being home to the nesting grounds of these rare birds, Khakassia is also the place they transit during their migration. Demoiselle cranes are the smallest crane species. There are six main populations of these cranes known to ornithologists, and their numbers keep decreasing: in Turkey they are on the brink of extinction, while in the Balkans they disappeared completely some 100 years ago.

The research data collected in Khakassia will be used to develop a global demoiselle crane protection strategy, including a regional strategy and an action plan for the Republic of Khakassia. The Institute of Ecology and Evolution (Russian Academy of Sciences) will analyze the observation findings to identify the birds' flyways, stopover sites and pre-migration roost locations.

2019 also saw RusHydro partner up with the Sayano-Shushensky Nature Reserve to restore the snow leopard population in the Krasnoyarsk Territory.

The snow leopard (Panthera uncia), also known as the ounce, is an endangered species included on the Russian Red List. The animal is native to the mountain ranges of Central Asia, including the Himalayas, Tibet, Pamir and Tian Shan. Main threats to the species numbers in Russia include loss of prey animals (ungulates) and poaching.

As part of the preservation project, there are plans to breed adult snow leopards in captivity and release their cubs (after adapting them to living in the wild) into their historic natural habitat, while also rehabilitating injured wild animals and running a research laboratory on the premises of the Sayano-Shushensky Nature Reserve. The laboratory will facilitate mapping of the animals' individual home ranges to improve the quality of biological and environmental data collected snow leopards, fine-tune tools used to protect their habitats within the reserve, and enhance preservation efforts in the Western Sayan Mountains.

As part of its efforts to complete the construction of a water reservoir at Nizhne-Bureyskaya HPP, RusHydro commissioned the Malye Simichi forest guard lodge in the Bureysky Nature Park.

RusHydro supports the International Program for Reintroduction of the Leopard in the Caucasus sponsored by the Russian Ministry of Natural Resources and Environment. As part of the Program, Sochi built a Center for Reintroduction of the Leopard in the Caucasus to host remaining pure-bred leopards from zoos from around the world.

In 2015, a CCTV camera at Gizeldonskaya HPP (Northern Ossetia) captured a Persian leopard (Panthera pardus ciscaucasica) roaming in the wild for the first time in many years.

This event served as a launching pad for a partnership between the North Ossetia branch of RusHydro and the Russian Academy of Sciences' Severtsov Institute of Ecology and Evolution (RAN IEE) focusing on a unique project designed to reintroduce leopards in Ossetia. As part of the project, RusHydro Group and RAN IEE made considerable efforts to turn natural areas within the Republic of North Ossetia (Alania) into new habitats for released Persian leopards. The exercise involved a wide range of scientific, environmental and awareness raising initiatives, including research on potential opportunities for animal releases, environmental adaptation of the habitats, and awareness raising events aiming to highlight the importance of Caucasian leopards as the patrimony of the Caucasian region and foster a responsible approach to nature.

In July 2018, two non-relative species of the Persian leopard were released in the Alania National Park with support from RusHydro. They had been raised in Sochi's Leopa rd Breeding Center and trained to live in the wild without human assistance.

In 2019, scientists continued to monitor the released animals using data from satellite collars, on-site research expeditions, photos and videos.

Recovery of aquatic life (OS)
With most of the Company's activities centered on rivers, much attention is paid to the restoration of fish populations.

Russian Geographical Society (RGS) and RusHydro have worked together for many years in a variety of areas. Thanks to RusHydro's support, RGS succeeded in bringing about dozens of projects aimed at studying and preserving Russia's natural, historical, and cultural heritage.
We appreciate the company's assistance in conducting scientific research in specially protected natural areas in different regions of the country, specifically in the Kirzinsky State Nature Reserve of Federal Significance and Khvalynsky National Park. I should also note RusHydro's publishing activities that promote the life and activities of great Russian travelers.

Sergey Shoigu,
President of the Russian Geographical Society

[1] Approved by the Company's Management Board (Minutes No. 1204 of September 26, 2019).

RusHydro Group assesses the impact on bioresources of water bodies planned to be use in its activities. As a result, with the approval of the Federal Agency for Fishery, measures necessary for fish preservation and compensation are carried out. In particular, fish safety devices are designed, and juvenile fish is released (for this purpose, fish-breeding facilities are planned to be constructed in some cases).

In 2019, the Kabardino-Balkaria branch of RusHydro released 638,800 fishlings of the Caspian salmon (Salmo trutta caspius), a Red List species, into the water bodies of the Kabardino-Balkarian Republic and the Republic of North Ossetia (Alania) as a way to compensate for the damage caused to water resources by HPPs. Fry release initiatives are approved and supported by the West Caspian Department of the Federal Fishery Agency.

Cheboksarskaya and Zhigulevskaya HPPs provided assistance in the release of 12,000 juvenile starlet (Acipenser ruthenus), a highly valuable fish species on the Red List, into the Volga River. The campaign promoting artificial reproduction of bioresources was mounted as part of RusHydro's charitable program and brought together two Russian regions – the Chuvash Republic and the Samara Region. The fish stocking event was overseen by a commission from the Federal Fishery Agency.

More than 600 fishlings of the of the sterlet were released into the Votkinsk Reservoir under the supervision of experts from the Perm Territory's Department for State Control, Supervision and Protection of Biological Water Resources (part of the Middle Volga Territorial Administration of the Federal Fishery Agency), Ural and Kama branch of Glavrybvod, and aquaculture laboratory at the Perm branch of the Russian Federal Research Institute Of Fisheries and Oceanography (VNIRO).

Additionally, Boguchanskaya HPP monitored and assessed the impact of its water reservoir on the environment and water life in 2019.

Rehabilitation of disturbed lands

As RusHydro Group engages in the construction and operation of energy facilities, it needs to implement mandatory compensatory measures in order to save affected natural habitats and rehabilitate disturbed lands.

Habitats preserved and rehabilitated by RAO ES East Subgroup *[304-3]*

Name	JSC DGK	PJSC Sakhalinenergo	JSC Chukotenergo	JSC LUR	Total
January 1, 2019					
Total disturbed area, ha	2,315.5	257.6	174.7	4,110,8	6,858.6
including total post-construction area, ha	59.0	3.2	1.5	24.4	88.1
topsoil stockpiled, '000 m^3	275.6	0.0	0.0	578.8	854.4
Total in 2019					
Total disturbed area, ha	25.0	0.0	0.3	62.8	88.1
Total post-construction area, ha	0.0	0.0	0.0	0.0	0.0
Total rehabilitated area, ha	3.0	0.0	1.0	0.0	4.0
December 31, 2019					
Total disturbed area, ha	2,337.5	257.6	173.9	4,173.6	6,942.7
Total post-construction area, ha	59.0	3.2	0.5	24.4	87.1
Topsoil stockpiled, '000 m^3	275.6	0.0	0.0	578.8	854.4

CORPORATE GOVERNANCE

Corporate governance system

RusHydro Group's corporate governance seeks to make sure that the rights and interests of its shareholders are protected and its investor relations are based on mutual trust. The quality of corporate governance is the key driver behind growth of the Company's value and dividend yields, contributing to a greater investment appeal.

RusHydro's corporate governance system:
- builds on compliance with the applicable Russian laws, Listing Rules of the London Stock Exchange and Moscow Exchange, and the U.S. OTCQX rules for international companies;
- takes into consideration recommendations set out in the Corporate Governance Code of the Bank of Russia[1];
- seeks to incorporate best global and domestic practices.

Having the Federal Agency for State Property Management (on behalf of the Russian government) as the Company's controlling shareholder exerting significant influence on the corporate management processes is the key distinctive feature of RusHydro's governance framework. Certain procedures for the government to exercise its rights as a shareholder are stipulated by law and set out the proceedings through which the state can use its corporate rights to make and pursue decisions with respect to the Company.

Over the past five years, the Company's corporate governance system has seen progressive improvements triggered by the implementation of the principles and guidelines set forth in the Bank of Russia's Corporate Governance Code, including through the adoption of RusHydro's own Corporate Governance Code[2].

The Company's corporate governance principles and procedures are laid out in its Charter and internal regulations, while the corporate practices are formalized in the Corporate Governance Code.

All internal corporate governance regulations adopted by PJSC RusHydro are available on the Company's website at: http://www.eng.rushydro.ru/

Key principles *[102-16]*

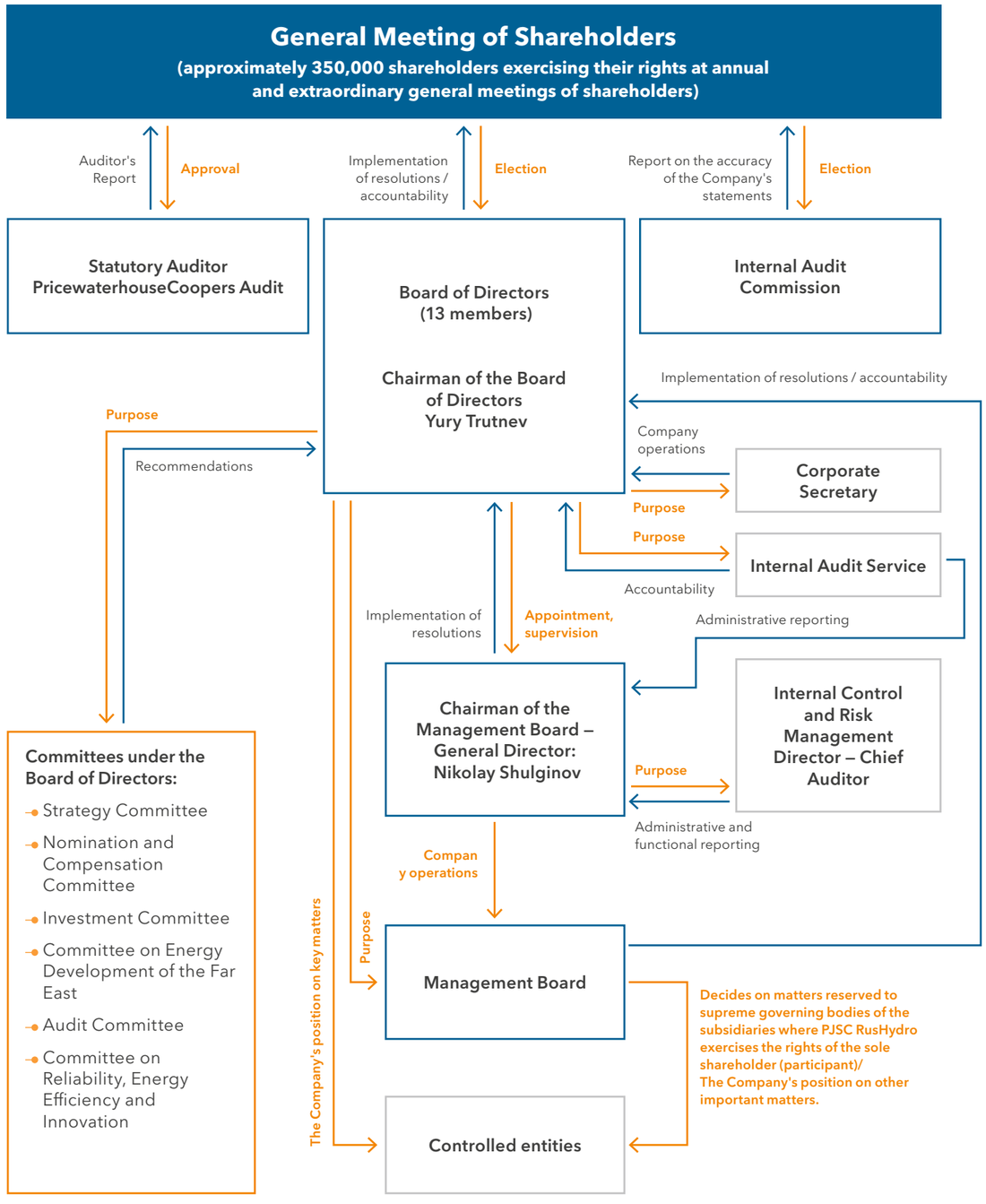
The Group's corporate governance is based on the following key principles

- Equitable and fair treatment of all shareholders
- Professionalism, responsibility and accountability of the Board of Directors to the Company's shareholders
- Transparency and accessibility of information about the Company
- Effective system of internal control and risk management
- Exercise by all shareholders, the Company, its management bodies, officers and other stakeholders of their rights in good faith, prevention of abuse of rights
- Prevention of any shareholder actions aimed at causing harm to other shareholders or the Company
- Continuous improvement of corporate governance practices

[1] The Corporate Governance Code recommended for implementation by joint-stock companies with securities admitted to organized trading as per letter of the Bank of Russia No. 06-52/2463 dated 10 April 2014.

[2] Approved by the Board of Directors on June 19, 2015 (Minutes No. 218 of June 22, 2015 as amended by resolutions adopted by the Board of Directors of RusHydro, Minutes No. 239 of June 23, 2016 and No. 263 of December 28, 2017)..

Corporate governance structure *[102-18]*



Subsidiary management

PJSC RusHydro has stakes (including indirectly through its subsidiaries) in the authorized capital of companies engaged in electricity and heat generation and distribution, energy facilities design, construction, repair, maintenance, rehabilitation and modernization, and other activities.

RusHydro has, either directly or indirectly, 100% or majority (as the case may be) stakes in the authorized capital of most of the Group's subsidiaries, which helps it pursue the Group's strategy and corporate governance policies all across the controlled entities.

The Company contributes to subsidiaries' strategy delivery, stable economic growth and investment appeal, and protection of rights and interests of the shareholders of both the Company and its subsidiaries.

The Company manages its subsidiaries by being represented at general meetings of shareholders/participants, on boards of directors and in supervisory bodies of the subsidiaries.

Deciding on matters reserved to supreme governing bodies of the subsidiaries where PJSC RusHydro exercises the rights of the sole shareholder (participant) falls within the remit of the Management Board. Establishing the Company's position on key matters regarding subsidiaries (reorganization, liquidation, increase of the authorized capital, approval of major transactions, participation of the subsidiary in other energy organizations, disposal of energy assets) falls within the remit of the Board of Directors. PJSC RusHydro's position on other important matters regarding subsidiaries (KPI approval (adjustment), participation of the subsidiary in non-energy organizations, nomination of candidates to the subsidiary's governance and supervisory bodies, etc.) is established by the Management Board.

In addition to that, the Company's internal regulations formalize the right of the members of RusHydro's Board of Directors to access documents and make inquiries on subsidiaries while also considering matters relating to material aspects of their business.

The regulations governing subsidiary relations include:
- Charter of PJSC RusHydro;
- Procedure for Interacting with the Organizations Where PJSC RusHydro Has an Interest.

Improving the corporate governance system

In 2019, the Company continued to implement the standards set forth in the Corporate Governance Code of the Bank of Russia (the "Code") to improve overall corporate governance by consistently amending the internal regulations and applying the standards in the day-to-day operations.

The following key actions were taken in 2019:
- The Company's Board of Directors approved a new version of the Regulations on Dividend Policy and the Regulation on the Assessment of the Activities of the Board of Directors and the Board of Director Committees of PJSC RusHydro;
- On June 28, 2019, the Company's shareholders could for the first time vote at the Annual General Meeting of Shareholders using an electronic voting system, while also having an opportunity to benefit from a new forum on the meeting agenda;
- With the adoption of a new version of the Internal Control and Risk Management Policy, the Board of Directors started playing a more prominent role in managing risks, including by approving Guidelines on RusHydro Group's Risk Appetite;
- The Company's Charter and internal regulations were amended to include the following corporate governance enhancement clauses:
  - resolutions on critical matters set forth in recommendation 170 of the Code shall be passed by a majority vote involving all elected directors;
  - shareholders shall have access to the list of persons entitled to attend General Meetings of Shareholders as soon as such list becomes available to the Company;
  - material corporate actions involving a potential conflict of interest shall be assessed by independent directors;
  - shareholders holding collectively at least 2% of the Company's voting shares shall have the right to submit proposals for the agenda of meetings held by the Company's Board of Directors;
- The quality and exhaustiveness of information disclosed in the Company's annual report and on the Company's website were improved;
- Candidates to the Board of Directors were assessed to confirm they have the necessary experience and knowledge, good reputation and no conflict of interest, with the assessment results submitted to shareholders as part of the materials for the Annual General Meeting of Shareholders;
- In April 2019, a meeting of the Board of Directors held in person reviewed results of the corporate governance practice assessment and self-assessment of the Board of Directors' performance, considered positive changes in the assessments of independent experts and took note of the proposals put forward to improve the Board's performance[1].

In addition to that, the reporting period saw election of the senior independent director, assessment of the risk management and internal control system efficiency, review of a report on progress in implementing the Information Policy Regulations, etc.

Improving the corporate governance system in subsidiaries

Over the reporting period, standardized subsidiary charters were adopted by the companies to ensure, among other things:
- compliance with applicable laws;
- harmonization of transaction approval approaches;
- quicker turnaround for corporate procedures.

Corporate governance improvement prospects

Key areas for improvement as regards the Company's corporate governance in 2020 include the following:
- increasing the number of meetings held by the Board of Directors in person;
- making arrangements for a comprehensive formal self-assessment of the Board of Directors and its committees with a focus on their performance as a single body and individual contributions of directors to the proceedings of the Board of Directors and its committees; drafting recommendations for the Board of Directors to improve the operating performance of the Board of Directors and its committees; and preparing a report on the results of the self-assessment exercise to be reviewed by the Board of Directors at a meeting held in person;
- lowering the threshold applied to disclosures of material transactions on the Company's website;
- improving corporate governance performance in the ESG ratings.

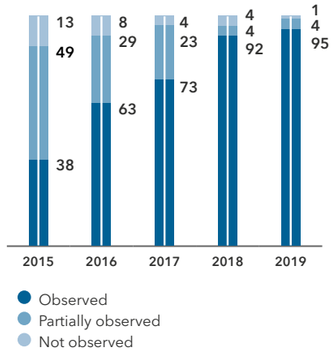
[1] Minutes No. 287 of April 22, 2019.

Compliance with the Corporate Governance Code

As a result of corporate governance improvement efforts and implementation of the standards set forth in the Code, the share of principles fully observed by RusHydro increased from 92% in 2018 to 95% in 2019.

For a detailed report on the Company's compliance with the Corporate Governance Code principles and recommendations, see Appendix No. 1.

Compliance with the priciples and recommendations of the Corporate Governance Code, %



95%

of the Corporate Governance Code's principles recommended by Russian Central Bank are fully observed by PJSC RusHydro

Compliance with the principles of the Corporate Governance Code[1]

Observance of standards and principles of the Code	Observed			Partially observed			Not observed			Total for 2019
Year	2017	2018	2019	2017	2018	2019	2017	2018	2019	
Shareholder rights and equitable treatment of shareholders	11	12	12	2	1	1	–	–	–	**13**
The Company's Board of Directors	23	32	34	10	1	1	3	3	1	**36**
The Company's Corporate Secretary	2	2	2	–	–	–	–	–	–	**2**
Remuneration of the Company's directors, executive bodies and other key managers	10	10	10	–	–	–	–	–	–	**10**
Risk management and internal control system	6	6	6	–	–	–	–	–	–	**6**
Disclosures and the Company's information policy	6	7	7	1	–	–	–	–	–	**7**
Material corporate actions	–	4	4	5	1	1	–	–	–	**5**

[1] Compliance with the principles of the Corporate Governance Code was assessed based on the Bank of Russia's methodology and reporting recommendations with respect to such compliance (annex to the Bank of Russia letter No. IN-06-52/8 dated February 17, 2016).

Corporate governance quality assessment

In the reporting period, RusHydro's corporate governance quality was externally assessed by the Russian Institute of Directors (RID).

In September 2019, the RID affirmed the corporate governance ranking at 8 ("Advanced Corporate Governance Practice" according to the National Corporate Governance Rating (NCGR) scale).

The Company's corporate governance practices were assessed based on four components, each including a set of criteria to reflect corporate governance policies, procedures and structures as required by applicable Russian laws, the Moscow Exchanges Listing Rules, recommendations of the Russian Corporate Governance Code and global best practices.

The RID concluded that the Company complies with the Russian legislative requirements imposed on corporate governance and observes many of the recommendations contained in the Russian Corporate Governance Code. In addition, the Company boasts a rather low risk of losses that might be incurred by owners due to corporate governance issues.

RusHydro is committed to further improving its corporate governance rating.

In addition to the external assessment, the Company runs annual corporate governance quality assessments by the Internal Audit Service. In 2019, the overall assessment grade was 92% out of 100% (vs 89% in 2018).

The assessment found the Company's corporate governance system to be effective. At the same time, certain moderate gaps and areas for improvement were identified.

Corporate governance quality assessment by TopCompetence

In 2019, RusHydro engaged TopCompetence Corporate Development Center to undertake a comprehensive assessment of the corporate governance quality and draw comparisons between the Company and its peers.

The National Corporate Governance Index research published annually by TopCompetence focuses on Top 100 largest cap Russian companies listed on the Moscow Exchange to analyze key corporate governance trends, identify industry leaders and show a link between excellence in corporate governance and market indices.

In the 2019 research, RusHydro joined the ranks of the **Top 10 Russian companies in terms of corporate governance quality.**

Shareholders and investors

Share capital and securities

Authorized capital

As at December 31, 2019, the registered authorized capital of PJSC RusHydro was RUB 426,288,813,551 and consisted of 426,288,813,551 ordinary shares, each with a par value of RUB 1[1].

Additional share issuance

In Q2 2019, RusHydro completed the first stage of its share placement[2] consisting in the exercise of the shareholders' pre-emptive right to buy out additional issuance shares.

As part of the pre-emptive right exercise, RusHydro placed 7,000,092,298 additional shares among its shareholders (including 7,000,000,000 shares purchased by the Federal Agency for State Property Management on behalf of the Russian Federation), each with a par value of RUB 1. As a result, the interest of the Russian Federation in the Company's share capital increased from 60.6% to 61.2%.

As at December 31, 2019, the date for the second stage of additional share issuance (via open subscription) remained unspecified, with the announcement deadline set for July 10, 2020.

Information on shares

The total number of voting shares is 433,288,905,849 ordinary registered shares. The Company did not issue preferred or ordinary shares with differing par values.

In accordance with Article 38 of Federal Law No. 178-FZ On the Privatization of State and Municipal Property dated December 21, 2001 (as amended on August 2, 2019), the Russian Federation has no special right to participate in the management of PJSC RusHydro (the "golden share").

According to the statement by executive bodies, there is no available information on any interests in the share capital of over 5%, apart from the data already disclosed by the Company.

Full text of the statement by executive bodies: http://www.eng.rushydro.ru/

Shareholders

PJSC RusHydro's shares are held by around 350,000 Russian and foreign investors. The Russian Federation owns the controlling stake of 265,161,535,606 shares[3], or 61.2% of the Company's total number of outstanding shares.

The Russian Government owns the Company's shares held by the Federal Agency for State Property Management (265,161,535,606 shares) and ITAR-TASS News Agency (248,527 shares). *[102-5]*

The Company does not hold any of its own shares.

Company's subsidiaries hold 3,852,259,324 shares, or 0.9% of the Company's authorized capital[4].

[1] State registration number of the issue: 1-01-55038-E, dated February 22, 2005.

[2] On June 21, 2018, the Board of Directors resolved to increase the authorized capital by RUB 14,013,888,828 with an additional placement via open subscription. The decision to issue additional shares was registered by the Bank of Russia on August 27, 2018, with the issuance being assigned the registration number of 1-01-55038-E-043D.
The proceeds from the additional issuance will be invested in the first stage of a project to construct two single-circuit 110 kV Pevek-Bilibino power lines in Chukotka in the run-up to the upcoming refurbishment of the Chaun and Bilibino energy hub following the decommissioning of power units at Bilibino NPP, which reached the end of its service life.

[3] Including shares of additional issuance No. 1-01-55038-E-043D dated August 27, 2018, with the additional issuance report still pending registration by the Bank of Russia as at December 31, 2019.

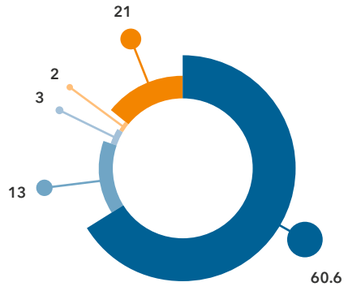
[4] RusHydro's shares held by subsidiaries were not used in voting at the Annual General Meeting of Shareholders that took place on June 28, 2019.

The number of shares held by the Company's subsidiaries

Name	Number of shares, pcs	Share in authorized capital, %
JSC Hydroinvest	3,430,091,314	0.804640
JSC Zaramagskiye HPP	271,302,097	0.063643
PJSC DEK	73,093,031	0.017146
JSC RAO ES East	48,511,631	0.011380
JSC ChirkeyGESstroy	29,205,310	0.006851
PJSC Yakutskenergo	55,941	0.000013

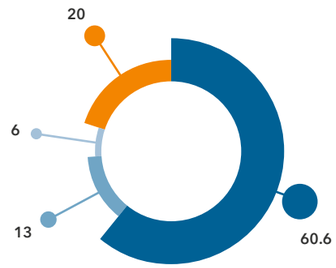
Changes in the group of persons with the right to exercise, directly or indirectly, at least 2% of the voting rights attached to the Company's voting shares[1], %

as at December 31, 2017



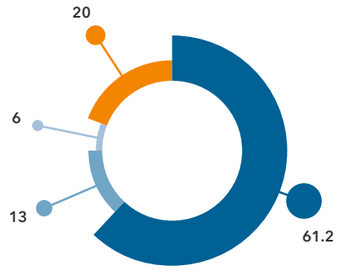
- Federal Agency for State Property Management
- VTB Bank (PJSC)
- Jivanta Ventures Limited
- LLC Avitrans
- Other shareholders

as at December 31, 2018



- Federal Agency for State Property Management
- VTB Bank (PJSC)
- LLC Avitrans
- Other shareholders

as at December 31, 2019



- Federal Agency for State Property Management
- VTB Bank (PJSC)
- LLC Avitrans
- Other shareholders

Changes in the shareholding structure by shareholder category, %

Name of the registered entity	Percentage share in authorized capital as at December 31, 2017	Percentage share in authorized capital as at December 31, 2018	Percentage share in authorized capital as at December 31, 2019[2]
The Russian Federation as represented by the Federal Agency for State Property Management	60.561	60.561	61.197
Legal entities, including:	38.087	38.115	37.509
resident	38.066	38.093	37,495
non-resident	0.021	0.022	0.014
Individuals, including:	1.352	1.324	1.294
resident	1.350	1.322	1.292
non-resident	0.002	0.002	0.002

[1] Shares in the registered authorized capital.

