

Annual report 2013









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**JSC RUSHYDRO ANNUAL REPORT** 

2013

Effectively utilize hydro resources, to create conditions required for the reliable performance of Russia's Unified Energy System (UES) and to enhance renewable energy source (RES) usage to benefit the Company's shareholders and society as a whole

## **Responsibility Statement**

We confirm that to the best of our knowledge:

(a) The financial statements, prepared in accordance with IFRS, give a true and fair view of the assets, liabilities, financial position and profit or loss of JSC RusHydro, and the undertakings included in the consolidation, taken as a whole; and

(b) The management report includes a fair review of the development and performance of JSC RusHydro's business and the Company's position, and the undertakings included in the consolidation, taken as a whole, together with a description of the principal risks and uncertainties that the Company faces.

RusHydro Annual report 2013

E.V.	Dod
L	Doa

D.V. Finkel

Location: 51 Respubliki Street, Krasnoyarsk, the Krasnoyarsk Region, Russia, 660075 INN 2460066195 OGRN 1042401810494 Registration date: December 26th, 2004 The Zheleznodorozhsky Inspectorate of the Ministry of Taxation of the Russian Federation, Krasnoyarsk, the Krasnoyarsk Region

## RusHydro

Chairman of the Management Board

**Chief Accountant** 

# Table of Contents

A Message to the Shareholders	

Key Company Performance Indicators	10
Financial Performance	10
Production Performance	11

8

About RusHydro Group	13
Company History	13
RusHydro Today	14
Holding Structure	16
Geographical Footprint of the Company	20
International Activity	22
JSC RusHydro's Chairmanship of GSEP	23

Key 2013 Events	24
Events After The Reporting Date	25

Strategy and Investment			
Strategy	27		
2013 Strategy Implementation	30		
2014 Development Priorities	36		
Strategy of the Holding JSC "RAO Energy System of East"	38		
Investment	40		
Principles of the Investment Policy	40		
2013 Investment Program	41		
2014 Investment Program	43		

Risks		45
Ris	Risk Management Policy	
	Documents Regulating the Risk Management System	46
	Independent Third Party Risk Assessment	46
	Improving the Risk Management System in 2013	47
	Main Process Stages and Risk Management Methods	47
Ris	Risk Register	
	Country Risks	48
	Financial Risks	48
	Industry Risks	49
	Risks Associated with Corporate Activities	49
	Information about Possible Circumstances that Objectively Hamper the Company's Activity	54
JS	C RusHydro Insurance Protection	55

ndustry and Business Overview			
About Hydro-power Generation	57		
The Future of Hydro-power Generation	58		
Russian Hydro-power Generation	58		
The Electricity and Capacity Market	59		
Description of the Company's Business	62		
JSC RusHydro business model	62		
Peers	63		
Production Performance	66		
Tariff Regulation	68		
Energy Efficiency	69		
Implementation of the 2013 Energy Efficiency Improvement Program	70		

Inr	novative Development	73
	Establishing Innovative Development Infrastructure	74
	Creating External Conditions for Innovative Activities	74
	International Cooperation in the Field of Innovation	75
	The Volume and Sources of Financing Innovation Program	76
	Selecting Innovative Projects	76
	Key Innovative Projects of JSC RusHydro	76
	2013 Innovative Activities of the Holding JSC "RAO Energy System of East"	77
	2014 Innovative Development Plans	77

Financial Performance	79
Assets, Equity and Liabilities	79
Accounts Receivable and Accounts Payable	80
Liquidity and Debt Indices	81
Financial Highlights	82
Distribution of the Company's Net Profit	85
Credit Rating	85

	e Governance
Corpo Gover	rnance Principles
Share	eholder
and Ir	nvestor Relations
Mana	gement and Control Bodies
G	eneral Meeting of Shareholders
Т	he Board of Directors
С	committees of the Board of Directors
Т	he Management Board
th	nformation on Transactions with ne Company's Shares Performed by 1embers of the Management Bodies
	iability Insurance for Management Bodies nd Executive Officers
	Company's Internal External Audit System
Т	he Audit Commission
	he Internal Control nd Risk Management
Т	he External Independent Auditor
_	fforts to Prevent the Use f Insider Information
Т	he Anti-Corruption Policy
	uneration due anagement and Control Bodies
Mana	aging Subsidiary

## RusHydro Annual report 2013

Th	e Company On The Securities Market	117
	Authorized Share Capital	117
	Circulation of Securities on the Russian Market	
	The Company Securities on the International Securities Markets	121
	Dividend Policy	
	Report on the payment of declared (accrued) dividends on the Company's shares in 2012	123
	Bonds	124

Social Responsibility	127
HR Policy	127
Developing Human Resource Potent	ial 129
Social Policy	131
Charity and Sponsorship	134
Safety and Environmental Protection	136
Social Responsibility and Corporate Sustainability Repo	ort 138

Contacts and Administrative Details	139
Branches	140

Glossary of Key Terms and Abbreviations 142

See the JSC RusHydro Annual Report 2013 Appendices Book — an integral part of this Annual Report

# **A Message to the Shareholders**



**M.I. Poluboyarinov** Chairman of the Board of Directors

**E.V. Dod** Chairman of the Management Board

## Dear shareholders,

We have every reason to consider 2013 as an important and successful stage in JSC RusHydro's development. In the past year, despite natural disasters in the Far Eastern regions, which required considerable financial, organizational and technical resources, we raised the total installed electrical capacity of our plants to 37.5 GW and strengthened our position among global hydro-power industry leaders. The Group's employees can be proud of the 2013 achieved production figures. Total electricity production during the period was 124 billion kWh, which was 10.4% more than in 2012. This is an absolute record in corporate history. The Group's financial performance is undoubtedly positive. Adjusted net income increased 63% compared with the previous year and stood at RUR 52.7 billion.

The key factors contributing to this strong performance included: increasing electricity generation by hydro-power plants, implementing programs to minimize operating costs, and reducing the cost of fuel and purchased electricity and capacity.

The unprecedented flooding in the Far East stands apart among 2013 events. It not only tested the strength of the Region's residents and authorities, but also hydropower engineers. The Zeyskaya HPP, the Bureyskaya HPP and the Kolymskaya HPP worked very effectively. They contained an essential part of the flood flow, which significantly reduced the scale of the disaster. In doing so, the power plants' hydro-power structures and equipment demonstrated reliability and trouble-free operation during extreme conditions.

Despite unexpected and unplanned tasks, the Company has never left existing projects unattended. So, Sayano-Shushenskava HPP reconstruction in strict accordance with the schedule and increasing it to the designed capacity, but with a new and higher level of efficiency, reliability and security has always been a corporate priority over the last few years. In 2013, the Company started the third and final stage of restoring the power plant, during which another three new hydro-power units were commissioned. This immediately influenced power plant performance and contributed to the overall success of JSC RusHydro. During 2012, electricity generation was 18 billion kWh; in 2013 this figure was surpassed already by November and by the end of the year amounted to 25 billion kWh. In 2014, the remaining three hydro-power units will be replaced with new ones and the HPP will finally pick up its usual, the country's record-breaking capacity of 6.400 MW.

The importance of commissioning the 168 MW first start-up complex of the Ust-Srednekanskaya HPP cannot be

overestimated for the energy-isolated Magadan Region. Up to now, the region's power supply was provided by only one power plant, the Kolymskaya HPP. When the first two hydro-power units of the Ust-Srednekanskaya HPP were commissioned, the Magadan Region had a highly flexible backup power generation source, which will have the most positive impact on power supply reliability to both residents and industrial enterprises. The power plant will provide electricity to the developing mining industry, primarily - the gold industry. Hydropower generation development also stimulates the creation of new business enterprises that are unique to the region. An example is a liquefied hydrogen plant; an agreement on constructing one was signed in June between JSC RusHydro and the Japanese company, Kawasaki. In addition, the hydro-power plant will facilitate shipping, regulating the flow of the Kolyma River. It will be possible to refuse to construct thermal power plants, which will reduce the consumption of imported fuel and decrease electricity tariff growth by reducing the prime cost.

By mid-December, the country's most modern hydro power plant, the Boguchanskaya HPP, had generated the first 5 billion kWh of electricity. This was preceded by the installation of all nine hydro-power units and the commissioning of five of them.

RusHydro Annual report 2013

In 2013, the Company began construction of the Upper Naryn Cascade of HPPs in Kyrgyzstan. This is a very interesting project technically. There will be four dammed and diversion power plants, erected at a height of more than 2,000 m. The project is being implemented rapidly: many infrastructure facilities, including the construction camp, have already been built, and a feasibility study has been approved. Work commencement on major structures will be a task for 2014.

Nine revamped hydro-power units with a total capacity of 737 MW were commissioned as part of the Comprehensive Modernization Program for JSC RusHydro's Generating Facilities. In total, in 2013, the Company invested more than RUR 32 billion in the modernization of hydro-power plants. The rate of renewal for obsolete equipment is unprecedented in our country. Turbines were replaced and reconstructed at the Rybinskaya HPP, the Cheboksarskaya HPP, the Kamskaya HPP, the Zhigulevskaya HPP, the Saratovskaya HPP, the Volzhskaya HPP, the Novosibirskaya HPP and the Mainskaya HPP. The Company performed extensive work on replacing hydro-mechanical equipment and power distribution scheme equipment at many power plants. In 2014, as part of the modernization of existing HPPs, the Company has had to do many things, including: mounting the first new vertical turbines at the Saratovskava HPP, making a contract for hydro-power units for the Votkinskaya HPP, starting priority work on revamping the HPPs of the North Ossetia branch and deploying reconstruction of the Kuban

Four priority projects in the Far East, which the Company has implemented pursuant to the Decree of Russian President Vladimir Putin, are being realized in strict accordance with the schedule. The Company has obtained a favorable opinion from the State Expertise of Russia on the technical and budget estimates of the design documentation, as well as favorable process and price audit conclusions for the 1st stage of the Yakutskaya SDPP-2 and the 2nd stage of the Blagoveschenskaya CHP. Independent audit results have been further reviewed by experts from the Scientific and Technical Council of the UES and the Scientific Council of the RAS on problems related to the reliability and safety of large-scale power

Cascade of HPPs.

systems. Project documentation for the Sakhalinskaya SDPP-2 and the CHP in the Sovetskaya Gavan has been sent for State Expertise. General contractors and suppliers of basic equipment for the Yakutskaya SDPP-2 and the 2nd stage of the Blagoveschenskaya CHP have been selected; equipment for the CHP has been purchased in the Sovetskaya Gavan. EPC contracts for the Sakhalinskaya SDPP-2 and the Sovgavanskaya CHP and for the supply of the main equipment for the new plant in Sakhalin will be concluded in Q2 and Q3 2014. Plots of land for the construction of the CHP in the Sovetskaya Gavan have been leased, with plots of land for the Yakutskaya SDPP-2 and the Sakhalinskaya SDPP-2 being in the leasing process. Construction of the 2nd stage of the Blagoveschenskaya CHP is already being performed at the site of the operating plant. The rate of progress gives reason for confidence that the facilities will be commissioned on time.

Today, in the year which marks the Company's tenth anniversary, we can state that the Company has been successfully resolving its tasks and has been moving forward confidently. JSC RusHydro is not only one of the largest, but also one of the most dynamically developing Russian industrial groups. The Russian business community's high opinion of the Company is confirmed by the Company's win in the category "Investment activity" of Expert-400's Largest Companies Rating and the rating of employers with high levels of attractiveness. The Company's risk management is recognized as the best in Russia and the CIS.

International recognition of the Company is not unimportant either. For the period from June 2013 to June 2014, JSC RusHydro is the chair of the Global Sustainable Electricity Partnership (GSEP), an international energy organization that comprises the world's largest electric power companies. As declared by the Company, the main focus of the partnership for this year is the theme "Innovations – A Fast Track to a Sustainable World". In our opinion, this theme reflects the main challenge of the time; the development problem cannot be solved without innovation.

During the current year, JSC RusHydro continues to focus on strategic development objectives set for the

Company by its shareholders. First of all, we have to finish the full restoration and modernization of equipment of the Sayano-Shushenskaya HPP. Commissioning all the hydro-power units of Russia's largest power plant will allow for a new level of security and resolve the problem of sustainable energy supply for Siberian Region consumers. As part of the investment program, the Company plans to put into operation 333 MW of the Boguchanskaya HPP in the Krasnoyarsk Region, 140 MW of the Zelenchukskaya HPP-PSPP in Karachay-Cherkessia and 100 MW of the Gotsatlinskaya HPP in Dagestan. Needless to say, the intensive construction of four thermal generation plants in the Far East is the most significant aspect of our work this year. The Company has a very difficult and responsible task to face - it has to build and put into operation 543 MW of electric power and 863 Gcal/h of thermal power within a very limited period of time (prior to the end of 2016). Commissioning these facilities will increase generating capacities in the Far East. These generating capacities will become a strong base for further economic development of the region.

Ensuring the reliable operation of existing facilities also remains a priority task. To this end, in 2014, the Company will continue to implement comprehensive modernization of hydro-power turbines and hydro-power generators at the Volzhskaya HPP, reconstruction of a 500 kV outdoor switchgear at the Votkinskaya HPP, comprehensive reconstruction of 20 hydro-power units at the Zhigulevskaya HPP and replacement of three hydropower units at the Rybinskaya HPP, modernization of 22 hydro-power turbines at the Saratovskaya HPP, replacement of hydro-power turbines at the Novosibirskaya HPP, and comprehensive modernization of the Cascade of Kuban HPPs.

Carrying out these intense activities, the Company's management follows the interests of shareholders and relies on the active support of JSC RusHydro's Board of Directors. The combination of these factors suggests the Company's confident forward movement, in the course of which JSC RusHydro will confirm its status as a leader in both the Russian and global power industry.

# **Key Company Performance Indicators**

## **Financial Performance**



## **Production Performance**



Information about the Company is presented taking into account JSC RusHydro's branches, as well as JSC Kolymaenergo, JSC Geoterm, JSC Pauzhetskaya GeoPP, CJSC MEK, JSC Boguchanskaya HPP, the Holding JSC "RAO Energy System of East" and JSC Ust-Srednekanskaya HPP.

RusHydro Annual report 2013

Return on Equity (ROE),%



Installed Capacity, MW



## The Volga



# **1. About RusHydro Group**

1.1. Company History

- 1.2. RusHvdro Todav
- 1.3. Holding Structure

1.4. Geographical Footprint of the Company

1.5. International Activity



## 1.2. RusHydro Today

RusHydro Group is one of the largest energy groups in Russia and is the Russian leader in terms of energy production using renewable energy sources (RES). The Company develops generation based on water flows, sea tides, wind and geothermal energy.



37.5 GW Total installed capacity of power plants



## 17,912.7 thousand Gcal/h Total thermal capacity

### More than 70 renewable energy objects

The Company unites more than 70 renewable energy source facilities, among which are the largest Russian power plant, the Sayano-Shushenskaya HPP, the newest and most modern HPP in Russia, the Boguchanskaya HPP, nine HPPs of the Volzhsko-Kamskiy Cascade, the Zeyskaya HPP, the Bureyskaya HPP, the Novosibirskaya HPP, HPPs in the North Caucasus region, geo-thermal plants in Kamchatka, the Zagorskaya PSPP in the Moscow Region, and the Cascade of the Sevano-Razdansky HPPs in the Republic of Armenia, as well as the largest supplier of electrical and thermal energy on the territory of the Russian Far East, the Holding JSC "RAO Energy System of East" (more than 300 generating facilities).

The RusHydro Group also unites R&D, design and engineering facilities, as well as retail energy companies. Power sales assets are consolidated within the subsidiary, JSC ESK RusHydro, repair and maintenance functions are consolidated in the united repair and service company, JSC Hydroremont-VKK, created on the basis of five companies in 2013, with the aim of fulfillment the Program for the complex modernization of JSC RusHydro's production assets and their subsequent servicing.

## Development and usage of renewable energy sources

The Company performs exploration and evaluation of potential wind sites, geothermal fields and the power sites of small HPPs, both with the usage of pilot projects and the organization of comprehensive work, for example, work

upon the study of hydro energy potential for the river-basins in the North Caucasus. Siberian, North-West and Volga Federal Districts. This allows the selection of the most advanced technologies for design and construction.

## Large scale investment projects

The Company realizes large-scale investment projects in various Russian regions: restoration of the Sayano-Shushenskaya HPP (the Khakassia Republic), the completion of construction and putting into operation the Boguchanskaya HPP (the Krasnoyarsk Region), the Bureyskaya HPP (the Amur Region), the Zagorskaya PSPP-2 (Sergievo-Posadskiy District, Moscow Region), the launch of the Zelenchukskaya HPP-PSPP (the Karachay-Cherkess Republic), the Zaragizhskaya MHEP (the Kabardino-Balkar Republic), the Gotsatlinskaya HPP (the Dagestan Republic), and the realization of four projects for thermal generation development in the Far East (the first stage of the Sakhalinskaya TPP-2 (the Sakhalin Region), the CHP in Sovetskaya Gavan (the Khabarovsk Region), the second stage of the Blagoveschenskaya CHP (the Amur Region) and the first stage of the Yakutskaya TPP-2 (Yakutia).

In 2012, according to a Decree of the President of the Russian Federation, JSC RusHydro was included in the list of strategic enterprises and strategic joint stock companies. Currently, JSC RusHydro plays a key role in the Russian energy sector and ensures national energy independence.



## **Capital construction**

- 1. The Nizhne-Bureiskaya HPP (the Amur Region) -a foundation was unwatered, the construction of basic facilities was launched, and a contract for delivering hydro-power units was concluded;
- 2. The Verkhne-Naryn Cascade of HPPs (Kyrgyzstan) - the preparatory stage of work was started, a working village for hydro-constructors was constructed, and a feasibility study of the project was approved;
- 3. The Gotsatlinskaya HPP (the Republic of Dagestan) - installation of hydropower units began, construction of a dam is underway;
- 4. The Zelenchukskaya HPP-PSPP (the Karachay-Cherkessia Republic) construction of a water passage for the tail pond was started, construction of the lower reservoir and the derivation is underway;
- 5. Small HPPs in Kabardino-Balkaria and Karachay-Cherkessia – the readiness of the Zaragizhskaya HPP exceeded 50%, the project on the Big Zelenchuk Small HPP was approved.

## Commissioning new hydrogenerating capacities

- 1. Completing the construction of the Boguchanskaya HPP (the Krasnoyarsk Region) -construction work on eight hydro-power units out of nine with a total design capacity of 2,664 MW were fully completed;
- 2. Restoring the Sayano-Shushenskaya HPP (the Republic of Khakassia) three hydro-power units were commissioned, as a result, operating capacity rose to 4,480 MW;
- 3. Constructing the Ust-Srednekanskaya HPP (the Magadan Region) - two hydropower units with a total capacity of 168 MW were put into operation.





## Start of the construction programs for new thermal generating facilities in the Far East

- 1. The Yakutskaya SDPP-2 (Phase 1), Yakutsk (the Republic of Sakha (Yakutia):
- 2. The Blagoveschenskaya CHP plant (Phase 2), Blagoveshchensk (the Amur Region);
- 3. The CHP plant in Sovetskaya Gavan (the Khabarovsk Region);
- 4. The Sakhalinskaya SDPP-2 (Phase 1), Ilvinskii village (the Sakhalin Region).

## 1.3. Holding Company's Structure

Holding JSC "RusHydro" on 31.12.2013



JSC Zharki (25 % + 1 share)

> **JSC UEMC** [20.6 %]

JSC MC HydroOGK (100 %)

LLC IT Energy Service [19.99 %]

LLC VolgaHydro (50 % + 1 Rouble)

> **JSC SSTK** (100 %)

JSC SC SSHPP [100 %]

JSC GVC Energetiki (42.53 %)

**JSC Hydroinvest** (100 %. In trust management)

RUSHYDRO INTERNATIONAL B. V. [100 %]

CJSC Malaya Dmitrovka (100 %)

RUSSUNHydro limited (50 %)

**JSC IEGC** (42.75 %)

JSC RAO Energy Systems of the East  $[84.39\ \%]$ 

LLS HydroService [100 %] Information on JSC RusHydro's second tier subsidiary and dependent companies

CJ SC HydroEngineering JSC Hydroinvest (100 %) JSC Nizhne-Bureyskaya HPP (100 %) JSC Yuzhno-Yakutsky HEC Siberia (100 %) (100 %) HYDROOGK POWER JSC Krasnoyarsk Region LLC Transbaikalia Development **JSC South Yakutia Development** JSC Krasnoyarskaya HPP COMPANY LIMITED **Development Corporation** Corporation Corporation (24.9996 %) (100 %) (25 % + 1 share) (25 %) (50%)LLC Energy Index Hydro OGK JSC MOSOBLHYDROPROJECT JSC ESK RusHydro (99.9 %) (100 % - 1 share ) (62.54 %) HYDROOGK ALUMINIUM **COMPANY LIMITED** (100 %) **JSC Hydroproject Institute** JSC Krasnoyarskenergosbyt Alstom RusHydro Holding B. V. JSC Kolymaenergo (100 % - 1 share) (51.75 %) (50 % + 1 share) (98.76 %) **CJSC Construction Contractor** of the Boguchanskaya HPP (51 %) JSC Ust-Srednekanskaya JSC Ust-Srednekanskaya HPP **JSC RESK** LLC AlstomRusHydroEnergy GESstroy (4.3 %) (90.52 %) (100 %) (100 %) CJSC Construction Contractor of the Boguchanskaya HPP [49 %] JSC Chuvashskaya Power JSC ChirkeyGESstroy JSC RBEF JSC Ust-Srednekanskaya HPP Supply Company (100 %) (25 % + 1 share) (51 %) (45.66 %) **CJSC Construction Contractor** of the Boguchansk Aluminum Smelter LLC Power Supply Company of Bashkortostan JSC Krasnoyarskenergosbyt (49 %) (14.05 %) (100 %) **CJSC Construction Contractor** of the Boguchansk Aluminum CJSC Technopark Rumyantsevo Smelter (100 % -1 share) (51%) CJSC Holding Company BoAS LLC SNPG **JSC Geoterm JSC Vedeneyev VNIIG** LLC IT SPVE RusHydro (100 %) (99.65 %) (100 %) (100 %) 99.99 % CJSC Holding Company JSC Pauzhetskaya GeoPP **JSC NIIES** LLP VNIIG 99 % BoHPP (100 %) (100 %) (100 %) (100 %) JSC Verkhne-Mutnovskaya JSC Leningradskya PSHPP LLC Montazhenergo GeoPP (100 %) (99 %) (51.96 %) 99.99 % LLC Verhnebalkarskaya SHPP **RUSHYDRO INTERNATIONAL B. V.** JSC Hydroremont VCC (100 %) (100 %) (100 %) Construction Construction Generation **Repair and Construction** Others **RUSHYDRO INTERNATIONAL A. G.** JSC SHPP of KBR Institute (100 %) (95.28 %) Supply Generation Others

Information about the companies in which JSC RusHydro has a holding within the framework of the BEMO Project





## **1.5. International Activity**

JSC RusHydro continues to pay great attention to developing international cooperation, the aim of which is broadening the geographic scope of the Company's presence, and attracting foreign investment and technologies to new prospective projects within the sphere of hydro-power and renewable energy sources, as well as fostering bilateral cooperation with foreign electric power, design and engineering companies.

## Broadening the geography of the Company's presence

JSC RusHydro owns CJSC International Energy Corporation (CJSC IEC), which possesses seven hydro power plants of the Sevan-Hrazdan Cascade with installed capacity of 561 MW, located on the Razdan River. In 2013, electricity generation amounted to 467.896 million kWh.

Currently, the state of the Cascade requires a number rehabilitation measures that will significantly prolong its service life and reduce the risk of accidents. The Company pursues a policy of restoration and technical upgrading of the Cascade power plants and plans to renovate the diversion channels of the system. The Cascade modernization and reconstruction program is scheduled to be realized until 2017.

In 2013, the Company began the practical realization of the Russian-Kyrgyz Inter-governmental Agreement on the construction and operation of the Upper Naryn Cascade of HPPs (which was signed in 2012). A technical and economic assessment of the project was prepared, and in June 2013 an official ceremony took place, dedicated to the beginning of construction at the site of the first stages of the Cascade of HPPs.

The Cascade will consist of four consecutive steps: the Akbulunskaya HPP, the Narynskaya HPP-1, the Narynskaya HPP-2 and the Narynskaya HPP-3. Optimizing the engineering and technological solutions will increase the installed capacity of the Cascade by 25% and bring it to 237.7 MW, with an average annual electrical energy output of approximately 1 bln kWh.

## Attracting foreign investment and technologies

Within the framework of the realization of joint projects with the French company Alstom and the Austrian company Voith Hydro, aimed at localizing modern hydro-power equipment production on the territory of the Russian Federation, which is planned to be used during modernization of the Company's active HPPs, the formation of the required contractual and legal base is ongoing, as well as the development of technical documentation, the designation of construction sites and the fulfillment of relevant preliminary work.

In particular, in August 2013, the Company and Voith Hydro, an Austrian company, registered a joint venture, VolgaHydro LLC, the activity of which is aimed at producing equipment for hydro-electric power plants. The project will ensure the transfer of modern technologies in the sphere of producing and assembling power engineering equipment to Russia, as well as the introduction of programs for the training and re-training of production personnel. The economic efficiency of the joint venture will be achieved not only by production of equipment for JSC RusHydro. The joint venture also plans to work with other companies in Russia and abroad, including on service contracts. The launch of the plant is scheduled for April 2015, while full-scale operation is scheduled for 2020.

The Company continues to implement the JSC RusHydro and Alstom project for the construction of the plant producing equipment for small HPPs with a capacity up to 25 MW, medium capacity HPPs (to 100 MW), for pumped storage power plants up to 150 MW, as well as auxiliary equipment. This will be a high-tech enterprise, equipped with the most modern equipment that has no analogues in Russia. Our partners are already preparing for the delivery of the first sets of equipment for installation.

Simultaneously, joint efforts are being made to search for new projects in Russia and the CIS to increase the load of the plant. In 2013, the main part of the design work for the plant was performed. Preparatory work is underway at the site.

## Participating in inter-governmental cooperation

JSC RusHydro regularly participates in inter-governmental commissions for trade and the economy, as well as in scientific and technical cooperation between the Russian Federation and foreign countries, as well as energy working groups within this framework. In 2013, Company representatives participated in 16 respective events. JSC RusHydro also participates in international forums organized within the framework of the Russian Union of Industrialists and Entrepreneurs and the Chamber of Commerce and the Industry of Russia.

## Cooperating with foreign companies

In 2013, JSC RusHydro concluded a number of business-to-business memorandums and agreements on cooperation with foreign companies:

- The Company concluded agreement on cooperation in the sphere of the joint realization of projects for the construction of HPPs in the confluents of the Amur River and on conducting research and development work with the China Three Gorges Corporation;
- The Company signed a Memorandum of understanding providing for the possibility of cooperation in the modernization of current power plants and the construction of new power plants, as well as other energy objects and constructions on the territory of the Russian Federation with the Korean company Samsung Engineering;
- An agreement on cooperation in realizing the project of industrial production of liquefied nitrogen without CO2 emission on the territory of the Russian Far East was signed between the Japanese company Kawasaki Heavy Industries and the Holding JSC "RAO Energy System of East":
- The Company signed a letter of intent on cooperation on hydro-power with the State energy corporation of the Bolivarian Republic of Venezuela CORPOELEC;

RusHydro Annual report 2013

• The Company signed an addendum to the Memorandum of understanding (signed May 24, 2011) confirming the intention of the parties to continue the development of bilateral cooperation and specifying the directions of respective cooperation with the Argentinean ENARSA company.

A protocol of intent upon interaction within the realization of the project on the expansion of the Vladivostokskaya CHP-2, as well as other projects for the construction of generation objects in the South of the Primorsk Region of the Russian Federation, was signed between the Holding JSC "RAO Energy System of East", LLC GE Rus (a subsidiary of General Electric) and LLC Russian Gas Turbines.

Agreement on the provision of technical services providing for the provision by RusHydro International AG of services on the technical administration of the Kainji HPP (760 MW) and the Jebba (578 MW) on the Niger River and the organization of their modernization was signed between RusHydro International AG and Nigerian Mainstream Energy Solutions. The Company will provide administration of production activity of the power plants, aimed at maximizing capacity usage.

## Interacting with non-commercial partnerships and international organizations

JSC RusHydro's representatives continue to participate in the committees and

working groups of numerous nonprofit partnerships and international organizations, in which the Company participates:

- The Global Sustainable Electricity Partnership, GSEP;
- The World Economic Forum, WEF;
- Association. IHA:
  - Dams, ICOLD;
  - The International Association for Hydro-Environment Engineering and Research, IAHR.

JSC RusHydro cooperates without being a member in some professional international organizations. Among these organizations, in particular, are:

- The Technology Association of Canada (the Centre for Energy Advancement through Technological Innovation, CEATI);
- The European Small Hydro Association, ESHA: • The International Council on Large
- Electric Systems (Conseil International des Grands Réseaux Électriques -CIGRF) The International Network of Basin
- Organizations (Réseau International des Organismes de Bassin, RIOB);
  - Eurelectric.

Also, JSC RusHydro fosters cooperation within the work of international governmental organizations and integration associations. Among these are:

## JSC RusHydro's Chairmanship of GSEP

In June 2013, the Company officially chaired the Global Sustainable Electricity Partnership (GSEP) (http://www. globalelectricity.org/en/) for the period from June 2013 to May 2014. Russia's year of chairing GSEP is a milestone event for the Company and the Russian electrical energy industry, on the whole. The topic of the year was "Innovations a fast track to a sustainable world", as the solution of sustainable development problems is impossible without innovation breakthroughs.

GSEP is an international organization founded in 1991 that unites the largest electric power companies from Group of Eight member states (except for the UK). At present, GSEP includes 14 of the

world's leading electricity companies. The main objectives of GSEP include, among others: the development of a joint policy for sustainable power industry development, the organization of large-scale discussions on issues related to environmental protection, climate change, globalization and social policy, the sharing of experiences in the sphere of electric power production and use, and the development of electric power markets and renewable energy sources, as well as the provision of assistance to developing countries.

Fulfilling the functions of the chair company of the Partnership, in October 2013, JSC RusHydro held meetings of the project, policy and management committees in St. Petersburg. At the

• The International Hydro-power

• The International Commission on Large

• The Union of the Electricity Industry,

## • The Electric Power Council of the CIS (EPC of CIS):

- The Eurasian Economic Community (EurAsEC);
- The International Energy Agency (IEA);
- The Asia-Pacific Economic Cooperation (APEC):
- The Baltic Sea Region Economic Cooperation (BASREC):
- The United Nations Economic Commission for Europe (UNECE).

