

The list of strategic risks of RusHydro Group

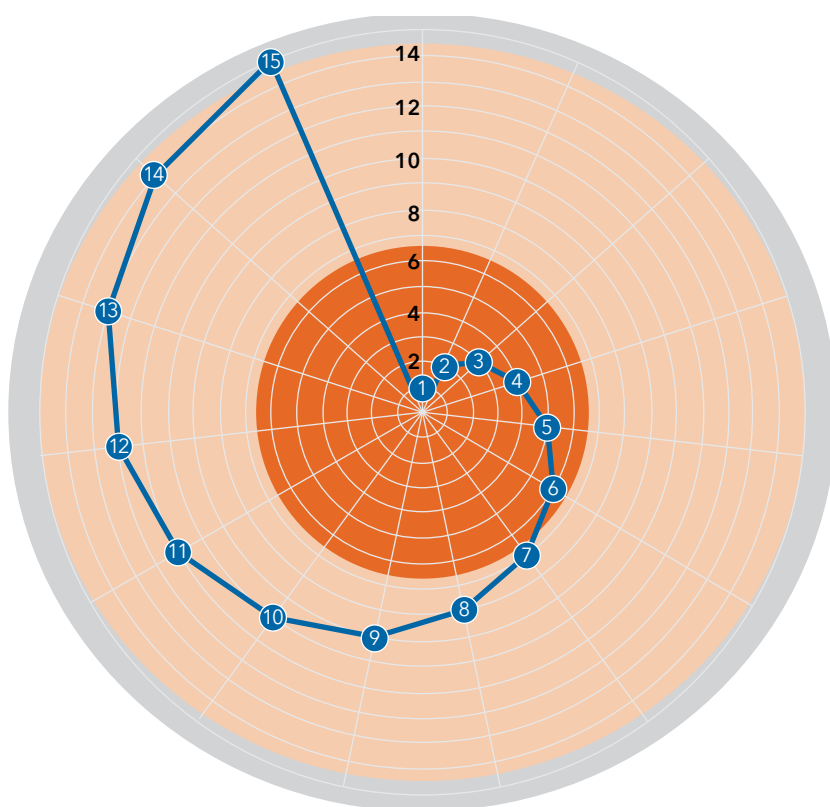
The Company annually composes the RusHydro Group's Strategic Risks Registry with the definition of risk owners. The registry is used both for the purposes of disclosure of information about risks to shareholders, rating agencies, the auditor and other interested parties, and for the purpose of further developing and monitoring the implementation of risk optimisation measures within the framework of RusHydro Group Strategy.

The priority of risks and opportunities is determined on the basis of their impact on key financial, environmental and social aspects of activities, taking into account the Company's strategic goals, development priorities and mission. [103-2], [103-3]

The current list of strategic risks of RusHydro Group was drawn up by the Company's management and approved by the Company's Management Board in 2017.

The diagram presents RusHydro Group's strategic risks radar, taking into account their ranking by the likelihood of implementation and the impact on the business in accordance with the strategic risks registry of RusHydro Group. [102-15]

Radar of strategic risks of RusHydro Group for 2017-2018



Critical risks

- 1 The disruption of the timing of the commissioning of new facilities
- 2 The rise in the cost of capital construction projects
- 3 The decrease in revenue from the sale of electricity and capacity relative to the business plan
- 4 Adverse changes / violations of legislation (Legal risk)
- 5 Technogenic accidents and accidents at production facilities
- 6 Shortage of funds, incl. obtained from external sources (Financial risk)
- 7 Risk of non-fulfillment/decline in the efficiency of production programs

Significant risks

Low priority risks

- 8 Failure to meet targets by engineering companies
- 9 Terrorism
- 10 Disadvantages and errors of the management system
- 11 Reputational risks
- 12 Damage caused by natural disasters and man-made accidents not at the facilities of RusHydroGroup
- 13 Corruption risk
- 14 Growth of receivables for the supply of electricity, power and heat
- 15 Inefficiency of integration of companies