[2] Including shares of additional issuance No. 1-01-55038-E-043D dated August 27, 2018, with the additional issuance report still pending registration by the Bank of Russia.

Share of securities in free float[1], %

Date	Free-float factor
Last trading day of 2017	25
Last trading day of 2018	19
Last trading day of 2019	19

Shareholder agreements

RusHydro's shareholders can enter into shareholder agreements that determine PJSC RusHydro's corporate governance and shareholding procedures[2].

Notifications on concluded shareholder agreements received by RusHydro

Parties to the shareholder agreement	Date of the shareholder agreement
The Russian Federation as represented by the Federal Agency for State Property Management VTB Bank (PJSC)	March 7, 2017
The Russian Federation as represented by the Federal Agency for State Property Management RusHydro's subsidiaries: Hydroinvest[3], EZOP, Energy Index – HydroOGK	June 23, 2016

Outstanding shares

Moscow Exchange listing

The Company's shares have been traded on the Moscow Exchange (formerly MICEX Stock Exchange) since February 4, 2008 (ticker: HYDR). Index inclusion:

- MOEX Russia Index (previous name – MICEX Index) IMOEX;
- Electric Utilities Index MOEXEU;
- Broad Market Index MOEXBMI;
- State-Owned Companies Index MOEXSCI;
- FTSE Emerging Index AWALLE;
- FTSE All-World Index AWORLDS;
- FTSE4Good Emerging;
- NASDAQ Russia NQRU;
- Nasdaq AlphaDEX Emerging Markets NQDXEM;
- STOXX Russia Total Market TCRUP;
- STOXX Optimized Russia EEORGT.

Moscow Exchange trading information

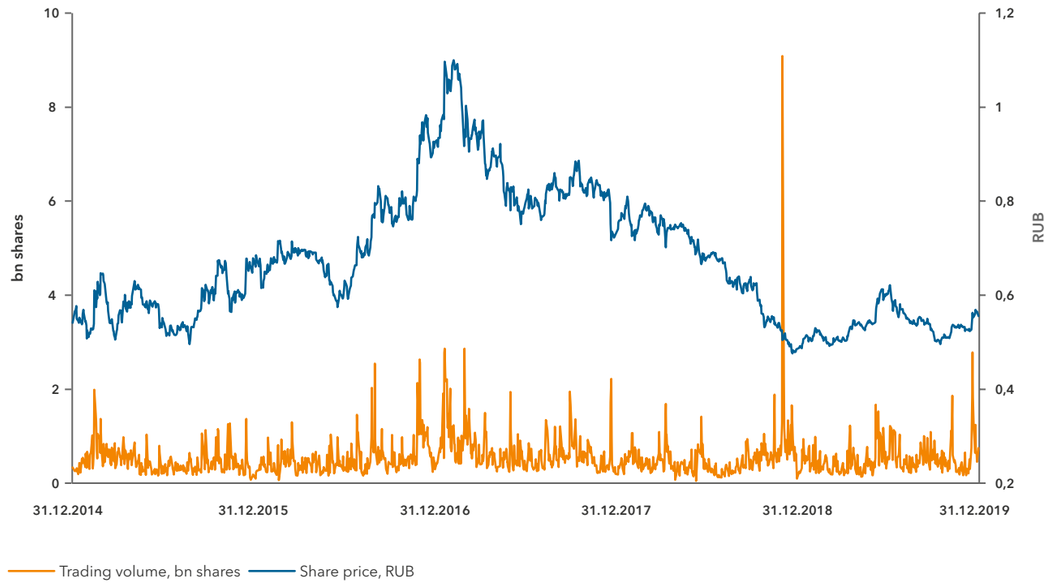
Item	2017	2018	2019
Trading mode	T+: stocks and DRs	T+: stocks and DRs	T+: stocks and DRs
Currency	RUB	RUB	RUB
Maximum trade price	1.100	0.810	0.622
Minimum trade price	0.717	0.476	0.487
Year-end trade price	0.729	0.486	0.555
Trading volume, bn pcs	173	136	132

[1] In accordance with the Moscow Exchange's methodology for calculating the free-float factor published at https://fs.moex.com/files/4540.

[2] For information on the ability of certain shareholders to obtain or actual cases of them obtaining an extent of control disproportionate to their contribution to the authorized capital, including through shareholder agreements or based on them holding ordinary and preferred shares with differing par values, please see the Company's website at http://www.rushydro.ru/upload/iblock/102/Svedeniya-o-vozmozhnosti-priobreteniya-ili-o-priobretenii-opredelennimi-aktsionerami-stepeni-kontrolya.pdf.

[3] As at March 7, 2017, Hydroinvest was no longer the Company's shareholder, while the aggregate stake of EZOP and Energy Index – HydroOGK in the Company's authorized capital went down to 0.8% due to the sale of shares to VTB Bank (PJSC). As at September 9, 2018, Hydroinvest held 0.8% in RusHydro's authorized capital following the incorporation of EZOP and Energy Index – HydroOGK into Hydroinvest.

Share performance on the Moscow Exchange



Shares vs key indices of the Moscow Exchange

Shares traded on the global market

As at December 31, 2018, the number of shares traded outside of the Russian Federation in the form of ADRs and GDRs stood at 9,657,528,500, or 2.27% of the Company's registered authorized capital (excluding shares of additional issuance No. 1-01-55038-E-043D dated August 27, 2018).

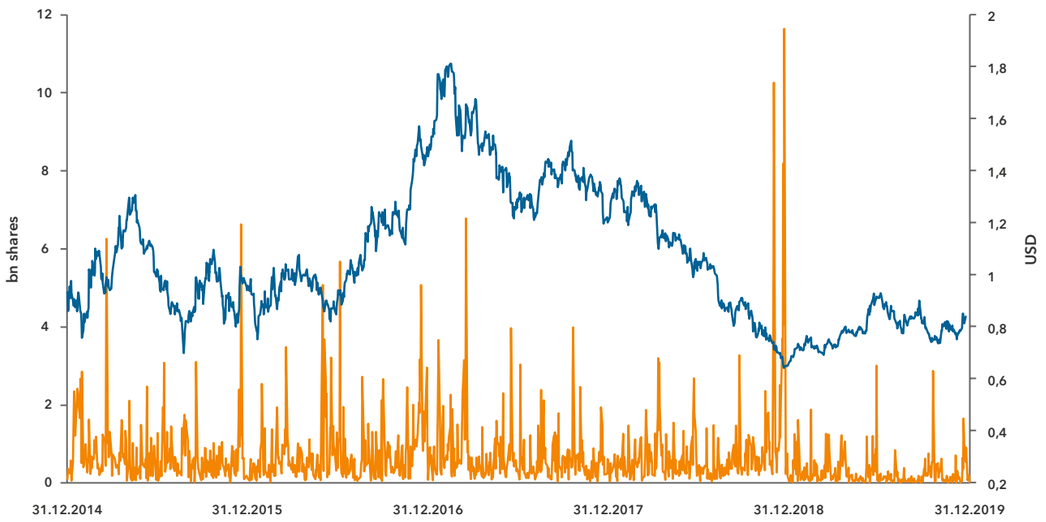
GDR and ADR program structure as at December 31, 2019

Type	Start of trading	Depositary bank	Ratio	Ticker	Quantity as at December 31, 2018, pcs	Trading platforms
Rule 144A GDRs	June 17, 2008	The Bank of New York Mellon	1 GDR = 100 ordinary shares	HYDR	78,273	London Stock Exchange (Main Market – IOB)
Level I ADRs	August 7, 2009	The Bank of New York Mellon	1 ADR = 100 ordinary shares	RSHYY HYDR	96,497,012	OTCQX London Stock Exchange

ADR trading on the London Stock Exchange

Item	2017	2018	2019
Currency	USD	USD	USD
Maximum trade price	1.81	1.37	0.93
Minimum trade price	1.20	0.64	0.67
Year-end trade price	1.20	0.66	0.84
Trading volume, mn psc	175	195	68

ADR performance on the London Stock Exchange



Share performance over five years

2015
In 2015, the MOEX Russia Index added 26% and the MOEX Electric Utilities Index rose by 18%, with RusHydro shares growing by 25%. The domestic market was buoyed by positive changes in the global investor sentiment towards assets from emerging markets triggered by sustained monetary loosening pursued by the world's leading central banks and expectations of mid-term recovery in Russia. Additional support for RusHydro's shares came from continued efforts to liberalize capacity sales for Siberian HPPs, results of the capacity auction, rising prices for electricity in the second price zone, commissioning of new generating facilities by the Company, and RusHydro's initiatives to strengthen the financial profile of RAO ES East.

2016
In 2016, the MOEX Russia Index added 27%, the MOEX Electric Utilities Index – 110%, and RusHydro shares grew by 36%. The domestic market was buoyed by the expected recovery of the Russian economy and ruble appreciation in the second half of the year. RusHydro shares grew on the back of high dividend payments, full liberalization of the HPP capacity market in Siberia, as well as overall strong hydro performance thanks to higher water levels. An additional boost to shares was provided by measures to optimize operating and investment expenses, decisions on refinancing the debt of RAO ES East Subgroup by signing a forward contract for RUB 55 bn in equity capital with VTB Bank (PJSC), and full consolidation of the RAO ES East shares for 100% ownership. The shares also benefited from the disposal of major assets by the Company for a total amount of over RUB 15 bn.

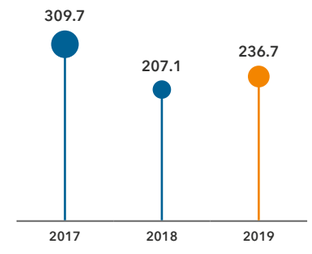
2017
In 2017, the MOEX Russia Index was down 6%, the MOEX Electric Utilities Index – 8%, and RusHydro shares lost 21%. The Russian market faced headwinds in the form of geopolitical risks, which included talks on new US sanctions as well as lower interest in Russian companies on the part of global investors given the stricter monetary policy in the US and oil price volatility. For most of the year, RusHydro's shares traded in line with the market. At the end of the year, the share price was driven down by the news of RusHydro's Board of Directors resolving to suspend the construction of Zagorskaya PSPP-2.

2018
In 2018, the MOEX Russia Index was up 7.8% year-on-year, while the Moscow Stock Exchange Power Index was down 11.4%, with shares in RusHydro losing 33.4%. In 2018, the market value of RusHydro shares decreased against a backdrop of the general lack of investor interest in the electric power industry. In Q1 2018, RusHydro's shares traded in line with the market. From Q2 2018 onwards, the Russian market and RusHydro shares were under pressure from sanctions on RUSAL Group, the biggest power consumer in Siberia and the Group's partner on the BEMO project, geopolitical risks, including talks on introducing new sanctions by the US (DASKA, August 2018), as well as lower interest in emerging market companies with no USD-denominated export revenue on the part of global investors while the US was tightening its monetary policy. Starting mid-October, RusHydro's shares began dropping in price due to investor and analyst expectation of MSCI excluding the Company from its Russia index, which it did in late November 2018.

2019
In 2019, the MOEX Russia Index was up 28.6% and the MOEX Electric Utilities Index rose by 25.0%, with RusHydro's shares adding 14.3%. The domestic share market was buoyed by a favorable external sentiment as global central bankers were embracing the monetary stimulus, while Russia's country risks kept diminishing and its macroeconomic stability was improving endorsed by the Bank of Russia's progressive monetary loosening. Early in the year, the Russian stock market got a major boost from the mitigation of sanction risks, with the U.S. Department of the Treasury lifting sanctions imposed on UC RUSAL, EN+ and EuroSibEnergo on April 6, 2018. RusHydro's shares rallied on the back of a new dividend policy approved by the Board of Directors, strong financial and operating results for 2018, inclusion of four of the Company's Far Eastern projects in a state-run TPP modernization program offering a guaranteed rate of return, and the generally favorable market environment.

Capitalization

RusHydro's market capitalization[1], RUB bn



[1] Source: the official website of the securities market operator (PJSC Moscow Exchange). Market capitalization is calculated as the number of shares of the respective category (type) multiplied by the market price of one share as disclosed by the market operator.

Dividends

RusHydro's dividend policy is focused on supporting the Company's strategic development for the benefit of its shareholders by striking an optimal balance between dividend payouts and profit capitalization.

The Development Strategy of RusHydro Group until 2020 with an outlook for 2025 sets the dividend payout ratio of at least 50% of net profit, and the Company is always going to target the maximum level of dividend yield for its shareholders. *[102-44]*

In order to enhance the transparency and predictability of dividend payouts, on April 19, 2019, RusHydro's Board of Directors approved an updated version of the Regulations on the Dividend Policy (Minutes No. 287 of April 22, 2019), which sets out 50% of RusHydro Group's IFRS net profit for the respective reporting period as the base rate for calculating dividends. Additionally, the minimum dividend (lower threshold) is set at the level of average dividend payout for the previous three years[1].

The Company's Board of Directors shall provide its dividend payout recommendations to be approved by the General Meeting of Shareholders based on the Company's IFRS net profit and the minimum dividend payout obligation, while also taking into consideration investments in the Group's strategic development and Investment Program, the maximum permissible debt ratio, and recommendations of the Russian Government.

Having considered RusHydro's performance in 2018, the Annual General Meeting of Shareholders resolved on June 28, 2019 to pay out dividends on ordinary shares in the amount of RUB 15.9 bn, or 50% of the IFRS net profit.

Over the past three years, the Group distributed a total of RUB 47 bn in dividends.

Regulations on the Dividend Policy of PJSC RusHydro: http://www.eng.rushydro.ru/

85 bn RUB

dividend paid by RusHydro over 15 years

Information on payment of dividends on the Company's shares in 2018

As at December 31, 2019, the Company had paid out RUB 15.87 bn in dividends, with unpaid dividends amounting to RUB 46.89 mn. The latter was due to reasons beyond the Company's control: the Company or the Registrar (nominal holder) did not have the exact and necessary address details or bank details.

The Company made the dividend payments to the federal budget in full, in the amount of RUB 9.74 bn. The Company has no dividends to the federal budget that are in arrears.

Dividend history for the five years preceding the reporting year

Reporting period for which the dividends were paid	Total amount of declared (accrued) dividends, RUB '000	Amount of dividends declared per share, RUB
2014	6,032,750	0.01561855
2015	15,011,046	0.038863
2016	19,875,503	0.0466245
2017	11,225,676	0.0263335
2018	15,918,514	0.0367388

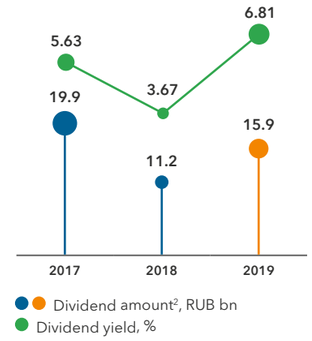
[1] Average dividend payout for the previous three years is calculated as follows: $Div_{threshold} = (Div_{-year\ 3} + Di_{v-year\ 2} + Div_{-year\ 1}) / 3$

Total shareholder return

In 2017, RusHydro adopted a Long-Term Incentive Plan (LTIP) for the Company's senior management with a three-year total shareholder return (TSR) as the key KPI. In line with the approved LTIP methodology, TSR is calculated as a sum of changes in the market price of shares and the dividend yield for the reporting period. The target value is considered achieved if the estimated actual indicator grew faster than the MOEX Russia Index over a three-year reporting period.

In 2019, the TSR was 17.2%, while the MOEX Russia Index grew by 25.6% over the same period.

Dividend yield[1]



Shareholder and investor relations

During the reporting period, the Company focused closely on maximizing engagement with participants of the exchange market and other stakeholders and improving efficiency of information disclosures. As part of the investor engagement exercise, the Company held:

- more than 200 one-on-one and group meetings with the managers of major international and Russian investment funds;
- Analyst and Investor Day bringing together all Management Board members and key heads of functions;
- four quarterly management conference calls for analysts, investors, rating agencies and business mass media;
- a trip to the Far East for analysts and investors with on-site visits to Blagoveshchenskaya CHPP, DRSK, Bureyskaya HPP and Nizhne-Bureyskaya HPP.

The meetings focused on discussing RusHydro Group's strategic priorities and plans, including those related to the updated dividend policy, inclusion of the four Far Eastern projects in the TPP modernization program with a guaranteed rate of return, implementation of the share value growth initiatives, management efforts aimed at improving operational efficiency, and plans for asset modernization.

For the purpose of liaising with the shareholders, the Company uses the following types of communication: personal meetings, conferences, call center and e-mail messages.

In 2019, the Company also closely engaged with the leading global analytical agencies seeking to enforce compliance with the sustainable development criteria. Those agencies included:

- CDP (Carbon Disclosure Project);
- Sustainalytics;
- MSCI-ESG;
- FTSE-Russel;
- Vigeo Eiris;
- Robeco-SAM;
- Trucost;
- Energy Intelligence.

For details on assessment of the Company by Russian and international analytical agencies, see Awards and ratings

Number of inquiries from RusHydro's shareholders recorded by VTB Registrar in 2019

Inquiries by topic	Personal visit to the Registrar's office	Registered mail	E-mail	Phone calls	Phone inquiries as percentage of total phone calls
Dividend distribution	–	78	104	3 620	70%
Inheritance registration	359	34	–	259	5%
Changes in account details	2,490	102	–	517	10%
Purchase / sale / gratuitous transfer of shares	443	14	–	259	5%
Inquiries about the number of securities	590	123	–	517	10%
Inquiries from notaries (to register inheritance deeds)	–	1,046	–	–	–

[1] The dividend yield is calculated upon the adoption of the resolution on the size of the annual dividend by dividing the annual dividend per one share by that share's median market price in the reporting period (dividends – PJSC Moscow Exchange, http://moex.com).

[2] The share of IFRS net profit allocated for dividends in 2016–2018 was 50%.

Governing bodies *[102-22] [102-23]*

General Meeting of Shareholders

The General Meeting of Shareholders is the supreme governing body of the Company, which operates in accordance with the laws of the Russian Federation, the Company's Charter and the Regulations on the Procedure for Convening and Holding General Meetings of Shareholders of RusHydro.

On June 28, 2019, an Annual General Meeting of Shareholders took place in Moscow (Minutes No. 18 of July 2, 2019) and was attended by 400 shareholders, as well as media representatives, nominees to the governing and supervisory bodies of the Company, and other invitees.

The Meeting reviewed an agenda of 15 items, having approved, among other things, the annual report, annual accounting (financial) statements and dividends for 2018 and having elected new members of the Board of Directors and the Internal Audit Commission. In addition, the Meeting approved new versions of the Charter, Regulations on the Procedure for Convocation and Holding of General Meetings of Shareholders, Regulations on the Procedure for Convening and Holding Meetings of the Board of Directors, Regulations on the Management Board, Regulations on the Internal Audit Commission, and Regulations on Payment of Remuneration and Compensation to Members of the Board of Directors.

There were no Extraordinary General Meetings of Shareholders in 2019.

All information on the Annual General Meeting of Shareholders, including Meeting materials and minutes, is available on the Company's website at www.eng.rushydro.ru

Board of Directors *[102-24]*

The Board of Directors is a governing body that sets the priority areas of the Company's operations, approves its strategy and defines the core principles and approaches to the organization of the Company's internal control and risk management functions. The Board of Directors also makes decisions on corporate governance improvements along with investment and business planning matters, manages performance, innovations and sustainable development. The Board of Directors is also involved in some of the most important or regularly supervised operational matters, such as reliability and security of the Company's facilities, monitoring of progress against major projects, approval of the certain types of transactions, and management of subsidiaries.

The Board of Directors consists of 13 directors and operates on the basis of the Charter and the Regulations on the Procedure for Convening and Holding Meetings of the Board of Directors of PJSC RusHydro. Candidates to the Board of Directors must show proof of relevant experience in energy, financial (including analysis, assessment and audit of financial statements), management, production and other areas irrespective of their gender.

To improve the quality of decision-making, matters submitted for consideration by the Company's Board of Directors are previewed by meetings of the Management Board and committees of the Board of Directors.

Regulations on the Procedure for Convening and Holding Meetings of the Board of Directors of PJSC RusHydro www.eng.rushydro.ru

Independent directors

Independent directors are required to have an efficient and highly professional Board of Directors exercising an unbiased and independent judgement and adopting resolutions that respect the interests of the Company and its shareholders.

Candidates to the Board of Directors are assessed for compliance with the independence criteria set out in the Corporate Governance Code recommended for implementation by the Bank of Russia and the Listing Rules of the Moscow Exchange.

RusHydro meets the Moscow Exchange requirements setting out the number of independent directors that should serve on the Board of Directors. There are four independent directors serving on the Company's Board of Directors: Maxim Bystrov, Pavel Grachev, Aleksei Chekunkov and Vyacheslav Pivovarov[1]. Independent directors monitor the Company's statement of financial results and analyze its financial performance and delivery against targets.

Each year, in the run-up to the General Meeting of Shareholders the Nomination and Compensation Committee of RusHydro's Board of Directors reviews compliance of potential candidates to the Board of Directors with independence criteria and submits an opinion on their independence to the shareholders as part of the meeting materials.

The compliance of the existing independent directors is assessed by the Nomination and Compensation Committee on a quarterly basis throughout their tenure as part of the procedure for confirming compliance with the Moscow Exchange listing requirements, with their details and regularly updated personal information used as the basis for the assessment.

Independent directors bring in well-balanced opinions and exercise unbiased judgment based solely on their experience and expertise. Independent directors and their input to the work of the Board of Directors enhance the trust and confidence of shareholders and a wide range of investors, improve the quality of management decisions, and promote compliance with corporate governance principles.

Composition of the Board of Directors

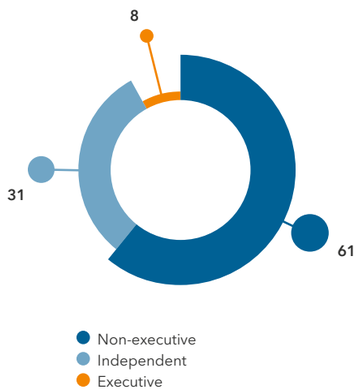
The Board of Directors consists of 13 members. In 2019, there were two line-ups of the Board of Directors: one elected by the Annual General Meeting of Shareholders on June 27, 2018 and the other elected on June 28, 2019, with the mandates of 10 out of 13 directors extended for another term.

All candidates nominated for election to the Company's Board of Directors at the Annual General Meeting of Shareholders held on June 28, 2019 have higher education and are highly professional and qualified, and:

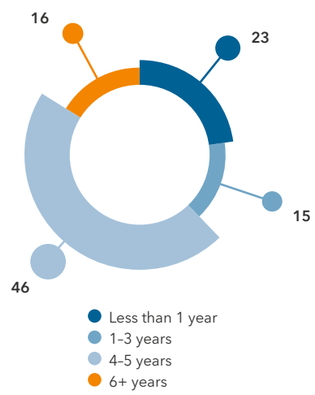
- are recognized experts in energy, finance, law, strategic and corporate governance, audit, risk management, HR, innovation and investment, as well as production and R&D;
- have a track record of serving on boards of directors or in senior positions at other joint-stock companies listed on organized exchanges;
- have impeccable business and personal reputation, sufficient skills, expertise and experience to make decisions falling within the Board of Directors' remit and perform their responsibilities efficiently.

The current composition of RusHydro's Board of Directors is well-balanced in terms of necessary competencies and professional experience. The balance of the Board of Directors is achieved through a high level of professional knowledge and expertise, sufficient time for performing the duties of a member of the Board of Directors, and absence of a conflict of interest, all of which contribute to effective decision-making.

Director status, %



Years served on the Board of Directors, %



[1] In the reporting year, none of the directors reported being stripped of his status as an independent director.

Composition of the Board of Directors

Full name	Year of appointment	Status	Nominated by	Committee membership					
				AC	NCC	SC	CEDFE	CREEI	IC
Artem Avetisyan	2015	Non-executive	Russian Federation						
Maxim Bystrov	2013	Independent	Russian Federation	V	V				V
Pavel Grachev	2016	Independent	Russian Federation	V	V	V	V		
Lev Kuznetsov	2019	Non-executive	Russian Federation			V			V
Yury Manevich	2019	Non-executive (public officer)	Russian Federation						
Pavel Livinsky	2018	Non-executive	Russian Federation						
Vyacheslav Pivovarov	2013	Independent	Russian Federation	V	V	V			V
Mikhail Rasstrigin	2018	Non-executive (public officer)	Russian Federation						
Nikolay Rogalev[1]	2016	Non-executive	Russian Federation			V		V	V
Yury Trutnev[2]	2015	Non-executive (public officer)	Russian Federation				V		
Alexei Chekunkov	2016[3]	Independent	Russian Federation		V		V		
Andrey Shishkin	2014	Non-executive	LLC Avitrans						
Nikolay Shulginov	2016	Executive	Russian Federation						

AC – Audit Committee
NCC – Nomination and Compensation Committee
SC – Strategy Committee
CEDFE – Committee on Energy Development of the Far East
CREEI – Committee on Reliability, Energy Efficiency and Innovation
IC – Investment Committee

Experience and competencies of the Board of Directors[4]

Full name / area of expertise	Area of expertise					
	Energy	Finance (including the analysis, assessment, and audit of financial statements)	Management	Production	R&D	Other competencies
Artem Avetisyan		+	+			Promotion of entrepreneurship
Maxim Bystrov	+	+	+	+		Global economics
Pavel Grachev		+	+			Law, Doctor of Law
Lev Kuznetsov		+		+		
Yury Manevich	+	+	+	+		
Pavel Livinsky		+	+			Economics
Vyacheslav Pivovarov		+	+			Global Economics, Applied Economics, MBA

[1] Deputy Chairman of the Company's Board of Directors, Dean of Moscow Power Engineering Institute.

[2] Chairman of the Company's Board of Directors, Deputy Prime Minister of the Russian Federation and Presidential Plenipotentiary Envoy to the Far Eastern Federal District.

[3] Was a member of the Board of Directors in 2016-2018 and since 2019.

[4] Relevant experience of the candidates to the Board of Directors in various areas of activity, based on the data received from candidates to the Board of Directors, including education, professional track record and other publicly available information.