## Participating in international seminars and forums

With the aim of supporting Russia's chairmanship of BASREC in 2012-2013. an international seminar was organized on the subject "Design, construction and maintenance of small HPPs" in November 2013 in St. Petersburg. Also, during the reporting year, the Company's management took part in the Davos Economic Forum (Switzerland) and the Congress of World Energy Council (Korea)





initiative of JSC RusHydro, elaboration on projects in the field of cyber-security and countering computer viruses in industrial systems was started within the framework of the Partnership. The Company also took part in a number of international events organized within the framework of the GSEP, including the events of the GSEP, which are part of the program of public-private partnership development, held in Warsaw under the auspices of the 19th United Nations Climate Change Conference (COP-19) and in Belgrade at the 22nd World Energy Congress. In June 2013, in Yakutsk, an international conference on hybrid systems in isolated zones, "Renewable energy in isolated systems of the Far East of Russia", was organized.

# Key 2013 Events



## Events after the Reporting Date



Modernization of hydro-power unit No.2 of the Rybinskaya HPP was completed



Assembling of the main equipment of the 220 kV switchgear of a modern design was completed at the Mainskaya HPP, which is part of the Sayano-Shushenskiy hydro-power complex





The Company attracted two credit lines in the amount of EUR 190 million under a guarantee of the OeKB Export Agency from syndicate of ING Bank and CACIB, aimed to modernize the Saratovskaya HPP \*\*\* JSC RusHydro received a permission by appropriate ministries and governmental agencies allowing the Company to use target budgetary funds out of RUR 50 billion allocated by the state for construction of heat generating facilities in Russia's Far East and deposited with JSC Sberbank of Russia \*\*\* Hydro-power

unit No.4 of the Sayano-Shushenskaya HPP with an installed capacity of 640 MW was put into operation



The installed capacity of the Rybinskaya HPP was increased by 10 MW to 356.4 MW after replacement of hydro-power unit No.2 \*\*\*

Sberbank CIB arranged financing for RusHydro Group in the sum of RUR 2.776 for current loan refinancing

## The Kama



# 2. Strategy and Investment



2.1. Strategy 2.2. Investment

## 2.1. Strategy

The Company's strategy is represented as the Strategic plan till 2015, with future development till 2020. JSC RusHydro's Strategic plan was adopted by resolution No. 100 of the Company's Board of Directors (dated June 16, 2010).

## **THE COMPANY'S MISSION**

is the efficient use of water resources, the creation of conditions to ensure Unified Energy System (UES) reliability and the expanded use of renewable energy sources (RES) to benefit both shareholders and society as a whole

To ensure the reliable and safe performance of

To upgrade energy efficiency by fostering development of power generation based on RES

Ensuring the reliable and safe functioning of equipment and hydro-power structures for society and the environment, taking into account the economic feasibility of funds allocated to minimize risk and reduce potential damage

The Company makes every effort to increase the share of renewable energy sources (RES), including hydro-generation, in the energy balance, holding Russia's leading position in RES usage

To increase the Company's value

The Company seeks to maximize its value to the State, shareholders, society and employees

The strategic plan was developed in accordance with the following documents in State strategic planning:

- 1. The Concept for Russia's Long-term Socio-economic Development till 2020;
- 2. The Long-term Development Forecast of the Russian economy till 2030;
- 3. Russia's Energy Strategy till 2030;
- till 2020 (forecast till 2030);
- 5. Regional strategies for socio-economic development and energy strategies for the regions;

2015 Target value

4. The General Lay-out of Power Facilities 6. Sector strategies and long-term plans for the development of the oil and gas industry, ferrous metallurgy, transport infrastructure, etc.

## Implementation mechanisms for the Company's strategy

strategic management cycle.

The Company has implemented and operates a strategic management system, which integrates strategic management processes with motivation system. The main instruments to implement the Strategy are the Company's Growth Priorities for the current year (Priorities) and the Strategy Implementation Plan (SIP). Both documents refer to the annual

Priorities are a formalized list of key strategic goals, projects and programs, the implementation of which ensures the achievement of the Company's strategic goals and

maximum synergy during the current year. The purpose of the Priorities is to focus the Company's resources on the most important targets and indicators. Responsibility for implementing Priorities rests on the Company's senior management team, which is responsible for the comprehensive implementation of all Priorities.

The Strategy Implementation Plan is a detailed document that includes a set of annual objectives and performance indicators, the accomplishment of which provides for the Company's strategic goals. The aim of forming the SIP is the Company's communication and operationalization within a one-year period. The SIP contains targets and indicators



\* In case of the realization of all strategic initiatives

\*\* in case of the adoption of State support measures for renewable energy, the indicator will be updated

\*\*\* For existing business and investment projects for construction on Russian territory

The Strategy Implementation Plan is a detailed document that includes a set of annual objectives and performance indicators, the accomplishment of which provides for the Company's strategic goals.

for the current year, indicating which of the Company's officials and departments are responsible for implementation. The aggregate of the SIP's indicators in their areas of responsibility is one of the annual key performance indicators (KPIs).

## RusHydro's Strategic Plan

## Strategic target indicators

## **Development programs for key directions**

Business Plan, Budget, Cost Management Program, Management reporting

Annual Strategy Implementation Plan (SIP)

SIP techniques. List of annual strategic KPIs

## **Motivation System**

## Integrated tools:

Unified Scenario Terms (UST) Summary Long-Term Model of the Company

## 2013 Strategy Implementation

## Development priorities for 2013 were adopted by a resolution of the Company's Board of Directors dated February 20, 2013 (Minutes No. 175).

## 1. Ensuring the reliability and modernization of existing assets

A constant annual strategic priority for the Company is ensuring the operating reliability of existing assets. This is performed in numerous ways, including via the Complex Modernization Program for JSC RusHydro's Generating Facilities till 2025.

## Realization of the Complex Modernization Program for JSC RusHydro's Generating Facilities

## About the Complex Modernization Program

Most power plants in Russia were put into operation 40-50 years ago and many facilities are even older. Thus, much of the equipment needs to be replaced and/or overhauled.

The problem is complicated by the fact that during the Soviet period no large modernization projects in this sphere were conducted; and in the 1990s, there were simply not enough funds. During the early years of the 21st century, equipment replacement started, but at a rate which was evidently insufficient. The problem had to be resolved radically, and in 2012, RusHydro adopted a large-scale Complex Modernization Program for Generating Assets. In accordance with the Program, by 2025, the Company will replace all HPP equipment that has an expired operational lifetime.





- Hydro-power structure reconstruction
- Transformers
- Design works

Main parameters of the Complex modernization program Planned to be replaced





176 transformers or 61% of transformer fleet



8 thousand units of secondary control wiring equipment



119 generators or 42% of generator fleet



396 high voltage switches



4 thousand unit of auxiliary equipment

RusHydro Annual report 2013

Results of the Fulfillment of the Complex Modernization Program in 2013



## Reconstruction of the Sayano-Shushenskaya HPP named after P. S. Neporozhny is performed in accordance with the adopted schedule

In 2013, the supply of hydro-power equipment and transformers was completed, the last station service transformer and auxiliary equipment for reconstruction of the 500 kV outdoor switchgear was delivered, the 500 kV cable and equipment for automation, protection and alarm system were installed, 500 kV gas insulated system sections with T5 and T3 units and high voltage transmission lines 541, 543 and 544 were put into operation, and the reconstruction of the T3 unit's transformer platform was completed.

With the aim of ensuring comprehensive quality control for the fulfilled construction and installation work and the supplied equipment, the Company actively attracts specialized organizations. Among these

are: the autonomous non-commercial organization Soyuzekspertiza of the Russian Chamber of Commerce, which controls the production quality of the hydro-power equipment and welding work, as well as JSC KTB Zhelezobetona, which controls the quality of concrete work, as well as reinforcing work.

In addition, supervisory authorities (Rostechnadzor and Rosprirodnadzor) conduct inspections, as a result of which the Company undertakes required measures in a timely manner and ensures that work corresponds with the requirements of normative documents.

## Ensuring (recovering) the readiness of the Company's HPPs for automatic frequency regulation

In 2013, the Company reconstructed and put into operation systems for the group regulation of active capacity (GRAC) with the capability of participating in the automated secondary regulation of current In 2014, the Company plans to complete the reconstruction of the GRAC at the Savano-Shushenskaya HPP, the Chirkeyskaya HPP, the HPP-2 of the Kuban Cascade of the HPPs and in JSC RusHydro, as a whole. In addition, the Company will continue the connection of modernized hydro-power units and their automatic systems to the GRAC.

frequency and active electric capacity flows

at the following JSC RusHydro facilities:

• the Bureyskaya HPP,

• the Volzhskaya HPP,

• the Votkinskaya HPP,

• the Zeyskaya HPP,

• the Zhigulevskaya HPP,

• the Zelenchukskava HPP.

the Nizhegorodskaya HPP,

• the Novosibirskaya HPP,

• the Irganayskaya HPP,

• the Kamskaya HPP,

• the Rybinskaya HPP,

• the Saratovskaya HPP,

• the Uglichskaya HPP,

• the Cheboksarskava HPP.

## 2. Increase in the effectiveness of repair and maintenance service for facilities

Due to the necessity for centralized repair and maintenance services, on June 1, 2013, JSC RusHydro formed an integrated repair and maintenance company -RSK, which united the resources and technologies of five maintenance SDCs

of JSC RusHydro at the basis of JSC Hydroremont VKK. RSK operations will optimize maintenance and repair costs, at the same time ensuring a high level of production asset reliability. In addition, RSK will be a center of engineering

competence for the Company and will allow it to broaden the technical competence and tools of the Company's maintenance personnel.

## 3. Increase installed capacity through the realization of investment projects

## Introduction of capacities at the Zagorskaya PSHPP-2 (630 MW)

The planned volume of installed capacities (630 MW) was indicated in accordance with the investment program adopted during the formation of Priority Development Indicators for 2013 with reference to possible changes within the consideration of the report on the fulfillment of the investment program by JSC RusHydro's Board of Directors.

Practically, work on the installation of two hydro-power units - 420 MW (hydropower unit No.1 and hydro-power unit No.2 with capacity of 210 MW each) were fully fulfilled already in 2012. In December 2012, a test launch was performed, but the connection of the

Zagorskaya PSPP to the UES did not take place due to the unavailability of the power distribution scheme, which JSC FGC UES is working on. In accordance with a resolution of JSC RusHydro's Board of Directors dated March 29, 2013 (Minutes No. 177 dated April 1, 2013) within the report on the fulfillment of the investment program, the introduction of the 420 MW hydro-power unit No.1 and hydro-power unit No.2 with capacity of 210 MW each was recorded as 2012.

In accordance with JSC RusHydro's adjusted Investment Program for 2013 adopted by the Russian Energy Ministry (Order No. 639 dated 24.09.2013), the introduction of capacity for the Zagorskaya PSPP-2 project is not foreseen for the reporting period. On 17

September 2013, on Zagorskaya GAES-2 which is under construction the local flooding of the building of GAES from lower reservoir via functional joints of station block and cavity in the right junction of the foundation of building of GAES-2 took place. Currently the Company estimates expenses that may be necessary as a consequence of the flooding and possible write-off of the assets under construction. Constructionassembly works as well as equipment are insured. Insurance companies need to analyze the causes of the accident based on the accident investigation act with supporting documentation, as well as studying other documents, which confirm the nature, guantitative and economic evaluation of the damage. Due to these facts, in 2014, the Company postponed

putting into operation the first start-up facility of Zagorskaya GAES-2 to 2017.

### Introduction of capacities at the Boguchanskaya HPP (999 MW)

The planned volume of introduced capacities (999 MW hydro-power units No.7. 8. 9 of 333 MW each) were indicated in accordance with the investment program adopted during the formation of priority development indicators for 2013 with reference to possible changes within the consideration of the report on the fulfillment of the investment program by JSC RusHydro's Board of Directors.

The Russian Energy Ministry adopted the adjustment of JSC RusHydro's investment program for 2013 in terms of postponing the launch of hydro-power unit No.9 (333 MW)

Thus, in accordance with JSC RusHydro's Investment Program adopted by the Russian Energy Ministry in 2013, the Company plans to introduce two hydropower units (hydro-power unit No.7 and hydro-power unit No.8 with a capacity of 333 MW each) at the Boguchanskaya HPP.

As of January 1, 2014 the permit to conduct start-up and adjustment operations of the hydro-power units No.7 and No.8 was received, the technical launch of hydro power units No.7-9 was conducted, and the protocol of readiness of the waterfront up to 205 meters mark was signed. At the same time, the readiness of the power distribution scheme from part of the Krasnoyarsk

## 4. Competitive increase of the project complex: managerial consolidation of project institutes

To solve the task of growth in competitiveness, JSC RusHydro plans to create a consolidated center for planning scientific and design studies and works, form a center to organize the execution of such works and control of their results, and organize a unified information space for design and research institutes. This

will enable the Company to improve the quality of design solutions, ensure the reliability and safety of hydraulic works and equipment, synchronize the development of scientific and engineering SDCs, as well as optimize the performance of human resources.

## 5. Increase in the profitability of power sales companies

### Centralized system for the management of power sales companies within JSC ESK RusHydro

In 2013, the Company undertook numerous actions aimed at centralizing the system for the management of JSC RusHydro's power sales companies. This activity was conducted with the aim of fulfilling a resolution of the Management Board on the adoption of a centralized system for the management of power sales companies within JSC ESK RusHydro and the adoption of a Program for the development of JSC RusHydro's power sales companies in 2012-2014.

Measures undertaken during the reporting year ensured the successful start of the centralization of the system for managing power sales companies and were aimed at:

- Fulfilling the functions of the sole executive body (SEB) for earlier concluded agreements;
- Elaborating on and introducing regulations for the interactions of the SEB and power sales SDCs;
- Standardizing the activity of power sales companies.

In 2014-2015, the Company plans to further enhance the management system of power sales holding JSC ESK RusHydro.

## Improving the operational efficiency of power sales companies

The 2013 Strategy Implementation Plan of JSC RusHydro aims to increase the operational efficiency of power sales companies by decreasing expenses at least 10%

due to the unavailability of the 500 kV grid (Order No.639 dated September 24, 2013).

Region was provided to an extent, allowing for the power distribution of four hydro-power units.

The construction preparedness of hydro-power units No.7 and No.8 of the Boguchanskaya HPP and the capacity of their placement under load, as well as the unavailability of the 500 kV power distribution scheme which did not allow for the provision of power distribution for more than four hydro-power units of the Boguchanskaya HPP, were noted at a meeting of the operations center of the Russian Energy Ministry dedicated to launch preparation of the Boguchanskaya HPP (Minutes No. KV-3pr dated December 20, 2013).

In 2013, the Company was carrying out the work on the draft Concept of the management system for scientific & design and technological complex of JSC RusHydro. The Concept is scheduled to be completed and start to be implemented in 2014.

According to managerial reporting data from 2012-2013, the plan to increase operational efficiency by decreasing expenses was fulfilled for each power sales company, among which are: JSC Krasnoyarskelektrosbyt, JSC Ryazan Power Sales Company, JSC Chuvash Power Sales Company and LLC Power Sales Company of Bashkortostan.

## 6. Corporate consolidation of hydro-power assets: acquiring shares in or managing economically efficient hydrogeneration assets, which are privately owned in Russia

The Company's Management Board annually adopts the Report on the Fulfillment of the Annual Program of Strategic and Other Material Transactions of RusHydro Group. The 2013 Report was adopted by a Management Board resolution (Minutes No.814pr dated December 20, 2013).

Key strategic and other material transactions concluded in 2013 are:

- Reorganization of JSC RusHydro's repair SDCs (State registration of SDCs was performed July 1, 2013);
- Project on the creation of a joint venture with Voith Hydro (a company to produce hydro-power equipment, LLC VolgaHydro, was registered August 19, 2013 on the territory of the Saratov Region);
- Disposal of shares of JSC Trust Gidromontazh (sale of 33.54% of shares

to JSC TEK Mosenergo was performed October 16, 2013).

In 2014, the realization of the following transaction will continue: transfer under Russian jurisdiction companies of the Boguchanskoye Energy and Metal Complex (BEMC), included in Annual Program of Strategic and Other Material Transactions for 2013.

## 7. Development of an effective system for innovation management and forming a sustainable innovation process in the Company's activity: formation of a center for innovative solutions in the sphere of new technologies for producing electrical energy, design work and construction in the field of RES, including HPPs

The RusHydro Group has a design and research complex that integrates design institutes (JSC Hydroproject Institute, JSC Lenhydroproject, JSC Mosoblhydroproject) and research organizations (JSC Vedeneev VNIIG and JSC NIIES). The complex activities are aimed at the development of innovative technologies in the field of "green" energy. In particular, in 2013, the specialists of JSC NIIES obtained a positive opinion of the state examination for the Bolshoy Zelenchuk Small HPP project developed by them. In addition, JSC NIIES is working on the design of orthogonal turbine impeller to be used in low-head mini HPPs and also participates in the construction of a binary power plant at the Pauzhetskaya GeoPP site as general designer.

8. Development of human resources potential: development of a system for primary and supplementary professional education on the basis of the Moscow Power Engineering Institute and the Corporate University of Hydro-power Engineering, as well as the Company's Scientific and Production Information Center.

JSC RusHydro aims to create an educational environment on the basis of an internal system of workplace mentoring, the Corporate University of Hydro-power Engineering, the Sayano-Shushenskaya Branch of the Siberian Federal University located in close vicinity to the largest HPP and a network of fieldoriented universities and technical schools both on the federal and regional level. In October 2013, the Company opened the Department of Hydro-power Engineering and Renewable Energy Sources in the National Research Institute Moscow Power Engineering Institute. This will allow the Company to participate in training engineers for every stage of the production asset lifecycle: design, research, construction and operation. The Department will ensure the formation of

a methodological center for increasing the effectiveness of professional development for personnel in production, repair and construction facilities, as well as the scientific and project complex of the hydro-power holding.

## 9. Development of activities in the field of water resources: development of a Concept for the modernization and effective management of Russia's water resources complex

To fulfill the task of JSC RusHydro's participation in the management of Russia's water resources complex, a Concept for the modernization and effective management of Russia's water resources complex was developed. The Concept, as well as suggestions on RusHydro Group's participation in its realization were submitted for consideration by the interested Russian Ministry. After a discussion of the matters on the form of JSC RusHydro's potential participation in the development of Russia's water resources complex, federal executive authorities suggested to designate sectors of water supply, water discharge and wastewater treatment. In addition, it was proposed that the Company exercise functions of strategic planning, the management of the modernization processes, the

organization of inter-regional interaction, investment attraction, the development of international ties and the creation of an industrial base for industry equipment and component production on Russian territory.

## 10. Transition to a target capital structure and broaden sources for realizing the Investment Program

The attraction of additional financial resources for financing the investment program within the framework of JSC RusHydro's re-capitalization

## Effective usage of funds for the investment programs of the Holding JSC "RAO Energy System of East"

In 2012, a resolution was adopted to increase the charter capital of JSC RusHydro via an additional share issue (Decree of the Russian President No.1564 dated November 22, 2012) on the condition that the share of the Russian Federation in the Company's charter capital will not amount to less than 60.5%.

Raised funds will be channeled to finance the construction of the following facilities of the electrical energy industry on the territory of Russia's Far East:

## 11. Broadening the Company's presence on international markets: realization of the project to construct the Upper Naryn Cascade of HPPs (Kyrgyzstan), including elaborating on the technical and economic assessment of the investment and development of project work

Development of the Upper Naryn Cascade of HPPs is conducted within the framework of the Agreement between the Russian Government and the Government of the Kyrgyz Republic on the construction and operation of the Upper Naryn Cascade of HPPs, signed September 20, 2012.

In January 2013, JSC Lenhydroproject, a SDC of JSC RusHydro, won the tender for a feasibility study (FS) for the construction of the Upper Naryn Cascade of HPPs. In November 2013, the feasibility study was approved by the Board of Directors of CJSC Upper Naryn HPPs.

The project developed provides for the construction of the Cascade of HPPs, including: the Akbulinskaya HPP, the

Narynskaya HPP-1, the Narynskaya HPP-2 and the Narynskaya HPP-3, with an overall installed capacity of 237.7 MW and an annual electricity output of 942.47 million kWh. The Cascade is situated in the Naryn Region of the Kyrgyz Republic.

Preparatory work on the construction of the cascade began in June 2013. As a result of this work, by the end of the reporting year, the first phase of the rotational camp with the necessary infrastructure was completed, a concrete plant and a crushing and grading complex were commissioned and access roads were constructed. In 2014, the Company will start construction work of the main structures of the cascade. The project is scheduled to be completed in 2013-2019.

CHP in Sovetskaya Gavan;
Sakhalinskaya TPP-2 (first stage);
Yakutskaya TPP-2 (first stage);
Blagoveschenskaya CHP (second stage).

On November 26, 2013, the placement of the shares of the additional issue was completed, and the securities offering report was registered by the Bank of Russia on December 26, 2013.

On 3 December 2013, the Company's Board of Directors approved the model for construction management of generating capacities in the Far East. According to the model, the shares of four SDCs that belong to JSC RusHydro and to be subsequently purchased shall be transferred in trust management of the Holding JSC "RAO Energy System of East" without the right to receive dividends and without the ability to dispose of and encumber the shares and assign rights to the shares. On 23 December 2013, JSC RusHydro and the Holding JSC "RAO Energy System of East" signed an agreement for trust management of shares belonging to engineering SDCs.

Thus, the recapitalization of JSC RusHydro for financing its investment program was finalized. In 2014, the Company will continue to work on the construction of generating capacities in the Far East. The next step will be carrying out the price and technological audit, obtaining positive conclusions by Federal Autonomous Establishment Glavgosexpertiza of Russia, as well as concluding general contracts for the construction of facilities.

In addition to the priorities listed above, due to the Company's special importance or due to the necessity of continuing work, the following Priorities are transitional and are included in 2014 development priorities with new target indicators:

- Ensuring the reliability and modernization of existing assets;
- Increasing installed capacity through the realization of investment projects;
- Upgrading the competitiveness of the project complex;
- Creating an effective system for innovation management and forming a sustainable innovation process within the Company's activity;
- Developing its human resource potential.

## **2014 Development Priorities**

## The Company's 2014 development priorities were adopted by a resolution of the Board of Directors (Minutes No. 190 dated November 29, 2013).



## Strategy of the Holding JSC "RAO Energy System of East"

### 2014 Development Priorities of the Holding JSC "RAO Energy System of East"\*



The Holding JSC "RAO Energy System of East" (JSC RAO Energy System of East, the Holding Company) as the main producer of electric and thermal energy for the Far Eastern Federal District, understands its social responsibility toward the State in the sphere of providing a reliable and safe energy supply to consumers on the territory in which the Company operates, in accordance with the Strategic Plan for the Development of the Holding JSC "RAO Energy System of East" for the period till 2015 with an outlook till 2020, which is in turn aimed at realizing the Strategy of JSC RusHydro.

## Strategic aims of the Holding JSC "RAO Energy System of East"



Ensuring reliable and uninterrupted power supply for consumers of electrical and thermal energy

Being the main producer of electrical and thermal energy on the teriritory of the Far Eastern Federal District, the Holding Company understands the fulness of its social responsibility and attributes maximum efforts for ensuring of sustainable and efficient development of the power industry on the territory of the Far Eastern Federal District, creation and supprt of the unified control circuit, realization of state policy in respect to development of the power industry of thee region, stipulated by the program documents of the federal and regional levels and above all, ensuring of reliability and safety of functioning of the utilized equipment and facilities.

## Strategic management system of the Holding JSC "RAO Energy System of East"

One of the instruments for realizing the strategy on a one year timeframe are the Priorities of the Development of the Holding, which represent a list of key aims and measures (the fulfillment of which are considered to be the most important during the current year). The basis for forming the Priorities of the Development of the Holding JSC "RAO Energy System of East" is the Priorities of Development of JSC RusHydro for the corresponding period.

A constant priority of the Holding is ensuring the reliable and safe performance of existing facilities by fulfilling the Complex modernization program of the Holding JSC "RAO Energy System of East", as well as increasing the installed capacity of the Holding's assets through the realization of investment projects.

Significant attention is given to controlling the efficient usage of funds directed at investment projects and maintenance work. The schemes for financing each project are elaborated on



Entry into new markets

The Holding Company aims at the development of existing types of activity and at the entry into new markets. One of the prospective directions for business development is the export of electrical energy, which will allow the Holding Company to broaden the end markets

individually taking into account the principles

of economic efficiency and expediency, as well

Group, the attraction of budgetary funds and

the realization of large-scale projects together

With the aim of ensuring a complex approach

complete elaboration and adopt the Program

the Far Eastern Federal District in the area of

responsibility for the Holding JSC "RAO Energy

structure a plan for consolidating the assets of

the Holding JSC "RAO Energy System of East"

The implemented policy of upgrading energy

efficiency in the production of electrical and

thermal energy through the use of modern

constructing new power generation facilities,

technologies in modernizing existing and

with bulk consumers of electrical energy.

to the development of the energy industry

in the Far East in 2014, the Group plans to

energy industry complex on the territory of

for the prospective development of the

To enhance the efficiency of corporate

governance and optimize the corporate

System of East" till 2025.

will be formed.



The Holding Company aims at increasing its fundamental value and its value for shareholders, emplyees and the society as a whole. The instruments for pursuing of this goal include both gradual vertical integration and the optimization of

operational costs of the Holding Company as well as the increase in efficiency of the business processes and development of governance system.

as well as the policy for decreasing losses in thermal and electric grids and developing as the potential usage of borrowed funds upon renewable energy sources, will contribute to more favorable conditions within the RusHvdro the enhancement of the Holding's operational efficiency.

> Enhancement of the efficiency of electric and thermal energy production will be ensured through optimizing the system of the repair and maintenance service, decreasing expenses on fuel supply through the demonopolization of the fuel and energy market of the Far Eastern Federal District and broadening competition between suppliers, as well as by realizing target programs for the introduction of innovations, including in energy efficiency.

> In the sphere of tariff regulation, the key aims of the Holding are stimulating a transition to a long-term system of tariff setting, which will ensure maintaining of the economy from an increase in operational efficiency and a decrease of costs in the tariff revenue of the Company, as well as the capability of reflecting the costs of technical rehabilitation and modernization in the planned gross revenue requirement to the full (required) extent.

RusHydro Annual report 2013



Increase of revenue/ decrease of shortfall in income



## Increase of fuel supply efficiency

6

Energy System of the

Far East

Creation of mechanism for return on investment into new generating facilities in non price zones of the wholesale market for electricity and capacity

of the legal and regulatory framework of the power industry

Conduction of work with authorized authorities upon introduction of long term tariff regulation in isolated systems and nonprice zones for electrical energy and transmission of electrical energy

\* Approval by the Holding's Board of Directors in spring 2014

## 2.2. Investment

## **Principles of the Investment Policy**

The Company's investment policy and the adoption of the related decisions are based on the following principles:

- investment decisions and the project's compliance with legislatively established requirements, building codes and environmental standards:
- following the sequence of steps and stages for investment project implementation;
- investment decisions and the project's compliance with profitability and risk requirements, established by the Company's Board of Directors;
- analysis of costs and benefits for alternative investment decisions at the end of each investment project stage when basic parameters change;
- funding sources available for all investment projects.

The Company's investment activity is regulated by a single consolidated document - the Regulations on the Investment Management Process in the Form of Capital Investments (approved September 30, 2013). Approval of the Company's Investment Program is the responsibility of the Company's Board of Directors. At the same time, in accordance with the Procedure for Approving Investment Programs for Electric Power Entities as a State-linked Company (approved December 1, 2009, by Government Decree No. 977), the investment programs, before being approved by JSC RusHydro's Board of Directors, are agreed upon with executive authorities and approved by

the Russian Ministry of Energy.

In accordance with Government Decree No. 1172 (December 27, 2010) On the Endorsement of the Rules of the Wholesale Electricity and Capacity Market and on Amendments to Some Acts of the Government of the Russian Federation on the Issues of the Organization of the Functioning of the Wholesale Electricity and Capacity Market, a target investment component (TIC) has not been set since 2012.

In 2013, the introduction of a corporate automated information system for investment management processes in the form of capital investments in JSC RusHydro and its SDCs and auxiliary dependent companies was finalized.

# 2013 Investment Program

## Implementation of the Company's Investment Program is one of the strategic objectives.

JSC RusHydro's 2013-2015 Investment Program was adopted by Order of the Russian Ministry of Energy No.665 (dated December 28, 2012). 2013 financing volumes were adjusted within the framework of the 2013 Investment Program of JSC RusHydro (adjusted) adopted by Order of the Russian Ministry of Energy No.639 (dated September 24, 2013).

Investment program adjustment is due to:

- Necessity of including investment projects on the territory of the Far East into the overall investment program;
- Significant decrease in planned revenue growth mainly due to the impossibility of placement under load

2013 fulfillment of the Investment Program

Actual financing in the amount

Commissioning

of capacities

of constructed generation capacities, which in turn negatively influence the financial indicators of JSC RusHydro, and as a result affects the maximum possible volume of financing for the investment program;

· Necessity of adjusting the time schedule for a number of investment projects taking into account differences in financing investment projects resulting from investment program realization in 2012.

The overall volume of the 2013 adjusted investment program is RUR 78,870.09 mln. In addition, in 2012 the Company plans to provide financing for the construction of the Boguchany

### The main parameters of the realization of the investment programs of JSC RusHydro and the Holding JSC "RAO Energy System of East" in 2013

Adopted volume of inve billion rubles Fulfillment of the Invest RUR bln Fulfillment of the Invest (90%) Program, % Plan for commissionin 6 MW capacities, MW Fulfillment of the plan (100%)

Fulfillment of the pla

## Main investment directions in 2013

The main directions of investment for JSC RusHydro in 2013 were:

- Technical rehabilitation and modernization measures - RUR 31.48 bln;
- Complex reconstruction of the Sayano-Shushenskaya HPP - RUR 3.1 bln;
- Priority projects in the Far East RUR 2.1 bln;
- Facilities under construction RUR 30.1 bln:

Program, billion rubles

commissioning capaci

for commissioning capacities, %

## RES projects – RUR 0.9 bln;

- Other projects RUR 1.2 bln (JSC RusHydro: restoration of the Sayano-Shushenskaya HPP, completion of work at the Bureyskaya HPP, R&D program, completion of work at the Nizhne-Chereksky Cascade of HPPs and the Cheboksarskaya HPP).

## Investment Dynamics, RUR billion



Aluminium Smelter in the volume of RUR 18.930.51 mln. The 2013 volume of commissioned capacity amounted to 896 MW.

The 2013 investment program of the Holding JSC "RAO Energy System of East" was formed in the amount of RUR 20,985.3 million, including VAT. The 2013 financing plan corresponds to the approved parameters of the Holding's SDCs' investment programs that underwent reconciliation and approval procedures in accordance with the RF Government Decree No 977 (dated December 1, 2009).