Strategic risk management of RusHydro Group

Priority of risk ¹	Risk ²	Influence on KPI LDP of RusHydro Group	Parties concerned	Key risk management activities
Economic aspect				
1	The disruption of the timing of the commissioning of new facilities (critical risk)	Direct: Implementation of capacity schedules and a plan for financing and development, % Return on Equity (ROE), % Income before interest, taxes and depreciation (EBITDA ³), RUB mn Indirect: Total shareholder return (TSR), %	Shareholders and investors Employees Federal authorities Regional authorities and local authorities Suppliers and contractors	Systematisation of data on projected objects: <ul style="list-style-type: none"> ■ development of a corporate project management system to systematise data on existing and projected facilities. Development of internal assessment of design and working documentation: <ul style="list-style-type: none"> ■ increasing the efficiency of the work of design institutes and procurement activities aimed at strengthening the role of its own design institutes in conducting internal assessment of project and working documentation; ■ regulation of activities for conducting internal assessment of project documentation. Control over the quality, timing and cost of work: <ul style="list-style-type: none"> ■ maintaining a list of unscrupulous designers, participating in the selection of subcontractors; ■ keeping a registry of violations by contractors of deadlines for the performance of contractual obligations under contracts for the implementation of the new construction programme and TR&M projects; ■ optimisation of the insurance and procurement system in terms of construction and installation activities (reducing the risk of project cost increase due to damage / destruction of the facility as a result of design and construction deficiencies and environmental impacts); ■ development of normative documents for the execution of certain types of work, the introduction of a system for the admission of personnel to perform such work with the possibility of personal suspension from the implementation of subsequent projects with the commitment of significant violations; ■ development of a quality control system for the supplied equipment (including the process of its production and shipment / delivery); ■ monitoring the progress of work on the creation of a grid infrastructure; ■ use of a system for supervising monitoring the timing and costs of new construction projects on the basis of the SAP information management system for fixed assets construction. In the materials for consideration of the investment programme for 2018-2023, the estimation of the profitability of investment projects of capital construction, taking into account risks, was carried out. ■ tightening of requirements for contractors to comply with contract terms; ■ complaints and lawsuits
2	The rise in the cost of capital construction projects (critical risk)	Direct: Return on Equity (ROE), % Income before interest, taxes and depreciation (EBITDA), RUB mn Indirect: Total shareholder return (TSR), %	Shareholders and investors Employees Federal authorities Regional authorities and local authorities Suppliers and contractors	<ul style="list-style-type: none"> ■ improvement of the methodology and automation of the outlining of water scenarios ■ Participation in the coordination of regulation for water management in interdepartmental working groups to establish the operating regimes of the hydrosystems ■ Implementation of the Comprehensive Modernisation Programme ■ Preparation of proposals on introducing amendments to normative legal acts in the electric power industry. Interaction with the Federal Social Insurance Fund and Association NP Market Council ■ Increase of the transparency of the business process of commercial dispatching
3	The decrease in revenue from the sale of electricity and capacity relative to the business plan (critical risk)	Direct: Return on Equity (ROE), % Income before interest, taxes and depreciation (EBITDA), RUB mn Indirect: Free cash flow (FCF) Total shareholder return (TSR), %	Shareholders and investors Employees Suppliers and contractors	<ul style="list-style-type: none"> ■ Improvement of the methodology and automation of the outlining of water scenarios ■ Participation in the coordination of regulation for water management in interdepartmental working groups to establish the operating regimes of the hydrosystems ■ Implementation of the Comprehensive Modernisation Programme ■ Preparation of proposals on introducing amendments to normative legal acts in the electric power industry. Interaction with the Federal Social Insurance Fund and Association NP Market Council ■ Increase of the transparency of the business process of commercial dispatching

¹ Risk number in the registry / on the strategic risk radar.

² These risks were not realised in 2017.

³ Further in this section, the indicator EBITDA is understood as the indicator used in KPI calculating.