Full name / area of expertise	Area of expertise					
	Energy	Finance (including the analysis, assessment, and audit of financial statements)	Management	Production	R&D	Other competencies
Mikhail Rasstrigin	+	+	+			Economics
Nikolay Rogalev	+		+	+	+	Doctoral Degree in Technical Sciences, Professor
Yury Trutnev	+	+	+	+	+	
Alexei Chekunkov		+	+			Economics
Andrey Shishkin	+	+	+	+		
Nikolay Shulginov	+	+	+	+	+	PhD in Technical Sciences
Total	**7**	**12**	**12**	**7**	**3**	

Induction program

A newly elected member of the Board of Directors takes an induction program, including introduction to the members of the Management Board and familiarizing with:
- the Company's internal regulations;
- the Company's key performance indicators;
- RusHydro Group Development Strategy and RusHydro Group's Long-term Development Program;
- the Company's specifics as a joint-stock company with a majority government stake and other specific aspects;
- the software and technical facilities used in the work of the Board of Directors.

Independent directors also acquaint themselves with additional rights and obligations of independent directors, their functions and roles in the Company's corporate practice.

In addition, Corporate Secretary assists newly elected members of the Company's Board of Directors with answers to their questions and sets up meetings with the Company's officers.

Education and further professional training

To improve its overall performance, the Board of Directors may decide to send its individual members for training and further professional development programs at the Company's expense within the limits of the Company's budget allocated for these purposes.

The training and further professional development programs for Board of Directors members are subject to approval by the Nomination and Compensation Committee.

In over 15 years, RusHydro has gone a great distance in its formation and development. The company, originally created as part of RAO UES of Russia's hydroelectric power plants, has grown into the largest electricity holding in Russia. It combines under one roof hydropower plants, thermal power plants, renewable energy generation, and power grid assets in the Far East, as well as energy, construction, and service companies, and a unique research and planning complex. One of RusHydro's priorities is the Far East's advanced development of electric power. By building new energy facilities and modernization of existing ones, the company is creating a solid foundation for developing other sectors and society as it contributes to economic growth in the Far East.

Yury Trutnev,

Deputy Prime Minister of Russia and Presidential Envoy to the Far Eastern Federal District, Chairman of the Board of Directors RusHydro

Short biographies of directors[1]

Yury
Trutnev

Chairman of the Board of Directors, non-executive director, representative of the Russian Federation, public officer

Born in 1956

Education, academic degree, academic rank:
Graduated from the Perm National Research Polytechnic University with a degree in Mining Engineering

Experience over the last 5 years:

2013–present: Deputy Prime Minister of the Russian Federation and Presidential Plenipotentiary Envoy to the Far Eastern Federal District

Nikolay
Shulginov

Executive director, representative of the Russian Federation

Born in 1951

Education, academic degree, academic rank:
Sergo Ordzhonikidze Novocherkassk Polytechnic Institute awarded the Order of the Red Banner of Labor; holds a PhD degree in Technology

Experience over the last 5 years:

- 2015–present: Chairman of the Management Board – General Director of RusHydro
- 2009–2015: First Deputy Chairman of the Management Board of JSC SO UES

Artem
Avetisyan

Non-executive director, representative of the Russian Federation

Born in 1976

Education, academic degree, academic rank:
Graduated from the Financial University under the Government of the Russian Federation with a degree in Finance and Lending
Postgraduate studies at the Financial University under the Government of the Russian Federation
Audit retraining program at Moscow State University

Experience over the last 5 years:

- 2011–present: Head of New Business at the Agency for Strategic Initiatives
- 2014–2016: Vice President of the NEO Center

Maxim
Bystrov

Independent director

Born in 1964

Education, academic degree, academic rank:
Graduated from the National Research Moscow State University of Civil Engineering with a degree in Hydraulic Engineering and Power Plant Construction
Graduated from the Russian Foreign Trade Academy with a degree in International Economics

Experience over the last 5 years:

- 2013–present: Chairman of the Management Board of NP Market Council
- 2013–present: Chairman of the Management Board of JSC ATS

Pavel
Grachev

Independent director

Born in 1973

Education, academic degree, academic rank:
Graduated from the Saint Petersburg State University and the University of Trieste (Italy) with degrees in law, Doctor of Law

Experience over the last 5 years:

- 2016–present: General Director of MC Polyus LLC
- 2014–present: Chief Executive Officer of PJSC Polyus
- 2014–2016: President of JSC Polyus Krasnoyarsk
- 2014–2016: Chief Executive Officer of Polyus Gold International Limited

Lev
Kuznetsov

Non-executive director, representative of the Russian Federation

Born in 1965

Education, academic degree, academic rank:
Graduated from Moscow Financial Institute with a degree in Economics

Experience over the last 5 years:

- 2019–present: Advisor to the General Director of New Pipe Technologies
- 2014–2018: Russian Minister of North Caucasus Affairs

For more details on members of the Board of Directors, including the full list of positions held by them previously in collective governing bodies, see the Quarterly Reports of PJSC RusHydro.

[1] As at December 31, 2019

Short biographies of directors

Pavel
Livinsky

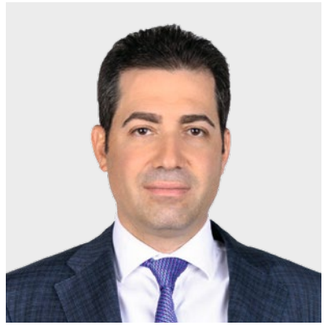
Non-executive director, representative of the Russian Federation

Born in 1980

Education, academic degree, academic rank:
Graduated from the Moscow State University with a degree in Economics;
holds a Master's degree in Management

Experience over the last 5 years:

- 2017–present: General Director, Chairman of the Management Board at Rosseti
- 2017: Head of the Moscow Department of Housing, Utilities and Amenities
- 2015–present: President of the Sport Federation of Firefighters and Rescuers
- 2013-2017: Head of the Moscow Department of Fuel and Energy



Yury
Manevich

Non-executive director, representative of the Russian Federation, public officer

Born in 1972

Education, academic degree, academic rank:
Graduated from Saint Petersburg University of Economics and Finance with a degree in Economics and Production Management

Experience over the last 5 years:

- 2019–present: Deputy Minister Energy of the Russian Federation
- 2010–2019: General Director and President at CJSC ROSPROJECT

Vyacheslav
Pivovarov

Independent director

Born in 1972

Education, academic degree, academic rank:
Graduated from the Sergo Ordzhonikidze State Academy of Management with a degree in International Economics
Graduated from the American University of Paris with a degree in Applied Economics
Received MBA from Stanford University

Experience over the last 5 years:

- 2017–present: President of Altera Capital[1]
- 2011–2017: President of Altera Capital[2]

Mikhail
Rasstrigin

Non-executive director, representative of the Russian Federation, public officer

Born in 1983

Education, academic degree, academic rank:
Graduated from Ivanovo State Power Engineering University with a degree in Heat Power Station Engineering; Bachelor of Economics

Experience over the last 5 years:

- 2017–present: Deputy Minister of Economic Development
- 2017: Assistant Minister of Economic Development
- 2011-2017: Head of Electric Power, Natural Resources Directorate, Research Department, VTB Capital

Nikolay
Rogalev

Non-executive director, representative of the Russian Federation

Born in 1962

Education, academic degree, academic rank:
Graduated from the Moscow Power Engineering Institute (heat power stations), Doctoral Degree in Technical Sciences, Professor

Experience over the last 5 years:

- 2016–present: President of NP Scientific and Technical Council of the Unified Energy System
- 2015–present: Head of Department at the Moscow Power Engineering Institute (part-time)
- 2013–present: Dean of the Moscow Power Engineering Institute

Alexei
Chekunkov

Independent director

Born in 1980

Education, academic degree, academic rank:
Graduated from Moscow State Institute of International Relations with a degree in Economics)

Experience over the last 5 years:

- 2014–present: Chief Executive Officer of the Far East and Baikal Region Development Fund

[1] INN: 7714961556.
[2] INN: 7703741291.

Short biographies of directors prior to June 28, 2019

Andrey
Shishkin

Non-executive director, representative of the Russian Federation

Born in 1959

Education, academic degree, academic rank:
Graduated from the Gubkin Moscow Institute of Petrochemical and Gas Industry with a degree in Industrial Heat and Power Engineering

Experience over the last 5 years:

- 2015–present: General Director at RN-Assets
- 2012–present: Vice President for Energy, Health, Safety and Environment at Rosneft; from 2014: Vice President for Energy and Localization at Rosneft; from 2016: Vice President for Energy, Localization and Innovation at Rosneft
- 2016–2019: President, Chairman of the Management Board at Bashneft

Sergey
Ivanov

Independent director

Born in 1961

Education, academic degree, academic rank:
Graduated from the National Research Nuclear University with a degree in Theoretical Nuclear Physics, PhD degree in Economics, Professor, Corresponding member of the Russian Academy of Natural Sciences

Experience over the last 5 years:

- 2016–2018: General Director at RT-Capital
- 2015–2016: General Director of Nechernozemagropromstroy Corporation
- 2012–2015: General Director of LENSENT
- 2011–2016: General Director of Energetic Russian Company (ERCO)
- 2007–2014: Chairman of the Presidium of the National Institute of Energy Security

Vyacheslav
Kravchenko

Non-executive director, representative of the Russian Federation

Born in 1967

Education, academic degree, academic rank:
Graduated from the Moscow State University with a degree in Law)

Experience over the last 5 years:

- 2013-2018: Deputy Minister of Energy of the Russian Federation

Sergey
Shishin

Non-executive director, representative of the Russian Federation

Born in 1963

Education, academic degree, academic rank:
Graduated from the KGB Moscow Higher Frontier Guards Command Academy

Russian Presidential Academy of National Economy and Public Administration, degree in Public and Municipal Administration, PhD in Economics

Experience over the last 5 years:

- 2007–present: Senior Vice President at VTB Bank

Additional information on directors

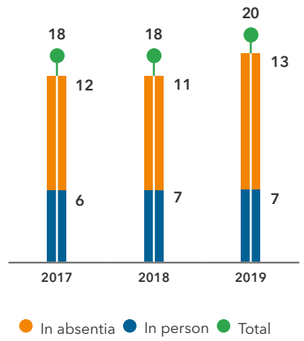
As at December 31, 2019, the directors held (directly or indirectly) no shares of the Company or shares/stakes Company's subsidiaries. In the reporting year, members of the Board of Directors did not buy or sell the Company's shares.

No loans were issued by the Company or RusHydro Group to any members of the Board of Directors.

Duties of officials representing the Russian Federation are set forth in Resolution No. 738 of the Russian Government dated December 3, 2004.

The independence of the members of the Board of Directors is defined in line with the independence criteria of the Moscow Exchange and the Corporate Governance Code recommended by the Bank of Russia[1].

Number of Board of Directors meetings



Attendance in 2019 by director

Full name	Meetings attended/total	Attendance, %
Artem Avetisyan	12/20	60
Maxim Bystrov	17/20	85
Pavel Grachev	20/20	100
Lev Kuznetsov (starting June 28, 2019)	10/10	100
Yury Manevich (starting June 28, 2019)	10/10	100
Pavel Livinsky	19/20	95
Vyacheslav Pivovarov	19/20	95
Mikhail Rasstrigin	19/20	95
Nikolay Rogalev	20/20	100
Yury Trutnev	20/20	100
Alexei Chekunkov (starting June 28, 2019)	9/10	90
Andrey Shishkin	18/20	90
Nikolay Shulginov	20/20	100
Sergey Ivanov (member until June 28, 2019)	5/10	50
Vyacheslav Kravchenko (member until June 28, 2019)	8/10	80
Sergey Shishin (member until June 28, 2019)	10/10	100

[1] Recognition of director independence is fully in line with the criteria set out in the Listing Rules of the Moscow Exchange and the Company's Corporate Governance Code, but partially contravenes the Corporate Governance Code recommended by the Bank of Russia as the latter does not allow for a director who has formal ties with the Government to be recognised as independent (Alexei Chekunkov).

As at the date of appointment and during 2019, no conflicts of interest (including participation in the governing bodies of the Company's competitors) of any member of the Board of Directors was reported.

Board of Directors' report

In 2019, the Board of Directors held 20 meetings and reviewed a total of 165 items. The average attendance rate stood at 90% of all meetings held during the year.

In 2019, in addition to resolutions on the convocation of the Annual General Meeting of Shareholders, approval of transactions, development of a transparent procurement management framework, enhancement of the control and audit system and subsidiary management matters, the Board of Directors made a number of important decisions related to the Company's development (see the key matters reviewed by the Board in 2018 in the table below).

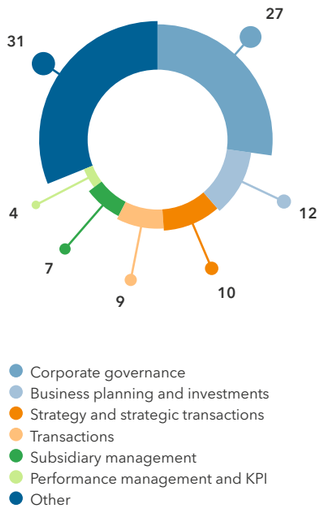
Key agenda items reviewed by the Board of Directors in the reporting year:

- progress and financing under the investment project to construct two single-circuit 110 kV Pevek-Bilibino power lines (construction stage No. 1);
- approval of PJSC RusHydro's Regulations on the Dividend Policy;
- extension of grace period for the loan given to JSC DGK under a forward transaction with VTB Bank (PJSC);
- review of the program to develop the energy system in the Far Eastern Federal District with a view to accelerating local economic growth;
- consolidation of RusHydro Group's energy companies across the Kamchatka Territory;
- RusHydro Group's initiatives to streamline operations and improve financial stability of JSC DGK and to change the ownership structure of PJSC DEK;
- initiatives to refinance the debt of JSC RAO ES East Subgroup's companies;
- creation of PJSC RusHydro branches to modernize CHPPs;
- performance under the Company's Business Plan in 2018 (including the report on progress against the Investment Program in 2018 covering, among other things, the Comprehensive Modernization Program for RusHydro's generating facilities);
- approval of the report on progress against the Company's Consolidated Business Plan (including the Consolidated Investment Program) in 2018;
- approval of the report on achievement of key performance indicators (for the Management Board);
- approval of the Company's Business Plan (including the Investment Program) and RusHydro Group's Consolidated Business Plan for 2020–2024;
- approval of the annual KPIs for the Management Board and their target values for 2020.

In 2019, the Company did not face the most complicated issues that would need to be discussed by the Board of Directors.

Minutes of the meetings held by PJSC RusHydro's Board of Directors are available on the Company's website at www.eng.rushydro.ru

Breakdown of items considered by the Board of Directors, %



Assessment of the Board of Directors performance

[103-3] [102-28]

Independent assessment

Performance of the Company's Board of Directors is assessed in accordance with the Regulation on the Assessment of the Activities of the Board of Directors and the Board of Director Committees of PJSC RusHydro[1] approved by the Board of Directors and developed in line with the applicable Russian laws, the Company's Charter, the Corporate Governance Code of the Bank of Russia, the UK Corporate Governance Code, and the G20/OECD Principles of Corporate Governance.

Pursuant to the Corporate Governance Code of RusHydro, assessment is performed as follows:

- internal assessment (annually);
- external independent assessment by an independent consultant (once every three years).

For more information on resolutions adopted by the Board of Directors in 2019, see Appendix No. 4.

The last independent assessment was completed by LLC Pricewaterhouse Coopers Advisory in 2018, with the results reviewed by a meeting of the Company's Board of Directors held in person in June 2018.

Self-assessment

In 2019, the Board of Directors assessed its performance by surveying individual directors and reviewing internal documents governing the activities of the Board of Directors and its committees, the meeting minutes of the Board of Directors and its committees, and other relevant materials. The scope of the assessment included:

- overall assessment of the Board of Directors' performance;
- assessment of each committee's performance;
- performance assessment for the Chairman of the Board of Directors and Senior Independent Director;
- individual assessment of the Board members.

The results of the self-assessment demonstrate that the Company largely complies with the principles and recommendations of both the Russian and British corporate governance codes and also highlight some key strengths of RusHydro's Board of Directors:

- collectively, the members of the Board of Directors possess a strong set of competencies, expertise, skills and leadership qualities that contribute to their efficient performance;
- he Board of Directors and the Audit Committee include a director with experience and expertise in preparation, analysis, assessment and audit of accounting (financial) statements;
- the Board of Directors represents the main stakeholders of the Company, while also maintaining a balance between ensuring succession and systematically bringing in new members;
- meetings of the Board of Directors are characterized by active discussions of the agenda items and resolutions, with new ideas and a diversity of opinions always welcome;
- the most important matters pertaining to the operations of the Company and its subsidiaries are normally discussed at the meetings of the Board of Directors that are held in person;
- directors do not refrain from asking the management team uncomfortable questions and provide constructive criticism on proposed resolutions to ensure well-informed decision-making;
- independent directors play an important and active role in the work of the Board of Directors and its committees.;
- the committees of the Board of Directors review the agenda items in greater depth and contribute to the overall efficiency of the Board of Directors.

Also, to evaluate individual contributions of each director elected as a representative of the Russian Federation, RusHydro introduced a special procedure for the performance of the Board of Directors to be assessed automatically based on information sourced from dedicated director questionnaires available in the Company's personal account on Rosimushchestvo's inter-agency portal.

This procedure helps assess individual efficiency of the Company's directors against the following criteria:

- Objective assessment provides a baseline to evaluate individual contributions from directors elected as representatives of the Russian Federation as regards their participation in corporate events, voting on items included in agendas of such corporate events, submission of performance reports to the Company's Board of Directors, etc.
- Subjective assessment provides a baseline to evaluate individual contributions from directors elected as representatives of the Russian Federation as regards their involvement at meetings of the Board of Directors, offer of advice and support to the Company's management team, protection of shareholder interests, possession of the necessary professional skills to work as a director, etc.

The assessment results are taken into consideration by the Government when it decides on candidates to be nominated to the Board of Directors at the next Annual General Meeting of Shareholders.

Areas for the development of the Board's activities

In order to continue improving its efficiency, the Board of Directors is going to take the following key actions based on the assessment results:

- hold a strategic session with external experts to discuss the strategy, its implementation and possible updates (in light of systematic renewal of the Board of Directors, as well as changes in the business landscape since the approval of the strategy);
- expand the list of speakers invited to the meetings of the Board of Directors with members of the Company's management and external experts;
- hold comprehensive Board of Directors discussions addressing the matters of risk

[1] Minutes No. 283 of February 21, 2019.

[1] The assessment is based on the methodology for individual assessment of directors in joint-stock companies partially owned by the Government, as approved by the Federal Agency for State Property Management (Rosimushchestvo).

appetite and key risk management as they pertain to the Company's operations;
- maintain and expand the practice of the Board of Directors members and independent directors in particular attending the most important investor and analyst engagement events.

Liability insurance

Since 2007, RusHydro has provided liability insurance for the members of the Board of Directors and the Management Board, as well as for the persons in the capacity of sole executive bodies at the Company's subsidiaries and branches and for those managing the Company's units and subsidiaries.
In a tender to select a provider of directors and officers (D&O) civil liability insurance for 2019, JSC SOGAZ was chosen based on its ability to provide the most reliable and comprehensive coverage when it comes to this type of insurance[1].

The amount of coverage is RUB 12.1 bn. In addition, the independent directors' liability is insured for RUB 156.6 mn. The insurance premium amounted to RUB 15,0 mn.

The insurance policy covers:
- property interests of the insured related to other persons' claims for damages arising from the insured person's claimed (alleged, supposed) wrongdoing (error, omission, improper performance, etc.);
- property interests of the Company and/or any subsidiary related to any claims made by other persons that were initially brought against the insured;
- property interests of the Company and/or any subsidiary related to any claims in respect of securities brought against the Company and/ or any subsidiary.

Committees of the Board of Directors

The committees are advisory bodies helping the Board of Directors to effectively perform its general management duties.

RusHydro's Board of Directors has six committees:
- Audit Committee;
- Nomination and Compensation Committee;
- Strategy Committee;
- Investment Committee;
- Committee on Energy Development of the Far East;
- Committee on Reliability, Energy Efficiency and Innovation.

Regulations on the committees, including meeting minutes, are available on the Company's website at http://www.eng.rushydro.ru/

For more information on meetings held by committees of the Board of Directors, see Appendix No. 5

[1] The insurer selection process complied with the requirements of the Company's internal regulations and Federal Law of the Russian Federation No. 223-FZ On Procurement of Goods, Works, Services by Certain Types of Legal Entities dated July 18, 2011.

Audit Committee

Members of the Committee	Competencies	Key performance results and recommendations issued to the Board of Directors
In 2019, the Audit Committee held 21 meetings, including: - 8 meetings before June 21, 2019; - 13 meetings on or after June 21, 2019.	The Committee is designed to assist the Board of Directors in exercising control over the Company's financial and business operations, with its key responsibilities including oversight of the financial statements, internal controls, risk management, corporate governance, and misconduct reporting systems, and ensuring independence and impartiality of the internal and external audit functions.	The Audit Committee recommended that the Company's Board of Directors: - approve the Company's annual financial statements and annual report; - approve the report on the operation and internal assessment of the internal control and risk management system. In addition, the Audit Committee: - reviewed corporate governance assessment results with a focus on internal audit review; - reviewed the results of control activities of internal auditors and assessed the efficiency of the internal audit system; - assessed the efficiency of external audit; - reviewed a report on progress against the Action Plan for Implementing the Company's Comprehensive Program of Anti-Corruption Activities; - reviewed an interim report on the results of diagnostics and preliminary independent assessment of the internal audit function.

Full name	Attendance
Independent members of the Board of Directors	
Maxim Bystrov (Chairman of the Committee)	21/21
Pavel Grachev (after June 21, 2019)	12/13
Vyacheslav Pivovarov	19/21
Sergey Ivanov (before June 21, 2019)	5/8

Nomination and Compensation Committee

Members of the Committee	Competencies	Key performance results and recommendations issued to the Board of Directors
In 2019, the Nomination and Compensation Committee held 15 meetings, including: - 8 meetings before June 21, 2019; - 7 meetings on or after June 21, 2019.	The Committee is designed to provide recommendations on composition and set of skills of the Company's governing bodies, and recommend tools to enhance efficiency and transparency of the remuneration system. Its primary objective is to review relevant items on a preliminary basis and draft recommendations on matters reserved to the remit of the Board of Directors.	The Nomination and Compensation Committee recommended that the Company's Board of Directors: - approve the report on achievement of the Management Board's annual KPIs for 2018; - recommend the Annual General Meeting of Shareholders to approve a new version of the Regulations on Payment of Remuneration and Compensation to Members of RusHydro's Board of Directors; - acknowledge Maxim Bystrov and Aleksei Chekunkov as independent directors pursuant to the Moscow Exchange's Listing Rules; - approve Pavel Grachev, an independent member of the Company's Board of Directors, as the Senior Independent Director; - approve the annual KPIs for the Company's Management Board and their target values for 2020, a new version of the Calculation and Evaluation Methodology for the Annual KPI of RusHydro's Management Board, target values for the KPI of under RusHydro's Long-term Incentive Plan, and amendments to the Calculation and Evaluation Methodology for the KPI of RusHydro's Long-term Incentive Plan. In addition, the Nomination and Compensation Committee: - analyzed qualifications of nominees to the Board of Directors and vetted them for potential conflicts of interest; - assessed nominees to the Board of Directors and independent directors for compliance with the independence criteria.

Full name	Attendance
Independent members of the Board of Directors	
Vyacheslav Pivovarov (Chairman of the Committee)	15/15
Maxim Bystrov (before July 26, 2019)	9/15
Sergey Ivanov (before June 21, 2019)	3/8
Pavel Grachev (after June 21, 2019)	7/7
Alexei Chekunkov (on or after July 26, 2019)	6/7

Strategy Committee

Members of the Committee	Competencies	Key performance results and recommendations issued to the Board of Directors
In 2019, the Strategy Committee held 12 meetings, including: - 6 meetings before July 26, 2019; - 6 meetings on or after July 26, 2019.	The Committee is designed to ensure efficient performance of the Board of Directors in strategic areas. The Committee determines the Group's strategic development priorities, approves the Company's development strategy and long-term development program (including review of the strategy implementation reports), provides recommendations on the dividend policy, makes decisions on the Company's investments in and divestments from other organizations, considers authorized capital increases and other share offering and purchase matters, and reviews the Group's financial and valuation models.	The Strategy Committee recommended that the Company's Board of Directors: - approve a new version of the Company's Regulations on the Dividend Policy; - approve changes to the Decision to Issue Additional Shares and to the Prospectus (for ordinary shares); - adopt a resolution on initiatives to refinance the debt of JSC RAO ES East companies; - take note of the program to develop the energy system in the Far Eastern Federal District with a view to accelerating local economic growth; - approve amendments to the Group's Long-term Development Program for 2018–2022; - approve changes to the KPI list, targets, and calculation and evaluation methodology for the KPI of RusHydro Group's Long-term Development Program; - adopt a resolution on the update of the Group's Innovative Development Program; - adopt a resolution on matters related to the consolidation of RusHydro Group's energy companies across the Kamchatka Territory; - divest from Bank of Cyprus Holdings Public Limited Company; - approve Hydroinvest's divestment from MEK; - approve the establishment at HydroEngineering Siberia of a Shared Services Center responsible for Group-wide financial and tax accounting and reporting.

Full name	Attendance
Independent members of the Board of Directors	
Pavel Grachev	12/12
Sergey Ivanov (before July 26, 2019)	5/6
Vyacheslav Pivovarov	12/12
Members of the Board of Directors	
Lev Kuznetsov (on or after July 26, 2019)	6/6
Nikolay Rogalev	12/12
Sergey Shishin (before July 26, 2019)	6/6
Members of the executive bodies	
George Rizhinashvili	12/12
Andrey Kazachenkov	12/12
Committee members	
Igor Zadvornov (Chairman of the Committee)	8/12
Aleksandr Bogashov (before July 26, 2019)	5/6
Dmitriy Denisov	11/12
Boris Livshits	10/12
Vasiliy Nikonov	9/12
Yevgeniy Olkhovich	8/12
Pavel Snikkars	8/12

Investment Committee

Members of the Committee	Competencies	Key performance results and recommendations issued to the Board of Directors
In 2019, the Investment Committee held 9 meetings, including: - 4 meetings before July 26, 2019; - 5 meetings on or after July 26, 2019.	The Committee is designed to preview new investment projects and programs, and contribute to the enhancement of the Company's investment policy.	The Investment Committee recommended that the Company's Board of Directors: - recommend the Annual General Meeting of Shareholders to approve distribution of the Company's profit (loss) for 2018; - recommend the Annual General Meeting of Shareholders to pay dividends for 2018 at RUB 0.0367388 per ordinary share; - approve KPI targets for Earnings per Share (EPS) in the first (2017–2019), second (2018–2020) and third (2019–2021) LTIP cycles; - approve adjusted 2019 targets for the annual KPIs of RusHydro's Management Board; - approve the annual KPIs for the Management Board and their target values for 2020; - approve the updated version of the consolidated business plan (including consolidated investment program) of RusHydro Group for 2019; - approve the updated version of the Company's business plan for 2019–2023 as regards PJSC RusHydro's Investment Program for 2019; - approve RusHydro's business plan and Consolidated Business Plan for 2020, including the investment program of PJSC RusHydro and the consolidated investment program of RusHydro Group for 2020–2024; - pre-approve RusHydro's draft investment program for 2020–2029 and draft amendments to RusHydro's investment program for 2019–2028.