	JSC RusHydro	The Holding JSC "RAO Energy System of East"	Total	
restment,	78.9	21.0	99.9	
stment s	69.1	20.5	89.6	
stment	88	97	90.1	
ng	896	4.2	900.2	
n for ities, MW	896	4.3	900.3	
an anacities %	100	102	100	

• Facilities under design – RUR 0.2 bln;

Among the main directions of investment of the Holding JSC "RAO Energy System of East" in 2013 were:

- Measures of technical rehabilitation and modernization – RUR 10.1 bln;
- New construction RUR 7.8 bln:
- Other projects RUR 2.6 bln.

## Major investment projects

## **JSC RusHydro**

### Technical rehabilitation and modernization

Measures of technical rehabilitation and modernization within JSC RusHvdro's Investment Program are realized in accordance with the Complex Modernization Program for the Company's Generating Facilities till 2025 and are aimed at achieving its target indicators in terms of decreasing the overall level of wear on major production equipment.

### Restoration of the Sayano-Shushenskaya HPP. 6.400 MW

Work on managing the renovation of hydro-power units with the full replacement of hydro-generation, hydroturbine equipment, automation and operation systems, alarm systems, safety communications system, and defense and devices.

## Ust-Srednekanskaya HPP, 570 MW

The aim of the project is to meet the electrical energy requirement of consumers of the central load center of the Magadan Region and partly of consumers of the Oimyakon District of the Sakha Republic, as well as the supply of reasonably priced energy to new gold and precious metal mining companies. The network's activities schedule has been fulfilled on time and in full.

### Boguchanskaya HPP, 2,997 MW

Completion of the construction of the HPP has great importance for the development of the Lower Angara region and the Siberian economic region, as a whole. More than half of all electric energy produced by the HPP will be used for the constructed aluminum plant.

## Gotsatlinskava HPP. 100 MW

The aim of the project is energy and capacity supply to the deficient North Caucasus UES, as well as carrying out the task of the Russian Prime Minister to undertake efforts to remedy the social and political situation in and to upgrade the social status of Dagestan.

### Small HPPs

These advanced projects provide for commissioning new generating units using RES and the enhancement of the sustainable energy supply to mountainous regions of the North Caucasus.

## Bureyskaya HPP (2,010 MW) and Nizhne-Bureyskaya HPP (320 MW)

These HPPs are aimed at the energy supply of industrial facilities of the Amur Region, the Khabarovsk Region and the Primorsk Region, as well as preventing winter floods in villages located in the lower pool of the Bureyskaya HPP, and protection of the lower pool of the Nizhne-Bureyskaya HPP, including the area bordering the Amur River.

### Zelenchukskava HPP-PSPP (140 MW)

The aim of the project is to enhance the reliability of the energy supply to the North Caucasus energy system and balance the daily schedule of the Kuban River.

## Construction of CHP in Sovetskaya Gavan with an electrical capacity of 120 MW and a thermal capacity of 200 Gcal/hr The CHP is constructed to substitute the disabled facilities of the Mayskaya TPP and to ensure meeting the growing electric energy needs of the special

economic zone port in Sovetskaya Gavan. Construction of the 1st phase of the Yakutskaya TPP-2 with an electric capacity of 193.48 MW and a thermal

capacity of 469.6 Gcal/hr The project is realized to replace the disabled facilities of the Yakutskava TPP and meet consumption growth for energy and enhance energy supply reliability.

## Construction of the 2nd phase of the Blagoveschenskaya CHP with an electric capacity of 120 MW and a thermal capacity of 188 Gcal/hr

The aim of construction is to liquidate the existing capacity deficit and meet future thermal energy consumption growth; to enhance energy supply reliability, as well as to meet the irregular part of the load schedule of UES of the East.

## Construction of the Sakhalinskava TPP-2 with an electric capacity of 120 MW and a thermal capacity of 150 Gcal/hr The new TPP will replace the disabled

capacities of the Sakhalinskaya TPP, as well as increase the efficiency of the Sakhalin energy system.

## The Holding JSC "RAO Energy System of East"

The Holding JSC "RAO Energy System of East" investment program included the completion of designing the following facilities: CHP in Sovetskaya Gavan, the Sakhalinskaya SDPP-2 (Phase 1), the Yakutskaya SDPP-2 (Phase 1), the Blagoveschenskaya CHP (Phase 2) for transferring the project documentation for construction of power plants to JSC RusHvdro in accordance with the Russian Federation Presidential Decree (No 1564 dated 22.11.2012) "On the further development of JSC RusHydro", and the construction of associated infrastructure for the above facilities, including the construction of electric and thermal power distribution scheme of CHP in Sovetskaya Gavan; construction of electric power distribution schemes for the Sakhalinskaya SDPP-2 (Phase 1) and the Yakutskaya SDPP-2 (Phase 1): construction of off-site branch railways to CHP in Sovetskaya Gavan etc.

### Transition to natural gas burning of the Vladivostokskaya CHP-2 (JSC DGK)

The purpose of reconstruction is to improve technical and economic parameters of the plant and reduce air emissions that have a negative impact on the environment. By the end of 2013. Phase 3 of the plant reconstruction was completed, 10 of 14 boiler units were shifted to gas.

### Transition of the boiler units of the Yuzhno-Sakhalinskaya CHP-1 to natural gas burning (JSC Sakhalinenergo)

The purpose of reconstruction is to upgrade technical and economic parameters of the plant, improve the environment situation in Yuzhno-Sakhalinsk by reducing harmful air emissions and enhance the level of energy security of the Sakhalin energy grid. The project was completed in the fourth guarter of 2013 and the facilities were commissioned.

## Construction of CCGT with an electric capacity of 139.5 MW and a thermal capacity of 420 Gcal/hr at the site of the central steam water boiler plant

The new facilities will ensure stable energy supply for the southern part of the Primorsk Region, as well as to meet load growth in Vladivostok.

RusHydro Annual report 2013

### Financing sources structure



As part of interaction with an independent Expert Community and Open Government, in order to upgrade the efficiency of using budgetary funds. cut costs and reduce construction time, as well as to improve the production competitiveness of major projects worth more than RUR 1.5 billion, the Company performed a technological audit of JSC RusHydro investment projects for compliance with the best domestic and international construction technologies, technological and design solutions, modern building materials and equipment.

The issue of public and price audit is particularly relevant to the projects financed from the budget. In this regard, the Company adopted the Corporate Standard "On public and price audit of large investment projects" and performed an audit of the following projects: the construction of the Leningradskaya PSPP, the Kankunskaya HPP, the Ussuriyskaya CHP, the Sakhalinskaya SDPP-2, the Blagoveschenskaya CHP and the Yakutskaya SDPP-2.

## Fulfillment of the plan for commissioning JSC RusHydro capacities

In accordance with the adjusted Investment Program of JSC RusHydro in 2013, the Company plans to commission capacities in the volume of 896 MW, including:

- Volzhskaya HPP 21 MW,
- Zhigulevskava HPP 21 MW.
- Kamskaya HPP 6.0 MW,
- Saratovskaya HPP 9.0 MW,
- Novosibirskaya HPP 5.0 MW,
- Ust-Srednekanskaya HPP 168.0 MW,
- Boguchanskaya HPP 666.0 MW.

## Fulfillment of the plan for commissioning capacities of the Holding JSC "RAO Energy System of East"

In accordance with the Investment Program of the Holding JSC "RAO Energy System of East" in 2013, the Company planned to commission capacities in the volume of:

• 4.2 MW (generation); • 674.5 km (grid infrastructure).

As a result of the fulfillment of the Investment Program of the Holding JSC "RAO Energy System of East" in 2013, the following were commissioned:

## 2014 Investment Program

JSC RusHydro's 2014-2016 Investment Program was adopted by Order No. 640 of the Russian Ministry of Energy (dated September 24, 2013). The Investment

The adopted investment volume for 2014 was RUR 122,391.96 mln, including:

Note: sums of investments in the section "Investment" include VAT

## Plan for commissioning capacities

In accordance with JSC RusHydro's 2014 Investment Program, it is planned to commission capacities in the volume of 1,077.8 MW including:

- Branch of JSC RusHydro the Volzhskaya HPP - 10.5 MW;
- Branch of JSC RusHydro the Zhigulevskaya HPP – 10.5 MW;
- Branch of JSC RusHydro the Kamskaya HPP - 6.0 MW;
- Branch of JSC RusHydro the Cascade of the Verkhnevolzhskive HPPs -10.0 MW;
- Branch of JSC RusHydro the Saratovskaya HPP - 9.0 MW;

As a result of the fulfillment of the Investment Program in 2013, the Company commissioned 896 MW (100%) of new capacity including:

- Volzhskaya HPP 21 MW,
- Zhigulevskava HPP 21 MW.
- Kamskaya HPP 6.0 MW,
- Saratovskaya HPP 9.0 MW,

Generation: 4.3 MW:

- Novosibirskaya HPP 5.0 MW,
- Ust-Srednekanskaya HPP 168.0 MW,
- Boguchanskaya HPP 666.0 MW.

• Grid infrastructure: 1,009.4 km.

Overfulfillment of the plan for commissioning capacities in terms of grid infrastructure was mainly due to the performance of grid connection work and the reconstruction of the distribution arid complex.

Program of the Holding JSC "RAO Energy System of East" was adopted by Order No. 638 of the Russian Ministry of Energy (dated September 24, 2013).

- JSC RusHydro RUR 96,641.06 mln;
- The Holding JSC "RAO Energy System of East" - RUR 25,750.9 mln.

- Branch of JSC RusHydro the Dagestan branch – 10.0\* MW;
- Boguchanskava HPP 333.0 MW;
- Gotsatlinskaya HPP 100.0 MW;
- Zelenchukskaya HPP-PSPP 140.0 MW;
- Zaragizhskaya small HPP 28.8 MW.

In accordance with the 2014 Investment Program of the Holding JSC "RAO Energy System of East", it is planned to commission capacities in the volume of:

- 7.8 MW (generation);
- 750.2 km (grid infrastructure)

## The Ob



# 3. Risks



3.1. Risk Management Policy 3.2. Risk Register 3.3. JSC RusHydro Insurance Protection

## **3.1. Risk Management Policy**

The Company's activities are associated with numerous risks, which under certain circumstances may affect the Company's production and financial

results, as well as its social and natural environment. To reduce the negative impact of potential risks and optimize valuable opportunities,

JSC RusHydro's organizational structure of financial and business operations control and risk management



To organize risk management processes, the Company has created and operates the Risk Management Division, as part of an internal control and risk management unit. In 2013, RusHydro's risk management team won the international "Best Risk Management 2013" contest in

the category "Best comprehensive risk management program" and the Head of the Risk Management Division, Mr. Konstantin Babayev, was a winner in the category "Best Risk Manager of Russia 2013". This contest has been held every year since 2006 by the Russian Risk

a risk management system to ensure corporate strategy implementation was created.

Management Society, RusRisk, a Russian national risk management association, which is part of FERMA, the Federation of European Risk Management Associations.

## **Documents Regulating the Risk Management System**

Regulations on the Internal Audit and Risk Management Policy are a principal document defining the goals, objectives and principles of JSC RusHydro's

corporate risk management system. The policy takes into account the methodological developments of best global practices and philosophies of the ISO 31000 standard, "Risk management -Principles and guidelines", adopted by the International Standards Organization

(ISO) in 2009. Methods for recognizing, assessing and responding to risks take into account COSO ERM principles and ISO31000 and ISO31010 risk management standards.

### Documents governing operational major strategic risk management



On an on-going basis, the Company provides independent third party risk assessment. In 2013, 11

Broker LLC. Moreover, the Company is monitoring the implementation of plans for carrying out the survey company's recommendations from previous years.

is performed and recommendations of the Company's third party auditor are taken into account.

## RusHydro Annual report 2013

## Improving the Risk Management System in 2013

To improve the risk management system in 2013, the following activities were undertaken:

- for the first time ever, JSC RusHydro updated the register of strategic risks based on data from the automated internal control and risk management system, which increased the share of quantitative risk assessments and reduced the need for expert opinions;
- the Company continued to work on the draft for JSC RAO ES of East's risk management system, which is analogous to the approach implemented by JSC RusHydro;
- a standard risk management policy for subsidiaries was developed. This policy is being adopted in all newly established companies where JSC RusHydro has a participation share and has been implemented in existing SDCs;

- a single Register for the risks of accidents and crashes at RusHydro`s hvdro-power facilities was formed to expand the base of risk situation scenarios both for operational facilities and facilities under construction and to upgrade efficiency for implementing production programs, as well as other risk management measures that are associated with the operation of the Company's assets;
- JSC RusHydro's sales policy was updated with a focus on risks. The Company also developed and validated the method for determining minimum price indices on the wholesale market for electricity and power based on the VaR method to assess and mitigate the risk of reducing revenue from the sales of electricity and power;
- · The method of currency and interest rate risk management was worked out and

## Main Process Stages and Risk Management Methods

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The Regulations on JSC RusHydro's strategic management is a basic document that determines the process of making up a register/plan /report for strategic risk management and relevant performance indicators (KPIs)

### **Risk Management Stages**

### Approving the annual register of strategic risks

The Company annually draws up a

strategic risk register defining risk

Management Board. The register is used

both to disclose information about risks

to shareholders, rating agencies and the

auditor and to further develop and control

the implementation of risk management

measures as part of implementing JSC

RusHydro's strategy. For risks that fall

into the category of critical and material

risks, the Management Board approves

the strategic risk management action plan

which defines for each action the period,

people responsible for its implementation

and the expected result at the end of the

reporting period.

owners, which is approved by the

Adopting an action plan of strategic risk management for critical and material risks

>

Implementing strategic risk management measures is accounted for in the approved performance indicators in accordance with JSC RusHydro's Strategy Implementation Plan. Meeting KPIs is taken into account when awarding employees (via remuneration). Independent monitoring of Plan realization and control over its implementation are performed by the Company's risk managers.

The report on the actual performance of the action plan for strategic risk management is prepared by the Risk Management Department at the end of the reporting period and submitted to the Chairman of the Board for approval.

approved. The Company also developed a mathematical model to assess the level of these risks, as well as a model to calculate the efficiency of risk hedging by derivative financial instruments.

As part of implementing the project of an automated internal control and risk management system, a risk treatment module was introduced to perform the functions of monitoring and control over the implementation of risk management actions. The Company also performed work to introduce the TeamMate system to automate the Company's internal audit procedures and implemented a function for the automated verification of information on individuals' affiliation with JSC RusHydro. This development was registered as a JSC RusHydro trade secret and the Company filed an application with the Russian Agency for Patents and Trademarks to register intellectual property rights.



Implementing strategic risk management



Reporting Reporting on the actual performance of the action plan of strategic risk management

Besides, the Company's risk management regularly interacts with the Audit Committee of the Board of Directors as part of exercising control over the functioning of the risk management system of JSC RusHydro.

Since 2012, the Company has been implementing an automated internal control and risk management system project for the technical support of the risk management process due to the need to process data and provide for the operational monitoring of key risk indicators.

## **3.2. Risk Register**



## **Country Risks**

The Company operates in the Russian Federation and therefore, it is influenced by economic and political risks that are inherent in Russia. The Russian national economy is vulnerable to market downturns and slowdowns in economic growth in other countries. As a result of the global financial crisis, financial problems or the heightened perception of risks related to investing in emerging market economies led to a decline in foreign investment in Russia and negatively impacted the Russian economy. In addition, Russia produces and exports large volumes of natural gas and oil.

Therefore, the Russian economy is particularly vulnerable to changes in global prices for natural gas and oil and a fall in natural gas and oil prices can slow or shake Russian economic development. These factors may constrain the Company's access to funding sources and may adversely affect consumers' purchasing power for the Company's products.

According to the international rating agency Moody's, a long-term credit rating of Russia is at Baa1 due to such factors as the relatively low level of public debt, predominantly balanced state budget, as well as positive changes in the monetary policy pursued by the Russian Federation. As estimated by other rating agencies, the rating stably remains at BBB (according to Standard & Poor's and Fitch). Due to the worsening of the international situation in the spring of 2014, the rating agencies Standard & Poor's and Fitch at the end of March 2014 changed their outlooks on the Russian Federation ratings from stable to negative, while the rating agency Moody's made the outlook revision with possible changes to negative. Consequently and due to the threat of economic sanctions and the occurrence of force majeure, there might be an increase of risks associated with the failure of individual foreign suppliers to fulfill their commitments, the reduction of market outlets and the revision of contracts.

In addition to economic factors, the political situation in Russia (the State is the Company's largest shareholder), inconsistent and frequent changes in tax and currency legislation, imperfections in the judicial system and high levels of depreciation for infrastructure facilities in the energy and transportation spheres may negatively impact corporate activities.



## **Financial Risks**

Financial risks can be categorized as the risk of growth rates in bank loans, foreign currency risk, inflation risk and liquidity risk. The impact of these risks on the Company's performance is not considered to be material to the Company.

Financial metrics, liquidity, financing sources and JSC RusHydro's performance are not very responsive to changes in the exchange rate and interest rates, because the Company sells energy on the domestic market, as well as settles accounts with resource suppliers, and accrues and receives payments from consumers mainly in the national currency - Russian rubles. Besides, almost all corporate liabilities are denominated in rubles, while the liabilities denominated in foreign currency are in total less than 5%.

The Company received several loans with floating interest rates denominated in rubles. To minimize the interest rate risk on financial liabilities, the Company entered into swap contracts; these swap contracts, for the most part, fixed the floating interest rates on all interest payments until the maturity date.

The inflation rate depends directly on Russia's political and economic situation in which the Company operates. The negative impact of inflation on the Company's financial and economic performance may be due to the following risks:

 risk of losses associated with a decrease in the true cost of the accounts

receivable in case of a significant delay or past due payments;

- risk associated with an increase in the cost of debt:
- risk associated with an increase in the cost of goods, products, work and services due to an increase in energy prices, transport costs, and wages, etc.;
- · risk associated with a reduction in the true cost of funds raised to finance the investment program;
- risk associated with an increase in the cost of borrowings.

At the end of 2013, the inflation rate in Russia was 6.5%, well below the critical inflation rate of at least 20% per annum which is considered by the Company to be the rate at which the Company may experience difficulties.

The Company manages liquidity risk by maintaining sufficient cash and marketable securities to fulfill current obligations. Temporarily free funds placed in shortterm financial instruments are mainly bank deposits and promissory notes.

Due to the aggravation of the international situation and the worsening of the outlook of international rating agencies' credit ratings of the Russian Federation and state-controlled companies, including JSC RusHydro and due to the threat of economic sanctions and the occurrence of force majeure, there might be an increase of risks associated with difficulties in the Company's access to credit funds of foreign counterparts, appreciation of the Company's debt obligations and losses due to the rise of the euro exchange rate and interest rates.

These risks are controlled by the reduction of the limits for counterparty banks with a decreased rating, stress-testing of potential losses due to the rise of the euro exchange rate and interest rates, using the currency and interest rate risk management procedure approved by the Company, and legal support of contractual framework. Almost all funds of the credit lines have been received there is no risk of inaccessibility to significant credit resources on previously opened credit lines



### **Industry Risks**

The reorganization of RAO UES of Russia, formerly the major State-owned electric power Group, resulted in the separation of electric power generation, transmission, distribution and the sales of electricity to end customers, repair and maintenance led to competition between generation, retail, repair and maintenance companies. Since 2011, Russia has been forming an electricity market, where energy is sold at free market prices, based on market supply and demand. The temporary exception is energy sold to the general population, as well as in non-price and technologically isolated territorial electric energy systems. Norms that regulate the activities of Russian energy companies and relate to the establishment of electricity tariffs, power market operations and the relationships between electricity producers and consumers are undergoing significant changes. Under the current market model, the risk that the prices achieved on the long-term capacity market may be insufficient to cover fixed costs, remains relevant.

The Company is exposed to industry-specific risks primarily due to possible changes in the

power industry. It should be noted that this risk is offset by the adoption of the "target" Rules of the Wholesale Electricity and Capacity Market (Decree No 1172 of the Russian Government as of December 27, 2010). To manage these risks, the Company provides expert assistance in the development of the regulatory and legal framework of the electricity and capacity market exercised by the RF Ministry of Energy, the NP Market Council and the Federal Tariff Service of Russia.

The government tightens control over the spending of allocated budget funds by electricity sector companies. JSC RusHydro undertakes necessary measures to ensuring the transparency and reliability of control procedures for budget fund expenditures in the execution of the investment program and the implementation of risk management measures.



**Risks Associated with Corporate Activities** 

The 2013-2014 Risk Register was made up based on the 2012-2013 Register, the analysis of external information, including

companies, public relations risks and

the risks of failure to reach performance

targets by engineering companies (yellow

JSC Ru Critical risks	sHydro's 2013-2014 Ris Material r
<ul> <li>Risks relating to capital construction project implementation;</li> <li>Reduced proceeds from the sale of electricity and power in relation to the corporate business plan;</li> <li>Man-made accidents;</li> <li>Fund shortages from external sources for planned investment;</li> <li>Adverse changes in / violation of legislation.</li> </ul>	<ul> <li>Failure to achieve perfor by retail companies;</li> <li>Lack of key personnel in of the Company;</li> <li>Risks of interactions wit</li> <li>Terrorism;</li> <li>Delays and errors in ma system upgrades;</li> <li>Failure to achieve perfor engineering companies;</li> <li>Incorrect forecast of wat production plans;</li> <li>Lack of resources to fulf program;</li> <li>Unethical or illegal actio</li> <li>Damage as a result of m and man-made accident than the Company's faci</li> </ul>
In 2013, the priority level of risks	performance targets by

In 2013, the priority level of risks relating to capital construction project implementation, adverse changes in legislation (red zone), failure to reach

RusHydro Annual report 2013

the experience of the world's largest companies in the electric power industry, consulting and insurance companies' risk reports related to fuel & energy complex companies and business in general, and the global risk report of the annual World Economic Forum in Davos. In 2013, when revising the risk register, JSC RusHydro compared the rating (critical level) of risk monitoring for ten major risks and opportunities for the electric power industry. This monitoring was stated in the international industry survey performed by Ernst & Young.



## **Risks relating to capital construction** project implementation

This risk is critical to the Company and is associated with large-scale investment programs for the coming years. Risk factors are:

- a great deal of uncertainty in project justification;
- nonconformity in the quality of design documentation, the execution of work and services, and equipment supplied to stated requirements;

i <b>sk Register for 20</b> risks	Less priority risks
ormance targets set in all areas ith stakeholders; anagement ormance targets by s; ater content / lfill the production ions by employees; natural disasters nts at locations other cilities.	<ul> <li>Growth in accounts receivable for the delivery of electricity and power;</li> <li>Inefficient use of resources for implementing innovation;</li> <li>Inability to enter international markets;</li> <li>Inefficient integration of companies acquired via mergers and acquisitions (M&amp;A).</li> </ul>
y power sales	area) increased and the relevance of risks

associated with mergers and acquisitions declined significantly.

## The 2012-2013/2013-2014 "Risk Radar"

The highest priority risks are in the center of the "radar", while the lowest priority risks are on edges of the "radar"



- problems with preparing flood zones in water storage basins;
- substantial dependence of projects' economic parameters on environmental factors (the availability of network infrastructure, and target markets by the time of commissioning a construction facility);
- growth in the prices for equipment and materials in the construction process;
- disruptions in supply chains for various reasons
- issues of communications with JSC RusHydro's shareholders.

To mitigate the negative impact of the risk, the following activities are carried out by the Company:

- Developing a corporate project management system to organize data both for existing and designed facilities;
- Increasing the efficiency of design institutes and procurement activities aimed at strengthening the role of its own design institutes with regard to

conducting an internal examination of design and working documentation; · Regulating activities connected with

- an internal examination of design documentation: • Optimizing the insurance and
- procurement system related to construction and installation work;
- Drafting regulatory documents for the execution of certain types of work, implementing a permit-to-work system for personnel with the possibility of personal removal from the realization of future projects if material violations have been made
- Developing a supplied equipment quality control system (including the process of its production and shipment/delivery).



## Reduced proceeds from the sale of electricity and power in relation to the business plan

This risk is critical because of the overregulation of the Wholesale Electricity and Capacity Market rules, the high volatility of electricity prices on the Wholesale Electricity and Capacity Market, volatility in fuel prices, a reduction in the solvency of counter-parties as a result of the financial crisis, unfavorable conditions (dry years), and difficulty in predicting equipment load. This risk is strongly correlated with the risk of incorrect forecasts of water content.

## RusHydro Annual report 2013

To reduce the negative impact of the risk on the Company, the following activities are carried out:

- Preparing proposals for making changes to regulatory acts in the matter of electric power;
- Regularly revising JSC RusHydro's marketing policy;
- Concluding bilateral hedging RSV (day ahead market) contracts (including the purchase of electricity to ensure the execution of obligations);
- Introducing a commercial dispatching control system;
- Working on reducing accounts receivable for electricity and capacity supply.



## The risk of man-made accidents

The Company pays special attention to the risk of various man-made accidents, which can threaten the life and health of people, lead to interruptions in production and subsequent revenue shortfalls. These risk factors are design flaws that appear at the operational stage, wear and tear, the breach of operation conditions and untimely repairs and re-tooling and modernization, and human errors, and environmental influences. Equipment failure and waterwork destruction can result from these risks. According to a corporate assessment, the risk probability is average. All major production facilities are insured. A range of measures exist to ensure the reliability of equipment and facilities at an adequate level, including:

- Fully implementing repairs and the fulfillment of a long-term modernization and reconstruction program;
- Developing a supplied equipment quality control system (including the process of its production and shipment/ delivery), implementing construction and installation work and commissioning work, as well as upgrading the level of suppliers/contractors' contractual liability in the manufacture and supply of equipment and materials;
- Making claims against unscrupulous contractors/suppliers;

- Implementing recommendations given as result of surveys made at JSC RusHydro facilities;
- Strengthening on-site control over contractors/sub-contractors, as related to reducing injuries, fires, unethical behavior and theft:
- Developing normative and technical documents aimed at upgrading design and construction management;
- Utilizing modern diagnostic methods without stopping equipment, modern technologies for production asset management, including necessary information technology;
- Optimizing the structure and size of spare parts volume:
- Developing a life-cycle management process for equipment within the existing HPP system.



## Fund shortages from external sources for planned investment

The risk relating to fund shortages from external sources for planned investment is critical for the Company. It is closely linked to the risk related to capital construction implementation. A reduction in all or part of the sources provided for funding the investment program can lead to the failure to meet JSC RusHydro's implementation date for projects or a scenario in which JSC RusHydro will be forced to stop construction or even mothball numerous generating facilities that are under construction. Taking into account the high conservation cost of assets under construction, which in some cases is comparable to the cost of continuing construction, this fact will affect both the economic efficiency of the Company's investment projects and the results of its financial and economic results, as a whole.

The Company manages this risk by the following methods:

- · Maintaining sufficient cash and making financial resources available via the provision of credit lines; • Implementing a balanced model of
- financing working capital through both short-term and long-term sources;
- Monitoring compliance with loan

agreements to avoid breaking the Company's financial covenants;

- Placing temporarily free funds in shortterm financial instruments (bank deposits and promissory notes);
- Applying "standard financial terms" when making contracts with counter-parties;
- Implementing management techniques for interest and currency risks (taking into account the Company's credit policy);
- Working on preparing flood zones for HPP reservoirs under construction from federal budgetary resources and the budgets of Russian constituent entities.



## The risk of adverse changes in / violations of legislation

The critical risk of adverse changes in / violations of legislation is marked as one of the most significant risks for the electric power industry, not only in Russia, but also throughout the world. The Company is constantly monitoring initiated and pending legislative changes that could potentially impact its activities, and the monitoring and revision of existing standards and regulations in the field of technical regulations. JSC RusHydro representatives take part in important events and roundtables devoted to making legislative changes to represent corporate interests. Such events and roundtables are conducted by legislative, executive and judicial authorities, public associations, professional associations and legal associations. Environmental audits are conducted on a regular basis and recommendations given are followed. JSC RusHydro takes part in the working groups of the RF Ministry of Energy on technical regulation issues (regarding Technical rules) and Technical Committee № 330 "Rostechregulation" (regarding national standards).



### Risk of incorrect forecast of water content

This risk is the inability to accurately predict the volume of electricity produced over both the medium- and long-term. To reduce the negative impact of the risk on the Company, the following activities are carried out:

- Optimizing the water resource usage of JSC RusHydro's Energy Saving Program;
- Developing an industry hydrometeorological observation system and protecting the interests of the HPPs in inter-agency operational groups under the Federal Agency for Water Resources (Rosvodresurs).



### Risk of damage as a result of natural disasters and man-made accidents at locations other than the Company's facilities

There is a possibility of accidents of a systemic nature, as well as of losses due to natural disasters. To ensure reliability throughout the grid in the event of local failures, the Company has implemented a centralized emergency control system, which is being modernized to meet today's requirements. The Company complies with Russian legislation in the field of industrial safety and uses a production control system functioning on a legislative basis.



## Risk of failure to achieve performance targets by engineering companies

The Company considers this risk significant due to the possible loss of the engineering part of the business due to inadequate efficiency and strong competition. To reduce the impact of this risk on the Company, the following activities are carried out:

- Implementing a development program of engineering subsidiaries;
- Developing personnel and training scientific manpower;
- Working out standard work scope sheets for equipment and waterwork repair operations;
- Creating a single repair and service company, JSC Hydroremont-VCC;
- Minimizing the risks associated with inefficient management of non-core activities by their consolidation in specialized service subsidiaries.



## Risk of failure to achieve performance targets by its own sales companies

This is a significant risk to the Company. Risk factors include a high level of competition, the risk of losing the status of a guaranteeing supplier in retail regions and the possibility that large consumers will construct alternative electricity supply facilities. To minimize the impact of this risk, the following activities are carried out:

- Monitoring the Company's compliance as a guaranteeing supplier with financial stability criteria in accordance with retail market rules;
- Actively working with consumers to establish a mutually beneficial relationship, including through JSC ESK RusHydro;
- Introducing a corporate risk management system for JSC RusHydro in its subsidiary sales companies.



## Risk relating to a lack of key personnel

To reduce the risk associated with lack of key personnel, the Company takes part in the Russian Ministry of Energy's working groups on the development of professional standards and the staffing roadmap for fuel & energy companies, enters into agreements with specialized colleges and technical schools to upgrade the quality of education taking into account JSC RusHydro's performance standards, forms talent pools for managerial positions, and introduces targeted benefits and programs to attract and retain personnel.



## Risk of interactions with stakeholders

To develop cooperation with stakeholders, the Company organizes joint public events, conducts special activities for the mass media, regularly updates information in the corporate blog, in the community in LiveJournal, on Facebook, and regularly monitors the mass media.