Strategic Review

Priority of risk ¹	Risk ²	Influence on KPI LDP of RusHydro Group	Parties concerned	Key risk management activities
6	Shortage of funds, incl. those received from external sources (financial risks) (significant risk)	<p>Direct: Implementation of capacity schedules and a plan for financing and development, %</p> <p>Indirect: Return on Equity (ROE), % Income before interest, taxes and depreciation (EBITDA), RUB mn Total shareholder return (TSR), %</p>	Shareholders and investors Federal authorities Suppliers and contractors	<ul style="list-style-type: none"> ■ Maintaining sufficient level of cash and sustaining the availability of financial resources through the provision of credit lines ■ Implementing a balanced model of working capital financing through the use of short-term and long-term sources ■ Monitoring the compliance with credit agreements to prevent violations of the Company's financial covenants ■ Placement of temporarily available funds in short-term financial instruments (bank deposits) ■ Conclusion of contracts with counterparties on standard financial terms ■ Introduction of a methodology for managing interest and currency risks, taking into account the credit policy of PJSC RusHydro ■ Work to prepare flood zones for reservoirs of hydroelectric stations under construction at the expense of the federal budget and budgets of the constituent entities of the Russian Federation ■ Interaction with regional and federal executive authorities, in the field of tariff regulation, aimed at reducing the tariff gap in the Far East ■ Optimisation of costs (in accordance with the VGP) ■ Implementation of measures to sell non-core assets ■ In order to reduce the debt burden of RusHydro Holding, an additional issue of shares was carried out and a deal was concluded for the acquisition of 55 billion shares of the Company by VTB Bank (PJSC) ■ Within the framework of the approved methodology for managing the Company's currency and interest rate risks, currency risks and interest rate risk are calculated annually to assess and form a reserve for currency and interest risks in the Company's budget
7	Risk of non-fulfilment / decline in the efficiency of production programmes (significant risk)	<p>Direct: Prevention of the number of accidents from exceeding the maximum value Return on Equity (ROE), % Income before interest, taxes and depreciation (EBITDA), RUB mn Commissioning of capacity schedules and a plan for financing and development, %</p> <p>Indirect: Total shareholder return (TSR), %</p>	Shareholders and investors Employees Suppliers and contractors	<ul style="list-style-type: none"> ■ Prompt execution of claims and lawsuits on the facts of poor quality of repairs, poor-quality equipment, and violation of delivery deadlines ■ Use of recommendations of the Analytical Centre in the creation of production programmes ■ Monitoring data on the financial status of suppliers and contractors to prevent the risk of bankruptcy of the counterparty. ■ Optimisation of the process of contract approval, introduction of changes to the Company's local regulations on contractual activities ■ Control of the implementation of technical re-equipment and reconstruction projects in accordance with the standards of the organisation
8	Lack of achievement of targets by engineering companies (design, controlled companies institutes) (significant risk)	<p>Direct: Integral Innovative KPI Return on Equity (ROE), % Income before interest, taxes and depreciation (EBITDA), RUB mn</p> <p>Indirect: Total shareholder return (TSR), %</p>	Shareholders and investors Suppliers and contractors	<ul style="list-style-type: none"> ■ Creation of a single project facility of PJSC RusHydro through reorganisation of controlled design companies ■ Implementation of the programme for the development of controlled engineering companies ■ Conducting the repair and project training programmes of international experience exchange ■ Staff development and training of scientific personnel ■ Development of standard sheets of the scope of work for the repair of equipment and hydraulic structures ■ Creation and maintenance of a database of advanced and innovative technologies ■ Minimisation of risks of ineffective management of non-core activities through its consolidation in specialised controlled service companies