Full name	Attendance
Independent members of the Board of Directors	
Maxim Bystrov	6/9
Vyacheslav Pivovarov	8/9
Sergey Ivanov (before July 26, 2019)	1/4
Members of the Board of Directors	
Lev Kuznetsov (Chairman of the Committee) (on or after July 26, 2019)	5/5
Nikolay Rogalev	9/9
Members of the executive bodies	
Andrey Kazachenkov	9/9
Sergey Kirov	9/9
Victor Khmarin	9/9
Committee members	
Mikhail Bychko	9/9
Andrey Gabov (before July 26, 2019)	3/4
Sergey Zhuravlev	9/9
Denis Milyutin	9/9
Alexei Kulagin (on or after July 26, 2019)	5/5
Mikhail Sonin (on or after July 26, 2019)	4/5
Pavel Snikkars (before July 26, 2019)	3/4
Alexander Ilyenko (on or after July 26, 2019)	5/5

Committee on Energy Development of the Far East

Members of the Committee	Competencies	Key performance results and recommendations issued to the Board of Directors
In 2019, the Committee on Energy Development of the Far East held 7 meetings, including: → 4 meetings before July 26, 2019; → 3 meetings on or after July 26, 2019.	The Committee is designed to ensure efficient performance of the Board of Directors in developing the power industry of the Far Eastern Federal District of Russia within the scope of responsibility of the Company and its subsidiaries. Among other things, the Committee is responsible for determining the Company's priority areas in the Far East, including by considering matters related to the consolidation of power assets in the Far East, growth of energy exports to the Asia-Pacific, and power supply to the consumers in the Far East.	The Committee on Energy Development of the Far East recommended that the Company's Board of Directors: → approve the acquisition of a stake in Sakhalinskaya GRES-2; → approve the acquisition of a stake in CHPP at Sovetskaya Gavan; → approve the acquisition of a stake in Yakutskaya GRES-2; → with a view to supporting construction and modernization of generating facilities (thermal power plants) in the non-price zone of the WECM in line with the Russian Government's Decree No. 1544-r dated July 15, 2019, establish: • RusHydro's Yakutsk branch in the city of Yakutsk; • RusHydro's Khabarovsk branch in the city of Khabarovsk; • RusHydro's Primorye branch in the city of Vladivostok. In addition, the Committee on Energy Development of the Far East regularly submitted updates on the construction of key energy facilities in the Far Eastern Federal District for review by the Board of Directors.

Full name	Attendance
Independent member of the Board of Directors	
Pavel Grachev	7/7
Alexei Chekunkov	7/7
Members of the Board of Directors	
Yury Trutnev (Chairman of the Committee)	0/7
Vyacheslav Kravchenko (before July 26, 2019)	1/4
Members of the executive bodies	
Sergey Vasilyev	7/7
Andrey Kazachenkov	7/7
Committee members	
Dmitry Bulgakov (on or after July 26, 2019)	3/3
Igor Zadvornov	7/7
Denis Konstantinov (before July 26, 2019)	3/4
Sergey Lebedev	6/7
Leonid Petukhov	0/7
Denis Pileniyeks	4/7
Aleksandr Pyatigor	3/7
Aleksey Molskiy	2/7
Sergey Tyrtsev	5/7

Committee on Reliability, Energy Efficiency and Innovation

Members of the Committee	Competencies	Key performance results and recommendations issued to the Board of Directors
In 2019, the Committee held 6 meetings, including: → 4 meetings before July 29, 2019; → 2 meetings on or after July 29, 2019.	The Committee is designed to ensure efficient performance of the Board of Directors in the realms of the Company's Technical Policy, reliable and safe operation of hydraulic facilities, energy efficiency, innovation and environmental policies, and other areas reserved to the remit of the Committee.	The Committee on Reliability, Energy Efficiency and Innovation recommended that the Company's Board of Directors: → approve the 2018 report on progress against the Innovative Development Program of RusHydro Group for 2016–2020 with a Prospect up to 2025; → update the Innovative Development Program of RusHydro Group; → review progress against the action plan developed for Zagorskaya PSPP-2.

Full name	Attendance
Members of the Board of Directors	
Nikolay Rogalev (Chairman of the Committee)	6/6
Vyacheslav Kravchenko (before July 29, 2019)	0/4
Members of the executive bodies	
Boris Bogush	5/6
George Rizhinashvili	5/6
Kirill Frolov (before July 29, 2019)	3/4
Viktor Gvozdev (before July 29, 2019)	3/4
Committee members	
Igor Baikov (on or after July 29, 2019)	1/2
Oleg Barkin	6/6
Yuriy Vishnevskiy	5/6
Dmitriy Gvozdev (before March 29, 2019)	1/1
Sergey Zhuravlev	6/6
Andrey Mayorov (after March 29, 2019)	1/5
Mikhail Fedorov	5/6

Corporate Secretary

Natalya Kovaleva

Born in 1972

Education, academic degree:

In 1996, graduated from Irkutsk State University with a degree in Law

Professional experience over the last five years:
→ 2016–present: Corporate Secretary, RusHydro
→ 2016–present: Deputy Head of Corporate Governance and Property Management, RusHydro
→ 2010–2015: Head of Corporate Governance, PJSC MO ESK

Positions held in collective governing bodies as at December 31, 2019:
→ member of the Board of Directors at Blagoveshchenskaya CHPP
→ member of the Board of Directors at Boguchanskiy Aluminum Smelter
→ member of the Board of Directors at PJSC DEK
→ member of the Board of Directors at Malaya Dmitrovka
→ member of the Board of Directors at SNRG
→ member of the Board of Directors at JSC Chuvashskaya Electricity Sales Company.

Natalya Kovaleva has no stake in RusHydro's authorized capital. She does not hold, whether directly or indirectly, any ordinary shares of RusHydro and did not acquire or dispose of such shares during the reporting year, the Corporate Secretary holds no shares of RusHydro's subsidiaries.

No loans were issued by PJSC RusHydro or RusHydro Group companies to Natalya Kovaleva, Corporate Secretary of RusHydro.

The Corporate Secretary has no conflict of interest (including participation in the governing bodies of the Company's competitors).

Executive bodies

Management Board

The Management Board is a collective executive body responsible for the day-to-day management of the Company as prescribed by the scope of responsibilities set out in the Charter, Regulations on the Management Board, and resolutions adopted by the Company's General Meeting of Shareholders and Board of Directors.

Regulations on the Management Board of PJSC RusHydro
http://www.eng.rushydro.ru

The number of the Management Board members is determined by the Board of Directors. Pursuant to the resolution adopted by the Board of Directors on December 12, 2018[1], the Management Board consisted of seven members, including Victor Khmarin, a newly elected member who assumed his responsibilities on January 16, 2019. On February 19, 2019[2], the Board of Directors resolved to terminate the powers of Vladimir Markin as a Management Board member, with the Management Board restructured to consist of six members from February 24, 2019. On December 24, 2019[2],the Board of Directors resolved to terminate the powers of George Rizhinashvili as a Management Board member, with the Management Board restructured to consist of five members.

Information on Management Board members[1]

Nikolay
Shulginov

Chairman of the Management Board – General Director

Born in 1951

Education, academic degree, academic rank:
Sergo Ordzhonikidze Novocherkassk Polytechnic Institute awarded the Order of the Red Banner of Labor; holds a PhD degree in Technology

Professional experience over the last five years:

- 2015–present: Chairman of the Management Board – General Director of RusHydro
- 2009–2015: First Deputy Chairman of the Management Board of JSC SO UES

Year of the first election to the Management Board: 2015

Boris
Bogush

Member of the Management Board, First Deputy General Director – Chief Engineer

Supervised units:
Production unit

Born in 1952

Education, academic degree, academic rank:
Graduated from Saratov State Technical University with a degree in Mechanical Engineering;

Graduated from Russian Presidential Academy of National Economy and Public Administration with a degree in Management of Business / Organization Development

Professional experience over the last five years:

- 2009–present: Managing Director, Head of Business Unit "Production"; member of the Management Board; member of the Management Board – Chief Engineer; member of the Management Board, First Deputy General Director – Chief Engineer

Year of the first election to the Management Board: 2010

Andrey
Kazachenkov

Member of the Management Board, First Deputy General Director

Supervised units:
Unit of financial and corporate law management

Born in 1980

Education, academic degree, academic rank:
Graduated from Saint Petersburg State University of Engineering and Economics with a degree in Economics and Management at Mechanical Engineering Enterprises;

Has an MBA from the University of Wisconsin-Madison, USA

Professional experience over the last five years:

- 2015–present: Advisor for the Chairman of the Management Board – General Director; member of the Management Board and First Deputy General Director of RusHydro
- 2012–2015: First Deputy Chairman of the Management Board, Deputy Chairman of the Management Board of PJSC FGC UES

Year of the first election to the Management Board: 2016

Sergey
Kirov

Member of the Management Board, First Deputy General Director

Supervised units:
Unit of sales, economic planning and investments

Born in 1976

Education, academic degree, academic rank:
Graduated from Perm State Agro-Technological University with a degree in Economics and Agricultural Production Management;

Graduated from the Regional Interdisciplinary Retraining Center of Perm National Research Polytechnic University with a degree in Economics and Management

Professional experience over the last five years:

- 2010–present: Director of Economic Affairs; Deputy General Director on Economics, Investment and Procurement, member of the Management Board and First Deputy General Director

Year of the first election to the Management Board: 2015

Victor
Khmarin

Member of the Management Board, Deputy General Director

Supervised units:
Resources and future development unit

Born in 1978

Education, academic degree, academic rank:
Graduated from Saint Petersburg State University with a degree in Law

Professional experience over the last five years:

- 2015–present: Deputy General Director on Economics, Investment and Procurement, Deputy General Director for Resources and Prospective Development, member of the Management Board, Deputy General Director at RusHydro
- 2014–2015: Advisor to the First Deputy President – Chairman of the Management Board – Vice President, Department for work with clients of market sectors, PJSC VTB Bank

Year of the first election to the Management Board: 2019

[1] Minutes No. 281 of December 27, 2018
[2] Minutes No. 283 of February 21, 2019.
[3] Minutes No. 302 of December 26, 2019.
[4] As at December 31, 2019.

In accordance with the Company's Charter, members of the Management Board are elected by the Board of Directors. Candidates to the Management Board proposed by its Chairman for consideration by the Board of Directors must meet the following criteria:
- a university degree in technical, engineering, economic, legal or other sciences;
- track record as a manager of at least five years;
- compliance with the other criteria set forth in the Company's internal regulations.

The Management Board's powers include developing the Company's business priorities and respective implementation plans and submitting them to the Board of Directors for review, reporting on KPI achievement and business plan implementation, approving budget parameters as regards income and expenditures, deciding on matters reserved to supreme governing bodies of the subsidiaries where the Company exercises the rights of the sole shareholder (participant), as well as approving (adjusting) KPI of the Company's employees, and reviewing relevant implementation reports.

Powers of the Chairman of the Management Board – General Director include managing the Company's day-to-day operations, approving internal regulations that are mandatory for all the Company's employees, exercising employer functions, approving regulations on the Company's branches and representative offices and appointing heads thereof, making transactions on behalf of the Company within the scope set out in laws and the Charter, arranging for accounting and reporting, arranging operations of the Management Board, as well as addressing other matters of the Company's day-to-day operations that do not fall within the remit of the General Meeting of Shareholders, Board of Directors or Management Board.

Additional information on Management Board members

In 2019, RusHydro's executive bodies had no conflict of interest (including participation in the governing bodies of the Company's competitors).

On September 15, 2015, Nikolay Shulginov was elected for a term of five years to act as the Company's sole executive body.

For more details on positions held over the past five years in the collective governing bodies of other organizations, see the Quarterly Report of PJSC RusHydro for Q4 2019.
http://www.eng.rushydro.ru/

Newly elected Management Board members sign employment contracts. The terms of such employment contracts are determined by the Company's sole executive body. Their effective period may not exceed three years.

In the reporting period, members of the Management Board received no loans from the Company or RusHydro Group.

Boris Bogush (a Management Board member) holds 0.003781% of RusHydro's ordinary shares.

Members of the Management Board do not indirectly hold any of RusHydro shares or own shares in any of RusHydro's subsidiaries.

In the reporting period, Management Board members entered into no deals to acquire or dispose of the Company's shares.

Report on the Management Board's performance

In 2019, the Management Board held 75 meetings, including 13 in person, and reviewed 420 items on the day-to-day operations of the Company, including preliminary consideration of recommendations submitted for review by the Board of Directors.

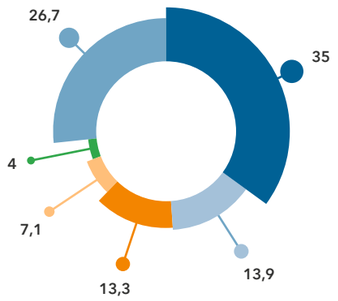
To protect the rights of investors and shareholders, the Company continued to implement its key strategic goals, including safe operation of the Company's production facilities, value growth and investment returns to the shareholders, as well as the enhancement of corporate governance and social and environmental responsibility mechanisms.

In the reporting period, meetings of the Management Board reviewed such items as:
- implementation of a project to develop charging stations for electric vehicles in the Far Eastern Federal District;
- progress against the Long-term Development Program in 2018;
- review of the Group's strategic risk register for 2020;
- concept of the Group's positioning in the global market;
- report on progress against the Strategy Implementation Plan in 2018;
- approval of loans to RusHydro's subsidiaries.

In addition, the Management Board reviews on a quarterly basis the performance of HQ (excluding members of the Management Board) and branch employees against their KPIs.

In 2019, the Management Board also approved a number of internal regulations, including:
- Annual Program of Strategic and Other Material Transactions of RusHydro Group for 2019;
- Implementation Program for the Environmental Policy for 2019–2021.

Items reviewed by RusHydro's Management Board in 2019, %



Management Board's performance *[102-28]*

The Board of Directors evaluates the performance of the Management Board and its Chairman by reviewing the following matters:
- the Company's business plan implementation;
- the Group's Consolidated Business Plan implementation;
- RusHydro's KPI achievement;
- corporate governance assessment;
- the report on the Management Board's performance.

In 2019, RusHydro's corporate governance system was assessed, including the executive bodies' performance. A report was drafted based on the assessment findings, with a relevant corrective action plan developed and approved.

Audit and control

In pursuance of Federal Law No. 208-FZ On Joint-Stock Companies, RusHydro runs a control framework to oversee the Company's financial and business operations. This system embraces a wide range of organizational structures, procedures, regulations and methodologies.

Key stakeholders exercising control over the Company's financial and business operations include:
- Internal Audit Commission;
- the Company's auditor;
- Internal Audit Service;
- Internal Control and Risk Management Director – Chief Auditor, Control and Risk Management Department.

The key principles, goals, objectives, methods, and processes of the control framework are set forth in the following documents approved by RusHydro's General Meeting of Shareholders and Board of Directors:
- Corporate Governance Code;
- Code of Corporate Ethics;
- Anti-Corruption Policy;
- Internal Control and Risk Management Policy;
- Internal Audit Policy;
- Regulations on the Audit Committee under the Board of Directors of PJSC RusHydro;
- Regulations on the Internal Audit Commission.

All of the above documents are available on the Company's website at www.eng.rushydro.ru

The Company's Internal Audit Commission reports to the General Meeting of Shareholders. The Internal Audit Commission's opinion is submitted to the Audit Committee of the Board of Directors of RusHydro. The Internal Audit Commission's opinion issued after the audit of the annual report, RAS financial statements and report on the Company's related-party transactions is a mandatory document that must be submitted to the General Meeting of Shareholders.

Each year the General Meeting of Shareholders approves an auditor to review and confirm the Company's annual accounting (financial) statements. The auditor reviews the Company's financial and business operations in accordance with the applicable Russian laws and its service agreement. The auditor's opinion is an integral part of the Company's annual accounting (financial) statements.

An Auditor's opinion is submitted to the Board of Directors' Audit Committee and to the Internal Audit Commission. The Audit Committee discusses the auditor's plan of annual audits of RusHydro Group.

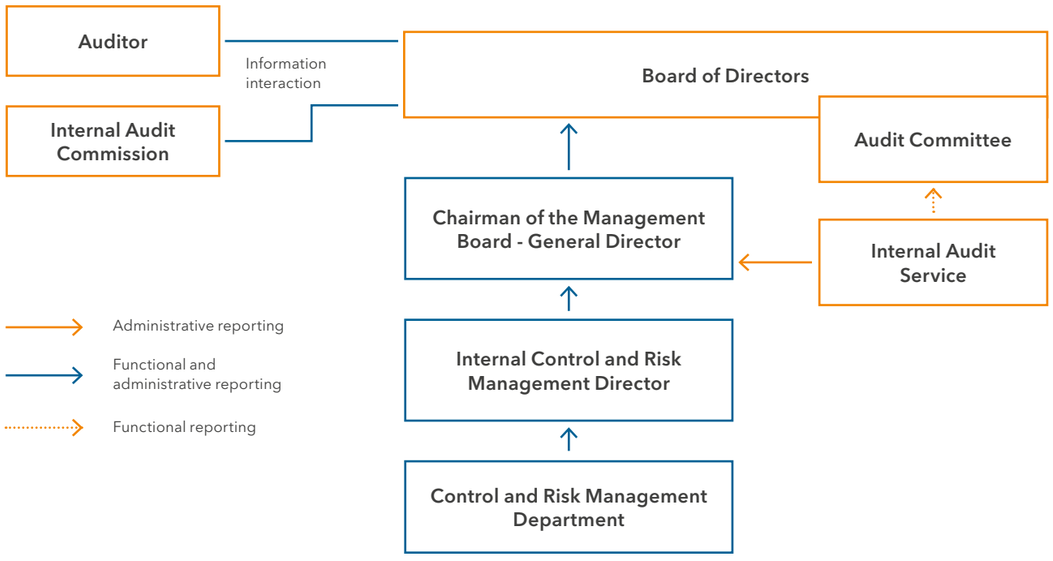
The Board of Directors approves the Group's Internal Control and Risk Management Policy.

The Company's Internal Audit Service is in charge of assisting the governing bodies in enhancing the Group's management efficiency and improving its operations, among other things, by means of a systematic and consistent analysis and evaluation of the risk management, internal control and corporate governance systems.

The Board of Directors represented by its Audit Committee is responsible for the functional management of the Internal Audit Service, including approval of the annual schedule of control activities and quarterly reports on adherence to that schedule.

The Control and Risk Management Department is responsible for assisting the management team in developing risk response processes and tools to improve risk governance, implementing the risk management policy and ensuring internal controls, including by providing guidance and training in risk management.

Financial and Business Operation Control Framework



RusHydro's Code of Corporate Ethics sets out key principles of professional ethics and ethics rules to be observed by the Company's employees (irrespective of their position in the Company) and members of the Board of Directors.

RusHydro takes the following steps to implement the Code:
- drafts uniform internal regulations specifying standards, requirements and limitations related to the implementation of the Code of Corporate Ethics. These are subject to approval at each Group company;
- familiarizes all employees with the above standards, rules and requirements, and provides advice as to their observance;
- sets up ethics committees at RusHydro and its subsidiaries, which help ensure compliance with corporate ethics rules by employees and managers, among other things, by reviewing identified breaches, issuing corrective recommendations and monitoring their implementation.

In their decisions, the governing bodies of PJSC RusHydro and its subsidiaries strictly abide by the principles and standards championed by the Code to promote the interests of the Company and avoid a conflict of interest. With a view to preventing, among other things, a conflict of interest, the Audit Committee of RusHydro's Board of Directors reviews, on a preliminary basis, the Company's transactions with persons affiliated with substantial shareholders of RusHydro (other than the Russian Federation) and makes sure that there is no conflict of interest involved.

For more information on key standards, principles of professional ethics and ethics rules, see RusHydro's[1] Code of Corporate Ethics: www.eng.rushydro.ru

Internal Audit Commission

The Internal Audit Commission is a permanent body elected annually by the General Meeting of Shareholders. It is responsible for the monitoring of the Company's financial and business operations. The Commission has five members. Its key competencies are as follows:
- confirming the accuracy of data contained in the annual report, annual accounting (financial) statements and report on interested-party transactions;
- analyzing the Company's financial position, identifying areas for financial improvement and developing recommendations for the Company's governing bodies;
- organizing and running checks (audit) on the Company's financial

[1] Note: As amended by the resolution of RusHydro's Board of Directors (Minutes No. 281 of December 27, 2018).

and business operations (review of the Company's documents to confirm its compliance with the Russian laws, RusHydro's Charter and internal regulations).
The audit confirmed that the data contained in the reports and financial documents of the Company were reliable, the accounting and financial reporting functions were performed in compliance with applicable laws and internal regulations, and financial and business operations were conducted in the best interests of the Company and its shareholders. The opinion also confirms the accuracy of data contained in the Company's annual report and the report on interested-party transactions consummated in 2019.

Members of the Internal Audit Commission in 2019[1]

Full name	Position[2]	Nominated by	Term of office
Membership effective since June 28, 2019			
Tatyana Zobkova (Chair of the Internal Audit Commission)	Deputy Director of the Department of Corporate Governance, Price Environment and Control in the Energy Sector of the Russian Ministry of Energy	The Company's Board of Directors	June 27, 2017 – present
Natalia Annikova	First Deputy General Director, OJSC SU No. 308	The Company's Board of Directors	June 26, 2015 – present
Igor Repin	Deputy Executive Director, Association of Institutional Investors	The Company's Board of Directors	June 27, 2014 – present
Dmitry Simochkin	Head of Department, Federal Agency for State Property Management	The Company's Board of Directors	June 27, 2017 – present
Denis Konstantinov	Expert, Department of the Russian Ministry of Economic Development	The Company's Board of Directors	June 28, 2019 – present
Members who were not re-elected to the new Internal Audit Commission effective since June 28, 2019			
Marina Kostina	Deputy Director of the Corporate Governance Department of the Russian Ministry of Economic Development	The Russian Federation as represented by the Federal Agency for State Property Management	June 27, 2017 – June 27, 2019

For the full text of the Internal Audit Commission's opinion on the audit of financial and business operations of PJSC RusHydro for 2019, see Appendix No. 17

The Regulations on the Internal Audit Commission of PJSC RusHydro: http://www.eng.rushydro.ru/

For details on the independent auditor's remuneration, see the Report on remuneration of the governing and control bodies

[1] The listed members of the Internal Audit Commission hold no shares of the Company.

[2] The positions held by members of the Internal Audit Commission are stated as at the nomination date.

Auditor

RusHydro's accounts (financial statements) prepared in accordance with Russian and international standards are audited on an annual basis. The auditor responsible for the independent audit of RusHydro's RAS and IFRS accounts (financial statements) for 2019 was selected through an open tender process[1].

RusHydro's auditor was selected in a competitive process pursuant to Article 5 of Federal Law No. 307-FZ of December 30, 2008 On Auditing, Federal Law No. 44-FZ of April 5, 2013 On the Contract System in the Federal and Municipal Procurement of Goods, Works and Services, the Charter, and internal regulations of RusHydro.

Following the tender procedures, JSC PricewaterhouseCoopers Audit (PwC Audit: 10, Butyrsky Val, 125047, Moscow) was declared the preferred bidder as was approved by resolution of RusHydro's General Meeting of Shareholders of June 27, 2018.

PwC Audit is a member of the self-regulated organization Sodruzhestvo Association. Principal entry number in the Register of Auditors: 12006020338.

No consulting services were rendered by PwC Audit to the Company.

For details on the independent auditor's remuneration, see the Report on remuneration of the governing and control bodies

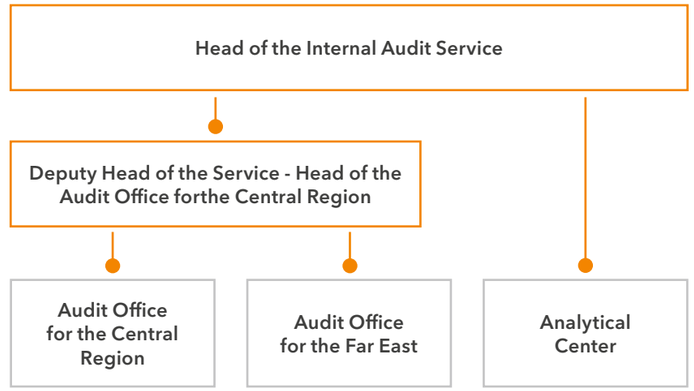
Internal Audit Service

The key objective of RusHydro's internal audit function is to assist the Board of Directors and executive bodies of RusHydro Group in enhancing the Group's management efficiency and improving its operations, among other things, by means of a systematic and consistent analysis and evaluation of the risk management, internal control and corporate governance systems.

The Internal Audit Service is RusHydro's standalone business unit that reports to the Board of Directors through the Audit Committee and has an administrative reporting line to the Chairman of the Management Board – General Director of RusHydro. The Head of the Internal Audit Service was approved by resolution of RusHydro's Board of Directors. The Service has 15 members.

The Internal Audit Service has the following objectives and functions:
- to conduct regular audits of business units, Company's branches/subsidiaries, processes, lines of business, projects of the Company/subsidiaries for an independent assessment and expression of opinion on the reliability and effectiveness of the:
  - internal control system;
  - risk management system;
  - corporate governance system.
- to liaise with the Audit Committee of the Company's Board of Directors;
- to liaise with local executive authorities of the Russian Federation, Accounts Chamber of the Russian Federation, the

Structure of RusHydro's Internal Audit Service



[1] The competition to select the Company's auditor for 2018–2020 was held in April 2018.

Company's Internal Audit Commission, and other supervisory bodies in connection with internal control issues and in the course of audits and inspections of the Company or its subsidiaries conducted by such bodies.

The general principles of, and approaches to the Company's internal audit system are set forth in the Internal Audit Policy approved by RusHydro's Board of Directors. The Policy is aligned with RusHydro's Corporate Governance Code, relevant Methodological Guidelines and Instructions of the Federal Agency for State Property Management, and is designed, inter alia, to ensure compliance of RusHydro's Internal Audit Service with the International Standards for the Professional Practice of Internal Auditing developed by the Institute of Internal Auditors (IIA).