## Risk of delays and errors in upgrading the management system

In order to manage this risk, the Company is developing a system to regulate business process activities and management, optimizing the timing and coordination of procurement, and is interacting with stakeholders. JSC RusHydro's internal control unit analyzes the main business processes to improve the control system and upgrade process efficiency. The Company's management and officers have third party liability insurance. The Company is implementing corporate management standards into the newly acquired or founded SDCs and is introducing a management system for organizational projects, grading employees, and certifying management personnel and implementing individual employee development plans.

## Risk of unethical or illegal actions by employees

As part of upgrading the control system, to reduce the risk of unethical practices in the Company, the following measures are undertaken to prevent unlawful actions: introducing an integrated automated system to control the distribution of commercial information, monitoring compliance by the Company's employees with Regulations on insider information, and implementing other measures to influence the factors and consequences of the risk related to unethical or illegal actions by employees.

## Information about Possible Circumstances that Objectively Hamper the Company's Activity

Risks associated with the region's geographical features can include the risk of losses (for example, the risk related to the decommissioning of fixed assets) due to seismic activity, avalanches and mudslides, possible landslides and rainfall related floods and other adverse weather conditions (hurricanes, heavy snowfalls and frosts).

In general, the regions in which the Company operates have a developed transportation infrastructure and are not exposed to the risks associated with the disruption of the transportation link. However, some generating assets are located in remote areas with harsh climates, including in the Krasnoyarsk Region and in the areas of the Far Eastern Federal District. The Company is constantly working to upgrade the technologies of access and work in harsh climatic conditions in these areas. However, one cannot guarantee that no additional costs will be required to overcome technical difficulties associated with the climate and the (lack) accessibility of these locations, which may negatively impact earnings, financial conditions, and the Company's performance and prospects. Within the foreseeable future, these risks are estimated as insignificant.

## Terrorism

Due to the tense political and social situation, the activities of armed gangs in the North Caucasus Region and their efforts to extend their activities to other regions of the Russian Federation, a high probability of local and regional armed conflict, a growing threat of international terrorism, increased political instability in several developing countries due to the ongoing economic crisis, the activity of radical organizations and the development of industrial terrorism, the Company assumes the occurrence of risks associated with terrorist activities, directed to hydrogenation facilities, including in the regions adjacent to the border with the Ukraine. To reduce these risks, the Company regularly carries out measures to ensure safety. A comprehensive program to ensure that the Company's facilities are safe and protected from terrorism has been developed and implemented. The Company regularly inspects antiterrorism protection and conducts staff trainings, including specialized antiterrorism exercises and trainings for security guards at corporate facilities.

The Company has implemented a comprehensive plan of main measures to strengthen the security of the Company's facilities. As part of this plan, the Company has made changes to the existing security system at corporate stations, including those under construction. The Company is also monitoring factors influencing the

49

security of the Company's facilities and is conducting informational and technical security audits.

Power facilities are protected by armed guards of the FSUE Departmental Security Agency of the Russian Ministry of Energy and non-departmental security forces of the RF Ministry of Internal Affairs, as well as extra-departmental guards from the Russian Ministry of Internal Affairs. Interaction Plans exist with law enforcement authorities to prevent terrorist acts from being carried out or the threat of terrorist acts at corporate facilities. On the territory of the hydropower facilities, there are robust access regimes and internal security regimes. In conjunction with law enforcement agencies, theft prevention measures are also organized. The most dangerous threats are assessed and plans are developed to eliminate consequences, in conjunction with the Russian Civil Defense and the Emergency Situations Agency at the Company's generating assets.

The Company's fixed assets insurance package includes insurance against terrorism. The Company will hold a roadshow and undertake other similar measures to mitigate negative effects on positioning the occurring insured events related to terrorism and the sabotage risk on the international insurance market.

### Earthquake-prone areas

Most of the Company's facilities are located in seismically quiet regions. However, such facilities as the Pauzhetskaya GeoPP and the Verkhne-Mutnovskaya GeoPP are located in seismic zones, with possible earthquake intensity up to 9 points on the Richter scale. The Company has worked out an emergency plan in case of earthquakes and is constantly monitoring the situation. There are seismic monitoring stations at the Company's facilities. Issues relating to the transportation link are worked out in good time with a focus on the above-mentioned risk. Cargo and people delivery schemes are optimized. All corporate facilities comply with earthquake resistance standards.

### Seasonal flooding areas

The risk of seasonal floods plays an important role in corporate activities and is regularly included in the list of critical risks. To manage this, a water regime management, including: forecasting and monitoring hydrological regimes, reservoir regulation, spillway construction and operation and other measures, has been implemented.

Last year's unprecedented flood situation in the Far East significantly impacted the Company's performance. However, all the Company's facilities in the region worked in accordance with the instructions given by the inter-agency working group of the Federal Agency for Water Resources (WAWR of Russia). The Company has strengthened control over the condition of its production assets. No accidents took place at the Company's facilities.

RusHydro Annual report 2013

## **3.3. JSC RusHydro Insurance Protection**

Insurance coverage

targets

Insurance protection in JSC RusHydro is built based on the normalization principles of the insurance protection system, the optimization of insurance coverage, the unity of approaches to insurance organization, and insurance continuity.

### Selection of insurance companies

The selection of insurance companies is carried out on a competitive basis to select insurers that offer the best qualityto-price ratio for insurance services. Requirements for the insurance cover terms and conditions are formed based on the Company's current risk situation analysis, the supply analysis of the insurance market, and social policy and legal requirements.

### Types of insurance coverage

In 2013, the insurance coverage of JSC RusHydro and its subsidiaries included the following types of insurance:

- property insurance against all risks;
- automobile and water transport insurance;
- insurance against construction and installation risks;
- third party insurance of organizations that operate hazardous production facilities and waterworks;
- voluntary medical insurance and accident insurance;
- third party insurance of JSC RusHydro's management team and executives.

JSC RusHydro imposes high requirements with regard to insuring its assets (property insurance against all risks and the insurance of construction and installation risks), and due to the limited resources of the Russian insurance market also puts forward additional demands and effects control over the reinsurance of its risks. Since 2010, the Company has been implementing a policy of openness to foreign insurance community representatives. Each year, the Company organizes insurance engineering surveys of its facilities, and holds road shows, negotiations and follows reinsurers' recommendations.

Minimizing the volume of the Company's financial resources to be allocated to eliminate the consequences of insured events

ding reliable antees against ble losses upon ccurrence of rse situations e Company's rmance (insured s) Providing social protection for employees and other persons insured by the Company on account of the corporate social package, using the mechanisms of personal insurance

The reliability of insurance protection conditions, the experience of insurance settlement and accumulated extensive friendly contacts with both the international and Russian insurance markets help the Company successfully implement risk and finance management activities.

## The Yenisei



# **4. Industry and Business Overview**



- 4.1. About Hydro-power Generation 4.2. The Electricity and Capacity Market
- 4.3. Description of the Company's Business
- 4.4. Production Performance
- 4.5. Tariff Regulation
- 4.6. Energy Efficiency

## **4.1. About Hydro-power Generation**

Hydro-power generation is one of the most effective areas of the electric power industry. It is based on using the power of water's mass movement in channels, as well as tidal motion. In addition to producing electric energy, hydro-power generation solves numerous major economic and social problems. They include the creation of drinking and industrial water supply systems, navigation development, the implementation of irrigation systems, production development and the creation of new jobs.



Source: Data from the Earth Policy Institute from BP, Statistical Review of World Energy June 2012 (London: 2012).



environmental legislation, - 95%

## The Future of Hydro-power Generation

## **Development of small-scale** hydro-power generation

In recent decades, small-scale hydropower generation has gained a stable position in many countries. Developing the hydro-power potential of small rivers solves energy supply problems for small consumers. The construction of small HPPs does not require water reservoirs of considerable size, and the construction period and costs of a small HPP are much lower than those of a general one. Small HPPs are usually easily automated and can be operated without permanent maintenance personnel. In addition, the cost of 1 kWh of electricity generated by small HPPs is lower than the cost of 1 kWh of electricity generated by large HPPs.

Use of the world's ocean energy

Tidal power plants use the energy of tides resulting from the gravitational interaction of the Earth rotating around

its axis with the Moon and the Sun. Just one tidal cycle of the world's ocean is equivalent to 8 trillion kWh in terms of energy. The Atlantic and Pacific Oceans have the largest tidal energy reserves. The advantages of tidal power plants include environmental safety, the low cost of electricity produced, and the possibility to be used with other types of power plants in electric power systems both in base-load demands and under peak loads.

Wave-cut generation - is another promising trend for hydro-power development. The technical potential of wave energy is estimated at approximately 3 billion kWh per annum.

### The ocean and sea current energy

potential, which amounts to hundreds of billions of kilowatt-hours per year, is also of interest for hydro-power development. The placement of low-speed turbines in sea currents is in progress.

Finally, another promising trend in hydro-power generation is the use of oceans' thermal energy. There is a very significant temperature difference between water on the surface and water at ocean depths, even in the first hundred meters. Pilot sea thermal plants have already been constructed near the Hawaiian Islands, Nauru, and off the coast of the lvory Coast. Scientists are working to solve the problem of accumulating and transmitting produced energy to mainland consumers.

## 4.2. The Electricity and Capacity Market

## Total installed capacity and generation in Russia and worldwide

of installed capacity and production volume, the Russian energy industry ranks third and fourth, respectively.

Among the world's largest electricityproducing countries are the USA, China, Japan, Russia and India. Globally, in terms

## Capacity, GW



Source: BP Statistical Review of World Energy 2013, EIA, IEA, Federal State Statistics Service

### Breakdown of the installed capacity of Russian UES power plants as of January 1, 2014 (without isolation zones), %



### Historical energy consumption

In 2013, electricity consumption in the UES of Russia decreased for the first time since the 2009 crisis.

### 1990-2013 Energy consumption dynamics



According to JSC SO UES, in 2013, energy consumption in the UES of Russia declined 0.6% to 1,009.813 bln kWh. Energy production by Russian UES power plants decreased 0.8% - down to 1,023.48 bln kWh. Approximately 61% of total electric power was produced by TPPs, 17% by NPPs and 17% by HPPs.

## **Russian Hydro-power Generation**

Hydro-power generation is an important element in ensuring the reliability of Russia's Unified Energy System. It provides more than 90% of regulating power reserve. Of all existing power plants, HPPs are the most flexible and can, if necessary, in a matter of minutes significantly increase the volume of generation to cover peak loads.

Currently, in Russia, there are 102 hydropower plants with a capacity of more than 100 MW. The total installed capacity of hvdro-power units at Russian HPPs is approximately 45 million kW, whereas generation is approximately 165 billion kWh per annum. HPPs account for 20.6% of Russia's total electricity production.

The RF Energy Strategy until 2020 assumes a growth in electricity consumption, including with a view to plans to accelerate natural resource development in Western and Eastern Siberia, the Far East, the European North and the Caspian Region. The country's designed energy balance provides for improving the structure of electrical

energy generation, including better utilizing hydro-power potential.

Now. Russia ranks second in the world in terms of hydro-power resources. But, its potential is even higher. New construction

is planned mainly in Siberia and the Far East. In addition, the modernization of existing HPPs is an important aspect of developing the domestic hydro-power industry.



RusHydro Annual report 2013

capacity, the share of thermal power plants (TPPs) is approximately 68.2%, the share of hydro-power plants (HPPs) is 20.6% and the share of nuclear power plants (NPPs) is 11.2%.

As of January 1, 2014, the installed capacity of Russian UES power plants was 226,470.18 MW. In terms of installed

## Production. bln kWh



### 2013 Structure of electric power production in the UES of Russia (without isolation zones), %



## The structure of the electricity and capacity market

Currently, the Russian Federation has a twolevel (wholesale and retail) electricity and capacity market.

Generating companies, electricity export/import operators, energy sales organizations, (including guaranteed supply companies), Federal Grid Company (in terms of purchasing electricity to cover transmission losses), and major consumers are both buyers and sellers on the wholesale market.

Apart from Federal Wholesale Hydro-Generating Company (JSC RusHydro), most of Russia's generating assets are concentrated in 5 thermal Wholesale Generating Companies (WGCs), 15 Territorial Generating Companies (TGC), and the State Concern ROSATOM. Part of the thermal and territorial generating companies, in turn, is integrated into large state and private holdings. Also, among the top industry companies, we ought to separately mention JSC INTER RAO UES, an export and import energy operator that owns a range of generating assets, both in Russia and abroad.

State-owned shares of Federal Grid Company, which operates the main highvoltage transmission lines, and Interregional Distribution Grid Companies (IDGCs) that own the medium to low voltage networks, were transferred to JSC Russian Grids. The system operator (JSC SO UES) performs operational dispatch control within the Russian Unified Energy System (UES).

The wholesale electricity and capacity market operates in regions that are incorporated into pricing zones. The first pricing zone covers the territory of European Russia and the Urals, whereas the second zone encompasses Siberia. In non-pricing zones (Arkhangelsk and the Kaliningrad Region, the Komi Republic and Far East Regions), where for technological reasons, the organization of market relationships in the electric power industry is not yet possible, electricity and capacity sales on the wholesale market are regulated by tariffs.

In isolated power systems, which are not technologically incorporated into Russia's Unified Energy System, the wholesale electricity and capacity market is absent and power delivery is regulated by retail markets.

The full liberalization of the wholesale and retail electricity and capacity market, which began in January 2007, was completed

January 1, 2011. Since 2011, the structure of the wholesale market has been as follows:



Starting January 1, 2011, power has been delivered to the wholesale electricity (capacity) market at free (non-regulated) prices, with the exception of power delivery in areas which are not part of the wholesale market pricing zones, in isolated territorial power systems, including constituent territories of the Russian Federation, combined in a pricing zones of the wholesale market within the boundaries of which an equilibrium price is not formed. In addition, prices for electricity delivered to the population and equivalent consumer categories, as well as to customers in certain Russian federal pricing zones in the territory of which the Russian Government has established special conditions for the operation of the wholesale electricity and capacity market (in the North Caucasus Region, in the Republic of Tuva and till 1 January 2012 in in the Republic of Buryatia) are subject to regulation.

Electric power volumes not covered by regulated contracts are sold at nonregulated prices under free bilateral contracts (FCs), on the day-ahead market (DAM) and on the balancing market (BM).

Capacity volumes not covered by regulated contracts are sold under free electricity and capacity supply contracts (FECCs), including the commodity market and contracts for capacity sales as a result of competitive capacity selection (CCS) conducted by the system operator. In addition, the long-term

capacity market includes capacity supply contracts (CSCs), which allow for investment financing for new power generation.

In December 2010, the first campaign of CSCs signing ended. The thermal generating facility, commissioned under capacity supply contracts, guarantees capacity payments for 10 years (20 years for contracts similar to CSCs signed with NPPs and HPPs), which provide returns on CAPEX and operating expenses (as specified).

CSCs were signed with heat power industry generating companies, which were spun-off from RAO UES of Russia. The list includes constructing energy facilities with a total capacity of 28 GW by 2015. Most new facilities will be located in the European part of Russia, as well as in the Urals and Siberia.

Capacity supply contracts, similar to CSCs, were signed with JSC RusHydro and JSC Concern Rosenergoatom. As part of the HPPs/NPPs capacity supply contracts, JSC RusHydro has already finished construction of the Kashkhatau HPP and continues to implement the following projects: the Gotsatlinskaya HPP, the Zagorskaya PSPP-2, and the Zelenchukskaya HPP-PSPP, with a total capacity of approximately 1.1 GW.

Commissioning new facilities will eliminate the problem of production capacity shortages in certain electricity zones; it will also upgrade sectoral efficiency, as a whole.

## RusHydro Annual report 2013

### **Grid infrastructure**

The two principal types of activity conducted by grid organizations are: the transmission of electrical power over the electrical grids and the provision of technological connections for electricity consumers, the power plants of generating companies and the transmission facilities of other owners to the electric grid. These activities are both natural monopolies and are thus regulated by the State.

The operation and development of Russia's electrical grid are the responsibility of JSC Russian Grids. a majority shareholder of Federal Grid Company, the operator of the Unified National (all-Russian) Electrical Grid (UNEG), JSC UES FGC, which operates the 110-1,150 kV high-voltage

transmission networks, and Interregional Distribution Grid Companies (IDGCs) that control lower voltage distribution networks, from 0.4 to 220 kV. In addition, electric power transmission and distribution services are provided by more than 3,000 territorial network organizations (TNOs) that mainly operate the 0.4-10kV lines.

## DAM price dynamics

The day-ahead market (DAM) is a competitive selection of price bids from suppliers and buyers for the day before actual electric power delivery; prices and delivery volumes are defined for every hour of the day, and are conducted by the commercial operator, JSC ATS.

DAM prices have relatively high volatility due to, firstly, cyclical fluctuations (daily,

### The Index of the Equilibrium Price for Power



Source: NP Market Council

The 2013 growth in electric power prices in the first price zone was mainly due to indexation, from July 1 and August 1, 2013, for gas prices, the main fuel for TPPs.

A reduction in prices in the second price zone in the second half of 2013 was caused by both a lower level of energy consumption and increased energy production at the Boguchanskaya HPP.

### 2014 Consumption and price forecast

In 2013, the Russian government continued to make decisions to ensure a moderate increase in prices and tariffs on goods (services) for natural monopolies. In particular, electricity transmission tariffs and gas tariffs for industrial consumers are frozen for 2014, with previously proposed indexation starting

from July 2014. In addition, 2015-2016 tariff growth forecasts were reduced.

Based on the approved 2014 socio-economic development forecast and the 2016-2016 planning period:

- electricity prices for all consumers, except for the general population, will rise 6-7% on average per annum in 2014 and in 2015-2016, 6.3-7.2% per annum;
- the 2014-2016 indexations of regulated electricity tariffs for the population (except for electricity supplied in excess of the social consumption norm in 2014) will occur in July. As a result, from July 1, 2014-2016 tariffs will grow 3.3-4.2 % per annum;
- the indexation of regulated tariffs for network organizations will also be in

weekly and annually), and secondly, due to price fluctuations caused by unpredictable demand- or supply-side changes.

According to the NP Market Council, the average weighted index of equilibrium prices for electric power during 2013 in the European part of Russia and the Urals rose 10.3% compared with 2012 and reached 1,103.9 RUR/MWh. In Siberia, the average weighted index of equilibrium prices during the past year rose 2.0 % - to 718.3 RUR/MWh.

July: from July 1, 2014 there will be no indexation, and from July 1, 2015-2016 - by 4.8-4.9 % per annum;

• regulated tariffs for natural gas for consumers, except for the general population: from July 1, 2014 there will be no indexation, and from July 1, 2015 -2016 - by 4.8-4.9 % per annum;

According to the adjusted balance forecast issued by the FTS in regard to electricity energy (capacity) production and supply within the Russian Unified Energy System to constituent Russian entities for 2014. Russian electricity consumption in 2014 will increase 1.2% compared with 2013 and amount to 1 trillion 54.30 bln kWh.

## 4.3. Description of the Company's Business JSC RusHydro business model

## Peer group

Installed capacity of the largest global peers

There are numerous power companies globally which rely on hydro-power plants for the majority of their capacity and which are also State-owned.





(Canada)

power company,

which played a crucial

role in the economic

development of the

Province of Quebec.

The Company's

assets include:

numerous HPPs, such

as major cascades

on the Manicouagan

River and the La

Grande River. The

Company is owned by the Government of the Province of

Quebec.

Eletrobras (Brazil) The leading power company in Brazil and Latin America. Its assets include: numerous major HPPs, including Itaipu, the world's second largest hvdro-power plant (located on the Parana River). The Company is controlled by the State, which owns 52% of its shares.

## Canada's largest

It is a government agency focused on building and operating are the responsibility of other government agencies).

RusHydro Annual report 2013

## Statkraft (Norway) The largest electricity producer in Norway and the third largest in Scandinavia. The Company owns approximately 290 USA Bureau of Recla-HPPs. A significant mation number of these It is a government HPPs have long-term agency that operates storage reservoirs. numerous HPPs, The Company is wholly including the famous owned by the State. Hoover Dam

### United States Army Corps of Engineers (USACE) (USA)

HPPs (electricity sales

### Edelca (Venezuela)

The Company's main asset is the world's third largest HPP – the Guri Dam – on the Caroni River, with a capacity of 10.3 GW. The Company supplies most of Venezuela's electricity and is wholly owned by the State.

### BC Hydro (Canada)

The largest electricity producer in the Province of British Columbia. The Company owns 31 HPPs and is controlled by the provincial government.

## **Competitive environment in Russia**

### Holding Company

ROSATOM

INTER RAO UES

EuroSibEnergo

Gazprom Energoholding

IES-Holding

E.ON

\_\_\_\_\_

\_\_\_\_

Enel

SUEK

LUKOIL

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UMMC

Sintez Group

Unexim

Fortum

RZD

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TAIF

## Generating companies that are part of the holding

Concern Rosenergoatom JSC PIMCU Siberian Chemical Combine (SChC)

INTER RAO UES OGC-1 OGC-3 TGC-11 Bashkirskaya Generating Company

Irkutskenergo The Krasnoyarskaya HPP CHP of GAZ

TGC-1 JSC Mosenergo (TGC-3) OGC-2 (includes the assets of former OGC-2 and OGC-6) MUEC

TGC-5 TGC-6 TGC-7 (the Volzhskaya TGC) TGC-9

OGC-5

OGC-4

Kuzbassenergo (TGC 12) TGC 13

LUKOIL – Ekoenergo (TGC-8)

Novosibirskenergo

TGC-2

Quadra (TGC-4)

Fortum (TGC-10)

TGC-16

TGC-14

## The Company's Key Competitive Advantages



Hydro resources represent a renewable energy source that is the most environmentally friendly energy source, decreasing emissions from thermal and electricity power plants, while preserving hydro-carbon fuel reserves



HPPs offer the greatest degree of flexibility and can, if necessary, within minutes significantly increase energy generation to cover peak load



Not dependency on energy price volatility and, as a consequence, offers long-term price guarantees to consumers The Company's Share in the Market Segment and 2011-2013 Performance

Year		Electricity		Capacity		
	Consumption in Russia, million kWh	Company output, million kWh	Share	Installed capacity of Russian power plants, MW	Total installed capacity of the Company's power plants, MW	Share
2011	1,000,069	109,204.6	10.9%	218,146	35,152.9	16.1%
2012	1,016,498	112,550.1	11.1%	223,071	36,500	16.4%
2013	1,009,813	124,144	12.3%	226,470	37,488.5	16.5%

The Company's share has been stable during the last three years, both in terms of energy generation performance and the share of Russian power plants' total installed capacity.

## **Electricity market in Armenia**

In 2011, JSC RusHydro acquired a 90% stake in the Sevan-Hrazdan HPP Cascade in the Republic of Armenia. Having entered the Armenian electricity market, JSC RusHydro has won a significant market share.

Generating Facility	Туре	Installed Capacity, MW	Generating Company	Parent Company
The Sevan-Hrazdan HPP Cascade	HPP	562	CJSC International Energy Company	JSC RusHydro
The Vorotansky HPP Cascade	HPP	404	CJSC Vorotansky HPP Cascade	Armenian government (claimant to the purchase of CJSC Contour Global Hydrocascade (USA))
The Dzoragetskaya HPP	HPP	25	CJSC Dzora HPP	Offshore company Global-Contact
Small HPPs	HPP	66	MGES	Private investors
The Armyanskaya NPP	NPP	440	CJSC Armyanskaya NPP	Armenian government
The Hrazdanskaya TPP	TPP	1,110	RazTPP LLC	JSC INTER RAO ES
The Hrazdanskaya TPP	TPP	467	CJSC ArmRosgazprom	JSC Gazprom
(5th Power Generating Unit)	TPP	467	CJSC ArmRosgazprom	JSC Gazprom
The Yerevanskaya CHPP	CHPP	100	CJSC Erevanskaya CHPP	Armenian government

RusHydro Annual report 2013

## 4.4. Production Performance

2011-2013 Capacity sales structure of JSC RusHydro branches, RUR million



JSC RusHydro's power generation and output dynamics, kWh million



2011-2013 Capacity sales structure of JSC RusHydro branches, RUR million



Total installed capacity of JSC RusHydro's Group, as of January 1, 2014, MW



Actual electricity output by RusHydro's Group in 2013 was 10.4 % higher than in 2012 (124,144 mln kWh), the HPP's output increased by 16.3% and reached 93,690 kWh. The increase in electricity output was due to hydrological conditions that prevailed in the reporting period, caused by an increased inflow into reservoirs of the Volga-Kama Cascade, Siberia and the Far East.

In 2013, the Company's net proceeds from the sales of goods, taking in to account the costs for the purchased electricity and capacity, work and systemic services provided by corporate branches increased 18.52%.

The main factors that influenced the change in proceeds from the sales of electricity and capacity in 2013 compared to 2012 include:

- increased electricity output at JSC RusHydro branch HPPs;
- higher electricity sales on the day-ahead market (DAM):
- higher electricity sales prices on the dayahead market (DAM):
- increased capacity sales price based on competitive capacity selection (CCS) for HPPs in the first price zone;
- an indexation of regulated tariffs for electric energy and capacity;
- an increase in the volume and cost of electricity and capacity sales at regulated prices.

## The Holding JSC "RAO Energy System of East"

JSC RAO ES of the East is the largest energy holding, which operates in the Far East and has been a part of the RusHydro Group since 2011.

East", RUR million







RusHydro Annual report 2013

In 2013, the totaled installed capacity of

JSC RusHydro's divisions grew 64.45 MW

to 24,669.25 MW. The growth was driven

 at the Novosibirskaya HPP - 5 MW; • at the Kamskaya HPP - 6,0 MW;

• at the Volzhskaya HPP - 21,0 MW;

• at the Saratovskaya HPP - 9 MW.

at the Zhigulevskaya HPPC - 21,0 MW;

In total, the Company's installed capacity was

JSC Geoterm, JSC Pauzhetskaya GeoPP, CJSC

Source: Data from JSC RusHvdro

37,488.5 MW (including JSC Kolymaenergo,

MEC, JSC Boguchanskaya HPP, the Holding

JSC "RAO Energy System of East", and JSC Ust-Srednekanskaya HPP), a 2% growth

mainly by re-labeling:

compared with 2012.

As of December 31, 2013, the total installed capacity of JSC RAO ES of the East power plants was 9,070.94 MW - a 17,495 MW or 0.2% decline compared with 2012.

## 2012-2013 Sales structure of the Holding JSC "RAO Energy System of

Thermal energy sales on the retail market

## Installed capacity of energy companies of the Holding JSC "RAO Energy System of East", as of January 1, 2013, MW

Electricity sales on the retail market

Electricity and capacity sales on the wholesale electricity and capacity market (WE CM)

## 4.5. Tariff Regulation

Under statutory legal requirements, all plants with an installed capacity exceeding 25 MW can sell electricity only on the wholesale electricity and capacity market (WECM). A majority of the Company's power plants are WECM operators. Power plants with capacity ranging from 5 MW to 25 MW are entitled to operate both on the wholesale and

retail electricity and capacity markets. The Company's plants in this category can sell their electricity and capacity on the WECM. Given that plants with a capacity of less than 25 MW and operating on the retail market are not regulated by the State and can sell electricity and capacity at unregulated prices. The table below provides a tariff scheme for HPPs which

are operating on the WECM.

Electricity and capacity are sold in accordance with tariffs under regulated contracts (RCs). The total value of the RCs may not exceed 35% of the full energy and capacity supply volume to the wholesale market, as set forth in the balance sheet decision for the relevant producer.

		New plants		Existing plants		
		Facilities covered by capacity supply contracts	HPPs not covered by capacity supply contracts	Price Zone 1	Price Zone 2	Non-price Zone
	RC	Tariff	Tariff	Tariff	Tariff	
ver	Four-lateral agreements					Tariff
Electric power	DAM					
Electr	Free bilateral electricity and capacity contracts	-				
	RC					
	RC		Tariff	Tariff	Tariff	
	Four-lateral agreements					Tariff
Capacity	Capacity traded on a competitive basis		WECM	WECM	Tariff	
Ca	CSC	WECM				
	Free bilateral electricity and capacity contracts		WECM	WECM	WECM	

### Tariff policy of the Holding JSC "RAO **Energy System of East**"

JSC RAO ES of the East energy companies operate at tariffs set by the Russian FTS and regional regulators.

There is no unregulated tariff zone in the Far Eastern Federal District.

At present, in establishing tariffs for energy

## **4.6. Energy Efficiency**

methods:

The energy efficiency of JSC RusHydro's facilities is initially very high, since most of the electricity produced by the company is generated from renewable energy sources. Nevertheless, at the Company's facilities, there are additional opportunities to upgrade energy efficiency through the modernization of primary equipment and the

implementation of innovative energysaving technologies, the optimization of using water resources, and the reduction of power consumption for in-house needs.

In 2013, the Company continued to implement the 2010-2015 Program on energy conservation and upgrading



### Improving the energy efficiency of the **Russian economy**

- Reducing organic fuel use
- Constructing efficient HPPs
- Upgrading the efficiency of largescale power generating units for thermal and nuclear generation due to the wider use of energy storage systems
- Promoting energy consumers to use energy-saving technologies

operator. As a result, electricity output

In Prize Zone 2, capacity traded on a competitive basis is also sold under tariffs that are equal to RC tariffs.

Tariffs for plants that are WECM market players are established by the Russian Federal Tariff Service, in accordance with proprietary guidelines:

• The main tariff calculation methodology for existing plants (including those located in the non-price zone) is the indexation methodology: the base, which was calculated in 2007, is reviewed annually so that it can increase in line with the consumer price index (published by the Russian Ministry of Economic Development). The above-mentioned method is also applied to new plants starting from their

second year of operation (for facilities covered by capacity supply contracts, it applies to electricity only);

• For the first year of a plant's WECM operation, the tariff is based on the economically viable costs method, which helps identify the economically justified amount of financing that a company needs to carry out regulated operations during a specified time period.

In contrast with previous regulatory periods, the tariffs described above do not include an investment component. In 2011, the capacity price, based on competitive trading results, increased by a rate determined by the Federal Tariff Service, under approved guidelines that ensure the funding needed

to construct (rebuild or upgrade) HPPs (PSPPs). For facilities covered by capacity supply contracts, the capacity price is also calculated by the Russian Federal Tariff Service under approved guidelines.

The Russian Federal Law "On the Electric Power Industry" sets forth a legislative framework and government regulation, as well as the scope of power for regulatory bodies in the electric power industry.

The procedure for calculating and setting electricity and capacity tariffs and timelines are set by the Rules of Government Regulation and the Application of Tariffs on Electric and Heat Energy in Russia and are approved by the Russian Federal Tariffs Service.

RusHydro Annual report 2013

companies, that are part of the Holding, regulators use the following regulation

the wholesale market entities in nonprice zones;

 method of economically viable costs for other regions.