Priority of risk ¹	Risk ²	Influence on KPI LDP of RusHydro Group	Parties concerned	Key risk management activities
9	Terrorism (significant risk)	<p>Direct:</p> <p>Prevention of the number of accidents from exceeding the maximum value</p> <p>Implementation of capacity schedules and a plan for financing and development, %</p> <p>Return on Equity (ROE), %</p> <p>Income before interest, taxes and depreciation (EBITDA), RUB mn</p> <p>Indirect:</p> <p>Reducing operating costs</p> <p>Total shareholder return (TSR), %</p>	<p>Shareholders and investors</p> <p>Employees</p> <p>Suppliers and contractors</p> <p>Federal authorities</p> <p>Regional authorities and local authorities</p>	<ul style="list-style-type: none"> ■ Provision of armed protection of facilities by forces of the private guards of Rosgvardia, FSUE "Okhrana" of Rosgvardia and FSUE "Departmental Security" of the Ministry of Energy of Russia. ■ Developing and maintaining up-to-date plans for interaction with law enforcement agencies to protect the Company's facilities when committed or threatened to commit a terrorist act. ■ Provision of on-site and in-site facilities on the territory of the Company's facilities. ■ Carrying out measures along with law enforcement agencies identify, prevent and suppress acts of unlawful interference in the activities of the Company's facilities. ■ Carry out an assessment of the most likely threats and develop plans for mitigation, together with the territorial bodies of EMERCOM of Russia in the constituent entities of the Russian Federation at the location of the Company's facilities. ■ Equipping facilities with engineering and technical means of protection. ■ Organisation and control of the access to information on the composition and status of engineering and technical means of protection. ■ Property insurance of the Company for the risk of "Terrorism and Sabotage". ■ Increase in the share of equipment certified by FSTEC of Russia, and increase locally produced equipment. ■ Conducting an audit of information and technical security. ■ Control of access to the firmware of control systems and information systems. ■ Protection of remote access to corporate information systems of the Company and implementation of work to ensure information security of virtual means, mobile and cloud services.
10	Disadvantages and errors of the management system (significant risk)	<p>Direct:</p> <p>Implementation of capacity schedules and a plan for financing and development, %</p> <p>Proportion of purchases from small and medium-sized enterprises</p> <p>Indirect:</p> <p>Return on Equity (ROE), %</p> <p>Income before interest, taxes and depreciation (EBITDA), RUB mn</p> <p>Total shareholder return (TSR), %</p>	<p>Shareholders and investors</p> <p>Employees</p> <p>Suppliers and contractors</p>	<ul style="list-style-type: none"> ■ Control over the implementation of federal authorities directives. ■ Monitoring, analysis, and control of document management procedures. ■ Civil liability insurance of members of management bodies and officials of the Company before third parties and the Company. ■ Using an automated procurement management system based on SAP. ■ Coordination and control of work on the regulation of the activities of structural units and officials. ■ Implementation of the Company's IT strategy. ■ Maintenance of information systems of the Company. ■ Improvement of the system of regulation of activities and management of business processes. <p>PJSC RusHydro implements corporate management standards in newly acquired or newly created controlled companies, as well as the introduction of management systems for organisational projects, grading of employees (grading - building a system of job levels, taking into account the assessment of the positions, strategy and corporate culture of the company), attestation of management personnel and fulfilment of individual employee development plans.</p>
14	Growth of receivables for the supply of electricity, power and heat (significant risk)	<p>Direct:</p> <p>Return on Equity (ROE), %</p> <p>Income before interest, taxes and depreciation (EBITDA), RUB mn</p> <p>Indirect:</p> <p>Total shareholder return (TSR), %</p>	<p>Shareholders and investors</p> <p>Federal authorities</p> <p>Suppliers and contractors</p>	<ul style="list-style-type: none"> ■ Claims, execution of settlements outside the authorised credit institution at the WECM in accordance with the Agreement on accession to the wholesale market trading system.

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² These risks were not realised in 2017.