The schedule of control activities is approved by the Audit Committee on an annual basis and defines the priorities of the internal audit work subject to RusHydro Group's strategic objectives, resources available, and risk-based approach to control activities.

In 2019, the Internal Audit Service conducted 14 scheduled control procedures and 7 unscheduled checks as provided by the schedule of control activities.

The Board of Directors reviewed the Internal Audit Service's assessment of the internal control, risk management and corporate governance systems of the Company and recommendations on their improvement.

Based on the management's feedback on the results of control activities, the Group's management team assessed the internal audit function as highly (duly) effective in 2019 in terms of identifying gaps to be addressed order to reduce or eliminate any negative factors impairing the efficiency of RusHydro and its subsidiaries.

The results of the control activities carried out by the Internal Audit Service are used by RusHydro Group's management team to develop and roll out a corrective action plan to address the identified gaps, including their causes and consequences, improve the efficiency of the internal control, risk management and corporate governance system, and prevent repeated violations.

The Internal Audit Service also takes consistent steps to monitor implementation by the Group's management team of the corrective action plans developed based on the findings of control activities.

The Internal Audit Service is also responsible for the liaison with external supervisory authorities (Accounts Chamber of the Russian Federation, Prosecutor General's Office, and Russia's Ministry of Energy) in the course of their control activities. In 2019, the external supervisory bodies conducted 11 inspections of the Group's operations. The Company has put in place an electronic platform to exchange information with external supervisory authorities (during their inspections) using a corporate file sharing service.

In 2019, RusHydro developed and introduced a software solution to automate monitoring of the efforts by the Group's management team to draft and implement corrective action plans based on the findings of external and internal inspections.

In 2019, the Internal Audit Service took steps to develop and update internal regulations governing the remit of the Internal Audit Service, including by:

- updating the Regulations on Planning and Conducting Control Activities by the Internal Audit Service;
- developing a Guarantee Map to streamline information about guarantees provided by internal and external service suppliers;
- updating the Regulations on Liaising with Supervisory Authorities as Part of Group Audits;
- developing the Regulations on Liaising with the Company's Internal Audit Commission and updating relevant interaction procedures.

In line with the approved Internal Audit Quality Assurance and Improvement Program, the Internal Audit Service conducted an annual self-assessment. As a result, the Audit Committee under RusHydro's Board of Directors recognized that the Company's internal audit function "meets the relevant requirements".

In 2019, LLC Ernst & Young Assurance & Consulting Services completed the first stage (diagnostics) of external independent assessment focusing on compliance of the Internal Audit Service with the International Standards for the Professional Practice of Internal Auditing and the Code of Ethics for internal auditors, producing an Interim Report on Diagnostics and Preliminary Assessment of the Company's Internal Audit Function reviewed by the Audit Committee of RusHydro's Board of Directors.

Internal audit function development plans

In 2020, further steps will be taken to enhance the Company's internal audit function by:

- ensuring and improving efficiency of the internal audit system (based on the findings of external independent assessment);
- updating the regulatory framework of the Internal Audit Service in compliance with the International Standards for the Professional Practice of Internal Auditing;
- updating standard control activities and guidelines in the automated internal audit management system (CHH TeamMate);
- further automating RusHydro's internal audit function.

Assessment of the efficiency of internal and external audit

On a quarterly basis, the Audit Committee reviews the report on the implementation of the schedule of control activities prepared by Head of the Internal Audit Service. Report describes material violations, flaws and gaps identified in the operations of RusHydro and its subsidiaries, includes information on substantial risks and issues of controls and corporate governance, and provides recommendations on remedial actions and improvement of internal controls. On top of that, the report submitted by the Head of the Internal Audit Service provides an overview (in the part dedicated to corrective action plans) of the management team's progress on bridging the gaps identified as part of the internal and external checks.

In accordance with the Company's approved Internal Audit Quality Assurance and Improvement Program, in order to ensure adequate control and assessment of the internal audit function and to identify improvement areas, in 2019, the internal audit function underwent an annual self-assessment based on which the Audit Committee recognized that the internal audit function "meets the relevant requirements".

In 2019, an independent review of the Company's internal audit function was started to assess the effectiveness of internal auditing.

In 2019, LLC Ernst & Young Assurance & Consulting Services undertook a diagnostic review of the Company's internal audit to check its compliance with the International Standards for the Professional Practice of Internal Auditing and the Code of Ethics for internal auditors. The results of the review were considered at a eeting of the Audit Committee.

According to feedback received on control activities, the internal audit function performed very effectively in 2019 in terms of identifying matters to be resolved in order to mitigate or eradicate any negative factors impairing the efficiency of RusHydro and its subsidiaries. Throughout the reporting year, the Company's auditor regularly reported to the Audit Committee on plans and results of the audits, shared its vision on important qualitative aspects of RusHydro's accounting practices, including its accounting policy, estimates, and disclosures in financial statements, and raised matters that based on the auditor's professional judgement are important for the oversight over the financial reporting process.

In 2019, The Audit Committee assessed the performance of the Company's auditor (including the auditor's reports) and the effectiveness of external audit as a process. Based on the assessment, the Audit Committee found the process to be effective. The Company's auditor is unbiased and independent from RusHydro, has no conflict of interest or any circumstances that might challenge its independence. Materials that the external auditor prepares and presents to the Audit Committee are informative and help control the quality of the auditor's performance.

Anti-corruption efforts

RusHydro Group's anti-corruption framework is aligned with the laws of Russia in order to reflect the national policy in internal measures that the Group takes to combat corruption, minimize corruption risks, provide for transparent and honest operations, improve corporate culture, follow best practices of corporate governance, and maintain strong business reputation. *[103-2]*

RusHydro and its subsidiaries use a system of corporate policies and standards to regulate anti-corruption measures and define the main objectives, goals and focus areas of activities aimed at preventing and combating corruption. These documents include:

- Code of Corporate Ethics;
- Anti-Corruption Policy;
- Regulations on the Prevention and Management of Conflicts of Interest;
- Regulations on the Procedure to Report Presents Received by RusHydro's Employees;
- Regulations on the Committees for Compliance with the Corporate Ethics Standards and Management of Conflicts of Interest;
- Rules of RusHydro's Line of Trust Operation.

The full list of legal requirements and internal regulations, including their contents, is available on the Company's website at: http://www.eng.rushydro.ru/

In order to make RusHydro's anti-corruption efforts more efficient, the Group has developed and approved the Comprehensive Program of Anti-Corruption Activities (the "Program") to define the focus areas of corruption prevention.

The Company's Declaration on Compliance with the Anti-Corruption Charter of the Russian Business was approved by the Russian Union of Industrialists and Entrepreneurs (RSPP), confirming the completeness, adequacy and effectiveness of the anti-corruption measures. RusHydro's membership in the Charter was extended until 2021.

Anti-corruption activities structure

Board of Directors (Audit Committee of the Company's Board of Directors)

- Establishes the key goals, objectives and principles of the Anti-Corruption Policy and monitors the results of its implementation.

Chairman of the Management Board – General Director

- Manages goals, objectives and principles of the Anti-Corruption Policy and selects business units responsible for developing, implementing and monitoring the anti-corruption procedures.

RusHydro's Control and Risk Management Department

- Develops anti-corruption activities and organizes and controls their implementation
- Coordinates activities aimed at preventing corruption
- Conducts control measures and develops activities to assess and minimize corruption risks
- Oversees legal compliance of anti-corruption efforts of RusHydro and its subsidiaries.

Units of RusHydro and subsidiaries (departments of security, HR, procurement, Ethics Committee, etc.)

- Implement activities aimed at corruption prevention within the scope of each department's operations.

Comprehensive Program of Anti-Corruption Activities

In 2019, the Company rolled out a number of anti-corruption initiatives in accordance with the approved action plan for implementing the Comprehensive Program of Anti-Corruption Activities for 2019–2020, in key areas.

Developing and updating the Company's anti-corruption regulations and by-laws:

- amended the Regulations on the Prevention and Management of Conflicts of Interest in terms of the procedure for considering notices of potential conflicts of interest of employees holding positions named in the list (Order No. 44 dated January 29, 2019)[1];
- approved a new version of the Regulations on the Procedure to Report Presents Received by RusHydro's Employees (Order No. 60 dated February 5, 2019) setting out:
  - limits on giving (offering, transferring) and receiving (asking for) presents, representation allowances and hospitality expenses;
  - the procedure for reporting presents, representation allowances and hospitality expenses;
- updated the Regulations on the Procedure for Reporting and Verifying the Data on Income, Property and Property-related Liabilities of RusHydro Group's Employees (Order No. 641 dated August 5, 2019);
- approved the Regulations on the Procedure for Receiving Foreign Visitors at RusHydro (Order No. 245 dated March 28, 2019).
- in order to harmonize anti-corruption framework approaches across RusHydro Group, its subsidiaries (subject to their organizational structure) continued adopting internal anti-corruption regulations (by-laws) in line with the Company's regulations;
- corresponding documents adopted:
  - new versions of Anti-Corruption Policy at 69 subsidiaries;
  - Regulations on the Committees for Compliance with the Corporate Ethics Standards and Management of Conflicts of Interest, as well as Ethics Committees' composition at 53 subsidiaries;
  - Regulations on the Procedure for Reporting Presents Received by Employees at 47 subsidiaries;
- Regulations on the Procedure for Reporting and Verifying the Data on Income, Property and Property-related Liabilities were put into effect at 42 subsidiaries.

Providing for transparency and availability of information on the Company's anti-corruption policy and ensuring employees' awareness of anti-corruption legislation:

- an anti-corruption section was added to the English version of the Company's website in order to inform RusHydro's international partners and other stakeholders on the Group's anti-corruption policies and activities. The section features key information on anti-corruption policy and English versions of the Company's main internal regulations (by-laws) in this area.

Providing for investigations into any reports of wrongdoings:

- the Company considered 198 reports received through the Line of Trust, of which 61 (31%) were confirmed to be true and involve violations of rights and/or other wrongdoings. The Company took measures to eliminate all verified violations and impose sanctions on the wrongdoers.

Cooperating with the state regulatory bodies and law enforcement authorities responsible for combating corruption:

- the areas of the Company's cooperation with government authorities (the Ministry of Energy of Russia, the Government of the Russian Federation, etc.) to prevent and combat corruption included:
  - disclosure of information upon an authorized request;
  - reporting on the Company's anti-corruption practices;
  - filing queries for the clarification of anti-corruption law enforcement practices;
  - sending proposals on amending Article 13.3 of Federal Law No. 273-FZ On Combating Corruption dated December 25, 2008.

[1] The list was approved by Resolution of the Government of the Russian Federation No. 613 dated July 22, 2013 and clarified by the Executive Office of the Government of the Russian Federation (No. P17-69370 dated December 29, 2018).

Measures to prevent wrongdoings by the Company's employees:

- the following measures were taken to improve training programs dedicated to preventing and combating corruption and ethics compliance:
  - following the amendments of legislation and RusHydro's internal regulations, the Company updated its corporate distance learning courses: Combating Fraud at RusHydro and Combating Procurement Fraud;
  - the employees of the Headquarters, branches and subsidiaries of RusHydro holding positions exposed to corruption risks were tested to check their knowledge of Russian anti-corruption laws and the Company's local internal regulations (by-laws) on combating corruption.
- the Company took the following measures to prevent, identify and resolve conflicts of interest:

collected and analysed income records of 364 employees (managers) of RusHydro Group as part of a yearly reporting procedure and revealed 44 cases of non-compliance, including:

- full or partial failure to provide information and/or documents on the officers and/or their relatives;
- concealment of information about the participation of the officers and/or their relatives in business entities (in the
- form of share or interest ownership or holding of management positions);
- non-compliance with internal regulations and labor laws;
- in response to all 44 cases of non-compliance, RusHydro's Central Ethics Committee issued recommendations on the elimination of the identified gaps and violations, prevention or resolution of actual and/or potential conflicts of interest and use of disciplinary action:

- checked and approved 103 candidates for the positions exposed to corruption risks, of whom:
  - 90 were not involved in conflicts of interest;
  - the 13 involved in (potential) conflicts of interest were given recommendations for the prevention of conflicts of interest in the future;
- checked 1,231 contractors for conflicts of interest and assessed their business reputation and financial position as part of the approval procedure for draft contracts and addenda. As a result of the check, no conflicts of interest between the managers (founders) of the contractor organizations and RusHydro's employees were revealed.

Enhancing internal control system:

- RusHydro develops, updates and implements internal control improvement plans on an annual basis. In line with these plans, the Company monitors its internal control activities focusing on the sufficiency of the control measures in mitigating the corruption and fraud risks. Based on the monitoring results, the Company develops new control measures and/or improves the existing ones, including by eliminating gaps and violations identified in the internal control process.

In 2020, RusHydro will continue its efforts under all the workstreams of the Comprehensive Program of Anti-Corruption Activities described above.

Anti-corruption awareness program *[205-2]*

RusHydro Group consistently promotes awareness among its employees and business partners of anti-corruption practices.

All new employees of RusHydro are required to read the Code of Corporate Ethics, Anti-Corruption Policy and other internal anti-corruption regulations of the Company. The information on newly approved internal regulations is communicated to the Company's employees via the corporate document management system. In 2019, 13,931 RusHydro Group employees were informed as part of the awareness program.

On top of that, RusHydro Group arranges for regular training of its employees, including:

- distance learning induction for new (newly hired) employees;
- regular training on preventing and combating corruption;
- individual consultations for the Company's employees regarding the application of anti-corruption standards and procedures.

RusHydro conducts annual assessment of employees in the positions with high exposure to corruption risk in order to test their knowledge of the anti-corruption laws.

Employee training in the existing anti-corruption policies

Region	Top management		Middle management		Junior management		White-collar employees	
	Number of people	% of employees	Number of people	% of employees	Number of people	% of employees	Number of people	% of employees
Amur Region	5	14.7	2	5.9	22	64.7	5	14.7
Volgograd Region	1	14.3	0	0.0	5	71.4	1	14.3
Moscow	19	10.3	45	24.5	88	47.8	32	17.4
St Petersburg	2	10.5	1	5.3	13	68.4	3	15.8
Kabardino-Balkarian Republic	1	20.0	0	0.0	4	80.0	0	0.0
Kamchatka Territory	5	15.6	6	18.8	15	46.9	6	18.8
Karachay-Cherkess Republic	1	12.5	0	0.0	6	75.0	1	12.5
Krasnoyarsk Territory	2	15.4	3	23.1	5	38.5	3	23.1
Leningrad Region	1	20.0	1	20.0	2	40.0	1	20.0
Magadan Region	10	22.7	3	6.8	22	50.0	9	20.5
Moscow Region	3	12.5	4	16.7	14	58.3	3	12.5
Nizhny Novgorod Region	1	11.1	0	0.0	7	77.8	1	11.1
Novosibirsk Region	2	25.0	0	0.0	4	50.0	2	25.0
Perm Region	4	22.2	0	0.0	12	66.7	2	11.1
Primorsky Krai	3	17.6	1	5.9	11	64.7	2	11.8
Republic of Dagestan	2	25.0	0	0.0	5	62.5	1	12.5
Republic of Sakha (Yakutia)	10	21.7	3	6.5	26	56.5	7	15.2
Republic of North Ossetia – Alania	0	0.0	0	0.0	5	83.3	1	16.7
Republic of Khakassia	11	19.0	2	3.4	22	37.9	23	39.7
Ryazan Region	0	0.0	0	0.0	4	66.7	2	33.3
Samara Region	1	11.1	0	0.0	6	66.7	2	22.2
Saratov Region	1	14.3	0	0.0	4	57.1	2	28.6
Sakhalin Region	4	23.5	3	17.6	6	35.3	4	23.5
Stavropol Territory	1	14.3	0	0.0	5	71.4	1	14.3
Khabarovsk Territory	6	18.2	2	6.1	16	48.5	9	27.3
Chuvash Republic	0	0.0	1	6.7	12	80.0	2	13.3
Chukotka Autonomous Area	3	42.9	0	0.0	4	57.1	0	0.0
Yaroslavl Region	1	14.3	0	0.0	5	71.4	1	14.3
Total	**100**	**–**	**77**	**–**	**350**	**–**	**126**	**–**

In 2019, 653 RusHydro Group employees underwent training on corruption prevention policies and practices, which is more than double the 2018 figure (305 employees) due to the introduction of mandatory training (testing) for officers of the Company's subsidiaries holding positions exposed to corruption risks.

In keeping with the business transparency principle, RusHydro Group communicates its anti-corruption standards to its counterparties and business partners. In the course of procurement and contracting, the Company adds anti-corruption clauses to draft contracts with information about its Anti-Corruption Policy and Line of Trust (a communication channel for reporting actual or potential violations). *[102-17]* In 2019, RusHydro Group communicated its anti-corruption principles to 28,404 business partners, including suppliers and contractors, banks, financial and credit institutions, and insurance companies.

No corruption cases were confirmed at RusHydro Group during the reporting period. *[205-3]*

In June 2019, the Company's Board of Directors approved a statement of zero tolerance and zero appetite culture towards corruption risks in line with the Guidelines on RusHydro Group's Risk Appetite.

On top of that, in order to raise awareness among its existing and potential partners and other stakeholders, RusHydro Group publishes main regulations and reports on its anti-corruption activities, as well as links to its anti-corruption communication channels, in the relevant section of its official website.

Key developments in 2019

In 2019, the Company implemented a project to automate the system for receiving, processing and responding to reports sent through the Group's Line of Trust.

The automation technology was developed in-house by a group of hired experts as part of a project to upgrade RusHydro's intranet portal.

The automated Line of Trust is currently being pilot-tested.

Providing for transparency and availability of information

The following information is published on RusHydro Group's website and intranet portal and updated on a timely basis:
- the Company's local internal documents on combating corruption and preventing wrongdoings and conflicts of interest;
- action plans and reports on the implementation of the Comprehensive Program of Anti-Corruption Activities;
- information, effective laws and regulations, and guidance on combating corruption.

RusHydro works in close cooperation with the law enforcement authorities and supervisory bodies and provides assistance to them in case of audits and inspections, requests of information on the Company's anti-corruption compliance (including with respect to storage and transfer to the authorities of the information and documents on corruption offences), investigations of corruption cases, and inspections seeking to check how the Company prevents and combats corruption.

Line of Trust

The Line of Trust is a confidential communication channel established so that RusHydro Group's employees and third parties (including anonymous) can report issues in an effort to combat fraud and corruption, embezzlement and unauthorized use of property and assets, conflicts of interest involving employees and counterparties of the Company, violations of the rules on the procurement of goods, works and services, as well as other violations of Russian laws and RusHydro Group's internal regulations.

The information on the ways to file a report is available on notice boards and information screens in the offices of RusHydro Group companies.

Line of Trust channels for submitting reports (available 24/7):
- e-mail: ld@rushydro.ru;
- online feedback form on the Company's website and intranet portal;
- hotline answer phone +7 495 710 0937;
- Line of Trust boxes placed in the offices of RusHydro Group;
- Russian Post service;
- in-person meeting with the Internal Control and Risk Management Director – Chief Auditor.

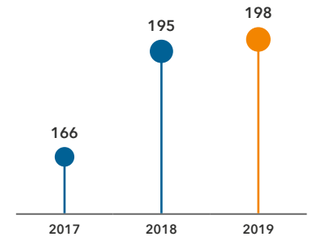
The Line of Trust provides for impartial consideration of reported issues by officers not involved in the cases, meaning they remain unbiased and independent while checking the facts and drawing conclusions, which they do in full compliance with the applicable law and internal regulations of the Company/subsidiaries.

RusHydro does the following to promote the Line of Trust among its employees and counterparties:
- regularly updates the information about the Line of Trust on its official website and intranet portal;
- includes the information about the Line of Trust in anti-corruption clauses added to contracts signed by the Company and its subsidiaries with counterparties.

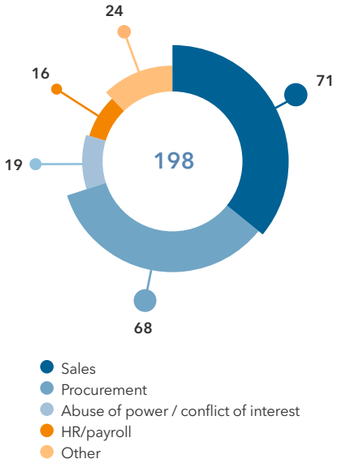
In 2019, the Company considered 198 reports received through the Line of Trust, which is three reports (2%) more than in 2018. The reports that did not meet the criteria set by the Rules of RusHydro's Line of Trust Operation (email spam, advertisements, mass mailing, etc.) were not accepted.

Information contained in 61 out of 198 reports (31%) was confirmed to be true and involve violations of rights and/or other wrongdoings. The Company took measures to eliminate all verified violations and impose sanctions on the wrongdoers (employees/managers), including:
- disciplinary action (reprimand, censure) was taken against seven employees (managers) of RusHydro Group, who committed violations;
- four reports resulted in the managers being stripped of their bonuses;
- organizational measures, including:
  - preventive discussions;
  - necessary employee training;
  - amendments made to procurement documents, cancellation/postponement of procurement procedures;
  - payment adjustments;
  - other measures aimed at eliminating identified gaps and violations.

Number of reports considered, pcs



Reports by topic, pcs



Control over major transactions and interested-party transactions

RusHydro has a transaction control system in place to ensure that every draft contract is checked for meeting the criteria of major, interested-party and other transactions that require the Board of Directors' approval.

Depending on transaction value, the review is done by legal departments of the Company's branches or at the Company's Headquarters.

RusHydro's Regulations on Contracts and Agreements govern a common procedure for negotiating, concluding and executing contracts on behalf of the Company.

In 2019, RusHydro concluded several interested-party transactions and no transactions that would be deemed major under the applicable law.

For further information on the interested-party transactions, including their subject, interested parties involved and approval details, see Appendix No. 2

Preventing the use of insider information

RusHydro has put in place Regulations on Insider Information to secure compliance with laws and regulations of the Russian Federation in terms of prevention of unauthorized use of insider information and market manipulation. The Regulations are in line with the world's best corporate governance practices, including Disclosure and Transparency Rules of the Financial Conduct Authority.

The Regulations specify:
- persons that are included in the Company's list of insiders;
- rules of access to the insider information and its confidentiality protection;
- restrictions on the use of insider information in transactions with the Company's financial instruments and disclosure thereof to third parties;
- procedure and deadlines for the disclosure of the Company's insider information, and the rules for transactions with the Company's financial instruments.

The list of insider information is made in Russian and English and published on the Company's website. In Q2 2019, the Company approved a new revised list of insider information[1].

RusHydro's list of insiders is updated upon inclusion or exclusion of the Company's insiders. As at December 31, 2019, the Company's list of insiders included 21 legal entities and 108 individuals. During 2019, 6 legal entities and 50 individuals were added to the list, while 3 legal entities and 27 individuals were excluded.

RusHydro sends proper and timely inclusion/exclusion notifications to the insiders. In 2019, 86 notifications were sent.

In response to the requests of the security market operator (PJSC Moscow Exchange), RusHydro provided it with 6 lists of insiders as of the respective dates of the requests.

In 2019, RusHydro received no notifications regarding the sale of its shares by any of its insiders.

As of 2019, a member of the Management Board and First Deputy General Director in charge of the unit of financial and corporate law management supervises the Company's compliance with the laws on insider information and submits quarterly reports to the Audit Committee of RusHydro's Board of Directors. The Audit Committee includes the information on the Company's compliance with these requirements in its annual report.

The data that constitutes the Company's insider information is published:
- in Russian in the news feed of the authorized news agency Interfax Corporate Information Disclosure Center: https://www.e-disclosure.ru/
- in English in the London Stock Exchange's News Monitoring Service: londonstockexchange.com/

[1] Order No. 851 of October 18, 2019.

Risk management *[102-30]*

Internal Control and Risk Management System

RusHydro Group has put in place an Internal Control and Risk Management System (the "System").

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The System focuses on providing reasonable assurance that the Group will be able to attain its goals and objectives in the following categories:
- missions of RusHydro Group;
- strategic goals;
- operating targets related to the efficiency of RusHydro Group's financial and business operations and safeguarding of its assets;
- goals related to the Company's compliance with the applicable laws and internal regulations (by-laws) of the Company and its subsidiaries;
- goals related to the timely preparation of accurate financial and non-financial internal and/or external reports.

Key stakeholders of the Internal Control and Risk Management System

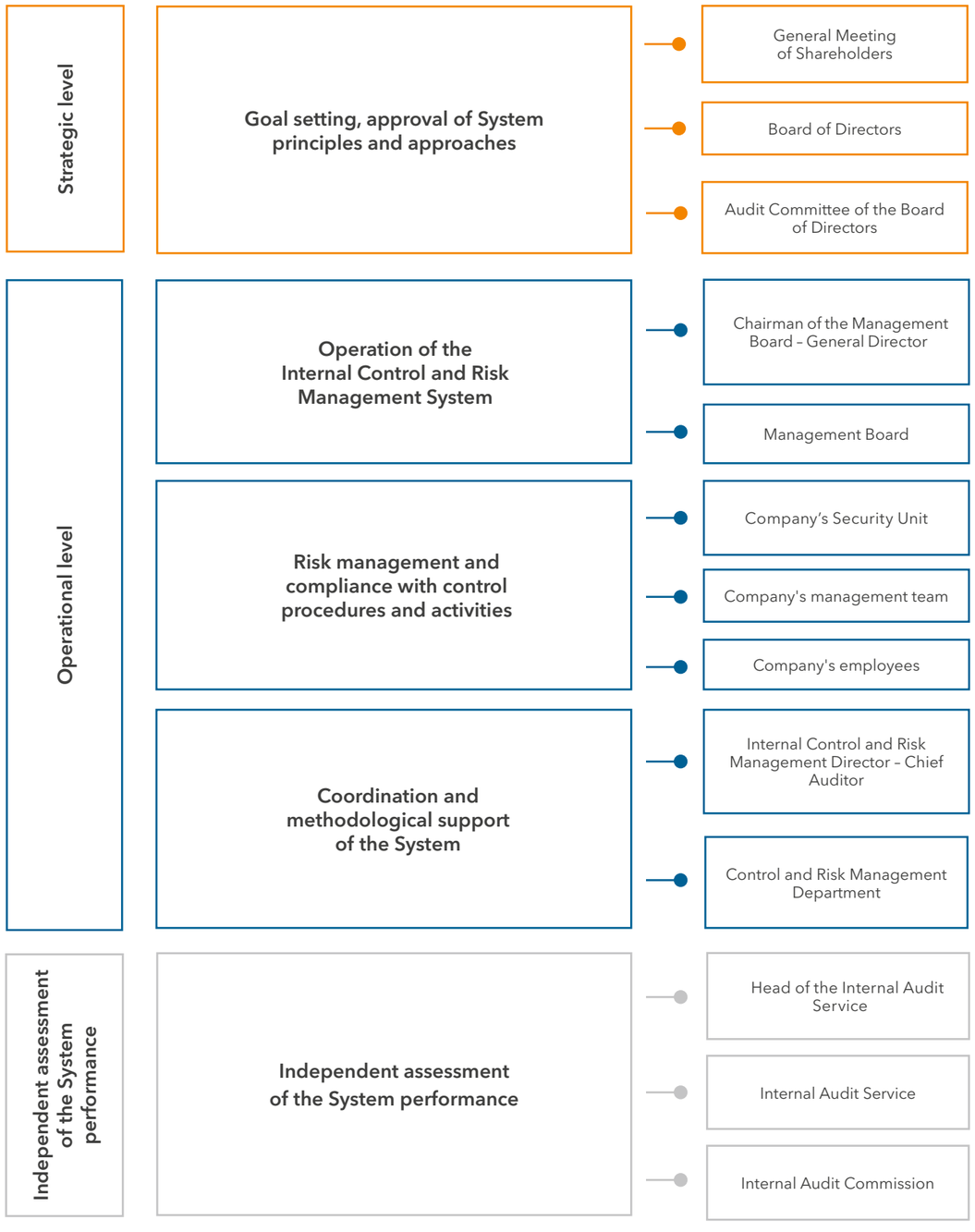
The roles of the Internal Control and Risk Management System stakeholders are differentiated based on their involvement in operating and implementing the System and monitoring its performance.