• return on invested capital method for the tariffs of grid companies located in nonprice zones of the wholesale market; long-term indexation method for achieving the required gross revenue; • indexation method for the electricity (capacity) tariffs of hydro-power plants -

> energy efficiency. The Program was developed pursuant to Federal Law 261-FZ (23.11.2009) "On Energy Saving and Improving Energy Efficiency and on Amendments to Certain Legislative Acts of the Russian Federation".

Improving the energy efficiency of JSC RusHydro's business

- Improving the energy efficiency of existing HPPs
- Optimizing water resource usage
- Lowering power consumption for inhouse needs for all activities

growth was chosen as the key indicator for the Program on energy conservation

and upgrading energy efficiency and RusHydro's Innovative Development Program.

## Implementation of the 2013 Energy **Efficiency Improvement Program**

## **Energy Efficiency Improvement in the Company's branches and SDCs**

Efforts to upgrade the capacity and efficiency of hydro-power units and to reduce electricity losses at power transformers brought the Company a 220.186 million kWh growth in long-term average output per annum.

Progress to date has been the result of synergies from the technical rehabilitation and modernization program (technological loss reduction by replacing turbines and units, upgrading the quality and volume of repairs and installing the latest energy-saving equipment and devices).

In particular, in 2013, the Company replaced hydro-turbines with higher efficiency ones at the Sayano-Shushenskaya HPP. Furthermore, hydro-power turbine units and hydro-turbines were replaced with more efficient equipment at the Zhigulevskaya HPP and the Volzhskaya HPP.

In 2013, the Company carried out energy audits at the Bureyskaya HPP, the Zeyskaya HPP, the Nizhegorodskaya HPP, the Novosibirskaya HPP, the Sayano-Shushenskaya HPP and the Mainskaya HPP, the Cascade of the Verkhnevolzhskive HPPs and the Cascade





of the Kubanskiye HPPs. Based on energy audit results, the Company developed measures aimed at improving the energy efficiency of facilities and also prepared energy performance certificates.

Energy saving in sales activity is achieved by reducing technical and commercial electricity losses and by upgrading energy accounting. Principal efforts include:

· introducing new methods of forecast consumption;



Businesses that do not have heavy energy consumption (e.g., design and engineering companies) are predominantly switching from incandescent lamps to energy efficient ones. These companies are also introducing automated control systems to monitor lighting and heating, etc.

## **Energy audit services**

The Company provides energy audit services and issues site energy performance certificates. The service is provided to the Group, as well as to external consumers. JSC NIIES, JSC Ryazan Energy Supply Company, JSC Chuvash Energy Supply Company and JSC Krasnoyarskenergosbyt are members of the self-regulatory organization for energy audits, which is entitled to carry out energy audits. In 2013, energy supply companies in total carried out 35 energy audits. The cost of the services was more than RUR 5 million.

## Education in energy saving

In working with customers (subscribers), energy supply companies hold consultations:

- on organizational, regulatory, technical, financial and economic issues related to energy saving in industry, housing and the utility sector and the public sector;
- on carrying out energy audits of

### Volume of each type of energy resource used by the Company in 2013

Republic.

Energy source type	Purchase of electric energy on the wholesale market, billion kWh	Cost of purchasing electric energy on the wholesale market, RUR billion
Multi-point deliveries to suit own needs of HPPs/PSPPs	0.92	0.97
Multi-point consumption of PSPPs (the pumping mode)	2.49	2.25
Total		3.22



## RusHydro Annual report 2013

businesses and organizations to determine the fuel reserve and energy resource savings and producing energy performance certificates;

• on energy services (legal aspects, types of energy service contracts);

• on assistance in working with information databases on energy-saving equipment and technologies.

In the reporting year, the Company continued to develop its regional Energy Saving and Energy Efficiency Centers, which have been established by energy supply subsidiaries in Krasnoyarsk, Novocheboksarsk, Ryazan, the Republic of Bashkortostan and the Chuvash

The Company's regional Energy Saving and Energy Efficiency Centers continue to work on installing automated electric power fiscal metering systems for different consumer groups. In 2013, these measurement systems were installed at 2,447 electricity metering points, and were then integrated into automated

measurement and information systems for electric power fiscal accounting for energy supply companies.

Within the framework of the International Energy Saving Day, celebrated on November 11, regional centers conducted educational activities and a photo contest on energy saving and energy efficiency for schoolchildren.

In addition, in 2013, JSC RusHydro energy supply companies' personnel replaced electric incandescent bulbs with energy-saving ones in children's social institutions as part of regional charity events.

## The Angara



# 5. Innovative Development

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5.7. 2013 Innovative Activities of the Holding JSC "RAO Energy System of East"

In 2013, the Company operated within the framework of the Innovative Development Program for 2011-2015 with a view to 2021.



be approved by the Board of Directors of JSC RusHydro and integrated into the Company`s strategic documents and programs system (Strategic Plan, Technical Policy, Production Program, Facility Safety Operation Program, Energy Efficiency Program, etc.).
# 5.1. Establishing Innovative **Development Infrastructure**

To meet future challenges, the JSC RusHydro intends to combine processes for seeking technical solutions of current problems and hightech and advanced development into a single management system. In 2013, major efforts were focused primarily on

the establishment of the Scientific and Technical Development Fund. In 2013. the Management Board of JSC RusHydro approved the establishment of the Scientific and Technical Development Fund, a wholly owned subsidiary of JSC NIIES in the legal form of CJSC

(closed joint stock company) with registered capital of RUR 900 million. It is required to obtain Directive of the Government of the Russian Federation for ownership in the Scientific and Technical Development Fund.

# **5.3. International Cooperation** in the Field of Innovation

In 2008 JSC RusHydro joined the Global Sustainability Electricity Partnership (GSEP), an international organization

that unites the major electric power companies from E-8 countries (except the UK). The strategic management of GSEP

## **Objectives of JSC RusHydro's participation in GSEP** expanding bilateral cooperation with companies-mambers of GSEP, including the possibility of implementing multipartner projects in countries outside the GSEP defending the positions of large hydro-power players internationally recognizing and including the hydro-power industry as an integral part of RES in all GREP international document

#### organizing an international seminar "Energy Development in 21 Century-World Experience and Best Practices", Tolyatti, 24-25 April, 2013

Traditionally, the Partnership`s members shall elect the chair-company from among their numbers for one year. According to the decision of GSEP chairs` summit, held in Berlin in June 2012, the functions of chair-company of GSEP for the period from June 2013 to June 2014 were transferred to JSC RusHydro.

GSEP year in Russia is a landmark event for the Company and for the Russian power industry as a whole.

JSC RusHydro declared topic of the year - "Innovation - a Fast Track to Sustainable Development of the World". The Company chose this topic to demonstrate that sustainable development is not possible without an innovative breakthrough.

#### Since 2008 JSC RusHydro is a member of E8

#### **Cooperation in the framework of E8**

Since 2008 JSC RusHydro is a member of E8 - an international organization founded in 1991 and brings together leading energy utilities of G8: JSC RusHydro, American Electric Power, Electricite de France, Duke Energy, Eletrobras, ENEL, Eskom, Hydro-Quebec, Kansai Electric Power Company, RWE, State

One of the major topics discussed in October 2013 at GSEP meetings in St. Petersburg - energy security. Sustainable power industry minimizes the risks to the environment and to the world at large. One of the overlooked risks today is considered the risk of cyber threats. GSEP members supported the initiative of JSC RusHydro to explore

Grid Corporation of Ch Federal de Electricidad Electric Power Compa

The main objectives of the organization include:

• establishing a common policy on sustainable development for electric power industry;

the topic of cyber security and the fight against computer viruses in industrial systems. The Company has a successful track record in this area in conjunction with the Kaspersky Lab and considers that today more than ever, it is important to move towards more vigorous joint actions. As part of this topic, the Company intends to work together with the Kaspersky

# **5.2. Creating External Conditions** for Innovative Activities

The idea to form an external innovative environment underlies JSC RusHydro concept of the interaction with a wide range of organizations, as well as expert community.

In 2013, the Company signed the following cooperation agreements on innovation:

- 1. On the scientific and technical cooperation with the Siberian Branch of the Russian Academy of Sciences to organize the introduction of innovative products and science-intensive technologies developed by SB RAS using RusHydro`s technological potential.
- 2. On interaction with the Russian Foundation for Basic Research to jointly implement conceptual stage of innovative projects.

The Scientific and Technical Council of JSC RusHydro (hereinafter - STC) and the Technology Platform "Advanced Technologies of Renewable Energy" (hereinafter - the Technology Platform) play an important role in forming innovative environment.

NTS includes about 200 best Russian experts, academics and industry practitioners. The decision of NTS launches the practical implementation of RusHydro Group`s innovative projects, providing objective professional external evaluation of the ideas contained in the projects and methods to implement them.

The Technology Platform is another way of interacting with stakeholders in the field of innovation aimed at bringing together efforts of State authorities, the constituent entities of the Russian Federation, the investment community, industrial, scientific, design



platforms the Scientific and Technical Council of JSC RusHydro expert community

> Innovative Program of JSC RusHydro

dependant

companies

favorable conditions for introducing highly efficient generation technologies based on RES, meeting the needs of the domestic economy and ensuring the competitiveness of products and services on the domestic and global markets.

and educational spheres to create

In October 2013, the First International Forum on Renewable Energy "Renewable Energy. Towards Raising Energy and Economic Efficiencies" (REENFOR-2013) was held under the auspices of the Platform. JSC RusHydro sponsored forum, the Company`s representatives participated in the Forum's events, roundtables on scientific and technological areas of RES.

Proposals to form topics within the framework of the Federal Target Program "Research and development on priority areas of scientific-technological complex of Russia for 2014-2020" (hereinafter - FTP R&D) were selected with organizational and expert support of JSC RusHydro. These proposals were analyzed and selected (68 topics).

In 2013 the Platform's participants implemented 18 projects totaling to RUR 536 million in accordance with the trends indicated in the Strategic Research Program of the Platform. The projects were financed by non-budgetary sources, the Russian Technological Development Fund and within the 2007-2013 Federal Target Program R&D formed by the Platform

is performed on a collegial basis by heads of all companies which have the status of chairpersons of GSEP.



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- organizing large-scale debates on the environment, globalization and social policy;
- exchanging experience in the field of the production and use of electricity and electricity markets` development;
- assistance to developing countries.

Lab. To implement the pilot project the Company will select one hydropower plant. In 2014 power engineers plan to discuss in more detail, select and adapt the solutions most applicable to hydropower industry. Duplication of technology will begin only after the program is tested on a pilot plant.

# **5.4.** The Volume and Sources of Financing Innovation Program

In 2013, the innovative activities was funded from own and borrowed funds. The total volume of financing innovation program of JSC RusHydro exceeded RUR 3.644 billion. The Innovative Development Program`s funding of the Holding JSC "RAO Energy System of East" was over RUR 3.97 billion, or 3.2% of the total revenues of the Holding companies participating in the Program.

## **5.5 Selecting Innovative Projects**

JSC RusHydro permanently applies multilevel system to search and select innovative projects. Typically, these are high-tech developments, focused on the prospective development of the electric power industry. For practical implementation the Company selects projects that lay the foundation for the prospective development of the electric power industry, coincide with the needs of RusHydro Group and capabilities of the external environment. So, in 2013, 16 new

projects were approved for implementation, and in general in the reporting year, the Company has worked to implement 34 R&D projects.

# **5.6. Key Innovative Projects of JSC RusHydro**



#### Binary power unit of the Pauzhetskaya GeoPP with discharging separat

Completion date of the project – 2014 The unique home-grown development to generate power at geothermal plants using binary technology. The feature of this development is the implementation of the project in severe climatic conditions (northern variant), using an inexplosive working body on the basis of the domestic equipment.

Binary cycle technology is based on the use of hot water heat that goes along with the steam from geothermal wells (the separat). Previously, the heat is not used in the power generation process. Today closed cycle is designed, in which the water is directed to a specially designed vaporizer, where it heats and vaporizes boiling halocarbon at a low temperature. The pressurized resultant halocarbon steam accelerates a turbine. Further, halocarbon is cooled, condensed and re-converted to liquid, ready for reuse.

This technology will significantly improve the utilization of geothermal resources of the existing deposits, as well as increase the volume of beneficial out-feed of thermal energy without drilling additional wells. In 2013, the structural improvements to equipment and technology were made. A variety of experimental runs was carried out to test the binary power unit.



Procedure for optimizing water and energy mode of the Volzhsko-Kamskiy cascade of HPPs

Completion date of the project – end of 2015 Water content of natural object became completely dependent on operation modes of the Volzhsko-Kamskiy cascade of HPPs due to the transportation of the river source Akhtuba downstream from the dam site of the Volga HPP. The need for flooding the Volga-Akhtuba floodplain involves additional waste water discharges through waterworks facilities of the Volzhsko-Kamskiy cascade of HPPs.

The optimization of HPP operation modes by using additional design solutions in the tail water will increase generation of the Volzhsko-Kamskiy cascade of HPPs and at the same time provide necessary level of flooding for the Volga-Akhtuba floodplain.

Development of the procedure for optimizing modes is a very complicated work from mathematical point of view. At the present time such a problem has not yet been addressed in any country or in any power system in the world, so creating a mathematical model to effectively control hydropower units as part of this project will be a unique world-class innovation.

RusHydro Annual report 2013



Developing standard equipment for low-head mini-HPPs with orthogonal hydropower units

Completion date of the project – 2014

As a result of the work the Company developed new equipment that can improve the efficiency (increasing the coefficient of performance and output) and the reliability of mini-HPPs, reduce costs and time to construct hydropower facilities of small hydropower industry. In addition, this will improve the efficient use of water resources for electricity generation at small HPPs, enhance the reliability of basic equipment of small hydropower plants and increase investment attractiveness of the construction of small hydropower industry's facilities.

# 5.7. 2013 Innovative Activities of the Holding JSC "RAO Energy System of East"

The principal document defining the innovative development of the Holding JSC "RAO Energy System of East" is the Innovative Development Program of the Holding JSC "RAO Energy System of East" for the period up to 2015 with a view to 2020. The main objective in the medium term is to create scientific and technical potential for the development of innovative-based technologies. The Holding Company's key innovation areas include the learning to use new technologies and innovations in management.

The most significant innovative projects of the Holding Company in 2013 include the Project "Introduction of innovative technologies (gas turbine units, GTU) as part of the implementation of the Project "Construction of gas turbine cogeneration plant at the site of central steam water boiler house CSWBH (thermal power plant "Eastern")", as well as the Project to construct wind-diesel complex in the village of Nikolskoe on Bering Ireland.

# 5.8. 2014 Innovative Development Plans

In 2013, JSC RusHydro developed a new version of the Innovative Development Program and the 2014-2016 mediumterm plan that is part of the Program. Currently, the Program and the plan are under consideration and will be published after approval.

- The Holding JSC "RAO Energy System of East" plans in the field of innovative development in 2014 include:
- Integrating the innovative development management system of the Holding JSC "RAO Energy System of East" with JSC RusHydro, including the joint development of JSC RusHydro's innovative development

- program integrated with the innovative development program of the Holding JSC "RAO Energy System of East";
- Improving the innovative development management system, regulatory and methodological support;
- Searching and selecting innovative ideas aimed at achieving the targets of the Company and the Holding, launching the most effective innovative development projects;
- Forming a community of experts (including external) that provide the expertise of innovative projects;

- Enhancing cooperation in the area of innovation with development institutions, research organizations, companies and public authorities;
- Continuing the work on promotion of public and private investment for R&D, facilitating the development of regulatory norms, rules and standards that enable to design, construct and operate generating and transmission facilities on the basis of new technologies.

## The Kolyma



# 6. Financial Performance



- 6.1. Assets, Equity and Liabilitie
- 6.2. Accounts Receivable and Accounts Payable
- 6.3. Liquidity and Debt Indices
- 6.4. Financial Highlights
- 6.5. Distribution of the Company's Net Profit
- 6.6. Credit Rating

In 2013, the RusHydro Group strengthened its financial position, effectively coping with the consequences of Far East floods, and simultaneously implementing the investment program, reducing key comparative figures for the debt burden and significantly increasing revenues and EBITDA, when returning to net profit.

- Key events that have affected the Group's 2013 financial performance included:
- the Group's companies increased power generation 10.4% compared to 2012;
- in 2013, the Group continued to implement its investment program, investing RUR 70,254 million in property, plant and equipment acquisition, with nine hydro-power units commissioned in the reporting period;
- the Group successfully restructured its debt, significantly reducing the share of short-term debt in the total value of borrowed funds by placing bonds in the amount of RUR 20,000 million and repaying bank loans;
- in June, JSC RusHydro's General Shareholders Meeting approved 2012 dividend payments in the amount of RUR 3,676 million, or 25% of the Company's net profit under RAS for 2012;

# 6.1. Assets, Equity and Liabilities

(RUR million)
Property, plant and equipment
Other non-current assets
Current assets
Total assets
Equity
Liabilities
The Laboration of the second sec

### This section is prepared based on the consolidated financial statements of the RusHydro Group (hereinafter "the Group"), in accordance with International Financial Reporting Standards (IFRS).

- in December, the Company registered an additional share issue report and completed the placement of additional shares, as a result of which, the total number of outstanding shares increased to 386,255,464,890 shares;
- the Group recognized an impairment loss of JSC INTER RAO UES shares in the amount of RUR 7,594 million, and the impairment loss of receivables in the amount of RUR 4,895 million.

2012	2013	Change
604,461	633,846	29,385
57,234	61,071	3,837
192,572	157,129	(35,443)
540,405	596,707	56,302
313,862	255,339	(58,523)
854,267		(2,221)

As of year-end 2013, the Group's assets slightly declined by RUR 2,221 million (0.3%). The main reason for this decline was the impairment of the Group's financial assets.

Property, plant and equipment are a significant portion of the Group's assets. In the reporting period, the share of property, plant and equipment increased from 71% to 74% due to the implementation of investment programs. As of December 31, 2013, the Group's property, plant and equipment was RUR 633,846 million, an increase of RUR 29,385 million (5%) compared with the same period last year. In 2013, the Group's current assets decreased RUR 35,443 million (18%) due to a change in intentions related to the transfer of JSC DRSK shares.

In 2012, at an Extraordinary General Shareholders Meeting of JSC RusHydro, a decision was made to increase authorized capital. The additional share issue report was registered in December 2013, which led to an increase in RusHydro Group's capital in the reporting period by RUR 56,302 million (10%) to RUR 596,707 million.

2013 total liabilities decreased RUR 58,523 million (19%) to RUR 255,339 million. This was caused by a retirement of accounts payable as of the end of 2012 on shares issued due to a reclassification of liabilities in respect to additional shares in the amount of RUR 50,000 million and a reduction in deferred tax liabilities by RUR 8,482 million (21%) to RUR 31,000 million.

In 2013, the RusHydro Group also restructured obligations to improve the efficiency of using borrowed funds. During the reporting year, current liabilities decreased RUR 114,599 million (59%) to RUR 80,419 million, whereas the non-current liabilities increased RUR 56,076 million (47%) to RUR 174,920 million.



# **6.2. Accounts Receivable and Accounts Payable**

In 2013, the RusHydro Group's accounts receivable decreased to RUR 1,285 million (3%), with a slight change in the structure of receivables during the reporting period. The largest part is constituted by trade receivables, which share amounted to 67% in 2013 (65% in 2012).

#### Structure of Accounts Receivable, RUR million



Structure of Accounts Payable\*, RUR million



\* Excluding taxes payable in the amount of RUR 11,059 million as of December 31, 2013 and RUR 9,049 million in December 31, 2012

# 6.3. Liquidity and Debt Indices

Ratio	2012	2013	Change
Current Ratio	0.93	1.79	0.86
Acid-Test Ratio	0.89	1.69	0.80
Absolute Liquidity Ratio	0.28	0.50	0.22
Financial Independence Ratio	0.63	0.70	0.07

As of year-end 2013, the Group achieved a significant improvement in all key liquidity indices, with all of them being significantly higher than the recommended levels. It suggests a high degree of financial stability of the RusHydro Group and an efficiency improvement during the reporting period.

Index	2012	2013	Change
Total Debt, RUR million	141,035	151,777	10,742
Net Debt, RUR million	101,216	117,305	16,089
Total Debt / Assets	0.17	0.18	0.01
Total Debt / EBITDA	2.20	1.92	(0.28)
EBITDA / Interest Expenses	5.55	5.83	0.28
Financial Leverage	0.58	0.43	(0.15)

In 2013, the total debt of the RusHydro Group increased RUR 10,742 million (8%) to RUR 151,777 million, primarily due to bond placements in the amount of RUR 20,000 million. Net debt increased RUR 16,089 million (16%) to RUR 117,305 million. However, the key comparative figures of the Group's debt burden in the reporting year remained at optimal levels. The ratio of total debt to the Group's assets slightly increased from 0.17 to 0.18, the ratio of total debt to EBITDA decreased from 2.20 to 1.92, financial leverage decreased from 0.58 to 0.43, and the ratio of EBITDA to interest expenses increased from 5.55 to 5.83.

In 2013, accounts payable of the RusHydro Group increased RUR 3,309 million (7%) to RUR 49,473 million due to a 4% increase in trade payables to RUR 30,968 million and in advances received by the Group by 17% to RUR 8,869 million. As of December 31, 2013, all payables were Russian ruble-denominated.

In 2013, the share of the Group's current debt in total debt declined from 52% to 13%, a comfortable level for further JSC RusHydro activities and investment program implementation.

Structure of Non-current Debt as of December 31, 2013, RUR million



Non-current debt Bonds Other non-current borrowings

In 2013, the Group's non-current debt nearly doubled to RUR 131,890 million, which reflects the desire of JSC RusHydro to improve the efficiency of using borrowed funds and reduce the impact of numerous financial risks. In the structure of noncurrent debt, long-term loans account for 55%, bonds placed by the Group – 42% and other long-term borrowings - 3%.



Current portion of non-current debt

As of the end of the financial year, the

Group's current debt decreased RUR

funds. In the structure of current debt,

current portion of non-current loans -

46% and other borrowed funds - 9%.

million, due to the repayment of borrowed

53,865 million (73%) to RUR 19,887

current loans account for 45%, the

Other current borrowings

Current debt

In the reporting year, the Group placed bonds in the amount of RUR 20,000 million and received RUR 10,613 million under the credit facility agreement with JSC Sberbank of Russia to refinance the debt of the Holding JSC "RAO Energy System of East" companies. Also, the Group restructured its debt to JSC Sberbank of Russia in the amount of RUR 40,000 million, repaying RUR 20,000 million in 2013 and extending the repayment period of the remaining debt for 7 years till 2020.

As of the end of 2013, more than 90% of the Group's debt is denominated in Russian rubles. Commitments to competent State-owned banks account for 40% of total debt financing, and the effective interest rate on RusHydro Group loans is 8.5%. The Group also has open credit lines in the largest Russian banks totaling more than RUR 115,000 million, which significantly reduces the likelihood of adverse impacts from financial risks.

#### **Revenue Structure, RUR million**



Heat energy and hot water sales Capacity sales Government subsidies Other revenue

Third party sarvices Other expenses

#### Structure of Operating Expenses, RUR million



## **6.4.** Financial Highlights

In 2013, RusHydro Group increased total revenue, maintaining operating expenses at the previous year's level.

During the reporting year, the Group's revenue increased RUR 17,277 million (6%) to RUR 326,878 million. A key factor for this increase was the growth in energy generation at JSC RusHydro's HPPs with the indexation of electricity and capacity tariffs.

The Group's operating expenses rose only RUR 1,603 million (1%) to RUR 272,784 million, which not only meets the task to limit the rate of expense increases to the annual inflation rate, but also significantly exceeds it.



In 2013, the structure of the Group's revenue did not change significantly. Proceeds from electricity sales provide more than 71% of revenue; their volume in the reporting year increased 5% to RUR 231,241 million. Proceeds from the sales of heat energy and hot water rose 5% to RUR 33,147 million, the sales of capacity increased 5% to RUR 25,300 million. Other revenue, which includes the return on electricity transmission, grid connection, repair and construction and other services, increased 1% to RUR 23,944 million.

In 2013, in the Far East regions, the Group was also given government subsidies in the amount of RUR 13,246 million to eliminate inter-regional crosssubsidization in electricity rates, the compensation for the difference between approved electricity rates and the reduced rates, as well as compensation for the loss on fuel.

The structure of operating expenses also did not change significantly in 2013. Payroll expenses rose in proportion with inflation (6%) and amounted to RUR 56,907 million. Expenses for third parties services slightly (2%) increased. Taxes other than on income rose 26% to RUR 9,295 million, whereas other expenses increased 2% to RUR 13,597 million.

	2012	2013	Change
EBITDA, RUR million	64,188	79,171	14,983
EBITDA margin, %	21.5%	25.2%	3.7%
Net profit (loss), RUR million	(25,324)	20,993	46,317
Adjusted net profit, RUR million	32,313	52,673	20,360
Adjusted net profit margin, %	10.8%	16.8%	5.9%
Net profit (loss) per one share, RUR	-0.08	0.06	0.14

Upgrading JSC RusHydro's operational efficiency, while increasing the role of non-regulated and regulated electricity and capacity supply contracts, has led to a reduction in the costs of purchased electricity and capacity (6% to RUR 54,622 million), fuel expenses (2% to RUR 44,472 million), electricity distribution expenses (1% to RUR 37,922 million), depreciation (0.1% to RUR 18,218 million) and the cost of other materials (2% to RUR 9,599 million).

EBITDA Dynamics (RUR million) and EBITDA margin (%)

**Dynamics of Adjusted Net Profit (RUR** million) and Adjusted Net Profit Margin (%)

Return on Assets and Equity, %



As of year-end 2013, the Group recorded EBITDA growth of RUR 14,983 million (23%) to RUR 79,171 million, with the Group's EBITDA margin increasing from 21.5% to 25.2%. The main factors behind these increases included: rising operating results and maintaining operating costs at the previous year's level as tariffs increased.

In 2013, the RusHydro Group returned to a net profit of RUR 20,993 million against a loss of RUR 25,324 million in the previous year. Adjusted net profit in 2013 amounted to RUR 52,673 million, a 63% increase as compared to the same period of the previous year. The difference between the reported and adjusted profit is attributed mainly to the following noncash effects: recognition of impairment loss on numerous property, plant and equipment and financial investments (generating facilities, shares of JSC INTER RAO UES, and promissory notes of CJSC Boguchansky Aluminum Plant), impairment loss on accounts receivable and the recognition of income from the reduced pension plan of JSC DGK. Adjusted net profit margin increased from 10.8% in 2012 to 16.8% in 2013.

As of year-end 2013, the Group's comparable profit margins also improved due to a significant increase in adjusted net profit. During the reporting year, return on assets (ROA) increased from 6.0% to 9.3%, and return on equity (ROE) increased from 3.8 % to 6.2%.

#### **Cash Flows**

(RUR million)	2012	2013	Change
Net cash generated by operating activities	58,876	62,428	3,552
Net cash used in investing activities	(121,626)	(51,155)	70,471
Net cash used in/ generated by financing activities	55,213	(16,706)	(71,919)
Decrease in cash and cash equivalents	(7,557)	(5,385)	2,172
Cash and cash equivalents at the end of the year	39,857	34,472	(5,385)

In 2013, net cash generated by operating activities increased RUR 3.552 million (6%) to RUR 62,248 million due to a return to net profit. Net cash used in investing activities decreased more than two times to RUR 51,155 million due to a significantly lower difference between amount of investments in bank deposits and their redemption in 2013 compared to 2012 At the same time, during the reporting year, the Group's financial

activities saw a net outflow of RUR 16,706 million against an inflow of RUR 55.213 million in the previous year, due to the repayment of borrowings in the amount of RUR 153.114 million.

recorded a reduction in negative cash flow of RUR 2,172 million (29%) to RUR 5,385 million. However, successful repayment of a portion of the Group's

# 6.5. Distribution of the **Company's Net Profit**

The issue of the distribution of the Company's net profit\* based on 2013 FY results, including the issue of the payment (declaration) of dividends, will be submitted for consideration to the Annual General Meeting of Shareholders in 2014.

On June 28, 2013, the Annual General Meeting of Shareholders approved the distribution of profits (including the payment (declaration) of dividends) and losses of the Company based on 2012 financial year results.

Retained profit (loss) of period Distribute to: Reserve fund Accumulation fund Dividends Covering losses from

\* The information is presented in accordance with RAS

## 6.6. Distribution of the Company's Net Profit

Rating Agency	Fitch Ratings	Standard & Poor's	Moody's
International rating	BB+	BB+	Ba1
National rating	ruAA	ruAA+	Aa1.ru
Outlook	Negative	Negative	Stable
Outlook revision date	24.03.2014	28.03.2014	24.07.2013

As a result, in 2013, the RusHydro Group

debt via debt restructuring and the increase in cash flow from operating activities allows the Group to count on a positive value for the index in 2014.

The Group's cash and cash equivalents in the reporting year decreased RUR 5,385 million (14%) to RUR 34,472 million, mainly due to dividend payments.



	Amount in RUR	Share, %
of the reporting	14,702,294,636.95	100%
	735,114,731.85	5%
	10,291,606,695.37	70%
	3,675,573,209.73	25%
previous years	0	0%

## The Zeya



# 7. Corporate Governance



7.1. Corporate Governance Principles 7.2. Shareholder and Investor Relations

- 7.3. Management and Control Bodies
- 7.4. The Company's Internal and External Audit System 7.5. Remuneration due to Management and Control Bodies

7.6. Managing Subsidiary and Dependent Companies

# 7.1. Corporate **Governance Principles**

Since 2010, the Company has had a Corporate Governance Code, according to which the Company assumes its obligations to comply with the norms and principles set forth in it: accountability, transparency, good faith and fairness.



The Code, according to which corporate governance is implemented in the Company, is based on Russian Law, the Russian Corporate Conduct Code, recommended and internationally recognized principles of corporate governance, such as the UK Corporate Governance Code and the Corporate Governance Principles of the Organization for Economic Cooperation and Development (OECD).







In 2013 the Russian Institute of Directors, based on monitoring results, confirmed JSC RusHydro`s National Corporate Governance Rating at 7+, evaluating it as a company with well-developed corporate governance practices.

The Company's corporate governance risks are low, because the Company adheres to the requirements of applicable Russian laws and acts in accordance with the majority of recommendations contained within the Russian Corporate Conduct Code, as well as international best corporate governance practices, including requirements set forth for companies listed on the London Stock Exchange.

#### Upgrading corporate governance practices in 2013

New versions of internal documents were adopted, which now comply with applicable changes in Russian laws: the Articles of Association, the Regulations on the procedure for convening and holding the General Meeting of Shareholders, and the Regulations on committees of the Board of Directors. JSC RusHydro`s Policy on Internal Audit to provide independent and objective guarantees aimed at achieving and upgrading the Company's operations via a systematic, disciplined approach to evaluating and improving the effectiveness of risk management, control and corporate governance processes was approved.