Strategic Review

Priority of risk ¹	Risk ²	Influence on KPI LDP of RusHydro Group	Parties concerned	Key risk management activities
Ecological aspect				
4	Adverse changes / violations of legislation (Legal risks) (critical risk)	<p>Direct:</p> <p>Return on Equity (ROE), %</p> <p>Income before interest, taxes and depreciation (EBITDA), RUB mn</p> <p>Reducing operating costs</p> <p>Indirect:</p> <p>Total shareholder return (TSR), %</p>	<p>Shareholders and investors</p> <p>Consumers</p> <p>Employees</p> <p>Unions</p> <p>Federal authorities</p> <p>Regional authorities and local authorities</p> <p>Local communities</p> <p>Ecological organisations</p> <p>Mass media</p> <p>Suppliers and contractors</p>	<ul style="list-style-type: none"> ■ Constant monitoring of initiated and reviewed changes in legislation, which in the future may have an impact on activities. ■ Monitoring and revision of existing standards and regulations in the field of technical regulation. ■ Participation of representatives of PJSC RusHydro in measures to change legislation conducted by legislative, executive and judicial bodies, public associations, professional legal associations and associations. ■ Regular conduct of environmental audits and implementation of the recommendations received. ■ Participation in the activities of working groups of the Ministry of Energy of Russia on technical regulation conducting claims and lawsuits.
5	Technogenic accidents and accidents at production facilities (critical risk)	<p>Direct:</p> <p>Prevention of the number of accidents from exceeding the maximum value</p> <p>Indirect:</p> <p>Return on Equity (ROE), %</p> <p>Income before interest, taxes and depreciation (EBITDA), RUB mn</p> <p>Reducing operating costs</p> <p>Total shareholder return (TSR), %</p>	<p>Shareholders and investors</p> <p>Consumers</p> <p>Employees</p> <p>Unions</p> <p>Federal authorities</p> <p>Regional authorities and local authorities</p> <p>Local communities</p> <p>Ecological organisations</p> <p>Professional communities and universities</p> <p>Mass media</p> <p>Suppliers and contractors</p> <p>Non-profit organisations</p>	<ul style="list-style-type: none"> ■ Carrying out in full the repair work and the Technical rehabilitation and modernisation Programme. ■ Development of a quality control system for the supplied equipment, including the process of its production and shipment / delivery, construction, installation and commissioning, as well as increasing the level of contractual responsibility of suppliers / contractors in the manufacturing and supply of equipment and materials. ■ Complaints and lawsuits against unfair contractors / suppliers. ■ Implementation of recommendations identified during the check-ups of the facilities of PJSC RusHydro. ■ Tightening the control of contractors / subcontractors at production sites in terms of reducing injuries, fires, unethical behaviour, and theft. ■ Development of normative and technical documents aimed at improving the quality of design and construction management processes. ■ Introduction of modern methods for servicing equipment without stopping, modern technologies for managing production assets, including the necessary information technologies. ■ Implementation of technical inspection of technical devices of hazardous production facilities, examination of industrial safety of technical devices of hazardous production facilities, buildings and structures at which dangerous production facilities are operated. ■ Development of a life cycle management system for existing hydroelectric power plants. ■ Control by officials of the implementation of regulations, instructions, etc. when performing work on operations, maintenance, etc. ■ In order to minimise errors at the design stage of the facilities, an analysis of the design documentation by the customer's specialists is set up, and the staff of the general designer is trained.

Priority of risk ¹	Risk ²	Influence on KPI LDP of RusHydro Group	Parties concerned	Key risk management activities
12	Damage caused by natural disasters and man-made accidents not at the Company's facilities (significant risk)	Direct: Prevention of the number of accidents from exceeding the maximum value Implementation of capacity schedules and a plan for financing and development, % Return on Equity (ROE), % Income before interest, taxes and depreciation (EBITDA), RUB mn Indirect: Reducing operating costs Total shareholder return (TSR), %	Shareholders and investors Consumers Employees Federal authorities Regional authorities and local authorities Ecological organisations Non-profit Organisations	<ul style="list-style-type: none"> ■ Modernisation in accordance with latest requirements of the centralised system emergency control systems ■ Implementation of measures for civil defence and the prevention of emergency situations ■ Research and development of methods for remote monitoring of the state of facilities and operating modes of HPPs ■ Compliance with the legislation of the Russian Federation in the field of industrial safety and the use of a system of production control operating on its basis ■ Property insurance of the Company
The social dimension				
11	Reputational risks (significant risk)	Direct: Total shareholder return (TSR), % Indirect: Return on Equity (ROE), % Income before interest, taxes and depreciation (EBITDA), RUB mn	Shareholders and investors Consumers Employees Unions Federal authorities Regional authorities and local authorities Local communities Ecological organisations Professional communities and universities Mass media	<ul style="list-style-type: none"> ■ Compliance with the regulations on the implementation of information activities, the regulations on participation in public events, the Regulation on Disclosure of Information ■ Interaction with stakeholders in the main areas of the Company's activities, incl. through joint public events ■ Preparation of press releases on a regular basis with the official position of the Company on activities ■ Holding press tours and special events for the media
13	Corruption risk (significant risk)	Indirect: Return on Equity (ROE), % Income before interest, taxes and depreciation (EBITDA), RUB mn Total shareholder return (TSR), %	Shareholders and investors Consumers Employees Unions Mass media Suppliers and contractors Non-profit Organisations	<ul style="list-style-type: none"> ■ Implementation of procedures aimed at preventing conflicts of interest of employees ■ monitoring of information on incomes, expenditures, property and liabilities of property issues of officials holding positions that are subject to corruption risks ■ examination of procurement documentation ■ checking counterparties for any conflicts of interest ■ Trust line management, checking incoming complaints about the facts of illegal activities ■ conducting official investigations related to the facts of illegal activities of employees. Development and adoption of measures to eliminate identified violations / deficiencies

¹ Risk number in the registry / on the strategic risk radar.

² These risks were not realised in 2017.