The Control and Risk Management Department is responsible for supervising and providing methodological support to the System. The Department has the following objectives:
- ensure general coordination of internal control and risk management processes;
- develop guidelines on internal control and risk management processes;
- organize training in risk management for employees of the Company and its subsidiaries;
- analyze the risk portfolio of RusHydro Group and suggest potential responses and reallocation of resources to manage specific risks;
- draft consolidated risk management reports;
- exercise ongoing control over internal control and risk management processes across the business units of the Company and its subsidiaries as prescribed by the relevant procedure;
- provide training and brief the Board of Directors and executive bodies of the Company on risk management and internal controls.

As at December 31, 2019, the Department's headcount was 35 employees.

RusHydro Group stands by the principles of highest transparency in communication with external stakeholders – shareholders, investors, governmental supervisory agencies, external auditors, banking and insurance organizations, complying with the applicable laws and internal regulations of the Company and its subsidiaries.

Key stakeholders of the Internal Control and Risk Management System



Internal regulations

The key regulation defining the goals, objectives and principles of the corporate system of internal control and risk management is RusHydro's Internal Control and Risk Management Policy (the "Policy")[1].

The Policy promotes compliance with the principles of the Internal Control and Risk Management System and harmonization of internal control and risk management approaches across RusHydro Group, while also reflecting the latest recommendations of international professional organizations on internal control and risk management and relevant best practices of Russian companies.

In 2019, the Board of Directors approved the Guidelines on RusHydro Group's Risk Appetite aiming to further improve the efficiency of internal controls and risk management in the Company.

In the reporting year, the Board of Directors also approved the Regulations on the Internal Control System of RusHydro Group (the "Regulations"), which set out applicable internal control guidelines. The document provides a detailed description of the internal control system and its elements, and sets forth requirements on key internal control procedures, types of monitoring to be used, coordination of efforts between the stakeholders of the RusHydro Group's Internal Control and Risk Management System, and reports on the internal control system status and improvements.

In addition, the Control and Risk Management Department joined forces with risk owners to produce a comprehensive classifier of risks to facilitate identification of risks and the development of a typical risk database for RusHydro Group. The document was reviewed by the Audit Committee of RusHydro's Board of Directors.

RusHydro Internal Control and Risk Management Policy: www.eng.rushydro.ru/

For more details on relevant regulations, see the Company's website at: www.eng.rushydro.ru

Risk management: methods and approaches

The Internal Control and Risk Management Policy of RusHydro specifies the following set of risk management methods and approaches:

- risk management is an integral part of all organizational processes: it is not segregated from the Company's key business activities and processes;
- risk management is an integral part of decision-making: it helps the decision makers to make informed choices, prioritize initiatives and find the best solutions among alternatives;
- risk management is essential to the continuous improvement of the Company and its subsidiaries: RusHydro Group keeps refining and enhancing its system of internal control and risk management to achieve greater risk management maturity;
- RusHydro is in the process of developing unified corporate classification of risks, a database of typical risks, risk categories and other tools required to improve efficiency;
- RusHydro Group fosters a risk-focused organizational culture.

Elements of a risk-focused culture

Approval of the Code of Corporate Ethics, anti-corruption and other policies, and procedures to identify misconduct and wrongdoing	Establishment of a center responsible for risk management	Active involvement of the Company's managers in the risk management process

[1] In June 2019, the Audit Committee and the Board of Directors of RusHydro approved a new version of the Internal Control and Risk Management Policy (Minutes No. 291 of the Company's Board of Directors dated June 21, 2019).

The key document governing the planning of strategic risk management initiatives for 2019 was the Strategic Management Regulations of RusHydro Group.

Pursuant to these Regulations, the Group maintains a strategic risk register, which identifies risk owners and is reviewed annually by the Management Board. Strategic risks that are deemed critical or material are addressed in the risk mitigation plan, which identifies action owners, deadlines and deliverables and is approved by the Management Board. Performance against the risk mitigation plan is measured when determining employees' bonus awards. The implementation of the risk mitigation plan and progress under it are monitored and overseen by the Company's risk managers.

Risk managers maintain an ongoing dialogue with the Audit Committee of the Board of Directors as the body overseeing RusHydro's risk management system in line with the Guidelines on Audit Committees of the Boards of Directors of Joint-Stock Companies with a Stake Owned by the Russian Federation.

Reports on actual progress against the strategic risk mitigation plan are drafted by the Control and Risk Management Department at the end of each reporting period and submitted for approval by the Chairman of the Management Board.

Strategic risk management cycle

Approval of the strategic risk register and the associated risk mitigation plan

↓

Implementation of the risk mitigation plan

↓

Report on the implementation of the risk mitigation plan

For more details on RusHydro's risk management cycles and methods, see the Company's website at: www.eng.rushydro.ru

Risk appetite *(EC)*

In 2019, RusHydro's Board of Directors approved the Group's risk appetite framework. *[102-33] [EC]*

Risk categories	Target	Risk appetite limit (risk level) indicator
Major accident risk	Reliable and safe operation of RusHydro Group's facilities	Number of major accidents
Risks affecting operational efficiency	Operational efficiency	Return on equity (ROE), labour productivity (revenue, RUB '000/man-hours)
Risk of losing investment appeal	Investment appeal	EBITDA
Investment risks	Investment activities	Adherence to the capacity commissioning schedule, progress against funding and spending targets
Corruption risk	Zero tolerance towards corruption	Number of actions lodged for illegal gratification offered on behalf of legal entities
Reputational risk	Good corporate reputation	Share of negative news in total media coverage

Independent assessment of the Company's Internal Control and Risk Management System

External assessment of the Company's Internal Control and Risk Management System

The Audit Committee of the Board of Directors or the Chairman of the Management Board – General Director may seek an external independent assessment of the Company's Internal Control and Risk Management System by independent third-party experts.

In 2019, no external independent assessment was performed.

Internal assessment of the Company's Internal Control and Risk Management System

The internal assessment of the corporate system of internal control and risk management is performed annually by the Company's Internal Audit Service to provide the Company's Board of Directors and the Group's executive bodies with independent and objective information about the system's current state and to identify areas for its improvement.

In 2019, the Internal Audit Service assessed the Company's internal control and risk management. The assessment relied on the methodology agreed with the Audit Committee of the Board of Directors and designed to analyze the system's current state against the target.

The report revealed that the Company's corporate system of internal control and risk management had a moderate level of maturity, with its elements generally in line with the target state set by the assessment methodology. The results were reviewed by the Company's Board of Directors at an in-person meeting and approved by its resolution of June 21, 2019.

Following the independent internal assessment, the Company drafted an Internal Control and Risk Management System Improvement Plan listing the development opportunities for 2019–2020.

Improving the Internal Control and Risk Management System *[EC]*

The Internal Control and Risk Management System is continuously developed and improved to ensure prompt response to external and internal changes, improve operational efficiency and attain corporate goals. The Company updates and approves the Internal Control and Risk Management System Improvement (Development) Plan on an annual basis.

Key 2019 initiatives to improve the Internal Control and Risk Management System

Areas	Initiatives
Coordination and methodological support	→ The implementation of improvements in internal control over RusHydro's key business processes was monitored on a systematic basis, with more proposals developed for introducing new or strengthening the existing business process controls → The development of risk mitigation plans for 2019–2020 by subsidiaries was subject to regular reviews and approvals, and progress against the risk mitigation plans was monitored on an ongoing basis
Development of internal regulations and training of employees	→ The Internal Control and Risk Management Policy of RusHydro Group was developed and approved; → The Regulations on the Internal Control System of RusHydro Group were developed and approved; → The Guidelines on RusHydro Group's Risk Appetite were developed and approved; → The risk classifier (typical risk database) was developed and reviewed by the Audit Committee of RusHydro's Board of Directors[1]
Development of the risk management and internal control process in the Company	→ The strategic and business process risk registers and rankings were updated on an annual basis, with the implementation of risk management initiatives monitored and the materialized risk database kept up to date; → Business process controls were developed, implemented and harmonized, including as a follow-up to the self-assessment exercise.
Automation of the risk management and internal control process	→ A pilot project to automate the risk management process and introduce an automated risk management system (ARMS) was implemented to support decision-making and develop a database of RusHydro Group's risks. The first ARMS module (FX and Interest Risk Management) was also tested in 2019

[1] Minutes No. 147/3 of the Audit Committee of RusHydro's Board of Directors dated December 30, 2019.

Risk management in 2019

Risks and opportunities are prioritized according to their impact on key financial, environmental and social aspects of the Company's operations, with the strategic targets, development priorities and the Company's mission factored in.

In 2019, RusHydro Group's strategic risk register consisted of 15 risks, with no changes taking place throughout the year.

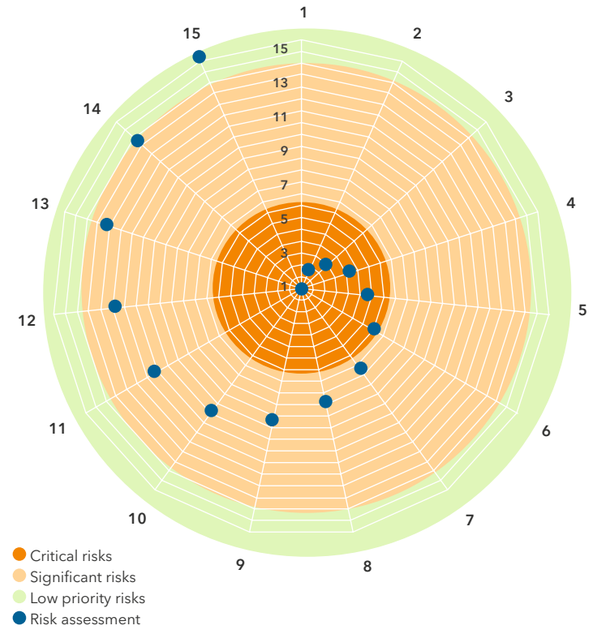
The Management Board adopted a resolution to approve RusHydro's Strategic Risk Mitigation Plan for 2018–2019 (the "Plan")[1]. The document provides an overview of strategic risk materialization scenarios and key risk drivers, while also specifying the sources of data used in estimating risk indicators. The digitalization of risk indicators is currently underway to enable the identification of materialized risks, estimate deviations and compare the damage from risk materialization.

Strategic risk monitoring in 2019 *[102-29] [EC]*

Category	Risk	2019 monitoring results
Investment risks	• Delayed commissioning of new capacities • Cost overruns for investment projects	In 2019, these risks remained most critical for key construction projects, including Nizhne-Bureyskaya HPP, Sakhalinskaya GRES-2, Zaramagskaya HPP and a CHPP in Sovetskaya Gavan. Delays in commissioning and project cost overruns were caused by the need to update and amend the design and cost estimate documents coupled with reduced financial stability, poor qualification of contractors, contractor employees' operating errors and gaps in synchronization of third-party efforts. In 2019, measures were taken to reduce these risks to an acceptable level, but due to the synergistic effect of construction delays accumulated over the previous project stages some of the construction projects were not completed on time.
Financial risks	• Revenue shortfalls from the sale of electricity (capacity) and heat against the business plan • Lack of funds, including those sourced externally (financial risks) • Risk of non-delivery / efficiency losses associated with production programs • Increase in receivables for electricity (capacity) and heat supplied and for transmission services rendered • Failure to achieve project targets by engineering companies (project companies, institutes, repair companies)	In 2019, financial risks were within the target range.
Non-financial risks	• Industrial disasters and accidents • Terrorism and cyber terrorism • Damage caused by natural and industrial disasters outside RusHydro Group's facilities • Adverse changes / breaches of the law (legal risks) • Reputational risks • Corruption risk • Management system deficiencies and errors • Inefficient integration of companies making part of RusHydro Group	In 2019, none of these risks materialized. The assessment of risk materialization was based on relevant risk indicators and applicable scenarios. ESG (Environmental, Social and Governance) risks have not been split into a separate risk group, but are reviewed (in terms of risk driver management) as part of the existing strategic risk register.

[1] Minutes No. 1133pr of the Management Board meeting dated October 9, 2018.

RusHydro Group's strategic risk radar for 2019



1. Delayed commissioning of new capacities
2. Cost overruns for investment projects
3. Revenue shortfalls from the sale of electricity (capacity) and heat against the business plan
4. Adverse changes / breaches of the law
5. Industrial disasters and accidents
6. Lack of funds, including those sourced externally
7. Risk of non-delivery / efficiency losses associated with production programs
8. Terrorism and cyber terrorism (EC)
9. Failure to achieve project targets by engineering companies (project companies, institutes, repair companies)
10. Management system deficiencies and errors
11. Reputational risks
12. Damage caused by natural and industrial disasters outside RusHydro Group's facilities
13. Corruption risk
14. Increase in receivables for electricity (capacity) and heat supplied and for transmission services rendered
15. Inefficient integration of companies merged into RusHydro Group

Strategic risk management report for 2019 *[102-33]*

Risk	Risk owner *(EC)*	Change in risk criticality during the year	Key risk drivers	Risk management practice
Delayed commissioning of new capacities Cost overruns for investment projects	Unit of Capital Construction, Deputy General Director for Capital Construction	↑	Design errors Failure to meet quality requirements imposed on developers of design and construction documents Late delivery of design specifications, estimates and construction documents, frequent changes to construction documents Low financial stability and bankruptcies of contractors and suppliers; failure of contractors and suppliers to meet their contractual obligations Lengthy contracting procedures to sign construction and installation, front-end engineering and design contracts Poor qualification/reduced capacity of contractors Acceptance of incomplete or partially completed works from contractors Low quality of equipment and materials (reduced technical capacity of manufacturers) Substandard grid infrastructure. Lack of connection capacity for completed and commissioned construction projects Unfavorable weather conditions affecting construction and installation works	1. Having design and construction documents reviewed by experts. 2. Exercising control over the work quality, timing and costs: • improving project scheduling techniques and monitoring deadline management on an ongoing basis; • controlling compliance with the quality and timing requirements imposed on developers of design specifications, estimates and construction documents; • ensuring customer supervision over construction sites; • developing a quality control system for the supplied equipment (including its production and shipment/delivery); • monitoring the progress of building grid infrastructure; • monitoring the contractors' compliance with the terms of contracts; • managing complaints and claims to/from contractors; 3. Insuring construction and installation risks (reducing the risk of project cost overruns due to facility damage or loss caused by design or construction deficiencies or external impact).

↑ Risk significance increase → Unchanged ↓ Risk significance decrease

Risk	Risk owner *(EC)*	Change in risk criticality during the year	Key risk drivers	Risk management practice
Revenue shortfalls from the sale of electricity (capacity) and heat against the business plan	Unit of Sales, Economic Planning and Investments, First Deputy General Director Unit of Production Activity, First Deputy General Director–Chief Engineer (as regards equipment wear and tear, and failure to meet dispatch schedules)	→	Decrease in electricity (capacity) and heat generation Decline in electricity (capacity) sold by the Group's retail subsidiaries in retail markets, including as a result of: – large customers shifting to the WECM; – large customers shifting to retail competitors; – consumers resorting to own generation; – grid companies reducing their energy losses. Regulated prices (tariffs) fixed below targets set by RusHydro Group companies	1. Automating generation of water level scenarios and refining the process methodology. 2. Taking part in shaping the Water Use Rules as part of the interagency working groups for setting HPP operation modes. 3. Liaising with federal government authorities and the Market Council Non-Profit Partnership on matters of tariff regulation and price setting. 4. Enhancing transparency of the economic dispatching business process. 5. Liaising with federal and regional government authorities on matters of tariff regulation with a view to eliminating the cost-tariff gap in the Russian Far East.
Adverse changes / breaches of the law	Unit of Financial and Corporate Law Management; First Deputy General Director	→	Adverse changes in laws and regulations governing the operation of the wholesale and retail electricity (capacity) markets Failure to comply with legal requirements imposed on: – operation and maintenance of equipment, buildings, and facilities of the Company's power plants; – implementation of investment projects to build new facilities; – compliance with environmental and nature conservation laws Sharper focus of environmental and nature conservation organizations on the Company's operations Violation of the following requirements by retail companies of RusHydro Group: – wholesale market rules, with non-compliance resulting in exclusion from the list of wholesale market participants; – key provisions governing the operation of retail markets, with non-compliance resulting in exclusion from the list of guaranteed suppliers	1. Drafting proposals on amending laws and regulations governing the electricity and heating power sector as well as related laws and regulations. 2. Maintaining ongoing monitoring of initiated and discussed legislative amendments that may affect RusHydro Group's operations. 3. Monitoring and revising the existing technical oversight standards and regulations. 4. Participating in major legislative change initiatives put forward by legislative, executive and judicial authorities, non-government associations, professional legal unions and associations. 5. Conducting regular environmental audits and implementing relevant recommendations. 6. Participating in the working groups of the Russian Ministry of Energy on technical regulation. 7. Managing complaints and claims to protect the Company's interests.

Risk	Risk owner *(EC)*	Change in risk criticality during the year	Key risk drivers	Risk management practice
Industrial disasters and accidents	Unit of Production Activity, First Deputy General Director – Chief Engineer	→	Design and/or construction errors Low quality of equipment, materials and repairs (reduced technical capacity of manufacturers) Deterioration of the technical condition of equipment, buildings and facilities Non-compliance with laws, internal regulations and guidelines Failures of subsystems of the upper-level automated process control systems and computer software Deficiencies in the system for physical protection of the Company's facilities Major industrial disasters/accidents/injuries	1. Implementing the full scope of the Company's production program initiatives, including rehabilitation and modernization. 2. Ensuring quality control of supplied equipment, including its production and shipment/delivery, construction, installation, commissioning and repairs. 3. Monitoring compliance of the Company's employees and contractors with industrial and technical safety requirements; certification of personnel in industrial safety. 4. Insuring production facilities. 5. Using advanced diagnostics methods eliminating equipment shutdowns and harnessing modern production asset management technologies, including IT (as required). 6. Implementing a comprehensive energy facility protection system at the Company's power plants.
Lack of funds, including those sourced externally	Unit of Sales, Economic Planning and Investments, First Deputy General Director	→	Increase in borrowing costs Loss of liquidity from delays in or lack of planned cash flows: – delayed capacity commissioning; – reduced purchasing power of customers/consumers; – shortfalls in VAT refund for capital construction projects; – shortfalls in subsidies to compensate for the loss of revenue caused by the adjustment of electricity (capacity) prices (tariffs) to the base level Excess of actual cash flows (payments) vs planned, driven by growing prices of fuel for heat generation facilities and increased investment costs	1. Maintaining sufficient cash levels and securing access to liquidity through credit facilities. 2. Maintaining a well-balanced model of working capital financing from both short-term and long-term sources. 3. Overseeing compliance with the terms of loan agreements to exclude any breach of financial covenants by the Company. 4. Using short-term financial instruments (bank deposits) to invest idle cash balances. 5. Refraining from high-risk investments with a 10+% return. 6. Divesting from non-core assets.
Risk of non-delivery / efficiency losses associated with production programs	Unit of Production Activity, First Deputy General Director – Chief Engineer	→	Gaps in/violations of production program planning guidelines Inadequate system of monitoring progress under the repair, rehabilitation and modernization projects, including the supervision of contractor works	1. Processing complaints and claims associated with the poor quality of repairs, delivery of substandard equipment and violation of delivery deadlines in a quick and efficient manner. 2. Maintaining control over the implementation of rehabilitation and modernization projects in compliance with the Company's standards, including using recommendations of the analytical center.

Risk	Risk owner *(EC)*	Change in risk criticality during the year	Key risk drivers	Risk management practice
Terrorism and cyber terrorism *[EC]*	Security Unit	→	Growing threat of international terrorism as a result of deteriorating international relations and growing political instability in some developing countries driven by the economic crisis and the activity of radical organizations Growing share of industrial terrorism in proportion to overall terrorist activities Low security level of third party facilities which are inherently connected to power plants or located close to them (bridges, roads) The threat of hidden functionality and hardware/software implants in foreign network and server equipment being used to disable computer networks and disrupt production Insufficient security of own facilities in terms of potential hacker attacks against information systems of the Company and external communication channels, including with the System Operator	1. Improving armed protection of the Company's facilities by engaging private security units of the National Guard of Russia (Rosgvardia), Guard Federal State Unitary Enterprise of Rosgvardia, and Departmental Protection Federal State Unitary Enterprise of the Russian Ministry of Energy. 2. Amending and maintaining up-to-date plans for the interaction with law enforcement agencies to protect the Company's facilities in case of threatened or attempted terrorist attacks. 3. Identifying the most probable threats and developing response plans to remedy acts of unlawful interference against the Company's facilities in cooperation with the local bodies of the Ministry for Civil Defence, Emergencies and Elimination of Consequences of Natural Disasters in the regions of the Company's operations. 4. Setting up and controlling access to information about on-site engineering and technical means of protection and their condition. 5. Insuring RusHydro Group's property against terrorism and sabotage risks. 6. Increasing the share of equipment certified by the Federal Service for Technical and Export Control, and the share of domestically manufactured equipment; 7. Conducting information security audits. 8. Setting up and controlling access to the hardware and software of management and information systems. 9. Protecting remote access to the Company's information systems and ensuring information security of virtual, mobile and cloud services. 10. Categorization of RusHydro's critical information infrastructure.
Failure to achieve project targets by engineering companies (project companies, institutes, repair companies)	Unit of Capital Construction, Deputy General Director for Capital Construction	↓	Shortage of qualified personnel in engineering companies Inefficient management of engineering companies Failure to use advanced design approaches	1. Implementing a development program for engineering companies. 2. Developing standard repair scope sheets for equipment and hydraulic structures. 3. Creating and maintaining a database of advanced and innovative technologies 4. Streamlining business processes related to the management of engineering companies

Risk	Risk owner *(EC)*	Change in risk criticality during the year	Key risk drivers	Risk management practice
Management system deficiencies and errors	Unit of Financial and Corporate Law Management; First Deputy General Director	→	Slow process of managerial decision review and approval Underregulated business processes and procedures Low level of comprehensive IT implementation	1. Insuring civil liability of the Company's officers and members of its governing bodies towards third parties and the Company. 2. Implementing a business process optimization project across the Company. 3. Implementing the Company's IT strategy and road map.
Reputational risks	Unit of Corporate Communications (PR and GR) Strategy and Innovation Unit (IR)	→	Dissemination of inaccurate and deliberately false information about RusHydro Group Dissemination of negative (compromising) information about RusHydro Group	1. Monitoring compliance with the Company's regulations governing information activities, participation in public events and information disclosure. 2. Engaging with stakeholders across the Company's core operations, including through joint public events. 3. Distributing regular press releases to share the Company's official position on its operations. 4. Holding press tours and special media events
Damage caused by natural and industrial disasters outside RusHydro Group's facilities	Unit of Production Activity, First Deputy General Director – Chief Engineer	→	Inadequate protection of RusHydro Group's production assets against natural disasters Climate changes	1. Upgrading centralized automatic emergency response systems to the latest standards. 2. Implementing civil defense and emergency prevention initiatives; 3. Carrying out research and development in the field of remote monitoring of HPP facilities condition and operating modes. 4. Monitoring compliance with the Russian industrial safety laws and maintaining a production control system based on such laws. 5. Insuring the property of RusHydro Group
Corruption risk	Security Unit	→	Appropriation of corporate opportunities for personal benefit: – lobbying the interests of affiliated counterparties; – abuse of office; – misusing insider information and manipulating the market of RusHydro's shares Unauthorised access to and disclosure of RusHydro Group's confidential information	1. Supervising the compliance anti-corruption activities pursued by RusHydro and its subsidiaries with the applicable laws. 2. Implementing procedures to prevent conflicts of interest in the workplace. 3. Monitoring information on income, expenditures, property and property-related liabilities of the Company's officers with exposure to corruption risks. 4. Maintaining anti-corruption hotline, checking allegations of wrongdoing. 5. Conducting internal investigations of alleged wrongdoings involving the Company's employees. Developing and implementing measures to eliminate identified violations/gaps. 6. Monitoring procurement activities. 7. Screening counterparties for conflicts of interest

Risk	Risk owner *(EC)*	Change in risk criticality during the year	Key risk drivers	Risk management practice
Increase in receivables for electricity (capacity) and heat supplied and for transmission services rendered	Unit of Sales, Economic Planning and Investments, First Deputy General Director	→	Low solvency of consumers (customers) and territorial grid operators Cheating by consumers (customers) and territorial grid operators	1. Monitoring data on supplier and contractor financial health to prevent the risk of counterparty bankruptcy. 2. Planning counterparty settlements, negotiations with counterparties on payments, debt restructuring and non-cash settlements. 3. Handling complaints and claims against non-paying consumers
Inefficient integration of companies merged into RusHydro Group	Unit of Financial and Corporate Law Management; First Deputy General Director	→	Impact of financial performance of merged companies on consolidated financial results of the Group	1. Overseeing the operations of RusHydro Group companies: introducing common management policies and corporate procedures. 2. Structuring the assets of RusHydro Group companies. 3. Streamlining the organizational structure of RusHydro Group

Impact of events after the reporting date beyond the Group's control

In late 2019, China first reported a novel coronavirus disease (COVID-19). The World Health Organization received information on a cluster of cases of unknown aetiology. In the first months of 2020, the virus spread worldwide, with its devastating impact gaining momentum.