#### Increasing the public transparency of procurement procedures: the Company`s procurement management system is recognized as one of the most effective by the execution quality of federal legal requirements and generally accepted business practices in procurement.

Joining the Anti-corruption Associationof Russian Bussines for independent expert's assesment of the Company's anti-corruption policy andits further improvement. The shareholders can make enquiries as to exercising their rights using the hotline telephone number of JSC R.O.S.T. Registrar, the Company's registrar. They can also send enquiries by e-mail. Depository receipt holders can address their enquiries to the Bank of New York Mellon, or to the Company's Corporate Governance Department and/or IR Department. In 2013, the Company's Annual Report was included for the first time in the ReportWatch Rating, where it took 251st place among more than 400 international companies and 3rd place among Russian companies. In addition, the 2013 Annual Report was recognized at competitions in Russia: the Best Annual Report of the Siberian Federal District (JSC Moscow Exchange MICEX -RTS ), the Best Interactive Annual Report (the rating

# 7.3. Management and Control Bodies

Organizational Structure of the Company's Management and Control Bodies

## 7.2. Shareholder and Investor Relations

Corporate website	www.rushydro.ru, www.eng.rushydro.ru
Information disclosure page	www.e-disclosure.ru/portal/company.aspx?id=8580
Official print media	Rossiyskaya Gazeta
Hotline telephone number for shareholders	8-800-555-99-97
E-mail	<u>rushydro@rrost.ru</u>

JSC RusHydro is actively working on relationships with stock market participants, improving transparency and communication. The key principle of the Company`s shareholder and investor relations lies in providing ongoing access to information related to the main aspects of corporate activities, including RusHydro Group`s strategic priorities and plans. Information disclosure complies with all Russian legal requirements, Russian and foreign securities market regulations, the Company's internal regulations, and Russian and foreign securities market regulators, as well as the rules of the relevant stock exchanges where the corporate securities are traded.

The website's home page contains information on JSC RusHydro's current activities. The home page contains direct links to resolutions of the Board of Directors, as well as information on forthcoming and past General Meetings of Shareholders and financial statements. The page also contains news updates concerning the Company, as well as for its SDCs.

In 2013, the Company disclosed some 177 significant facts pertaining to corporate activities, the decisions of the management bodies, data on the issue of securities, interested party transactions and information that impacts the price of the Company's securities. The Company actively publishes press releases on a daily basis.

Investor relations functions are actively carried out by the structural IR Department, which has been recognized as the best IR department in Russia's power sector among market participants, according to voting results of ThomsonReuters Extel. By the end of 2013, more than 200 individual and group meetings of the Company's management with managers of Russian and foreign funds investing in stocks, as well as quarterly conference calls for analysts, investors and rating agencies, were organized.

RusHydro Annual report 2013



agency "Expert RA"), Best Interactive Annual Report (Journal "Securities Market"); nominations: " Electric power industry (mining, oil and gas exploration, production of electricity) – 1st place", "Best Electronic Annual Report- 1st place" (competition held in the Krasnodar Region).

## **General Meeting of Shareholders**

The General Meeting of Shareholders is the Company's highest management body; the competency of the General Meeting of Shareholders is defined by the Russian Federal Law on Joint Stock Companies, as well as by RusHydro's Articles of Association. The procedure for preparing and convening the meeting and the shareholders' decision-making process is set forth in the Regulations on Convening and Holding the Company's General Meeting of Shareholders.

A decision to convene the General Meeting of Shareholders is made by the Company's Board of Directors at its own initiative or at the request of the Audit Commission, the Auditor or by shareholder(s) owning at least ten percent of the Company's voting shares (as of the date of said request).

Shareholders owning at least two percent of the Company's voting shares are entitled to include items on the agenda of the Annual General Meeting of Shareholders

and nominate candidates to the Board of Directors and the Audit Commission. Such proposals shall be received at least 90 days after the expiration of the fiscal year.

Shareholders shall be given notice of the General Meeting at least 30 days prior to the date of the General Meeting; and if the agenda of an Extraordinary General Meeting includes items on electing members of the Company's Board of Directors, such notice shall be given at least 70 days prior to said General Meeting.

The Company provides shareholders with timely information about the General Meeting(s), including via the corporate website (http://www.rushydro.ru/corporate/ general-meeting/forthcoming/), which also discloses all materials for the forthcoming meeting.

The right to participate in voting on agenda issues at the General Meeting of Shareholders is one of the key rights

## The Board of Directors

The Board of Directors is a collegial body responsible for general corporate management. The Board of Directors develops JSC RusHydro's strategy and controls its executive bodies to protect the rights and lawful interests of the Company's shareholders.

Members of the Board of Directors are elected by a cumulative vote at the General Meeting of Shareholders for the period till the next Annual General Meeting of Shareholders. Members may be re-elected an unlimited number of times. The Board of Directors shall consist of 13 members. The right to propose a candidate for the Board of Directors belongs to shareholders that own at least two percent of the Company's voting shares.

The Board of Directors operates in accordance with Russian laws, the Articles of Association, the Corporate Governance Code and Regulations on Convening and Holding Meetings of the Company's Board of Directors.

JSC RusHydro's Articles of Association stipulate that the following issues fall under the exclusive competence of the Company's Board of Directors: defining priority business

areas, approving long-term corporate development programs, including: approval of the Investment Program and the approval (update) of the Company's key performance indicators (KPIs) and the business plan. The Board of Directors decides on the approval of transactions related to the Company's non-current assets exceeding 10% of the balance value of these assets as of the date of the decision on such a transaction, as well as equity transactions and the shares of entities in which the Company participates,

#### Structure issues reviewed at meetings of the Board of Directors in 2013



of shareholders, which can be exercised

either by voting in person at the Meeting,

or by mailing in ballots. The function of the

counting commission to vote and count votes

at the General Meeting of Shareholders shall

be performed by the Company's independent

Concerning issues related to exercising

the rights of depository receipt holders,

pertaining to their participation in voting on

Shareholders, JSC RusHydro interacts with

the Bank of New York Mellon, the depository

agenda issues for the General Meeting of

bank of record, as well as with Bank VTB

(open joint-stock company), the custodian.

In 2013, the Company held one annual and

one extraordinary meeting of shareholders.

Information on the issues discussed is given

in the Appendix and on the corporate website

http://www.rushydro.ru/corporate/general-

transactions related to the disposal or

intangible assets, and construction in

possible disposal of assets (fixed assets,

The Board of Directors holds regular meetings

at least once per month in accordance with the approved Action Plan. In 2013, the Board

held 22 meetings (compared with 28 in 2012), with one being held in person. More than 100

issues were reviewed at the meetings.

meeting/overpast/.

progress).

registrar.

Issues related to the mangement of DSC; Issues related to the participation or termination of participation in other organizations; Issues related to the approval of transaction; Strategic issues of the Company's development; Operating issues

Changes that occurred in the membership of the Board of Directors in 2013 are linked to compliance with the requirement of the mandatory election of the Board of

Directors at the Annual General Meeting of Shareholders (June 2013) and the requirement of shareholders on the early termination of powers and the election of

of	mbers of the Board Directors served from June 29, 12 to April 19, 2013	of [	mbers of the Board Directors served from April 19, 13 to June 28, 2013	of	embers of the Board Directors served from ne 28, 2013
1.	Tatsiy Vladimir Vitalyevich (Chairman of the Board of Directors)	1.	Poluboyarinov Mikhail Igorevich (Chairman of the Board of Directors)	1.	Poluboyarinov Mikhail Igorevich (Chairman of the Board of Directors)
2.	Danilov-Danilyan Victor Ivanovich (Deputy Chairman of the Board of Directors)	2.	Danilov-Danilyan Victor Ivanovich (Deputy Chairman of the Board of Directors)	2.	Danilov-Danilyan Victor Ivanovich (Deputy Chairman of the Board of Directors)
3.	Ayuev Boris Ilyich	3.	Ayuev Boris Ilyich	3.	Ayuev Boris Ilyich
4.	Dod Evgeny Vyacheslavovich	4.	Volkov Eduard Petrovich	4.	Berndt Kristian Andreas
5.	Zimin Victor Mikhailovich	5.	Gubin Ilya Nikolaevich	5.	Bugrov Andrey Evgenievich
6.	Kovalchuk Boris Yurievich	6.	Dod Evgeny Vyacheslavovich	6.	Bystrov Maksim Sergeevich
7.	Kurtser Grigory Markovich	7.	Zimin Victor Mikhailovich	7.	Dod Evgeny Vyacheslavovich
8.	Malyshev Andrey Borisovich	8.	Kudryavy Victor Vasilyevich	8.	Zimin Victor Mikhailovich
9.	Poluboyarinov Mikhail Igorevich	9.	Morozov Denis Stanislavovich	9.	Ivanov Sergey Nikolaevich
10.	Tugolukov Evgeny Aleksandrovich	10.	Nozdrachev Denis Aleksandrovich	10.	Morozov Denis Stanislavovich
11.	Sharipov Rashid Ravelyevich	11.	Pivovarov Vyacheslav Victorovich	11.	Pivovarov Vyacheslav Victorovich
12.	Shelkov Mikhail Evgenievich	12.	Pfyffenbach Berndt	12.	Stolyarenko Vladimir Mikhailovich
13.	Shishin Sergey Vladimirovich	13.	Stolyarenko Vladimir Mikhailovich	13.	Shishin Sergey Vladimirovich

The Board of Directors consists of six independent directors, who are defined as independent in accordance with the Code of Corporate Conduct\* (the version recommended by the Order #421/r issued by FCSM on April 4th, 2002), one executive director and six non-executive directors that help to ensure the independence and objectivity of the Directors' decisions. A member of the Board of Directors of JSC

RusHydro A.E. Bugrov is a national award winner, "Director of the Year Awards 2013" in the category "Independent Director", and a Deputy Chairman of the Board of Directors V.I. Danilov-Danilyan entered the list of the "top 50 independent directors".

Directors, who are members of the Board of Directors, have extensive professional experience in electric power, the economy

\* In 2014-2015, the Company plans to implement the new Corporate Governance Code recommended by the decision by the Board of Directors of the Bank of Russia on March 21st, 2014

RusHydro Annual report 2013

a new Board of Directors (April 2013). In 2013, seven new members were included in the Board of Directors.

and corporate governance. Many of them have advanced degrees and are graduates of international business schools.

## Members of the Board of Directors

#### **Chairman of the Board of Directors**

Mikhail Igorevich POLUBOYARINOV		
Position	Member of the Management Board, First Deputy Chairman of Vneshekonombank State Corporation	
Status as a member of the Board of Directors	Non-executive Director (professional counsel)	
Year of birth	1966	
Citizenship	Russian	
Education	The Moscow Financial Institute (the Financial Academy attached to the Government of the Russian Federation), crediting and economics department, qualification - economist (1988), post-graduate studies at the Academy of People's Economy (named after G.V. Plekhanov) (1998), Ph.D. in Economics	
Curriculum Vitae	Deputy General Director of JSC Aeroflot – Russian Airlines (2003 – 2009), various positions in Vneshekonombank State Corporation (2009), including: Director of the Infrastructure Department (2009-2011), Deputy Chairman (2011) and member of the Management Board (2012), First Deputy Chairman of Vneshekonombank State Corporation (since 2012) Current positions include: member of the Board of Directors of JSC North Caucasus Health Resorts, CJSC Leader, JSC Sovkomflot and JSC Zarubezhneft.	
Ownership of Company shares	Owns no Company shares	

#### Deputy Chairman of the Board of Directors

Viktor Ivanovich DANILOV-DANILYAN		
Position	Director and Chairman of the Academic Board of the Institute for Aquatic Issues of the Russian Academy of Sciences (RAS)	
Status as a member of the Board of Directors	Independent Director	
Year of birth	1938	
Citizenship	Russian	
Education	Moscow State University (named after M.V. Lomonosov), the Mechanical- Mathematical Department (1960), Ph.D. in Economics, Professor, Associate Member of the Russian Academy of Sciences (RAS)	
Curriculum Vitae	Director and Chairman of the Academic Board of the Institute for Aquatic Issues of the Russian Academy of Sciences (2003); Head of the Chair of Environmental Sciences and the Management of Water Resources and member of the Academic Board of the Russian University of People's Friendship (2005); Editor-in-Chief of the Encyclopedia Publishing House (2007); Head of the Chair of Natural Resources Management and member of the Academic Council of Moscow State University (named after M.V Lomonosov) (since 2009) Currently, serves as the Chairman of the Board of Directors of the Sustainable Development Fund	
Ownership of Company shares	Owns no Company shares	

#### Members of the Board of Directors

Chairman of the Man SO UES
Non-executive Direc
1957
Russian
The Urals Polytechn
Member of the Manag of the Management Bo 2004)
Current positions inclu Chairman of RNK SIGI
0.008024%
JSC "RAO Energy Sys capital: 0.019754%, s

Evgeny Vyacheslavovich DOD	
Position	Chairman of the Mana
Status as a member of the Board of Directors	Executive Director (pr
Year of birth	1973
Citizenship	Russian
Education	Moscow Aviation Insti Management and Eco
Curriculum Vitae	General Manager of C. Management Board of Management Board of Current positions inclu System of East", memb the Supervisory Board Partnership, member Employers "Russian U member of the Board of Association, member of Organization Charitabl
Ownership of Company shares	0.095461%

nagement Board and member of the Board of Directors of JSC

ctor (professional counsel)

nic Institute, electric power stations (1979)

gement Board of JSC RAO UES of Russia (2004-2008), Chairman Board and member of the Board of Directors of JSC SO UES (since

clude: member of the Board of Directors of JSC Russian Grids, and GRE Non-Commercial Partnership

ystem of East", shares owned in the organization's share share of the organization's ordinary shares owned: 0.020699%

nagement Board of JSC RusHydro

professional counsel)

titute (the State Technical University), Machine-tool Facilities onomics (1995) PhD in Economics

CJSC INTER RAO UES (2000 – 2008); Chairman of the of JSC INTER RAO UES (2008 – 2010); Chairman of the of JSC RusHydro (since 2009).

lude: Chairman of the Board of Directors of JSC "RAO Energy nber of the Board of Directors of JSC SO UES, member of rd of JSC VBRR, the Russian Hydro-power Non-Commercial r of the Management Board of the all-Russian Association of Union of Industrialists and Entrepreneurs" and RSPP LLC, I of Managers of MCUER Autonomous Non-Commercial

of the Russian National Committee of the World Energy Council, of Trustees and the Foundation Council of the Non-Commercial ble Foundation "Awareness"

#### **Kristian Andreas BERNDT** Position General Director of EF-TEK LLC Status as a member of the Board of Directors Independent Director Year of birth 1956 Citizenship Germany Moscow Civil Engineering Institute named after VV Kuibyshev, construction Education of thermal and nuclear power plants, Ph.D. (1985, USSR), holder of Doctor of Engineering (Dr.-Ing) under German standards (1991) **Curriculum Vitae** Engineering bureaus in Germany(1981 – 2001), project manager at Fichtner GmbH & Co. KG (2001 - 2005), head of EnergoFichtner LLC (2005 - 2012) and CEO of EF-TEK (since September 2012) Ownership of Company shares Owns no Company shares

Chairman of the Mar Acting Chairman of t
Non-executive Direc
1964
Russian
Moscow Civil Engine engineering of river Trade Academy, glob
Ministry of Economic Federal Agency for N Regional Developme NGOs, En Manageme of the President of th (2010 to 2013), Chair of the NP Market Co Caucasus Health Re
Owns no Company s

Andrey Evgenievich BUGROV	
Position	Vice President of CJSC INTERROS Holding Company, Deputy General Director of JSC MMC Norilsk Nickel working with the investment community and government bodies, Vice President, Member of the Management Board of the Russian Union of Industrialists and Entrepreneurs (RSPP)
Status as a member of the Board of Directors	Independent Director
Year of birth	1952
Citizenship	Russian
Education	Moscow State Institute of International Relations, international economic relations (1974), PhD in Economics
Curriculum Vitae	Executive positions in Interros Group (2002) Vice President of JSC Interros (since 2013). Member of the Board of Directors of JSC MMC Norilsk Nickel (since 2002), Chairman of the Board of Directors (since 2011), Deputy Chairman of the Board of Directors (since March 2013), since April 2013 - Deputy General Director of JSC MMC Norilsk Nickel working with the investment community and government bodies. Member of the Council of the Non-Governmental Organization "Council on Foreign and Defense Policy"
Ownership of Company shares	Owns no Company shares

Victor Mikhailovich ZIMIN	
Position	Head and Chairman c
Status as a member of the Board of Directors	Non-executive Direct
Year of birth	1962
Citizenship	Russian
Education	The Tomsk State Arch engineering, enginee
Curriculum Vitae	Deputy Head and Hea facilities of the Abaka Russian Railways (20 2009) and member of Chairman of the Gove
Ownership of Company shares	Owns no Company sh

#### anagement Board JSC ATS the Management Board of the Non-Commercial

#### ctor

eering Institute named after V.V. Kuibyshev, hydro-power r structures and hydro-power plants (1986), Russian Foreign ybal economy (1998)

ic Development of the Russian Federation (2001-2007), the Management of Special Economic Zones, Deputy Minister of ent (2007). Director of work with government agencies and nent LLC (2008-2009), Deputy Plenipotentiary Representative the Russian Federation in the North Caucasus Federal District rman of the Management Board of JSC ATS, Acting Chairman ouncil and Chairman of the Board of Directors of the JSC North esorts (since 2013).

shares

of the Government of the Republic of Khakassia

ctor (government official)

chitectural and Construction University, motor car er (2007)

ead of the Construction Department for newly constructed (an Branch of the Krasnoyarsk Railways, a branch of JSC 004-2007); member of the Russian State Duma (2007of the State Duma Committee on Agriculture; Head and the vernment of the Republic of Khakassia (since 2009)

hares

Sergey Nikolaevich IVANOV	
Position	General Director of JSC Russian Energy Company
Status as a member of the Board of Directors	Independent Director
Year of birth	1961
Citizenship	Russian
Education	Moscow Engineering Physics Institute, Theoretical Nuclear Physics (1984), Doctor of Economics, Professor, Corresponding Member of the Russian Academy of Sciences
Curriculum Vitae	JSC Russian Energy Company (1994-1997, 1999-2002), JSC Concern Rosenergoatom (1997-1999, 2002-2006), CJSC INTER RAO UES (2007-2008), JSC FGC UES (2008- 2010), Acting General Director (since 2010) and General Director of JSC Russian Energy Company (since 2011). Since 2012, General Director of the management companies LLC LENSENT, LLC Insurance Aspect, CJSC Svent, since 2013 - LLC Lisiteya, LLC Pasiphae, LLC Metida, LLC Amalthea and LLC Oberon. Chairman of the Board of Directors of JSC Nechernozemagropromstroy corporation, member of the Board of Directors of JSC Russian Energy Company, JSC Exhibition Pavilion "Electrification", JSC INPK RET, and Chairman of the Presidium of the Autonomous Non-Commercial Organization National Institute of Energy Security
Ownership of Company shares	Owns no Company shares

Denis Stanislavovich MOROZOV	
Position	Representative of the Russian Federation in the Board of Directors of the European Bank for Reconstruction and Development, Executive Director for the Russian Federation, Belarus and Tajikistan
Status as a member of the Board of Directors	Independent Director
Year of birth	1973
Citizenship	Russian
Education	Moscow State University named after M.V. Lomonosov, political economy (1993), jurisprudence (1996), PhD in Economics. Swiss Banking School (2000), Harvard Business School in-depth program management training (2009), School of International and Public Affairs at Columbia University, Master of Public Administration, Program for economic policy management (2011)
Curriculum Vitae	Financial and credit institutions (1992 – 1999), leadership positions in JSC Norilsk Nickel (2007 – 2009). General Director of JSC Uralkali (2010 – 2011), Director of the Russian Federation in the Board of Directors of the European Bank for Reconstruction and Development (since March 2011). Member of the Board of Directors of JSC Russian Agency for Export Credit and Investment Insurance, JSC ALROSA, JSC Rossetti.
Ownership of Company shares	Owns no Company shares

Vyacheslav Victorovich PIVOVAROV	
Position	General Director of A
Status as a member of the Board of Directors	Non-executive Direct
Year of birth	1972
Citizenship	Russian
Education	State Academy of Ma Economy (1995), Ame Business School, MB
Curriculum Vitae	Advisor to the Minister Altera Capital LLC (sin
Ownership of Company shares	Owns no Company sh

Indimir Mikhaila	vich STOLYARENKO
Vlauinni Mikilailu	VICHSTULIARENNU

Ownership of Company shares

Position	Professor at the Natio
Status as a member of the Board of Directors	Non-executive Directo
Year of birth	1961
Citizenship	Russian
Education	Leningrad Finance and finance and credit (198 School of Law at Harv School of Business, Co Economics, Doctor of
Curriculum Vitae	The banking sector (si Management Board of Professor of the "Theo the National Research Chairman of the Super Member of the Counci of Trustees of the St. F of the Council of the D Russian Federation. M

Altera	Capital	IIC
Alleid	Capitat	LLC

ctor (professional counsel)

anagement (named after Sergo Ordzhonikidze), Global erican University of Paris, Applied Economics (1995), Stanford BA (2002)

er of Economic Development (2009 - 2011), General Director of nce 2011)

hares

onal Research University "Higher School of Economics"

tor (professional counsel)

nd Economics Institute (named after N.A. Voznesensky), 983), Moscow State Law Academy, jurisprudence (2002), rvard University (2002), London Business School and the Columbia University, Executive MBA-GLOBAL (2008), PhD in f Laws

The banking sector (since 1991). From 2003 to 2012 President - Chairman of the Management Board of JSC AKB EVROFINANCE MOSNARBANK (2003-2012), Professor of the "Theory and practice of business and government relations" in the National Research University "Higher School of Economics" (since 2009). Chairman of the Supervisory Board of JSC AKB EVROFINANCE MOSNARBANK, Member of the Council of the Russian Banks Association, Member of the Board of Trustees of the St. Petersburg University of Economics and Finance, Member of the Council of the Diplomatic Academy of the Ministry of Foreign Affairs of the Russian Federation, Member of the Council of Banking Law Institute, Moscow State Law Academy (named after O.E. Kutafin), Member of the Supervisory Council of the Non-commercial Partnership "Harvard Alumni Club" (Moscow), Member of the Public Council attached to the Federal Security Service of the

Owns no Company shares

**Russian Federation** 

#### Sergey Vladimirovich SHISHIN

Position	Senior Vice President of JSC VTB Bank
Status as a member of the Board of Directors	Independent Director
Year of birth	1963
Citizenship	Russian
Education	The Highest Border Guards College of the KGB USSR (1984), the KGB USSR Institute (1990), the Russian Academy of Civil Services attached to the President of the Russian Federation, majoring in stage and municipal management (1999).
Curriculum Vitae	Military Service (1980 – 2007), Senior Vice President of JSC VTB Bank (since 2007). Member of the Supervisory Board of JSC VBRR
Ownership of Company shares	Owns no Company shares

\* Company shares owned by members of the Board of Directors are represented as of 31.12.2013, as a share in the Company's share capital and as a stake in the ordinary shares owned by a member of the Company's Board of Directors. These portions are equal, as the Company has issued only ordinary shares

## **Committees of the Board of Directors**

The Committees of the Board of Directors are established to preliminarily review the most critical matters that fall under the competence of the Company's Board of Directors. The Committees must report to the Board of Directors. The Board of Directors is responsible for ensuring regular and efficient cooperation with its Committees. Reports on the Committees' operations are reviewed annually at meetings of the Company's Board of Directors.

The Committees include persons with expertise and knowledge in the relevant areas, which enhances the performance and quality of the Board of Directors' activities. The number of members on each Committee is defined to ensure a thorough discussion of the addressed issues and to reasonably consider different points-of-view. The Committees

acts in accordance with the Regulations on the Committees of the Company's Board of Directors.

In accordance with best corporate governance practices, the Audit Committee and the HR and Remuneration Committee shall include only independent directors who are members of the Company's Board of Directors.

Members of a Committee are elected for a period prior to the General Shareholders' Meeting, which elects a new Board of Directors. In 2013, changes in the membership of the Committees are explained by the election of new Members of the Board of Directors in April and June 2013. Acting members of the Committees were elected by the Board of Directors July 15, 2013.

The Company has implemented the practice of holding joint committee meetings to ensure a more detailed and efficient review of relevant issues.

#### **The Strategy Committee**

The Strategy Committee is responsible for enhancing the Company's longterm performance and developing recommendations on current adjustments in growth strategy.

#### Members of the Committee served from July 25, 2012 to May 14,2013

- 1. Andrey Borisovich Chairman of the Co
- 2. Chairman of the Committee
- 3. Mikhail Viktorovich Voyevodin Vladimir Olegovich Volik
- 4. Vsevolod Valeryanovich Gavrilov 5.
- 6. Evgeny Evgenievich Gorev 7. Viktor Ivanovich Danilov-Danilyan
- 8. Mikhail Alekseyevich Mantrov
- Valentin Yefimovich Mezhevich 9.
- 10. Maria Gennadievna Tikhonova

11. Nikolay Grigorievich Shulginov

Members of the Committee served from July 15, 2013		
Andrey Borisovich Malyshev	Chairman of the Commi President of JSC Group	
George Ilyich Rizhinashvil	<b>Deputy Chairman of the C</b> Deputy Chairman of the M	
Alexander Aleksandrovich Auzan	Acting Dean of the Faculty (named after M.V. Lomono	
Vyacheslav Viktorovich Pivovarov	General Director of Altera Member of the Board of D	
Evgeny Evgenievich Gorev	Member of the Managem	
Viktor Ivanovich Danilov-Danilyan	Deputy Chairman of the B rector and Chairman of th Academy of Sciences (RA	
Mikhail Alekseyevich Mantrov	Deputy Chairman of the M	
Valentin Yefimovich Mezhevich	Member of the Federatior Deputy Chairman of the E	
Nikolay Grigorievich Shulginov	First Deputy Chairman of	
Maria Gennadievna Tikhonova*	Deputy Chairman of the N of JSC FGC UES	

\*Maria G. Tikhonova's term of office is from 15.10.2013 to 17.02.2014

#### Report on the Committee Activities in 2013

In 2013, the Committee held twelve meetings (compared with 11 in 2012), including two meetings that were held jointly with other committees. The list of all issues reviewed at the meetings is available in the Appendix and on

our website (http://www.rushydro.ru/ corporate/committees/stratcom/). The Committee continued to implement the Company's Innovative Development Program. The Committee also periodically reviewed management`s reports on the implementation of priority projects under the Program. Prior to the Board of Directors of JSC RusHydro`s review

Malyshev –	
ommittee	

- George Ilich Rizhinashvili Deputy

- Members of the Committee served from May 14, 2013 to July 15, 2013
- 1. Andrey Borisovich Malyshev -Chairman of the Committee
- 2. George Ilich Rizhinashvili Deputy
- Chairman of the Committee
- Viktor Ivanovich Danilov-Danilyan 3. Evgeny Evgenievich Gorev 4.
- Mikhail Alekseyevich Mantrov 5.
- 6. Valentin Yefimovich Mezhevich
- 7. Vyacheslav Viktorovich Pivovarov
- Maria Gennadievna Tikhonova 8.
- 9. Nikolay Grigorievich Shulginov

#### nittee

E4

#### Committee

Management Board of JSC RusHydro

ty of Economics of Moscow State University nosov)

a Capital LLC Directors

nent Board of JSC RusHydro

Board of Directors of JSC RusHydro (Independent Director), the Dihe Academic Board of the Institute for Aquatic Issues of the Russian AS)

Management Board of JSC RusHydro

on Council of the Federal Assembly of the Russian Federation, First Economic Policy Committee of the Federation Council

the Management Board of JSC SO UES

Management Board, Member of the Management Board

of these issues related to transactions with the Company's shares and stakes in organizations, such transactions shall be analyzed by the Committee. In total, nine such transactions were analyzed. Work to develop the Concept of the Fund for Scientific and Technological Development was carried out jointly with the Reliability Committee.

#### **The Audit Committee**

The Audit Committee enables the Board of Directors to control the Company's financial and economic activities by developing recommendations on the selection of an independent audit organization and on the procedure for interacting with the Audit Commission and the external auditor.

#### Members of the Committee served from July 25, 2012 to May 14, 2013

- 1. Danilov- Danilyan Viktor Ivanovich -Chairman of the Committee
- 2. Kurtser Grigory Markovich
- 3. Malyshev Andrey Borisovich

#### Members of the Committee served from May 14, 2013 to July 15, 2013

- 1. Danilov-Danilyan Viktor Ivanovich -Chairman of the Committee
- 2. Kudryavy Viktor Vasilievich
- 3. Nozdrachev Denis Aleksandrovich

#### The HR and Remuneration Committee

The HR and Remuneration Committee of the Company's Board of Directors is focused on attracting gualified management to manage corporate activities and to develop necessary 3. incentives for their successful operation. The Committee is tasked with developing principles and criteria for determining the remuneration and material incentives for members of the Board of Directors, the Chairman and members of the Management Board and to issue recommendations (conclusions) on the above-mentioned issues to the Board of Directors.

#### Members of the Committee served from July 25, 2012 to May 14, 2013

- 1. Danilov-Danilyan Viktor Ivanovich -Chairman of the Committee
- 2. Kurtser Grigory Markovich
- Malyshev Andrey Borisovich

Members of the Committee served from July 15, 2013				
Viktor Ivanovich Danilov-Danilyan	Chairman of the Committee Director and Chairman of the Academic Board of the Institute for Aquatic Issues of the Russian Academy of Sciences (RAS), Deputy Chairman of the Board of Directors of JSC RusHydro (Independent Director)			
Kristian Andreas Berndt	General Director of EF-TEK LLC, member of the Board of Directors of JSC RusHydro (Independent Director)			
Sergey Nikolaevich Ivanov	General Director of JSC Russian Energy Company, member of the Board of Directors of JSC RusHydro (Independent Director)			

#### Members of the Committee served from July 15, 2013

Viktor Ivanovich Danilov-Danilyan	Chairman of the Commit Director and Chairman of Russian Academy of Scie Deputy Chairmen of the N
Andrey Evgenievich Bugrov	Vice President of CJSC INT Norilsk Nickel working with dent, Member of the Manag neurs (RSPP) Member of the Board of Dir
Sergey Nikolaevich Ivanov	General Director of JSC Ru Member of the Board of Di

#### Report on the Committee Activities in 2013

In 2013, the Committee held twelve meetings (compared with 11 in 2012). The list of all issues reviewed at the meetings is available in the Appendix and on our website (http://www.rushydro. ru/corporate/committees/audit/). The main issues reviewed at the meetings included a preliminary review of the Company's statements (prepared in accordance with RAS and ISFR), the development of recommendations for

the Board of Directors on the selection of an external auditor and issues related to controlling the use of insider information and implementing measures of the Comprehensive Program for the Prevention of Commissioning Illegal Actions by JSC RusHydro Employees, a review of the 2013 RusHydro strategic risks Registry and a report on the architecture of the corporate risk management system. The Committee also studied the issue on the Procedure for the selection of appraisers and (or) candidate(s) for the position of

appraiser (s) for determining the value of shares, property and other assets of the Company and the Board of Directors` recommendation to approve the Procedure was issued.