Although on the date of publishing this report the situation around the virus has not yet stabilized, we expect it to damage both the global economy and RusHydro Group operations, in particular.

The virus repercussions included rouble depreciation, plunging oil prices and a stock market crash.

Up to now, the Group's sales and supply chain have not taken a substantial hit, with future effects of the epidemic impossible to predict. The Company management is closely monitoring the related potential risks and is ready to unleash a comprehensive set of measures to mitigate the consequences.

While engaged in continuous electricity and heat generation, transfer and sales to all groups of customer, RusHydro is also taking steps to prevent the infection from spreading among its employees.

To that end, we are educating our people on how to avoid contagion and supplying personal protective equipment. We have also arranged for more than 80% of our white-collar staff to work remotely.

Additionally, we reorganized the operation of our facilities. In regions where RusHydro Group companies render services to retail and corporate customers, all communications are handled distantly, by phone or online.

Report on remuneration of the governing and control bodies *[102-35]*

Remuneration of the Board of Directors and Board committees

The Company adopted a short-term incentive system for the Board of Directors (see the Regulations on Payment of Remunerations and Compensations to Members of RusHydro's Board of Directors).[1] The system relies on the following remuneration principle:

- the Regulations are not applicable to the members of the Board of Directors who act (during their term in office as members of the Board of Directors whether partial or entire) as members of the Company's collective executive body or as the Company's sole executive body;
- remuneration is not accrued or paid to the members of the Board of Directors for the period during their term in office as members of the Board of Directors when they were subject to restrictions or bans on receiving any payments from business entities in accordance with the applicable Russian laws;
- remuneration is paid to the members the Board of Directors for the period from their appointment as members of the Board of Directors to the election of a new Board of Directors;
- the remuneration depends on the number of meetings attended;
- the base remuneration of a member of the Board of Directors is RUB 3.51 mn;
- the remuneration is increased if the member of the Board of Directors is Chairman of the Board of Directors (by 30%), Chairman of a Board committee (by 20%), Senior Independent Director (by 15%), or member of a Board committee (by 10%).

The Board of Directors annually adopts a resolution on the Recommendations to the Annual General Meeting of Shareholders Regarding Payment of Remuneration to Members of the Board of Directors Who are Not Public Officers in the Amount Set by the Internal Regulations as provided for in the relevant Regulations.

The Regulations also define the amount of remuneration for directors who are members of the Board committees and set out the procedure for payment of such remuneration.

On June 28, 2019, RusHydro's Annual General Meeting of Shareholders resolved[2] to pay remuneration to members of the Board of Directors for their services for the period from June 27, 2018 to June 28, 2019 in the amount, within the timeframes, and in accordance with the procedure set out in the relevant Regulations.

The Regulations on Payment of Remuneration and Compensation to Members of RusHydro's Board of Directors: www.eng.rushydro.ru

Board of Directors' remuneration, '000 RUB[3]

Type of remuneration	2017	2018	2019
Remuneration for membership in governing bodies	7,472.3	27,945.0	24,840.0
Salary	0	0	0
Bonus	0	0	0
Commissions	0	0	0
Other types of remuneration	0	0	0
Total	**7,472.3**	**27,945.0**	**24,840.0**
Costs related to services of members of governing bodies compensated by the issuer	0	0	0

[1] A new version of the Regulations was approved by resolution of the Annual General Meeting of Shareholders (Minutes No. 18 of July 2, 2019).

[2] Minutes No. 18 of July 2, 2019.

[3] Including personal income tax.

Personal remuneration of the Board of Directors in 2019, '000 RUB

Full name	Meetings held	Meetings attended	Senior Independent Director, %	Member of a Board committee, %	Aggregate bonus, %	Remuneration	Bonus	Total remuneration	Remuneration payable[1]
Artem Avetisyan	18	15	0	0	0	2,250	0	2,250	1,957.5
Maxim Bystrov	18	18	0	40	40	2,700	1,080	3,780	3,288.6
Pavel Grachev	18	18	0	20	20	2,700	540	3,240	2,818.8
Vyacheslav Pivovarov	18	17	0	40	40	2,550	1,020	3,570	3,105.9
Pavel Livinsky	18	18	0	0	0	2,700	0	2,700	2,349.0
Nikolay Rogalev	18	18	0	40	40	2,700	1,080	3,780	3,288.6
Sergey Shishin	18	18	0	10	10	2,700	270	2,970	2,583.9
Andrey Shishkin	18	17	0	0	0	2,550	0	2,550	2,218.5
Total						**20,850**	**3 990**	**24,840**	**21,610.8**

Remuneration of the Management Board

Remuneration to members of the Management Board, including Chairman of the Management Board – General Director, is paid in accordance with the employment contracts and the Regulations on Payment of Remuneration and Compensation to Members of RusHydro's Management Board[2].

In 2016, the Company engaged Ernst & Young (CIS) B.V. (Moscow branch), a global consultancy firm, to develop recommendations on remuneration for the collective executive and sole executive bodies in line with the best Russian practices. Market benchmarking of the remuneration structure and amount focused on major peer companies. The research results were used to revise the incentive system for the Management Board.

Since January 1, 2017, the remuneration system has become more transparent and is now directly linked to the achievement of the Company's short- and long-term KPIs as recommended by the Nomination and Compensation Committee and approved by the Board of Directors.

The new incentive system relies on the following principles: transparency, balanced approach (interests of shareholders are aligned with the management's interests in achieving the Company's long- and short-term goals), impartiality (the remuneration depends on the RusHydro's performance and outcomes from the implementation of significant projects).

The current remuneration system includes a Long-Term Incentive Plan for the Management Board linked to the growth in share price and achievement of KPIs set by the Company's Board of Directors. The Plan aims to ensure closer alignment of motivation of the management and shareholders in delivering consistent growth of the company's value and developing the business. The key objectives and principles underpinning the Plan are to motivate the Company's management to achieve strategic objectives and pursue openness to shareholders as remuneration is dependent on the achievement of the KPIs, is calculated using the unified methodology and is based on equal payment conditions.

The amount and terms of payment of remuneration to the members of the Management Board upon early termination of employment are determined in the regulation on payment of remuneration and compensation to RusHydro's Management Board approved by the Board of Directors. The Company does not make "golden parachute" payouts for early termination. The maximum compensation paid to members of the Management Board upon early termination of employment is limited to three average monthly salaries as provided for by the Russian legislation. Pursuant Pursuant to the Regulations on Payment of Remuneration and Compensation to Members of RusHydro's Management Board, members of the Management Board are reimbursed for:

- hotel booking and accommodation costs, return tickets on business trips and other expenses associated with business trip assignments;
- representation expenditures (with the procedures for planning, monitoring and documenting representation allowances governed by the Company's internal regulations).

The members of the Management Board may receive other compensations associated with performing their job duties in the amount and manner prescribed by the Company's internal regulations.

For more information on the Management Board's KPIs and performance, see the Key Performance Indicators section

Remuneration of the Management Board, '000 RUB[1]

Type of remuneration	2017	2018	2019
Remuneration for membership in governing bodies	0	0	0
Salary	185,393.1	157,616.6	172,190.2
Bonus	344,618.0	244,368.6	260,281.3
Commissions	0	0	0
Other types of remuneration	0	0	0
Total	**530,011.1**	**401,985.2**	**432,471.5**
Compensations	1 697.5	861.6	638.1

Remuneration of the Internal Audit Commission

Remuneration to members of the Internal Audit Commission is based on the following principles approved by the Regulations on Payment of Remuneration and Compensation to Members of RusHydro's Internal Audit Commission[2] (the "Regulations"):

- the remuneration and compensation are paid to members of the Internal Audit Commission for the corporate year which Clause 2.1 of the Regulations defines as the period from the appointment of new members of the Internal Audit Commission at the General Meeting of Shareholders until the next General Meeting of Shareholders charged with considering election of new members to the Internal Audit Commission;

The Regulations on Payment of Remuneration and Compensation to Members of RusHydro's Internal Audit Commission: www.eng.rushydro.ru

- the remuneration amount is directly linked to the remuneration paid to members of the Board of Directors;
- the base part is set at 15% of the average annual remuneration for a member of the Board of Directors;
- pursuant to Article 12.1 of Federal Law No. 273-FZ On Combating Corruption of December 25, 2008 and Clause 1.3 of the Regulations, remuneration is not paid to the members of the Internal Audit Commission for the period during their term in office when they were subject to restrictions or bans on receiving any payments from business entities in accordance with the applicable Russian laws. If any such restriction or ban are lifted on the grounds specified in the applicable Russian legislation, the remuneration shall be calculated from the date on which the Company's Board of Directors is notified in writing of any such restriction or ban being lifted as per the Regulations.

There are no agreements in place on the amount of remuneration paid to members of the Internal Audit Commission.

[1] Excl. personal income tax.

[2] Approved by the Company's Board of Directors (Minutes No. 243 of November 14, 2016), amended as per Minutes No. 283 of February 21 2019.

[1] Including personal income tax.

[2] A new version of the Regulations was approved by resolution of the Annual General Meeting of Shareholders (Minutes No. 18 of July 2, 2019).

Remuneration of the Internal Audit Commission, '000 RUB

Type of remuneration	2017	2018	2019
Remuneration for membership in a control body overseeing the Company's financial and business activities	530.5	370.8	550.5
Expenses related to duties in the control body overseeing the Company's financial and business activities and compensated by the Company	0	0	0

Individual disclosure of remuneration for work in RusHydro's Internal Audit Commission in 2019[1]

Member of the Internal Audit Commission	Remuneration, RUB '000
Natalia Annikova	275.2
Igor Repin	275.2
Tatyana Zobkova	–
Denis Konstantinov	–
Dmitry Simochkin	–

Auditor's fee

The auditor's fee is determined by the Board of Directors based on the results of competitive bidding and after prior consideration of the matter by the Audit Committee under the Board of Directors of PJSC RusHydro.

Auditor's fee, RUB mn[2]

Type of remuneration	2017[3]	2018	2019
Audit of the annual RAS financial (accounting) statements and IFRS consolidated statements	136.1	84.2	83.4
Non-audit services	None	None	None

[1] Membership effective, among other things, as at December 31, 2019.

[2] Including VAT.

[3] The auditor's fee for 2017 includes the review of the consolidated statements for nine months ended September 30, 2017.

Auditor's opinion

Independent Limited Assurance Report to the Management of Public Joint Stock Company Federal Hydro-Generating Company – RusHydro (PJSC RusHydro)

Introduction

We have been engaged by management of PJSC RusHydro to provide limited assurance on the selected information described below and included in the Annual report (including information on Sustainable Development) of PJSC RusHydro ("Report") for the year ended 31 December 2019.
The selected subsidiaries ("RusHydro Group"[i]) are listed in the Group structure section of the Report.

Selected Information

We assessed the qualitative and quantitative information that is included in the «GRI SRS content index» for standard disclosures in environmental, workforce, safety and socio-economic areas in the reporting scope (the "Selected Information"). The scope of our limited assurance procedures was limited to Selected Information for the year ended 31 December 2019.

Reporting Criteria

We assessed the Selected Information using Sustainability Reporting Guidelines of the Global Reporting Initiative (GRI) and GRI Electric Utilities Sector Supplement (collectively, GRI Standards). We believe that these criteria are appropriate given the purpose of our limited assurance engagement.

Management responsibilities

Management of PJSC RusHydro is responsible for:
- designing, implementing and maintaining internal systems, processes and controls over information relevant to the preparation of the Selected Information that is free from material misstatement, whether due to fraud or error;
- establishing objective reporting criteria for preparing the Selected Information;
- measuring and reporting the Selected Information based on the Reporting Criteria; and
- ensuring that the Selected Information is accurate, complete and fairly presented.

[i] The term "RusHydro Group" in this Report relates only to PJSC RusHydro and its selected subsidiaries included in the Report and is not equivalent to the similar term used in the Consolidated IFRS financial statements.

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Our responsibilities

We are responsible for:
- planning and performing the engagement to obtain limited assurance about whether the Selected Information is free from material misstatement, whether due to fraud or error;
- forming an independent conclusion, based on the procedures we have performed and the evidence we have obtained; and
- reporting our conclusion to the management of PJSC RusHydro.

This report, including our conclusions, has been prepared solely for the management of PJSC RusHydro in accordance with the agreement between us, to assist management in reporting on RusHydro Group sustainability performance and activities. We permit this report to be disclosed in the Report[ii] for the year ended 31 December 2019, to assist management in responding to their government responsibilities by obtaining an independent limited assurance report in connection with the Selected Information for 2019. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than management of PJSC RusHydro for our work or this report except where terms are expressly agreed in writing and our prior consent in writing is obtained.

Professional standards applied and level of assurance

We performed a limited assurance engagement in accordance with International Standard on Assurance Engagements 3000 (Revised) 'Assurance Engagements other than Audits and Reviews of Historical Financial Information', issued by the International Auditing and Assurance Standards Board. A limited assurance engagement is substantially less in scope than a reasonable assurance engagement in relation to both the risk assessment procedures, including an understanding of internal control, and the procedures performed in response to the assessed risks.

Our Independence and Quality Control

We have complied with the independence and other ethical requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour, together with the ethical requirements of the Auditor's Professional Ethics Code and Auditor's Independence Rules that are relevant to our limited assurance procedures in the Russian Federation.

Our firm applies International Standard on Quality Control 1 and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

[ii] PJSC RusHydro's management is responsible for placing information on PJSC RusHydro's web-site and for accuracy of such information. The scope of our performed work does not include reviewing these matters; consequently, we do not assume any responsibility for any amendments that might have been made to the Selected Information underlying the Independent Limited Assurance Report or any differences between the report issued by us and the information presented on the PJSC RusHydro's web-site.

TRANSLATOR'S EXPLANATORY NOTE: This version of our report/the accompanying documents is a translation from the original, which was prepared in Russian. All possible care has been taken to ensure that the translation is an accurate representation of the original. However, in all matters of interpretation of information, views or opinions, the original language version of our report takes precedence over this translation.

Work done

We are required to plan and perform our work in order to consider the risks of material misstatement of the Selected Information. In doing so, we:
- made enquiries of PJSC RusHydro's management;
- conducted interviews of RusHydro Group's officials responsible for the preparation of the Selected Information and collection of underlying data;
- performed analysis of the Reporting Criteria and gaining an understanding of the design of the key systems, processes and controls for preparing and reporting the Selected Information; and
- performed limited substantive testing of the Selected Information on a sample basis to verify that data have been appropriately measured, recorded, collated and reported in line with the Reporting Criteria.

We have not performed any audit or review procedures in accordance with International Standards on Auditing or International Standards on Review Engagements on the underlying data based on which the Selected Information was prepared.
We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our limited assurance conclusion.

Reporting and measurement methodologies

There are no globally recognised and established practices for evaluating and measuring the Selected Information. The range of different, but acceptable, techniques can result in materially different reporting outcomes that may affect comparability with other organisations. The Reporting Criteria used as a basis of RusHydro Group sustainability reporting should therefore be read in conjunction with the Selected Information and associated statements reported on PJSC RusHydro's web-site.

TRANSLATOR'S EXPLANATORY NOTE: This version of our report/the accompanying documents is a translation from the original, which was prepared in Russian. All possible care has been taken to ensure that the translation is an accurate representation of the original. However, in all matters of interpretation of information, views or opinions, the original language version of our report takes precedence over this translation.

Limited assurance conclusion

Based on the procedures we have performed and the evidence we have obtained:
- nothing has come to our attention that causes us to believe that the Selected Information for the year ended 31 December 2019 has not been prepared, in all material respects, in accordance with the Reporting criteria; and
- nothing has come to our attention that causes us to believe that the Selected Information does not meet the Core requirements in accordance with the Guidelines of GRI Standards.

30 April 2020
Moscow, Russian Federation

A. S. Ivanov, certified auditor (licence no. 01-000531),
AO PricewaterhouseCoopers Audit

Engaging party: Public joint stock company Federal Hydro-Generating Company – RusHydro

Record made in the Unified State Register of Legal Entities on 26 December 2004 under State Registration Number 1042401810494

Taxpayer Identification Number 2460066195

660017, Russian Federation, Krasnoyarsk Region, Krasnoyarsk, Dubrovinskogo str. 43, bld. 1

Audit organization:
AO PricewaterhouseCoopers Audit

Registered by the Government Agency Moscow Registration Chamber on 28 February 1992 under No. 008.890

Record made in the Unified State Register of Legal Entities on 22 August 2002 under State Registration Number 1027700148431

Taxpayer Identification Number 7705051102

Member of Self-regulatory organization of auditors Association «Sodruzhestvo»

Principal Registration Number of the Record in the Register of Auditors and Audit Organizations – 12006020338

TRANSLATOR'S EXPLANATORY NOTE: This version of our report/the accompanying documents is a translation from the original, which was prepared in Russian. All possible care has been taken to ensure that the translation is an accurate representation of the original. However, in all matters of interpretation of information, views or opinions, the original language version of our report takes precedence over this translation.

Opinion on public (stakeholder) assurance

Subject matter and basis of assurance

We were engaged by PJSC RusHydro (the "Company") to assess the Company's public annual report in terms of completeness and materiality of information disclosed and responsiveness of the Company's management to the findings and recommendations of the stakeholders. To this end, we were offered an opportunity to take part in the public hearings held in absentia to discuss the draft Report (April 2020). We also participated in the procedure for identifying material topics to be covered by the Report.

Independence

We confirm our independence and objectivity in respect of the assessment of the Report and express our opinion as independent experts, not representatives of the firm that employs us.

We are unaware of any facts that may compromise the reliability of information disclosed in the Report. Yet, it should be noted that a review of the information collection and analysis system and its reliability and completeness is beyond the scope of this public assurance.

We did not receive any remuneration from RusHydro for participation in the public assurance procedure.

Completeness and materiality of disclosed information

The level of completeness in the Report is sufficient for stakeholders to gain an understanding of the Company's current state and future development prospects.

The Report covers topics that are material to its stakeholders.

By using the updated methods aligned with the international standards to assess material aspects, the Company was able to take into account the opinions of all groups of stakeholders. The Report discloses material topics in a manner proportionate to their importance as defined by the stakeholders.

We believe there are no reasons to question the reliability and relevance of the results of the identification of the material topics.

The Company's responsiveness to the suggestions and recommendations of the stakeholders

The Company is continuously making significant efforts to ensure dialogue with a broader public and traditionally shows readiness for open engagement with the stakeholders on various aspects of its operations.

As part of the current reporting process, we, together with other stakeholders' representatives, put forward a number of proposals and recommendations that were mostly taken into account, in whole or in part, in the final version of the Report. Information relating to the consideration of stakeholders' proposals following the questionnaire surveys and public hearings on the draft Report, as well as obligations to review and accept comments when preparing future reports are presented in Appendix No. 19 to the Report. In addition, the Company fulfilled a number of obligations it had assumed during the previous reporting campaigns, which contributed to greater transparency and level of detail of the reporting.

Qualification of the Report

We are agreed to give a positive opinion on the Report in terms of its format and the extent of disclosure. The Company prepared an informative and well structured report that meets our expectations.

It is worth noting that the Company aims to bring its corporate reporting in line with the highest Russian and international standards, such as Global Reporting Initiative Sustainability Reporting Standards (including the Electric Utilities Sector Supplement), International Integrated Reporting Standard, Standards on AA1000 Institute of Social and Ethical Accountability (AA1000AP and AA1000SES).

In addition, the Company's priorities are aligned with the Sustainable Development Goals until 2030 adopted by the United Nations. The Company worked out a number of quantitative indicators that will be disclosed going forward, helping to track RusHydro Group's contribution to the achievement of SDGs.

In our opinion, the Company has taken a consistent approach to increasing transparency and accountability of its operations. The open procedure for identifying the materiality allowed the stakeholders not only to assess the materiality of the proposed topics, but suggest additional topics to be disclosed. As a result, another matter was added to the list of material topics – Rushydro Group's contribution to low-carbon economy in Russia – and was covered by the Report.

We believe the Report provides a holistic disclosure of all key aspects of the Company's operations. It is also worth noting that the Company improved its business model, conducted a comprehensive review of its position in the industry, provided detailed information about the practice and the results of the Company's engagement with the stakeholders in the reporting period and a detailed disclosure of its investments in socially significant infrastructure.

We are confident that the Company will consistently fulfil its obligations and targets set out in the Report and will maintain traditionally high quality engagement with its stakeholders.

Head of the working group on Report preparation, member of ROSATOM's Expert Council on Sustainable Development

S. Golovachev

Director on corporate responsibility, Office of Corporate Responsibility, Sustainable Development and Social Entrepreneurship at Russian Union of Industrialists and Entrepreneurs

M. Ozeryanskaya

Head of the Electric Power Department of JSC VTB Capital Analytical Department

V. Sklyar

Director of the Environmental Projects Consulting Institute, of Russian National Junior Water Prize, candidate of technical sciences, Honored Worker of the Russian Water Industry

N. Davydova

Deputy Director of the Department of Social Partnership, Analytics and Professional Qualifications of the Association "ERA of Russia"

A. Pavlov

List of subsidiaries and affiliates of RusHydro Group *[102-45]*

Colour legend:

- PJSC RusHydro (Headquarters and branches) and its subsidiaries, excluding JSC RAO ES East Subgroup.
- RAO ES East Subgroup's companies within report boundaries.
- Companies that are part of RusHydro Group, but outside report boundaries.

Branches

- PJSC RusHydro's branch Bureyskaya HPP
- PJSC RusHydro's branch Volzhskaya HPP
- PJSC RusHydro's branch Votkinskaya HPP
- PJSC RusHydro's Dagestan branch
- PJSC RusHydro's branch Zhigulevskaya HPP
- PJSC RusHydro's branch Zagorskaya PSPP
- PJSC RusHydro's branch Zeyskaya HPP
- PJSC RusHydro's Kabardino-Balkaria branch
- PJSC RusHydro's branch Kamskaya HPP
- PJSC RusHydro's Karachay-Cherkessia branch
- PJSC RusHydro's branch Cascade of Verkhnevolzhskiye HPPs
- PJSC RusHydro's branch Cascade of Kubanskiye HPPs
- PJSC RusHydro's branch Nizhegorodskaya HPP
- PJSC RusHydro's branch Novosibirskaya HPP
- PJSC RusHydro's branch Saratovskaya HPP
- PJSC RusHydro's branch Sayano-Shushenskaya HPP named after P. S. Neporozhniy
- PJSC RusHydro's North Ossetia branch
- PJSC RusHydro's branch Cheboksarskaya HPP
- PJSC RusHydro's branch CorUnH
- PJSC RusHydro's Yakutsky branch
- PJSC RusHydro's Khabarovsky branch
- PJSC RusHydro's Primorye branch

Generating subsidiaries

- JSC DGK[1]
- JSC Geoterm[2]
- PJSC KamGEC[3]
- CJSC MEK
- JSC NDES
- PJSC Kolymaenergo
- JSC Nizhne-Bureyskaya HPP

Subsidiaries combining generation, transmission and sales of electricity and heat

- PJSC Yakutskenergo[4]
- JSC Sakhaenergo
- PJSC Kamchatskenergo
- JSC UESK
- PJSC Magadanenergo
- JSC Chukotenergo
- PJSC Sakhalinenergo[5]
- PJSC Mobile Energy
- JSC Teploenergoservis

Subsidiaries that are customer developers

- JSC CHPP at Sovetskaya Gavan
- JSC Zagorskaya PSPP-2
- LLC SHPPs of Stavropol Territory and Karachay-Cherkess Republic
- LLC Verkhnebalkarskaya SHPP
- JSC Zaramagskiye HPP
- JSC Ust-Srednekanskaya HPP[6]

Subsidiaries that are management companies

- JSC MC HydroOGK
- JSC ESC RusHydro

Electricity retail subsidiaries

- PJSC Krasnoyarskenergosbyt
- PJSC Ryazanenergosbyt
- JSC Chuvashskaya Electricity Sales Company
- PJSC DEK

Grid companies

- JSC DRSK

Coal strip mine

- JSC LUR

Subsidiaries engaged in construction and repairs

- JSC Hydroremont – VCC
- JSC ChirkeyGESstroy
- JSC Ust-SrednekanGESstroy
- JSC KhPRC
- JSC KhRAC
- JSC Neryungrienergoremont
- JSC YaERC
- JSC Magadanenergoremont
- JSC Magadanelectrosetremont

Service and other subsidiaries

- JSC RHS
- JSC RusHydro CAC
- LLC RusHydro IT Service
- JSC RusHydro SSC
- JSC SSHPP SC
- JSC Transport Company RusHydro
- JSC Vehicle Fleet Operator LuTEK
- LLC SNRG
- JSC Rodnik Zdorovya
- JSC VOSTEC
- JSC Energotranssnab

R&D subsidiaries

- JSC Vedeneyev VNIIG
- JSC NIIES
- JSC Lenhydroproject
- JSC Mosoblhydroproject
- JSC Hydroproject Institute
- LLP VNIIG
- JSC KhETC
- JSC Engineering Center for Renewable Energy

Companies within the structure of BEMO

- PJSC Boguchanskaya HPP[1]
- JSC BoAP[2]
- JSC BoAP Holding Company
- JSC BoHPP Holding Company
- HYDROOGK ALUMINIUM COMPANY LIMITED
- BOGES LIMITED
- BALP LIMITED
- JSC Boguchanskiy Aluminum Smelter Construction Customer
- JSC Boguchanskiy Aluminum Smelter Construction Organizer
- LLC CKHK BoGES

Holding companies and asset holders

- JSC RAO ES East
- JSC Hydroinvest
- JSC Malaya Dmitrovka
- JSC Blagoveshchenskaya CHPP
- JSC Yakutskaya GRES-2
- JSC Sulaksky HydroCascade
- LLC Primorskaya GRES
- JSC Sakhalinskaya GRES-2

Other investments ranging from 1 to 50%

- LLC Transbaikal Development Corporation
- JSC Magadanelectroset
- JSC IEGC
- JSC CEK
- JSC ENIN
- JSC KRES
- JSC SKK
- JSC NGES
- JSC Shakhta Ugolnaya
- JSC Okhinskaya TPP
- CJSC Verkhne-Narynskie HPPs

Subsidiaries that do not have any significant operations or are in liquidation or preparing for liquidation

- JSC RHBE
- JSC Karachay-Cherkessia Hydrogeneration company[3]
- LLC DUZ
- JSC Technopark Rumyantsevo
- JSC FEETC
- JSC Small HPPs of Altai
- JSC MGES CBR
- JSC HUA
- JSC ESKO UES
- JSC AvtotransportEnergo
- JSC KRSK
- RusHydro International B.V.
- RusHydro International A.G.
- RusHydro International India Private Limited
- LLC Hydroproject-Servis
- LLC International Institute of Geomechanics and Hydraulic Structures
- JSC Leningradskaya PSHPP

[1] Also operates assets of JSC Blagoveshchenskaya CHPP under a lease contract.