#### Report on the Committee Activities in 2013

IIn 2013, the Committee held eight meetings (compared with 5 in 2012). The list of all issues reviewed at the meetings is available in the Appendix and

#### on our website (http://www.rushydro. ru/corporate/committees/hr/). The Committee reviewed issues on changing membership of the Management Board, including: the approval of new candidates to the Board`s members, as well as the approval of a new Corporate Secretary of

- Members of the Committee served from May 14, 2013 to July 15, 2013
- 1. Danilov-Danilyan Viktor Ivanovich (Chairman)
- 2. Kudryaviy Viktor Vasilievich
- 3. Nozdrachev Denis Aleksandrovich

#### ittee

of the Academic Board of the Institute for Aquatic Issues of the ences (RAS)

Management Board of JSC RusHydro (Independent Director)

TERROS Holding Company, Deputy General Director of JSC MMC ith the investment community and government bodies, Vice Presiagement Board of the Russian Union of Industrialists and Entrepre-

lirectors of JSC RusHydro (Independent Director)

Cussian Energy Company Directors of JSC RusHydro (Independent Director)

JSC RusHydro. The Committee allowed the Management Board`s members to hold concurrently positions in the management of other organizations and prepared recommendations related to the approval of the 2014-2016 Collective Agreement of RusHydro`s branches.

#### **The Investment Committee**

The Investment Committee is tasked with preliminary reviews of investment projects and programs, and the enhancement and development of the Company's investment policy.

#### Members of the Committee served from July 25, 2012 to May 14, 2013

- 1. Vladimir Vitalyevich Tatsiy -
- Chairman of the Committee 2. Mikhail Alekseyevich Mantrov
- 3. Alexandr Vladimirovich Ilyenko
- 4. Ivan Sergeevich Korolev
- 5. Gennady Aleksandrovich Kurkin
- Viktor Ivanovich Danilov-Danilyan 6.
- 7. Aleksey Viktorovich Maslov
- 8. Denis Aleksandrovich Nozdrachev
- George Ilyich Rizhinashvili 9.
- 10. Alexandr Valerievich Grigoriev
- Tikhonova Maria Gennadievna 11.

#### Members of the Committee served from May 14, 2013 to July 15, 2013

- 1. Denis Aleksandrovich Nozdrachev -Chairman of the Committee
- 2. Iliya Nikolaevich Gubin
- Viktor Ivanovich Danilov-Danilyan 3.
- Alexandr Vladimirovich Ilchenko 4.
- 5. Mikhail Alekseyevich Mantrov
- Alexey Viktorovich Maslov 6.
- 7. Vyacheslav Viktorovich Pivovarov
- 8. George Ilyich Rizhinashvili
- 9. Tikhonova Maria Gennadievna

#### The Reliability, Energy Efficiency and Innovations Committee

The Committee is tasked with the preliminary review of issues pertaining to technical, environmental and energysaving and efficiency policies, and the development of standards in the sphere of technical regulation, the long-term planning of hydro-power and power industry development, based on the use of other renewable energy sources (RES).

#### Members of the Comm July 25, 2012 to May 14

- 1. Kudryavy Viktor Va of the Committee
- 2. Voskresensky Sero
  - 3. Bellendir Evgeny N
    - Bogush Boris Bori 4.
    - 5. Bolgov Mikhail Vas
    - Alzhanov Rakhme 6.
    - 7. Sergeyeva Lyudmi
    - 8. Rizhinashvili Georg
    - Maslov Alexey Vikt 9. 10. Khaziakhmetov Ra
    - 11. Tatsiy Vladimir Vita
    - 12. Shishin Sergey Vladimirovich

#### Members of the Committee served from July 15, 2013

Maxim Sergeevich Bystrov	<b>Chairman of the Committee</b> Chairman of the Management Board of JSC ATS Acting Chairman of the Management Board of the Non-commercial Partnership Market Council Member of the Board of Directors of JSC RusHydro
Boris Borisovich Bogush	Member of the Management Board, Chief Engineer of JSC RusHydro
Bugrov Andrey Evgenievich	Vice President of CJSC INTERROS Holding Company, Deputy General Director of JSC MMC Norilsk Nickel working with the investment community and government bodies, Vice Presi- dent, Member of the Management Board of the Russian Union of Industrialists and Entrepre- neurs (RSPP) Member of the Board of Directors of JSC RusHydro (Independent Director)
Viktor Ivanovich Danilov-Danilyan	Director and Chairman of the Academic Board of the Institute for Aquatic Issues of the Rus- sian Academy of Sciences (RAS) Member of the Board of Directors of JSC RusHydro (Independent Director)
Viktor Mikhailovich Zimin	Head and Chairman of the Government of the Republic of Khakassia Member of the Board of Directors of JSC RusHydro
Sergey Nikolaevich Ivanov	General Director of JSC Russian Energy Company Member of the Board of Directors of JSC RusHydro (Independent Director)
Alexandr Vladimirovich Ilyenko	Management Member, Director for Development Management of UES of JSC SO UES
Sergey Anatolievich Kirov	Director on Economy of JSC RusHydro
Mikhail Alekseyevich Mantrov	Deputy Chairman of the Management Board of JSC RusHydro
George Ilyich Rizhinashvili	Deputy Chairman of the Management Board of JSC RusHydro
Maria Gennadievna Tikhonova*	Deputy Chairman of the Management Board, Member of the Management Board of JSC FGC UES

\*Maria G. Tikhonova's term of office is from 15.10.2013 to 17.02.2014

#### **Report on the Committee** Activities in 2013

97

In 2013, the Committee held ten meetings (compared with nine in 2012), focusing on issues including: implementing JSC RusHydro's Business Plan and reports

on the implementation of the Company's key performance indicators (KPIs). The Committee periodically issued recommendations to determine the Company's position (its representatives) on the agenda issues of management bodies of subsidiary and dependent

companies (SDCs). The list of all issues reviewed at the meetings is available in the Appendix and on our website http:// www.rushydro.ru/corporate/committees/ Investments/.committees/Investments/.

Viktor Vasilievich Kudryavy	Chairman of the Commit Advisor to the Euroceme
Rakhmetulla Shamshievich Alzhanov	Deputy Chairman of the Ma
Evgeny Nikolaevich Bellendir	Director of Scientific Resea
Boris Borisovich Bogush	Member of the Manageme
Mikhail Vasilievich Bolgov	Acting Deputy General Dire Sciences (RAS)
Maxim Sergeevich Bystrov	Chairman of the Managem Acting Chairman of the Ma Partnership Market Counci Member of the Board of Dir
Eduard Petrovich Volkov	General Director of JSC EN
Sergey Modestovich Voskresensky	Member of the Manageme
Sergey Nikolaevich Ivanov	General Director of JSC Ru Member of the Board of Dir
Sergey Anatolievich Pavlushko	Member of the Manageme Chief Dispatcher of JSC SO
George Ilyich Rizhinashvili	Deputy Chairman of the Ma
Rasim Magsumovich Khaziakhmetov	Director for Technical Polic
Report on 2013 Committee Activities	The meetings were focus on issues pertaining to Ir

In 2013, the Committee held twelve meetings (compared with 4 in 2012), including meetings that were held jointly with the Strategy Committee.

sed mainly Investment Program implementation, including the **Comprehensive Modernization Program** for generating facilities. The Committee reviewed and recommended that the Board of Directors approve the Provisions

nittee served from 4, 2013	Members of the Committee served from May 14, 2013 to July 15, 2013		
asilievich – Chairman	1.	Kudryavy Viktor Vasilievich – Chairman of the Committee	
gey Modestovich	2.	Alzhanov Rakhmetulla Shamshievich	
Nikolaevich	3.	Bellendir Evgeny Nikolaevich	
isovich	4.	Bogush Boris Borisovich	
silievich	5.	Bolgov Mikhail Vasilievich	
etulla Shamshievich	6.	Volkov Eduard Petrovich	
ila Anatolievna	7.	Voskresensky Sergey Modestovich	
ge Ilyich	8.	Maslov Alexey Viktorovich	
torovich	9.	Pavlushko Sergey Anatolievich	
asim Magsumovich	10.	Rizhinashvili George Ilyich	
alyevich	11.	Khaziakhmetov Rasim Magsumovich	
adimirovich			

#### Chairman of the Committee nt Group

anagement Board - of JSC RusHydro

arch of JSC RusHydro

ent Board, Chief Engineer of JSC RusHydro

rector of the Institute for Aquatic Issues of the Russian Academy of

nent Board of JSC ATS anagement Board of the Non-commercial ·il

irectors of JSC RusHydro

#### NIN

ent Board of JSC RusHydro

ussian Energy Company irectors of JSC RusHydro (Independent Director)

ent Board , Director for UES Mode Control -0 UES

anagement Board of JSC RusHydro

icy and Development of JSC RusHydro

for the public technological and price audit process for major investment projects of JSC RusHydro. The list of all issues reviewed at the meetings is available in the Appendix and on our website http://www.rushydro.ru/corporate/ committees/reliability/.

# **The Management Board**

The Management Board is responsible for implementing corporate goals and the development strategy and manages the Company's day-to-day operations to ensure high asset yield and maximum operational profitability.

The Management Board is a collegiate executive body of the Company, acting in accordance with applicable Russian laws, the Articles of Association, the Corporate Governance Code and Regulations on the Management Board and is governed by resolutions of the General Meeting of Shareholders and the Company's Board of Directors.

The Management Board is responsible for implementing corporate goals and the development strategy and manages the Company's day-to-day operations to ensure high asset yield and maximum operational profitability. The Chairman of the Management Board is responsible for operations and is the Company's chief executive body.



**Evgeny Vyacheslavovich** Dod

Chairman of the Management Board and member of the Board of Directors of JSC RusHydro

Terms of reference Managing corporate operations

Year of birth 1973

Citizenship Russian

Education

The Moscow Aviation Institute (the State Technical University), machine-tool facilities management and economics (1995). PhD in Economics

#### Curriculum Vitae

- General Manager of CJSC INTER RAO UES (2000-2008):
- Chairman of the Management Board of JSC INTER RAO UES (2008-2010);
- Chairman of the Management Board of JSC RusHydro (since 2009).

Current positions include: Chairman of the Board of Directors of JSC "RAO Energy System of East", member of the Board of Directors of JSC SO UES, member of the Supervisory Board of Russian Hydro-power Non-Commercial Partnership, member of the Management Board of the all-Russian Association of Employers the "Russian Union of Industrialists and Entrepreneurs" and RSPP LLC, member of the Board of Managers of MCUER Autonomous Non-Commercial Association. member of the Russian National Committee of the World Energy Council, member of the Board of Trustees and Foundation Council of the Non-Commercial Organization Charitable Foundation "Awareness"

Ownership of Company shares 0.095461%



Sergey Nikolaevich Abrashin

#### Member of the Management Board of JSC RusHydro

Terms of reference Managing the operations of the Economic Security Department

Year of birth 1959

Citizenship Russian

Education Higher education, radio communications and law major

**Curriculum Vitae** 

- Head of the Security Department of YUKOS Oil Company (2006-2008),
- Vice President of JSC AK Transnefteprodukt (2008-2010),
- Advisor to the Chairman of the Management Board and a member of the Management Board of JSC RusHydro (since 2010).

Current positions include: member of the Board of Trustees of the Non-Commercial Organization Charitable Foundation "Awareness"

Ownership of Company shares 0.002577%



**Rakhmetulla Shamshievich** Alzhanov

#### Member of the Management Board of JSC RusHydro

**Deputy Chairman** of the Management Board

Terms of reference Managing capital construction operations

Year of birth 1950

Citizenship Russian

#### Education The Novocherkassk Polytechnic Institute, majoring in electric power plants (electrical engineer) (1972)

#### **Curriculum Vitae**

- General Director of JSC Sangtudinskaya HPP-1 (2005-2009),
- Deputy Chairman of the Management Board, Engineer-in-Chief, member of the Management Board of JSC RusHydro (since 2009).

Current positions include: member of the Supervisory Board of the Power Industry Veterans Council non-commercial partnership, member of the Supervisory Board of the Hydro-power Industry of Russia non-commercial partnership, member of the Board of Trustees of the Non-Commercial Organization Charitable Foundation "Awareness"

Ownership of Company shares 0.000035%



**Konstantin Valerievich Bessmertny** 

#### Member of the Management Board of JSC RusHydro

Terms of reference Managing financial operations

Year of birth 1973

Citizenship Russian

#### Education

The Moscow State Technical University (named after N.E. Bauman), majoring in automated data processing and control systems (systems engineer) (1996), the Academy of the People's Economy attached to the Government of the Russian Federation, majoring in organizational finance control (Master of Business Administration) (2008)

#### Curriculum Vitae

- (2000 2008),
  - 2010).
  - Nizhnevartovskaya SDPP (2009–2010),
  - CFO of JSC RusHydro (2010),
  - member of the Management Board of JSC RusHydro (since 2010).

Current positions include: member of the Board of Trustees of the Non-Commercial Organization Charitable Foundation "Awareness"

Ownership of Company shares 0.009061%

• Advisor, CFO of CJSC INTER RAO UES

• Advisor of JSC INTER RAO UES (2008-

• Director of the Moscow Branch of the



Boris **Borisovich Bogush** 

#### Member of the Management Board of JSC RusHydro

Chief Engineer of JSC RusHydro

Terms of reference Managing production operations, Chief Engineer

Year of birth 1952

Citizenship Russian

#### Education

The Saratov Polytechnic Institute. majoring in mechanical engineering (1975), the Academy of the People's Economy attached to the Government of the Russian Federation (2004)

#### Curriculum Vitae

- Member of the Management Board (2007 - 2009)
- Managing Director and Head of the Production Business Unit of JSC RusHydro (2007-2010),
- member of the Management Board of JSC RusHydro (since 2010).

Current positions include: member of the Board of Trustees of the Non-Commercial Organization Charitable Foundation "Awareness"

Ownership of Company shares 0.004234%

In 2013, the Management Board addressed issues related to the Company's current operations.

Members of the Management Board are elected and terminated by a resolution of the Board of Directors. The right to propose the number of members of the Management Board and its candidates belongs to the Chairman of the Management Board, who exercises this right after preliminary discussions and recommendations issued by the HR and Remuneration Committee.

As of year end, JSC RusHydro's Management Board includes 14 persons. In 2013, the Board of Directors made changes in the membership of the Management Board: Vladimir Alekseyevich Pekhtin was elected as a member in April last year, in September, the powers of Alexey Viktorovich Maslov were terminated, and at the same time, Sergey Nikolaevich Tolstoguzov was elected as a member.

Since 2009, Evgeny Vyacheslavovich Dod has been the Chairman of the Management Board. His term of office is five years. The terms and conditions of the employment agreement of the Chairman of the Management Board are determined by the Company's Board of Directors.

In 2013, the Management Board addressed issues related to the Company's current operations. The Management Board also discussed all strategic issues that fall under the competence of the Company's Board of Directors. The Management Board prepared reports on the achievement of performance indicators, the Company's Business Plan and approved target values of key performance indicators of subsidiary and dependent companies, and reviewed implementation reports.



Sergey Modestovich Voskresensky

#### Member of the Management Board of JSC RusHydro

Terms of reference Managing operations of the design and research division

Year of birth 1956

Citizenship Russian

#### Education

The All-Union Extra-mural Polytechnic Institute, majoring in Economics and construction organization (engineering economics) (1984), Ph.D. in Economics

#### Curriculum Vitae

- From 2007 to 2014 he was General Director of JSC Lenhydroproject,
- Member of the Management Board of JSC RusHydro (since 2012).

Current positions include: member of the Board of Trustees of the Non-Commercial Organization Charitable Foundation "Awareness", Member of the Board of Directors of JSC Lenhydroproject

#### Ownership of Company shares Owns no Company shares



Yuri Vasilievich Gorbenko

#### Member of the Management Board of JSC RusHydro

#### Terms of reference

Managing construction operations in the implementation of the BEMO project, the construction project of the Upper Naryn Cascade of HPPs and the restoration and reconstruction project of the Sayano-Shushenskaya HPP named after P.S.Neporozhniy

Year of birth 1958

Citizenship Russian

#### Education

The Krasnoyarsk Construction Engineering Institute, majoring in industrial and civil construction (construction engineer) (1992), the Academy of the People's Economy attached to the Government of the Russian Federation, majoring in corporate development management (2004), Ph.D. in Economics

#### Curriculum Vitae

- General Director of JSC Bureyskaya HPP (1998-2008),
- Managing Director and Head of the Far East Division of JSC RusHydro and JSC UK HvdroOGK (2007-2009).
- member of the Management Board of JSC RusHydro (since 2009).

Current positions include: member of the Board of Trustees of Non-Commercial Organization Charitable Foundation "Awareness"

Ownership of Company shares 0.005410%



**Evgeny Evgenievich** Gorev

#### Member of the Management Board of JSC RusHydro

Terms of reference Managing the operations of the Corporate and Legal Departments

Year of birth 1975

#### Citizenship Russian

#### Education The Law Department of the Moscow State University (named after M.V. Lomonosov) (1998)

#### Curriculum Vitae

- Deputy Director for Corporate Development, Head of the Legal Department of the Corporate Center of CJSC INTER RAO UES (2006-2008),
- Deputy Director of the Corporate Center, Corporate Governance Director of the Moscow branch of JSC INTER RAO UES (2008).
- Deputy Head of the Corporate Center, Corporate Governance Director of JSC INTER RAO UES (2008-2009), member of the Management Board of JSC RusHydro (since 2009).

Current positions include: member of the Board of Trustees of the Non-Commercial **Organization Charitable Foundation** "Awareness"

Ownership of Company shares 0.006472%



Mikhail Alekseyevich Mantrov

Member of the Management Board of JSC RusHydro

Deputy Chairman of the Management Board of JSC RusHydro

Terms of reference Managing the operations of the Finance and Economics Departments

Year of birth 1965

Citizenship Russian

#### Education

The Moscow Power Engineering Institute (Technical University), majoring in electrical systems cybernetics (1988), the Academy of the People's Economy attached to the Government of the Russian Federation, majoring in financial managements (1996)

Curriculum Vitae

- RAO UES (2000-2008), • Deputy Chairman of the Management
- Board, Head of the Corporate Center of JSC INTER RAO UES (2008-2009),
- Deputy Chairman, member of the Management Board of JSC RusHydro (since 2009).

Current positions include: member of the Board of Trustees of the Non-Commercial Organization Charitable Foundation "Awareness" and Member of the Board of Directors of LLC VolgaHydro

Ownership of Company shares 0.024186%

• Deputy General Director of CJSC INTER



Vladimir Alekseyevich Pekhtin

Member of the Management Board of JSC RusHydro

Deputy Chairman of the Management Board of JSC RusHydro

General Director of JSC Lenhydroproject and JSC Hydroproject Institute

Terms of reference Managing scientific and project activities

Year of birth 1950

Citizenship Russian

#### Education

The Leningrad Order of the Lenin Polytechnic Institute (named after M.I.Kalinin) majoring in hydro-power engineering of river structures and hydropower plants (1974), Doctor of Engineering Sciences

#### **Curriculum Vitae**

- Kolymagesstroy, all positions from foreman to Head of the Kolymagesstroy construction (1974-1994),
- General Director of JSC Kolymaenergo (1994–1997),
- Chairman of the Magadan Oblast Duma of the second convocation, member of the Federation Council (1997-2000),
- State Duma Deputy of the Federal Assembly of the Russian Federation of the third and fourth convocations (2000 - 2013),
- Deputy Chairman and member of the Management Board of JSC RusHydro (since 2013).

Current positions include: member of the Supervisory Board of the Hydro-power Industry of Russia non-commercial partnership, President of the National Association of Self-Regulatory Organizations in the Sphere of Energy Audit Noncommercial Partnership

Ownership of Company shares 0.0000001%



**George Ilyich** Rizhinashvili

Member of the Management Board of JSC RusHydro

Deputy Chairman of the Management Board of JSC RusHydro

Terms of reference Managing the operations of the Strategy and Innovations Departments

Year of birth 1981

### Russian

Citizenship

Education Masters program at Moscow State University (named after M.V. Lomonosov), majoring in Economics (2004), Ph.D. in Economics

#### Curriculum Vitae

- Head of the Strategy and Investments Department, Director for Investments of CJSC INTER RAO UES (2007-2008),
- Deputy Head of the Department, Director for Strategy and Investments, Head of the Strategy and Investments Department, member of the Management Board of JSC INTER RAO UES (2008-2009),
- member and Deputy Chairman of the Management Board of JSC RusHydro (since 2009).

Current positions include: member of the Supervisory Board of KONTS UES Noncommercial Partnership, member of the Board of Trustees of the Non-Commercial Organization Charitable Foundation "Awareness"

Ownership of Company shares 0.014193%



**Stanislav Valerievich** Savin

#### Member of the Management Board of JSC RusHydro

Terms of reference Managing the operations of the Sales Department

Year of birth 1972

Citizenship Russian

#### Education

The Moscow State University of Railway Transport (MIIT), majoring in railway cars (mechanical engineer) (1997)

#### Curriculum Vitae

- Head of the Division for Operations in the Middle Asian and Far Eastern Markets (the Department of Foreign Economic Activities) of CJSC INTER RAO UES (2007-2008),
- Deputy Head of the Central Asian Far Eastern Geographical Division and Head of the Central Asian Geographical Division (2008-2010),
- Member of the Management Board of JSC RusHydro (since 2010).

Current positions include: member of the Supervisory Board of the Market Council Non-commercial Partnership (list A of the Chamber of Electricity Sellers), member of the Board of Trustees of the Non-Commercial Organization Charitable Foundation "Awareness"

#### Ownership of Company shares 0.004283%

0.000135%

#### Ownership of DSC shares

Sergey Nikolaevich

Member of the Management

General Director of JSC "RAO Energy

Managing the construction of thermal

generating facilities in the Far East

The Magnitogorsk Institute of Mining

Nosov) majoring in electricity supply

for industrial enterprises, cities and

• Senior positions in RAO UES of

and Metallurgy (named after G.I.

agriculture, electrician (1992)

**Curriculum Vitae** 

Board of JSC RusHydro

Tolstoguzov

System of East"

Year of birth

Citizenship

Education

Russian

1964

Terms of reference

Share owned in the organization's share capital: 0.00022%, share of the organization's ordinary shares owned: 0.000231%



**Sergey Petrovich** Tsoy

Member of the Management Board of JSC RusHvdro

Deputy Chairman of the Management Board of JSC RusHydro

Terms of reference Managing international relations, administrative support, governmental relations and public relations division

Year of birth 1957

Citizenship Russian

#### Education

The Rostov State University (named after M.A. Suslov), the Department of Journalism (1982), the Moscow State University (named after M.V. Lomonosov), majoring in political psychology (2004), Ph.D. in Political Science

#### **Curriculum Vitae**

0.002589%

- Russia, Concern Rosenergoatom, JSC Bashkirenergo and JSC VO Technopromexport. JSC INTER RAO UES (2007-2011),
- General Director of JSC "RAO Energy System of East" (since 2011).
- Member of the Management Board of JSC RusHydro (since 2013).

Current positions include: Chairman of the Management Board, member of the Board of Directors of JSC "RAO Energy System of East", member of the Supervisory Board of STC UES Noncommercial Partnership

Ownership of Company shares

JSC "RAO Energy System of East"

\* Company shares owned by members of the Management Board are represented as of 31.12.2013 including the Company's outstanding shares (the report on the additional issue of securities was registered December 26, 2013) and as a share in the Company's share capital and as a stake of ordinary shares owned by a member of the Company's Management Board. These portions are equal, as the Company has issued only ordinary shares.

• Head of the PR Department of the Moscow Mayor and the Moscow Government, Press Secretary of the Moscow Mayor (2003-2010),

• Deputy Chairman of the Management Board, member of the Management Board of JSC RusHydro (since 2010).

Current positions include: member of the Board of Trustees and Foundation Council of the Non-Commercial Organization Charitable Foundation "Awareness"

Ownership of Company shares

## Information on Transactions with the Company's Shares Performed by Members of the Management Bodies

Full name of the member of the Company's Management Body	Transaction Date	Transaction Description	Number of Shares Involved in the Transaction	Share of Charter Capital before the Transaction	Share of Charter Capital after the Transaction
<b>Abrashin S.N.</b> Member of the Management Board	23.04.2013	Purchase of shares	9,954,000	0%	0.003134%
<b>Bessmertny K.V.</b> Member of the Management Board	12.04.2013	Purchase of shares	10,000,000	0.007871%	0.011019%
Maslov A.V. Served as Deputy Chairman of the Management Board until 17.09.2013	23.04.2013	Purchase of shares	3,150,000	0.002408%	0.003400%
<b>Rizhinashvili D.I</b> Deputy Chairman of the Management Board	10.04.2013	Purchase of shares	21,940,000	0.002914%	0.009821%
	26.04.2013	Purchase of shares	5,647,000	0.009821%	0.011599%
	29.04.2013	Purchase of shares	17,980,000	0.011599%	0.017259%

## **Liability Insurance for Management Bodies and Executive Officers**

JSC RusHydro insures the civil liability of members of the management bodies and executive officers (including independent directors, except for civil servants) to protect the Company, its subsidiaries and members of the management bodies from possible suits from third parties which may result from the professional activities of the Company's directors and executive officers.

To select an insurance company and sign a D&O (director and officer) insurance agreement, the Company holds an open tender each year. The insurance agreement, with a single limit of the insurer`s liability, shall be valid for one year and provide for a oneyear claim detection period, as well as a six-year claim detection period for retired persons. The total for all insurance coverage is USD 30 million. Additional insurance for an independent director stands at USD 1 million. The aggregate additional insurance for independent directors is USD 2 million.

Liability coverage for members of the management bodies complies with international insurance standards both in the volume of insured risks and in the limits on indemnity and other terms and conditions of said insurance.

# 7.4. The Company's Internal and External **Audit System**

The Company's efficient system for controlling financial and business operations guarantees finely-tuned mechanisms of the management bodies and integrated internal and external control system relations.

The main principles, goals, objectives, methods and processes of the internal audit system are defined in the following internal corporate documents (approved by the Company's Board of Directors):

- The Corporate Governance Code:
- The Internal Control and Risk Management Policy;

- The Internal Audit Policy;
- Regulations on the Board of Director's Audit Committee;
- Regulations on the Audit Commission.

## The Audit Commission

The key responsibilities of the Audit Commission include: controlling financial and business operations, carrying out supervision over how the Company's business and financial transactions comply with both Russian laws and JSC RusHydro's Articles of Association and conducting an independent evaluation of the Company's financial condition.

The Audit Commission acts in accordance with Russian laws, the Articles of Association and the Regulation on the

Audit Commission and is elected by the General Meeting of Shareholders for a one-year term. The Commission consists of 5 members.

#### Members of the Commission served from June 29.2012 to June 28. 2013

- 2.
- 4.
- Dmitry Mikhailovich Gorevoy 1. Elena Yurievna Litvina 3. Anna Valerievna Drokova Adilya Iskanderovna Vyaseleva 5. Alan Fedorovich Khadziev

#### Members of the Audit Commission elected by a resolution of the General Meeting of Shareholders June 28th, 2013

FULL NAME	Year of birth	Position
Alan Fedorovich Khadziev	1981	Chairman of Head of the tion and Pro
Leonid Valerievich Neganov	1972	The Deputy Russian Mir
Anna Valerievna Drokova	1985	The Deputy Industry Org Organization Property Ma
Maria Gennadievna Tikhonova	1980	Deputy Chai Board of JS
Vladimir Vasilievich Khvorov	1947	Leading exp the Russian

Members of the Audit Commission of JSC RusHydro do not own corporate shares and do not hold positions in corporate management bodies.

In 2013, the Audit Commission held two meetings on new membership. The Audit Commission shall carry out an audit of the Company's financial and business

operations based on 2013 results, the audit's opinion will be submitted to the Annual General Meeting of Shareholders in 2014. The main objectives of the audit will be to obtain reasonable assurance that the information contained in the Company's reports and financial statements is reliable, ensuring that the accounting and submission of financial statements are

In 2013, the Audit Commission carried out one audit of the Company's financial and business operations based on 2012 corporate performance results. The audit revealed no corporate violations of Russian laws. The audit confirmed the validity of data contained in the 2012 Annual Report and the corresponding financial statements.

#### of the Commission

e Control and Audit Division of the Department of Economic Regulaoperty Relations of the Russian Ministry of Energy

Director of the Electric Power Development Department of the nistry of Energy

Head of the Division of the Fuel and Energy Complex and Coal ganizations of the Department of Infrastructural Sectors and ons of the Military Industrial Sector of the Federal Agency for State anagement

airman of the Management Board, Member of the Management SC FGC UES

pert of the Department of the Ministry of Economic Development of n Federation

> carried out in compliance with applicable laws and internal regulations, as well as that internal financial and economic operations are conducted in compliance with the Company's and its shareholders interests.

## The Internal Control and Risk Management

The Company's internal control and risk management system operates in full compliance with international standards, general principles and approaches as set forth in the Internal Control and Risk Management Policy and the Internal Audit Policy adopted in 2013.

The Internal Control and Risk Management Unit is responsible for the Company's internal audit and risk management. It includes the following departments:

- The Internal Audit Department;
- The Internal Control Department;
- The Risk Management Division.

The Director for Internal Audit and Risk Management is the Head of the Internal Audit and Risk Management Unit. The Director for Internal Audit and Risk Management reports directly to the Chairman of the Management Board and is accountable to the Audit Committee.

Timelines for the Internal Audit and Risk Management Unit are approved on an annual basis by the Audit Committee. The Director`s internal control and risk management report on the performance of the timeline of control measures is reviewed on a quarterly basis by the Audit Committee. The report contains a brief description of significant violations,

criticisms and shortcomings in corporate operations and those of its subsidiary and dependent companies, which are revealed through monitoring, as well as proposals to eliminate them and to enhance the internal control system`s effectiveness.

#### **Report on Internal** Audit activities in 2013

In 2013, the Internal Audit Department fulfilled all control efforts set out in the 2013 timelines, including: a comprehensive audit of six branches and twenty-seven subsidiary and dependent companies inter alia design institutes, subsidiary and dependent companies engaged in the generation and sale of electricity, and SDCs engaged in the construction and repair of power generating facilities.

Detailed reports based on the results of the audits were submitted to the audited companies and branch directors, and members of the Management Board who supervises the respective companies, to the Chairman of the Management Board of JSC RusHydro.

Each audit resulted in the development of a plan of action to eliminate revealed violations and shortcomings. Monitoring of the implementation of these programs and controls aimed at preventing further similar violations and shortcomings are provided.