[2] On December 19, 2019 JSC Geoterm was restructured by merging into PJSC Kamchatskenergo

[3] On December 19, 2019 PJSC KamGEC was restructured by merging into PJSC Kamchatskenergo

[4] Also operates assets of JSC Yakutskaya GRES-2 under a lease contract.

[5] Also operates assets of JSC Sakhalinskaya GRES-2 under a lease contract.

[6] The plant's three hydropower units are operated by PJSC Kolymaenergo under a lease contract, construction of the fourth (last) unit is nearing completion.

[1] PJSC Boguchanskaya HPP is not part of RusHydro Group, it is a joint venture of RusHydro Group and RUSAL Group.

[2] JSC BoAP is not part of RusHydro Group, it is a joint venture of RusHydro Group and RUSAL Group.

[3] JSC Karachay-Cherkessia Hydrogeneration company was liquidated on February 2, 2020 following completion of bankruptcy proceedings.

Defining materiality *[103-1] [102-21] [102-46]*

The basic procedure for preparing the annual report in line with the <IR>, GRI SRS, and AA1000SES international standards is to identify material topics.

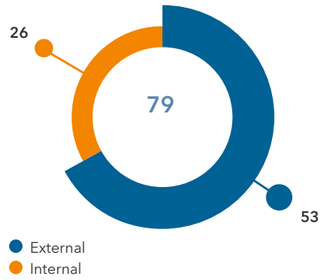
RusHydro Group optimizes its approaches to defining materiality on an annual basis in order to disclose the most material information for stakeholders.
In 2019, the Company updated its methodology for defining material topics, which involved the following stages:
1. We made a long-list of topics based on GRI SRS topics recommended for disclosure and relevant to RusHydro Group operations due to the corporate and industry specific features, as well as significant topics relevant to the global agenda and fitting the recent trends in public reporting;
2. RusHydro's management verified the proposed list of topics, updating content and wording;
3. Stakeholder representatives assessed topic significance (in a survey)[1];
4. We adjusted responses of external stakeholders by means of weights;
5. We prioritized material topics for disclosure in the report proportional to their importance;
6. We reviewed stakeholder suggestions for disclosing additional material topics in the report.

Representatives of both internal (the Company's management) and external stakeholder groups took part in the survey process, and questions diversified depending on their competencies helped maintain the balance of responses. The respondents assessed the relevance of the topics by the following parameters:
- significance both for RusHydro Group's tackling its current tasks and for delivering on its strategic goals (assessed only by internal respondents);
- relevance to the respondent or their entity (assessed only by external respondents);
- significance for the economy, environment, and local communities in the regions where RusHydro Group companies operate (assessed by both internal and external respondents).

An important innovation was to prioritize external stakeholders' responses by using weighed scores based on the position on the stakeholder ranking map[2].

Based on the survey results, integral scores including the above parameters were calculated for each proposed topic.

Coverage of respondents in 2019, persons



[1] The highest possible score of each parameter was 2 points, so the highest possible cumulative score was 6 points.

[2] Out of 12 stakeholder groups, the group "Local communities and the regions of operation" was excluded for the purpose of weighting, as this group did not participate in the survey.

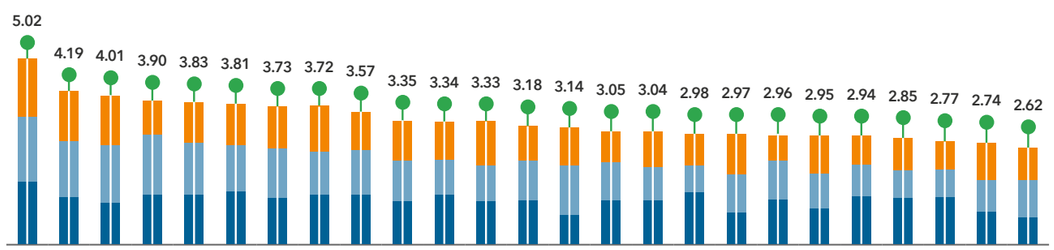
Long-list of material topics[1], proposed for the survey, sorted by significance *[102-49] [EC]*

Topic №	The name of material topic (aspect of activity)	Integrated stakeholder scores
1.	Ensuring reliable and safe operation of energy facilities	**5.02**
2.	Financial and economic performance of RusHydro Group	**4.19**
3.	Ensuring financial strength of RusHydro Group	**4.01**
4.	Tariff regulation in the Far East	**3.90**
5.	Occupational health and safety	**3.83**
6.	Safety of consumers and people in the regions of operation (including unauthorized interaction with energy facilities and construction sites)	**3.81**
7.	Modernization of production assets, increase in the efficiency of power and heat generation, grid assets	**3.73**
8.	Quality of customer service (reliability of electricity and heat supply, development of user services)	**3.72**
9.	Development of energy infrastructure in the regions of operation (including construction of generating facilities)	**3.57**
10.	Anti-corruption efforts	**3.35**
11.	Compliance of RusHydro Group operations with environmental legislation	**3.34**
12.	Renewable energy promotion	**3.33**
13.	Water use and discharge	**3.18**
14.	Increase in the value of RusHydro Group	**3.14**
15.	Respect for employee rights and compliance with collective bargaining agreements	**3.05**
16.	Social and charitable projects in the regions of operation	**3.04**
17.	Creation of jobs across our footprint	**2.98**
18.	Innovation, research and development	**2.97**
19.	Human resources management and the promotion of good working conditions	**2.96**
20.	Staff training and education	**2.95**
21.	Greenhouse gas and other air pollutant emissions	**2.94**
22.	Industrial waste management	**2.85**
23.	Impact on biodiversity	**2.77**
24.	Compliance of RusHydro Group operations with antitrust law	**2.74**
25.	Efficiency of procurement	**2.62**

[1] According to the methodology applied, from the long-list (31 topics) the top material topics disclosed in the annual report include the first 25 topics with the highest scores in the survey.

Topic №	The name of material topic (aspect of activity)	Integrated stakeholder scores
26.	Respect for human rights	**2.43**
27.	Information on materials and energy resources used for power and heat generation, construction of facilities	**2.41**
28.	Energy consumption by RusHydro Group companies, development of energy-saving practices	**2.41**
29.	Digitalization of operational and management processes	**2.36**
30.	Supply chain management (including interaction with suppliers, contractors)	**2.35**
31.	Respect for the rights and interests of indigenous peoples in the regions of operation	**2.06**

Scores of the Top 25 topics by constituent parameters, *score [102-47]*



- Significance both for RusHydro Group's tackling its current tasks and for delivering on its strategic goals (assessed only by internal respondents)
- Relevance to the respondent or their entity (assessed only by external respondents)
- Significance for the economy, environment, and local communities in the regions where RusHydro Grou companies operate (assessed by both external and respondents)
- Total

According to the Company's decision, we added another topic relevant to both RusHydro Group operations and the global agenda (including due to Russia's ratification of the Paris Agreement on climate change), as well as arousing interest of individual stakeholders in the survey, to the list of material topics:

- Rushydro Group's contribution to low-carbon economy in Russia.

The additional material topic was not assessed on the external and internal scale.

GRI SRS content index *[102-55]*

GRI Content Index RusHydro Jul 2020 Service

For the GRI Content Index Service, GRI Services reviewed that the GRI content index is clearly presented and the references for all disclosures included align with the appropriate sections in the body of the report. The service was performed on the English version of the report.

Disclosure number	Disclosure name	Report page, excluded data, note	External assurance
GENERAL DISCLOSURES			
GRI 101: Foundation		**3**	V
GRI 102: General Disclosures (2016)			
Organizational profile			
102-1	Name of the organization	32, 268	V
102-2	Activities, brands, products, and services	32	V
102-3	Location of headquarters	32, 268	V
102-4	Location of operations	42	V
102-5	Ownership and legal form	188, 268	V
102-6	Markets served	47	V
102-7	Scale of the organization	144	V
102-8	Information on employees and other workers	144, Appendix No. 22	V
102-9	Supply chain	127	V
102-10	Significant changes to the organization and its supply chain	3	V
102-11	Precautionary Principle or approach	The Company uses the precautionary principle, especially in the area of health, safety and environmental impact. This principle is implemented in risk management.	V
102-12	External initiatives	151	V
102-13	Membership of associations	Appendix No. 3	V
Strategy and analysis			
102-14	Statement from senior decision-maker	6	V
102-15	Key impacts, risks, and opportunities	49	V
Ethics and integrity			
102-16	Values, principles, standards, and norms of behavior	182	V
102-17	Mechanisms for advice and concerns about unethical or illegal behavior	228	V
Governance			
102-18	Governance structure	183	V
102-19	Delegating authority	74	V
102-20	Executive-level responsibility for economic, Environmental, and social topics	74	V
102-21	Consulting stakeholders on economic, Environmental, and social topics	85, 256	V
102-22	Composition of the highest governance body and its committees	196	V
102-23	Chair of the highest governance body	196	V
102-24	Nominating and selecting the highest governance body	196	V

Disclosure number	Disclosure name	Report page, excluded data, note	External assurance
102-26	Role of highest governance body in setting purpose, values, and strategy	54	V
102-28	Evaluating the highest governance body's performance	206, 217	V
102-29	Identifying and managing economic, Environmental, and social impacts	236	V
102-30	Effectiveness of risk management processes	231	V
102-31	Review of economic, Environmental, and social topics	RusHydro Group's integrated annual report, including sustainability data, is approved by resolution of the Annual General Shareholders Meeting (and pre-approved by the Board of Directors)	V
102-32	Highest governance body's role in sustainability reporting	RusHydro Group's integrated annual report, including sustainability data, is approved by resolution of the Annual General Shareholders Meeting (and pre-approved by the Board of Directors)	V
102-33	Communicating critical concerns	85, 234, 237	V
102-35	Remuneration policies	243	V
Stakeholder engagement			
102-40	List of stakeholder groups	85	V
102-41	Collective bargaining agreements	154	V
102-42	Identifying and selecting stakeholders	84	V
102-43	Approach to stakeholder engagement	84, 85	V
102-44	Key topics and concerns raised	85, 194	V
Reporting practice			
102-45	Entities included in the consolidated financial statements	3, 254	V
102-46	Defining report content and topic Boundaries	256, Appendix No. 22	V
102-47	List of material topics	258	V
102-48	Restatements of information	3, 92	V
102-49	Changes in reporting	257	V
102-50	Reporting period	Financial year from January 1, 2019 to December 31, 2019	V
102-51	Date of most recent report	April 30, 2019	V
102-52	Reporting cycle	Annual	V
102-53	Contact point for questions regarding the report	268	V
102-54	Claims of reporting in accordance with the GRI Standards	This report has been prepared in accordance with the GRI Standards: Core option	V
102-55	GRI content index	259	V
102-56	External assurance	3	V
GRI 103: Management Approach (2016)			
103-1	Explanation of the material topic and its Boundary[1]	256, Appendix No. 22	V
103-2	Management approach, including material topics[1]:		V
	2 Financial and economic performance;	92	
	1 Ensuring reliable and safe operation of energy facilities;	119	
	7 Modernization of production assets, increase in the efficiency of power and heat generation, grid assets;	117	
	9 Development of energy infrastructure in the regions of operation (including construction of generating facilities);	68	
	8 Quality of customer service (reliability of electricity and heat supply, development of user services);	115	
	12 Renewable energy promotion;	80	
	10 Anti-corruption efforts;	224	
	13 Water use and discharge;	173	
	23 Impact on biodiversity;	176	
	21 Greenhouse gas and other air pollutant emissions;	174	
	22 Industrial waste management;	176	
	5 Occupational health and safety;	155	
	19 Human resources management and the promotion of good working conditions;	143	
	17 Creation of jobs across our footprint;	144	
	20 Staff training and education;	146	
	15 Respect for employee rights and compliance with collective bargaining agreements;	154	
	16 Social and charitable projects in the regions of operation;	161	
	6 Safety of consumers and people in the regions of operation	122	
103-3	Evaluation of the management approach[2]	206	V
MATERIAL TOPICS			
GRI 201: Economic performance (2016) Material topic name as formulated by RusHydro: 2			
201-1	Direct economic value generated and distributed	95	V
201-3	Defined benefit plan obligations and other retirement plans	152	V
201-4	Financial assistance received from government	94	V
GRI 202: Market presence (2016) Material topic name as formulated by RusHydro: 19			
202-1	Ratios of standard entry level wage by gender compared to local minimum wage	146	V
GRI 203: Indirect economic impacts (2016) Material topic name as formulated by RusHydro: 9, 17, 16			
203-1	Significant indirect economic impacts	161	V
203-2	Infrastructure investments and services supported	68, 164	V
GRI 205: Anti-corruption (2016) Material topic name as formulated by RusHydro: 10			
205-2	Communication and training about anti-corruption policies and procedures	226	V
205-3	Confirmed incidents of corruption and actions taken	228	V
GRI 302: Energy (2016)			
302-1	Energy consumption within the organization	172	V
302-3	Energy intensity	172	V
302-4	Reduction of energy consumption	172	V

[1] Management Approaches are disclosed on all material topics (Top-25), based on the survey results.

[1] Here are presented the links to 103-2 management approach disclosures for all material topics that match with the topic-specific GRI Standards. Links to management approach disclosures for additional topics relevant for the RusHydro Group can be found on page 264.

[2] Management Approaches are disclosed on all material topics (Top-25), based on the survey results.

Disclosure number	Disclosure name	Report page, excluded data, note	External assurance
GRI 303: Water and Effluents (2018) Material topic name as formulated by RusHydro: 13			
303-1	Interactions with water as a shared resource	173	
303-2	Management of water discharge-related impacts	173	V
303-3	Water withdrawal	173	V
303-4	Water discharge	173	V
303-5	Water consumption	173	V
GRI 304: Biodiversity (2016) Material topic name as formulated by RusHydro: 23			
304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	176	V
304-2	Significant impacts of activities, products, and services on biodiversity	176	V
304-3	Habitats protected or restored	180	V
304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	176	V
GRI 305: Emissions (2016) Material topic name as formulated by RusHydro: 21			
305-1	Direct (Scope 1) GHG emissions	174	V
305-2	Energy indirect (Scope 2) GHG emissions	Information unavailable to the lack of centralised records. The Company does not keep record of indirect GHG emissions. The Company will consider the development of automated records system in the next 2–3 years.	V
305-4	GHG emissions intensity	175	V
305-5	Reduction of GHG emissions	In 2019, GHG emissions did not decline y-o-y	V
305-7	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	175	V
GRI 306: Effluents and waste (2016) Material topic name as formulated by RusHydro: 22			
306-2	Waste by type and disposal method	176	V
306-4	Transport of hazardous waste	The Company is not engaged in imports, exports or recycling of hazardous waste as per annexes I, II, III and VIII to the Basel Convention.	V
306-5	Water bodies affected by water discharges and/or runof	177	V
GRI 401: Employment (2016) Material topic name as formulated by RusHydro: 19			
401-1	New employee hires and employee turnover	145	V
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	151	V
GRI 402: Labor/Management Relations (2016) Material topic name as formulated by RusHydro: 19			
402-1	Minimum notice periods regarding operational changes	154	V

Disclosure number	Disclosure name	Report page, excluded data, note	External assurance
GRI 403: Occupational health and safety (2018) Material topic name as formulated by RusHydro: 1, 5			
403-1	Worker training on occupational health and safety	155	V
403-2	Hazard identification, risk assessment, and incident investigation	156	V
403-3	The categories of workers at risk of occupational diseases and the number of these workers	155, 156	V
403-4	Promotion of worker health	156	V
403-5	Worker training on occupational health and safety	156, 158	V
403-6	Promotion of worker health	156	V
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	155	
403-9	Work-related injuries	160	V
403-10	Work-related ill health	159	V
GRI 404: Training and Education (2016) Material topic name as formulated by RusHydro: 20			
404-1	Average hours of training per year per employee	147	V
404-2	Programs for upgrading employee skills and transition assistance programs	148	V
404-3	Percentage of employees receiving regular performance and career development reviews	150	V
GRI 405: Diversity and Equal Opportunity (2016)			
405-1	Diversity of governance bodies and employees	143, Appendix No. 22	V
GRI 407: Freedom of Association and Collective Bargaining (2016) Material topic name as formulated by RusHydro: 15			
407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	154	V
GRI Electric Utilities Sector Disclosures Material topic name as formulated by RusHydro: 7, 9, 8, 12, 23, 19, 6			
EU1	Installed capacity	102	V
EU2	Net supply by primary energy source and by regulatory regime	105	V
EU3	Number of residential, industrial, institutional and commercial customer accounts by regulatory regime	109, 113, 114	V
EU4	Length of overhead and underground transmission and distribution lines by regulatory regime	103, 104	V
EU12	Transmission and distribution losses as a percentage of total energy	104	V
EU13	Biodiversity of offset habitats compared to the biodiversity of the affected areas	178	V
EU15	Percentage of employees eligible to retire in the next 5 and 10 years broken down by job category and by region	144	V
EU22	Number of people economically displaced and compensated, by type of project	70	V
EU23	Programs, including those in partnership with government, to improve or maintain access to electricity and customer support services	72, 105, 111	V

Disclosure number	Disclosure name	Report page, excluded data, note	External assurance
EU25	Number of injuries and fatalities to the public involving company assets, including legal judgments, settlements and pending legal cases of diseases	125	V
EU28	Power outage frequency	122	V
EU29	Average power outage duration	123	V
Specific material topics, relevant for the RusHydro Group			
Tariff regulation in the Far East			
Material topic name as formulated by RusHydro: 4			
103-2	Management approach	111	V
–	Solvency ratio (leverage)	111	V
Increase in the value of RusHydro Group			
Material topic name as formulated by RusHydro: 14			
103-2	Management approach	57	V
–	Market capitalization of the Company	193	V
Ensuring financial strength of RusHydro Group			
Material topic name as formulated by RusHydro: 3			
103-2	Management approach	97	V
–	Solvency ratio (leverage)	97	V
Innovation, research and development			
Material topic name as formulated by RusHydro: 18			
103-2	Management approach	132	V
–	R&D expenses, % of consolidated revenue	132	V
–	Amount spent on the Innovative Development Program	134	V
Efficiency of procurement			
Material topic name as formulated by RusHydro: 25			
103-2	Management approach	126	V
–	Share of procurement through SMEs	130	V
–	Share of procurement through local suppliers	130	V
Legal Compliance with the law			
Material topic name as formulated by RusHydro: 11, 24			
103-2	Management approach	167	V
Additional material topic: Rushydro Group's contribution to low-carbon economy in Russia			
103-2	Management approach	80	V
–	Share of renewables in the total installed capacity	102	V
–	Construction of generation facilities for a low-carbon economy	80, 81	V
–	Savings in potential GHG emissions	81	V

FTSE Russell in EU content index

Disclosure number	Disclosure name	Linked GRI Disclosures	Report page, excluded data, note
ECC14	Total operational GHG emissions data (Scope 1 & 2) is disclosed	305-1, 305-2	174, The Company does not keep record of indirect GHG emissions (Scope 2)
ECC15	Total energy consumption data is disclosed	302-1	172
ECC23	GHG emissions per megawatt-hr	305-4	175
EPR18	Disclosure of NOx emissions (tonnes)	305-7	175
EPR19	Disclosure of SOx emissions (tonnes)	305-7	175
EPR24	Disclosure of hazardous waste generation (tonnes)	306-2	176
EPR25	Disclosure of non-recycled waste generation (tonnes)	306-2	Accumulated waste is collected by specialized contractors duly licensed to collect, transport and treat such waste.
EPR27	Total costs of environmental fines and penalties during financial year	–	168
EPR28	Percentage of sites covered by recognised environmental management systems such as ISO14001 or EMAS	–	RusHydro Group does not have a centralized environmental management system, but certain subsidiaries undergo an annual audit to confirm their compliance with ISO 14001
EWT11	Total water use / water extraction data is disclosed	303-3	173
EWT12	Percentage of water recycled (non-potable) for use in own operations	-	173
GAC13	Disclosure of number of staff disciplined or dismissed due to non-compliance with anti-corruption policy/policies	205-3	228
GAC14	Disclosure of cost of fines, penalties or settlements in relation to corruption	–	RusHydro Group was not charged with relevant considerable fines and non-financial penalties
SHR17	Total amount of corporate or group donations / community investments made to registered not-for-profit organisations	–	161
SHS12	Percentage of sites with OHSAS 18001 certification	–	53 sites
SHS13	Number of staff trained on health and safety standards within the last year	–	66,829 employees
SHS38	Number of work-related employee fatalities	403-9	160
SHS40	Number of work-related contractor fatalities	–	160
SLS26	Amount of time spent on employee development training to enhance knowledge or individual skills, using: • Total hours as a company; • Average hours per employee	404-1	147

Glossary and list of abbreviations

Glossary

Wind power plant	A power plant consisting of two or more wind power installations designed to convert wind energy into electrical energy and transmit it to the consumer
Day-ahead market	The competitive selection of suppliers and consumers price bids by JSC ATS a day before the actual delivery of electricity with the determination of prices and delivery volumes for each hour of the day
Energy efficiency	Effective (rational) use of energy resources. Use less energy to provide buildings or production processes with the same level of energy
Generating companies (OGKs) of the wholesale electricity and capacity market	Electricity and power suppliers who received the status of wholesale market entities entered into contracts binding on wholesale market participants and made other actions necessary for trading in electricity and capacity on the wholesale market in accordance with the agreement on joining the wholesale market trading system
Gigacalorie	A unit of measurement for heating energy
Gigacalorie-Hour	A unit of measurement for heating power
Hydroelectric power plant	The power plant as a single production and technological complex, including waterworks/hydro-technical facilities and equipment that converts mechanical energy of water into electrical energy. In the annual report, unless otherwise noted, HPPs and PSPP are also classified as hydroelectric power plants.
Hydro-technical facilities	Dams, buildings of hydroelectric power stations, water discharge, drainage and outlet structures, tunnels, channels, pumping stations, shipping locks, ship elevators; structures designed to protect against floods and destruction of the banks of reservoirs, banks and the bottom of river beds; structures (dams) enclosing liquid waste storage facilities of industrial and agricultural organizations; facilities against washing-away in channels, as well as other structures designed to use water resources and prevent the harmful effects of water and liquid waste
Installed capacity	Total nominal active capacity of generators at electric power plants which are part of the Group's structure
Kilowatt-Hour	A unit of measurement of generated electrical energy
Megawatt	A unit of measurement for electrical capacity
Net electricity delivered	Electricity received by consumers
Net heat delivered	Heat energy delivered to the consumer (consumers) at the boundary of operational responsibility (balance sheet attribution)
PJSC RusHydro, the Company	Public Joint-Stock Company Federal Hydro-generating Company - RusHydro, including the executive office and branches
Pumped storage power plant	Power plant working by transforming electricity from other power plants into the potential energy of water; during reverse transformation, accumulated energy is contributed to the energy system primarily to cover deficits that may occur during peak load periods
RAO ES East	A holding established to manage energy companies operating in the Unified Energy System of the East (Primorsky Krai, Khabarovsk Territory, Amur Region, Jewish Autonomous Region, and South of Yakutia), as well as in six isolated energy systems
RAO ES East Subgroup	JSC RAO ES East, including its subsidiaries
Renewables	Renewables include all renewable energy sources defined in Art. 3 of Federal Law No. 35-FZ dated March 26, 2003 On Electric Power Industry, except for HPPs with an installed capacity of more than 30 MW.
RusHydro Group	PJSC RusHydro, including its subsidiaries
RusHydro Subgroup	RusHydro and its subsidiaries, without those belonging to the RAO ES East Subgroup
Subsidiary	A legal entity that is under the direct or indirect control of a controlling person
Unified Energy System	The combination of industrial and other property facilities of electric power industry interconnected through a single process of generation (including the combined generation of electric and heat energy) and transmission of electric energy under centralized operational dispatch management in electric power industry
Wholesale electricity and capacity market	Sphere for the circulation of electric energy and capacity under Russia's Unified 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 entities, confirmed in full accordance with the Russian Federal Law on Electric Power Industry (by the Russian Government). The criteria for including electricity producers and consumers in the category of large producers and large consumers are also established by the Russian Government

List of abbreviations

CHPP	Central heating and power plant
DAM	Day-ahead market
FEC	Fuel & energy complex
Gcal	Gigacalorie
Gcal/h	Gigacalorie-Hour
GRES	State district power plant
HPP	Hydroelectric power plant
JSC RAO ES East	Joint-Stock Company RAO Energy Systems of the East
CPA	Capacity price auction
KPI	Key performance indicator
kWh	Kilowatt-Hour
MPP	Mobile power plant
MW	Megawatt
PJSC RusHydro	Public Joint-Stock Company Federal Hydro-generating Company - RusHydro, including the executive office and branches
PSPP	Pumped storage power plant
R&D	Research and development
REM	Retail electricity market
SPP	Solar power plant
the report, the annual report	the present annual report
TPP	Thermal power plant
TR&M	Rehabilitation & modernization
UES	Unified Energy System
VNIIG	All-Russian Hydraulic Engineering Research Institute
WECM	Wholesale electricity and capacity market
WPP	Wind power plant

Feedback questionnaire

Dear reader!

You are now familiar with PJCS RusHydro's annual report. When drafting it, we tried to take note of all suggestions on disclosing material information. Please help us improve 2020 annual report by selecting the most relevant topics in the questionnaire. We value the opinion of every client, shareholder, contractor, and employee. The results of the stakeholder questionnaires are published in every annual report and on the Company's website.

See the list of important matters for the previous periods here: http://www.eng.rushydro.ru

Please follow the link to fill in the questionnaire https://ar2019.rushydro.ru/ru/profile/

Public reporting enhancement plans *[OS]*:

- development of RusHydro Public Non-financial Reporting Standard according to Russian and international legislation , international standards and frameworks, stock exchanges and regulators requirements;
- presentation of the annual reports on external and internal events;
- upgrade training of employees involved in preparation of public reporting on workshops and round tables;
- audience building for the purposes of materiality assessment surveys and public consultations during public reporting preparation.

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Abbreviated name	PwC Audit
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