## The External Independent Auditor

JSC RusHydro carries out an annual external independent audit of its financial (accounting) statements in accordance with both RAS and IFRS. The candidate to perform an independent audit is reviewed by the Audit Committee and is determined based on an open tender. Based on recommendation of the Company's Board of Directors, the Annual General Meeting of Shareholders approves an independent auditor.

For 2012–2013, the Company approved Closed Joint Stock Company PricewaterhouseCoopers Audit (CJSC PwC Audit) as the Company's independent external auditor. CJSC PwC Audit is a member of a self-regulating organization of auditors of the Russian Audit Chamber Non-commercial Partnership.

In 2013, CJSC PwC Audit conducted an audit of the Company's 2012 RAS and IFRS financial statements. The Audit Committee took a favorable view of the auditor`s opinion and recommended that the Board of Directors submit an

opinion to the Annual General Meeting of Shareholders. Finally, in June 2013, the Company submitted it, as part of the materials provided to shareholders, to the General Meeting of Shareholders.

In 2013, the Internal

Audit Department

fulfilled all control

efforts set out in the 2013

timelines, including: a

seven subsidiary and

dependent companies

companies engaged

in the generation and

sale of electricity, and

SDCs engaged in the

of power generating

facilities.

construction and repair

comprehensive audit of

six branches and twenty-

inter alia design institutes,

subsidiary and dependent

## Efforts to Prevent the Use of Insider Information

The Company has an approved Regulation on Insider Information, which is aimed at complying with Russian laws preventing the use of insider information and market abuse. The Regulation takes into account international corporate governance practices, including requirements of the Disclosure and Transparency Rules (as authored by the British Financial Services Authority).

The Regulation defines the categories of persons that are qualified by the Company as insiders, as well as limitations on the use of insider information by insiders for the purpose of dealing with corporate financial instruments, and on the transfer of

corporate information to third parties. In 2013, the Company prepared 52 notifications for the inclusion and exclusion of persons in/from the list of insiders.

The list of insider information in both Russian and English is published on the Company's website at www.rushydro.ru and www.eng.rushydro.ru. Insider information in Russian is published in the newsfeed of Interfax. the authorized information agency, at www.e-disclosure. ru and in English on the RNS newsfeed at (http://www.londonstockexchange.com/ exchange/prices-andnews/news/marketnews/market-news-home.html).

## The Anti-Corruption Policy

The Company seeks to prevent and uncover corrupt practices. The Company has developed a comprehensive program to prevent employees from committing illegal actions. If any violations are identified, the Company carries out internal investigations, develops and implements measures to eliminate and prevent these problems and applies disciplinary measures toward employees who are guilty under applicable law(s). In accordance with the Corporate Conduct Code, to prevent conflicts of interest, members of the Company's Board of Directors are obliged to notify the Company of their affiliation.

To minimize the risk of involving the Company and its employees, regardless of position, in corrupt activities, as well as the explanation of the Company's position on intolerance of corruption in all its forms and manifestations, RusHydro has the following internal regulations:

- The Corporate Governance Code;
- The Internal Audit Policy;
- Regulations for the submission and verification of income, assets and property liabilities:
- Regulations on the Audit Committee.

In 2013, JSC RusHydro joined the participants of the Anti-Corruption Charter of Russian Business adopted by the business community in 2012 to implement the National Anti-Corruption Plan. The Chamber of Commerce of the Russian Federation, the Russian Union of Industrialists and Entrepreneurs, the Russian Public Organization "Business Russia" and the Russian Public Organization of Small and Medium Enterprises "SUPPORT OF RUSSIA" initiated the Charter.

#### **Confidential Hotline**

The Company has opened a confidential hotline via which individuals can contact the Internal Audit and Risk Management Unit, if any corrupt practices are identified. All calls received via the confidential hotline in 2013 were analyzed and discussed. The Company carried out internal investigations on the most essential facts; necessary information was brought to the attention of the Chairman of the Management Board, and the heads of the responsible structural divisions of JSC RusHydro, its branches and SDCs.

The Company's Controller is responsible for supervising compliance with insider information laws. The Inspector reports to the Audit Committee on a guarterly basis. The Audit Committee includes information on fulfilling these requirements in its reports, which are subject to approval by the Company's Board of Directors.



#### Verification of the heads` income, assets and property liabilities

In order to ensure the disclosure of 2013 information about the income, assets and property liability of the heads of JSC RusHydro, its branches and SDCs, the Company has drawn up a complete list of executive officers (including members of their families and close relatives) who are obliged to submit above-mentioned information.

Last year, information obtained from more than 1,500 employees and their relatives was verified. Revealed inconsistencies were submitted to the Company`s HR Commission. The Commission examined the facts of the declaration of false information, conflict of interests and based on the results, the disciplinary measures were proposed.

# 7.5. Remuneration due to Management and Control Bodies

#### **The Board of Directors**

In 2013, the Annual Shareholders Meeting made a decision to pay remuneration to members of the Board of Directors for the period from June 29, 2012 to April 18, 2013, and for the period from April 19, 2013 to June 28, 2013 in the amount and manner specified in the Regulations on Remuneration to Members of JSC RusHydro's Board of Directors.

Remuneration is defined in accordance with the Regulation on Remuneration to Members of JSC RusHydro's Board of Directors based on fixed remuneration in the amount of RUR 900 thousand, taking into account the number of Board meetings for the past corporate year and the number of said meetings attended by an individual member of the Board. Additional remuneration premiums are payable as follows:

- 30% to the Chairman of the Board of Directors;
- 20% to the Chairpersons of the Committees of the Board of Directors;
- 10% to members of the Committees of the Board of Directors.

Total remuneration due to a member of the Company's Board of Directors shall not exceed RUR 1 million, taking into account all additional premiums.

The Company makes no payments to members of the Board of Directors to compensate for the cost of transportation, lodgings, etc., that are related to performing duties.

The Regulation of Remuneration to Members of the Board of Directors does not apply to members of the Board of Directors

#### who simultaneously hold the position of Chairman, or are a member of the Management Board (for a complete term or a part of it), and to members of the Board of Directors who are not eligible to receive any payments from commercial organizations in accordance with Russian federal laws.

In 2013, total remuneration paid to members of the Board of Directors amounted to RUR 4,852,958.59 (for the period from June 30, 2011 to June 28, 2012 amounted to RUR 6,862,864.71)

#### The Management Board

Remuneration to the Chairman and members of the Management Board is defined by the conditions of labor contracts and the Regulation on the Procedure of Paying Remuneration and Compensation to Members of the Company's Management Board. To emphasize the dependence of remuneration on the performance results of the Chairman and members, the relationship between the fixed and variable portions of remuneration is set at 30/70. The Regulation stipulates the payment of quarterly and annual bonuses for achieving key performance indicators (KPIs) set for the Company, the Chairman and members of the Management Board by the Company's Board of Directors (a 50% bonus). Achievements of individual KPIs are awarded with a 50% bonus also. Key performance indicators imply assessing performance in terms of financial, as well as production business indicators.

In 2013, KPIs were achieved by the Chairman and members of the Management Board. The total amount of salaries and bonuses paid to the Chairman and members of the Management Board in 2013 amounted to RUR 612,261,217.92 (compared with RUR 925,214,507.86 in 2012).

#### The Audit Commission

Members of the Audit Commission receive a lump sum remuneration, in accordance with the Regulation on the Payment of Remuneration and Compensation to Members of the Audit Commission of JSC RusHydro.

Remuneration is equal to the sum of twenty-five monthly tariff rates for a first-class worker, as set by the industrywide Tariff Agreement adopted for the Russian electric power industry for the period of the audit, taking into account indexing set by the Tariff Agreement. Remuneration for the Chairman of the Commission is increased 50%.

No remuneration and/or compensation is charged or paid to members of the Audit Commission who are subject to limitations or bans pertaining to the receipt of any payments from commercial organizations.

The total amount of remuneration paid to members of the Audit Commission in 2013 amounted to RUR 242,450.00 (in 2012, no remuneration was charged and/ or paid to members of the Company's Audit Commission).

#### **The External Auditor**

The Auditor's remuneration is approved by the Board of Directors on the recommendation of the Audit Committee. In 2013, the Company paid RUR 15,000,000 including VAT, to JSC PWC Audit for services related to the audit of the Company's 2012 accounting statements (according to RAS). The same services related to the audit of the Company's 2012 accounting statements (according to IFRS) cost RUR 57,967,500 including VAT.

# **7.6. Managing Subsidiary and Dependent Companies**

JSC RusHydro has a participatory interest in the authorized capital of companies engaged in design, construction, repair, servicing, technical renovation and reconstruction of power facilities, as well as in electric power production and supply.

The Company's interactions with SDCs is intended to implement corporate strategy, to ensure stable economic development and to provide for the Company's investment attractiveness, as well as to protect the rights and interests of the Company and SDC shareholders.

The Company's SDCs are managed via corporate representatives that are present at the General Meetings of Shareholders and are on the SDCs Board of Directors and control bodies. Management is achieved in accordance with the Articles of Association and the Procedure for JSC RusHydro's interested organizations. Decision-making on the management of SDCs, in which the Company owns 100% of the share capital is the competence of the Company's Management Board. Defining the Company's position on strategic issues of SDCs activities (reorganization, liquidation, change in the share capital, approval of major operations, participation of SDCs in other organizations) is the responsibility of the Board of Directors.

JSC RusHydro pays significant attention to upgrading the SDCs corporate governance by carrying out measures intended to increase SDCs transparency and to supervise SDCs compliance with information disclosure law requirements.

## Changes in the RusHydro Group structure in 2013

Information about changes that occurred in the RusHydro Group structure in 2013 is given in the Appendix. Key events include:

- creating four subsidiaries that are fully owned by JSC RusHydro to implement the construction projects of new generating facilities in the Far East;
- creating VolgaHydro LLC a joint venture with the Austrian company Voith Hydro to produce hydraulic turbine equipment;
- combining repair and maintenance functions in JSC Hydroremont-WKK and liquidating subsidiaries: JSC REMIK, JSC Sayano-Shushenskaya Hydroenergoremont (SSHGER), JSC Turboremont-WKK and JSC Elektroremont-WKK;
- creating CJSC Holding Company BoAZ and CJSC Holding Company BoHPP.

## **The Bureya**



# 8. The Company **On The Securities Market**



- 8.1. Authorized Share Capital
- 8.2. Circulation of Securities on the Russian Market
- 8.3. The Company Securities on the International Securities Markets
- 8.4. Dividend Policy
- 8.5. Bonds

# 8.1. Authorized Share Capital

As of December 31, 2013, JSC RusHydro`s authorized share capital amounted to RUR 317,637,520,094, divided into 317,637,520,094 non-documentary registered ordinary shares with a par value of 1 ruble each.

The State registration number of the share issue is 1-01-55038-E. The Company does not issue preferred shares. The number of declared ordinary shares is 122,665,182,285.

Since 2006, the Company has increased authorized share capital annually through the additional issues of ordinary shares. The funds raised from the Company's share placement are mainly directed to finance its large-scale investment program. In 2008, the authorized share capital increase was carried out to convert merging companies` shares into JSC RusHydro shares.

#### Additional Share Issue 2013

The date of the decision to increase authorized share capital
State registration date of the issue
Total volume of the additional issue at nominal value
Category (type) of shares
Placement method
The form of payment for shares
The offering price per share
Start date of the placement
End date of the placement
The volume of outstanding shares at par value, rubles
Outstanding shares/ total share issue





1-01-55038-E-041D
16.11.2012
03.12.2012
RUR 110 bln
Ordinary registered shares
Public offering
Monetary and non-monetary assets
1 ruble
20.12.2012
26.11.2013
68, 617, 944,796
62.38%

In November 2012, the General Meeting of Shareholders made a resolution about increasing the Company`s share capital to RUR 110 billion. The additional share issue was assigned the State registration number 1-01-55038-E-041D. The Company gave its shareholders the right to exercise their pre-emptive right to purchase shares of the additional issue. More than 70 shareholders (legal entities and individuals) exercised this

right, including the holders of depositary receipts for the Company's shares, and the Russian Federation.

RUR 50 billion to finance the construction of four thermal power plants in the Far East has been allocated from the budget of the Russian Federation. In addition, the shares of the Holding JSC "RAO Energy System of East", JSC SEC, JSC Ust-Srednekanskaya HPP, JSC Irkutsk Electric

Grid Company and JSC Irkutskenergo were transferred as payment for additional shares. Outstanding shares/total share issue amounted to 62.38 %. In December 2013, the Bank of Russia registered the report on the results of the issue, and in January 2014 amendments to the Company`s Articles of Association were registered. The authorized share capital, including outstanding shares, amounted to RUR 386,255,464,890.

#### List of Registered Persons with More Than 2% of Shares on Personal Accounts, as of December 31, 2013

Registered entity	Type of registered	Number of shares	% of authorized share capital *
The Russian Federation represented by the Federal Agency for State Property Management	entity	258,161,535,606	66.84
Non-bank credit organization CJSC National Settlement Depository	holder	110,327,350,871	28.56
Limited Liability Company Depository and Corporate Technologies	nominee holder	10,191,600,852	2.64

\* including outstanding shares of the additional issue

#### Shareholding Structure



Source: JSC Registrator R.O.S.T.

# 8.2. Circulation of Securities on the Russian Market

Since 2008, JSC RusHydro shares have been traded on the MICEX Stock Exchange under the ticker symbol HYDR, and in March 2013 the Company's shares were among the first on the Russian Stock Market which were admitted to

trading on the T+2 trading system (with partial collateral and deferred execution of trades). The Company's shares are included in the list of liquid securities traded on the Stock Exchange. They are included in the calculation base of the

#### Trading Results with the Company's Shares 2012-2013

	2012		2013
Trading sectors	Main market	Standard market	T+2
Trading currency	RUR	RUR	RUR
The highest transaction price	1.2092	1.25	0.7920
The lowest transaction price	0.7154	0.716	0.4537
Year end transaction price	0.7335	0.73	0.5675
Trading volume	140 billion	202 million	181 billion

#### 2013 Share Performance and Traded Volume



JSC RusHydro`s shareholders include

shareholder is the Russian Federation

over 360,000 Russian and foreign

investors. The largest Company's

represented by the Federal Agency

for State Property Management. The

Government owns a controlling stake

authorized share capital. In 2013 there

were not any significant changes in the

structure of the owners and holders of

totaling 66.84% of the Company`s

the authorized share capital.

Russian MICEX and RTS indices, the MICEX BMI index. the MICEX PWR index and the RTSeu indexes, as well as in the foreign MSCI Russia index.

### The Company's 2013 Shares Performance (HYDR) Versus MICEX Index (MICEX) and MICEX Power Index (MICEXPWR)



# 8.3. The Company Securities on the International Securities Markets

JSC RusHydro has launched a depositary receipts (DR) program for its ordinary shares. As of December 31, 2013, 201,983,749 depository receipts for 20,198,374,900 ordinary shares have been issued, which accounts for 5.2% of the total number of ordinary corporate shares.

#### Stages of Development of the DR Program



#### **Description of the Depository Receipt Program**

Program type	Program launch date	Depository bank	Ratio	Ticker symbol	CUSIP number	Maximum volume of the program, in shares	Trading floors
GDR according to Rule 144A	June 17, 2008	The Bank of New York Mellon	1 GDR = 100 ordinary shares	HYDR	466294204	832,131,000	London Stock Exchange (Main Market – IOB)
ADR Level 1	August 7, 2009	The Bank of New York Mellon	1 ADR = 100 ordinary shares	HYDR	466294105		OTCQX International Premier Portal

Source: http://moex.com/

In 2013, the main indicator of the Russian MICEX Stock Exchange index showed a slight increase of 2%. The main constraint against Russian securities market growth was the slowdown in Russia`s economic growth, as well as the outflow of foreign investors` funds from emerging markets. In general, 2013 was an unsuccessful year for the electric power industry - the MICEX power index fell 40%. The Government of the Russian Federation's solutions related to restricting growth in electricity prices continues to impose pressure on electricity sector shares. JSC RusHydro shares which followed the MICEX power index during the first five months demonstrated better trends in the second half of the year (compared with the industry), and fell 23% at yearend 2013. Quotations of JSC RusHydro shares in the second half of the year were supported by the Company`s strong operating and financial results.

#### 2011-2013 the Company`s Capitalization, RUR mln



#### The Company`s Market Multipliers

	2011	2012	2013
P/E	6.1	6.6	3.4
P/S	0.9	0.7	0.6
EV/EBITDA	7.4	8.2	5.5
P/BV	0.3	0.2	0.2

The calculation is based on the Company's IFRS financial statements

#### 2013 ADR Performance and Trading Volume, LSE (IOB)



An analysis of the structure of the Company's DR holders indicates that a significant proportion of investors use the "Value" and "Growth" approaches in their investment strategies. In addition, it should be noted that "GARP" investors (value and growth investments) have increased since 2012. as well as investor demand for those who adhere to the passive strategy Index for Depositary Receipts. This has gone up from 2011-2013, whereas the number of investors who adhere to the active Deep Value strategy has gone down.

Results of Depositary I	Receipt Trading, LSE
-------------------------	----------------------

	2012	2013
Ticker	НҮ	'DR
Trading currency	USD	
The highest price for the transaction	4.18	2.610
The lowest price for the transaction	2.21	1.366
Year-end transaction price	2.31	1.726
Trading volume	688 mln	473 mln

#### 2011-2013 Distribution of DR Holders by Investment Strategy



Source: Depository Bank: The Bank of New York Mellon.

#### 2011-2013 Geographic Distribution of DR Holders



Source: Depository Bank: The Bank of New York Mellon.

An analysis of the structure of DR holders by geography shows that the major holders are U.S. and UK investors.

# 8.4. Dividend Policy

The main purpose of the Company's dividend policy is to provide for the strategic development of JSC RusHydro and increase shareholder wealth by establishing an optimal balance between dividend payments to shareholder and profit capitalization.

Company has a Dividend Policy. The Company can pay annual dividends of at least 5% of net income, as well as to decide on paying interim dividends. Dividends are paid from the Company's profit after tax (net profit under RAS). The dividend payment period is not more than 60 calendar days after the decision has been adopted by the General Meeting of Shareholders.

To ensure the transparency of principles for calculating dividends and the order and terms for their payments, the

#### Report on the payment of declared (accrued) dividends on the Company's shares in 2012

According to a decision of the Annual General Meeting of Shareholders (June 28, 2013), RUR 3,675,573 thousand (25 % of net profit calculated according to RAS) was allocated for the payment of dividends for 2012, which is 47 % more than in 2011. Payments were made in full to all persons registered

Dividend yield of the Company's share, %, in 2011-2013







The Company informs shareholders about the beginning of dividend payment by posting a message on its corporate website. Shareholders may specify their preferred method for receiving dividends by post or by bank transfer or at the cash desk of the Registrar, JSC Registrar R.0.S.T.

in the register of shareholders with the exception of RUR 27,459 thousand. Those undistributed funds were outside the control of the Company, for example: incorrect postal and bank details, as well as dividends which were not vet received by shareholders who specified "Cash desk" as their preferred method for receiving dividends.

The Company performed its obligations to pay dividends to the federal budget in full in the amount of RUR 2,467,007 thousands. There is no debt payable to the federal budget.

Amount allocated for the dividend payment, billion rubles, 2010-2012



#### 2005-2012 Dividend History

Reporting period subject to the divi- dend payment	Total amount of declared (accrued) dividends, RUR thousand	Declared dividends per share, RUR
9 M 2005	27,889	0.000268289
2005	565,695	0.005441922
Q1 2006	223,600	0.002151
H12006	110,588	0.00106384
9 M 2006	809,000	0.005739439
Q1 2007	1,119,000	0.00793872
2010	2,496,867	0.00860091
2011	2,500,000	0.00789317
2012	3,675,573	0.00955606

## 8.5. Bonds

The Company continues to use public funding. In February 2013, two bond issues with a total nominal value of RUR 20 billion were placed to partially refinance a loan in the amount of RUR 40 billion, which had been provided by Sberbank of Russia. Despite the high volatility of the Russian debt market during the marketing period, the placement of JSC RusHydro's bonds attracted the attention of a wide range of investors - during book-building more than 50 investor bids were received with a coupon rate falling in the range of 8.35 % to 8.60 % per annum. Aggregate demand on the bonds exceeded the nominal volume.

As of December 31, 2013, there are four RusHydro bond issues outstanding with a total nominal value of RUR 35 billion, as well as one Euro bond issue with a nominal value of RUR 20 billion.

In accordance with legislative amendments on the securities market

#### Euro bond Main Parameters

Type of securities	Euro Bonds (LPN Notes, Eurobond convention)
lssuer	Rushydro Finance Ltd. (Ireland)
Ultimate borrower	JSC RusHydro
Volume	RUR 20 billion
Period	5 years
Coupon rate	7.875% per annum
Issue rating	S&P: BB+ / Moody's: Ba1 / Fitch: BB+
Listing	London Stock Exchange
Regulating law	English law

entered into force in 2013 related to changes in decisions on the issuance of bonds and the prospectus of the Company's bonds with regard to the extension of the securities placement with a total nominal value of RUR 20 billion for one calendar year to December 27, 2014 were approved in December. The extension of the issuing documentation will ensure prompt placement of bonds in 2014 in case of favorable public debt market trends (debt financing is used, when necessary, for the Company`s investment or current activities).

#### **Bond Issues Main Parameters**

	Series 01	Series 02	Series 07	Series 08
State registration number	4-01-55038-E	4-02-55038-E	4-07-55038-E	4-08-55038-E
Registration date	23.09.2010	23.09.2010	27.12.2012	27.12.2012
Type of bond	documentary interest non-convertible bearer bonds with mandatory centralized custody	documentary interest non- convertible bearer bonds with mandatory centralized custody	documentary interest non-convertible bearer bonds with mandatory centralized custody	documentary interest non-convertible bearer bonds with mandatory centralized custody
Nominal	RUR 1,000	RUR 1,000	RUR 1,000	RUR 1,000
Nominal amount of issue	RUR10 bln	RUR10 bln	RUR10 bln	RUR10 bln
Nominal amount in circulation	RUR10 bln	RUR 5 bln	RUR10 bln	RUR10 bln
Offering price	100%	100%	100%	100%
Method of placement	Public offering, bookbuilding	Public offering, bookbuilding	Public offering, bookbuilding	Public offering, bookbuilding
Placement date	25.04.2011	Start date -25.04.2011 Expiration date - 03.05.2011	14.02.2013	14.02.2013
Start date of circulation	17.05.2011	17.05.2011	06.03.2013	06.03.2013
Coupon	1-10 coupons - 8% , 11-20 - determined by the Issuer	1-10 coupons - 8% , 11-20 - determined by the Issuer	1-10 coupons - 8.5%, 11-20 -determined by the Issuer	1-10 coupons - 8.5%, 11-20 - determined by the Issuer
Coupon frequency	On a bi-annual basis	On a bi-annual basis	On a bi-annual basis	On a bi-annual basis
Yield at Pricing	8.16%	8.16%	8.68%	8.68%
Put-option	22.04.2016, type - put, price - 100%	22.04.2016, type - put, price - 100%	15.02.2018, type - put, price - 100%	15.02.2018, type - put, price - 100%
Maturity date	12.04.2021	12.04.2021	02.02.2023	02.02.2023
Issue rating	-	-	Fitch: BB+	Fitch: BB+

## The Kuban



# 9. Social Responsibility



9.1. HR Policy 9.2. Social Policy

9.3. Charity and Sponsorship

9.4. Safety and Environmental Protection 9.5. Social Responsibility and Corporate Sustainability Report

## **HR Policy**

The Expert RA rating agency awarded A.hr rating (high level of employee attractiveness) to JSC RusHydro

Staffing with qualified and responsible managerial and engineering personnel is a major strategic objective that is the Company's focus in personnel management. The Company's HR policy addresses the following problems:

- attracting new employees with the necessary competencies, skills and knowledge, including young specialists;
- ncreasing employee loyalty;
- · providing education and staff development.

The Rating Committee noted that the Company provides high quality professional development for its employees and helps

#### **Characteristics of personnel** structure

As of December 31,2013, JSC RusHydro's headcount increased 3.3% and amounted to 6,305 employees (compared to 6,101 employees in 2012). Last year, the increase was due to the following factors:

- connecting a hydro-power plant to the branch in North Ossetia;
- commissioning the first start-up facility of the second phaze of the Zagorskaya PSPP



them upgrade their living standards. Positive factors, such as: the Company's average wage, a transparent system of allowances, bonuses and increments, a decent level and quality of employee social protection, a clear definition of criteria for career growth, the possibility of obtaining additional education and re-training at the Corporate Hydro-power University, as well as in external training centers, allowed the Company to receive the highest rating.

· employing personnel to meet Rostekhnadzor`s requirements on strengthening responsibilities for equipment operation and improving power facility reliability.

The average duration of employment at the Company was 9.5 years (compared with 10.9 years in 2012). In 2013, the average monthly earnings of corporate employees grew 5.5% and stood at RUR 89,980.6 (compared to RUR 85,256 in 2012).

2013 JSC RusHydro Personnel Structure, %



## **Developing Human Resource Potential**

One of the Company's strategic priorities is to grow and develop human resources potential to successfully meet current and future targets, aims and objectives. The Company uses measures on forming personnel reserve, and developing an incentive and social support system that can

create a long-term competitive advantage to attract and retain gualified employees.

The Company has the Fast-Track Human Resource Development Concept - From New School to Workplace in which a Corporate

As part of the Program, the Company has target projects underway to develop key competencies for future hydro-power professionals starting from elementary school, activities aimed at offering guidance for middle and high school students, energy power training for students based on RusHydro's requirements, and efforts to create a corporate environment that promotes effective performance for the Company's young employees.

The Company has an ongoing employee training system, helping to grow the competencies of its personnel in line with their job requirements, and to rotate and transfer employees as part of developing a succession pool.

JSC RusHydro set up a branch the Corporate Hydropower University (CorHUn), which is an active participant in the Company's educational initiatives and one of the key elements in the Company's knowledge management system. In its practice, the Corporate University develops and implements face-to-face and distance learning programs based on JSC RusHydro's competencies and carries out training of corporate employees. All programs for training HPP employees contain three disciplines: corporate, general professional and special.

Wide opportunities for professional personnel development (including simulator training) are offered by a new IT-based Training and Industrial Centers.

RusHydro Annual report 2013

Elevator Program is created: Corporate Elevator – New School, Corporate Elevator – Higher Institutions/ Secondary Specialized College, Corporate Elevator – the Company.

**Expenditures on Human Resource** Development, 2011-2013, RUR million



#### The Corporate Elevator Program Structure



## **Social Policy**

In 2013, the Board of Directors approved JSC RusHydro's Social Policy In this document, the Company addresses the problems of forming long-term human resource management as a major asset of staffing new facilities, performing production programs and attracting young profile professionals into the industry.

#### **Collective agreement**

Caring about the well-being and social protection of its employees and their families is one of RusHydro's priorities. At each of its branches, the Company has a collective agreement in place. RusHydro offers its staff a strong social package, ensuring that the Company remains an attractive competitive employer on the labor market.

- Existing social programs, benefits, corporate payments and compensation:
- non-State pension coverage and voluntary insurance;
- additional paid days for family leave;
- material aid to branch employees, pensioners and their families;
- health resort treatment and rest for employees
- employee child care.

To implement the Action Plan for the development of Social Policy in 2013, the Company developed a new version of a model collective agreement for the Company's branches for 2014-2016, which included the current social package and new social programs:

- family and maternal support;
- support to employees who took orphans in their families:
  - socio-professional adaptation of children from orphanages.

#### Non-State pension coverage

In 2013, the current NPO Program of JSC RusHydro received the main award at the all-Russian competition for non-material motivation - first place in the category, "The best NPF project to attract/retain staff". GlobalForum held the competition within the auspices of the 7th Annual Conference "Compensation & Benefit Forum Russia - 2014". It is the largest event that brings together personnel management specialists from leading Russian and foreign companies operating in Russia.

The Program is designed to create a long-term system of non-State pension coverage under a single approach, with common goals and principles. The program is focused on providing both a decent standard of living for RusHydro's employees at retirement, and on effectively addressing personnel issues related to attracting, retaining and motivating personnel. The program is also designed to generate additional retirement savings for different target groups, especially employees with significant industry experience, who have received industry and State awards, and for employees with particular specializations where there is a labor shortage.

#### Expenditures on Social Policy, 2011-2013, RUR billion



\* Excluding non-State pension coverage program expenses

#### Voluntary health insurance and voluntary accident and illness insurance

The Company annually revises and signs agreements for voluntary health insurance and voluntary accident and illness insurance to expand and upgrade the list of medical services available to employees. The program covers 100% of the Company's workforce. Under voluntary health insurance coverage, employees take advantage of out-patient medical treatment (including home visits by doctors), urgent and nonurgent hospital services, emergency medical services. healthcare services abroad, regular medical examinations and employee vaccinations, the start of treatment and preventive examinations in Russia's best medical facilities, and if necessary, in foreign clinics. The Company supports employees' acquisition of medical insurance for family members at competitive prices; the Company also provides informational support concerning the registration policy for compulsory health insurance.



## Employee housing upgrade program

JSC RusHydro continues to implement the Employee Housing Improvement Program. The priority right to participate in the program is provided to young employees under the age of 30 who do not own a separate residential property, professionals who were offered branch positions and relocated from a different location, and to key and highly skilled professionals.

The main forms of corporate support in upgrading employee housing conditions are compensation for interest on mortgages and rental costs. In addition, the Company provided corporate support to all its employees in improving their housing conditions through the interaction of employees and credit, realtor and insurance organizations on better terms than market ones (lower mortgage interest, shorter time for

application processing, and providing favorable insurance rates).

## Socio-professional adaptation of children from orphanages

The socio-professional adaptation program for children from orphanages has been implemented since May 2013 in the framework of the Advanced Human Resources Development Concept "From the New School to the workplace". This program helps children who have experienced loss or parents' refusal adapt to the orphanage and post-orphanage life and purposefully prepare for admission to industry-specific schools after graduation of which they will come to work for the Company. Children get acquainted with the specifics of the profession and have the opportunity to attend the Company's facilities. They are attended to by volunteers from the personnel of the RusHydro Group of companies.

In 2013, the Company was actively working with six orphanages: Orphanage Volzhskiy (Rybinsk), Volzhskiy Orphanage (Volzhskiy), Comprehensive Boarding School named after 37 Gvardeyskoy Strelkovoy Divizii (Volzhskiy), Orphanage Lastochka (Sayanogorsk), Orphanage No 3 (Perm), Orphanage Nadezhda (Kochubeyevskiy District, Balahonovskoye).

In the framework of the 2013 Program, the following areas of activities were identified:

- social, professional, spiritual and moral development of orphan children and children left without parental care;
- equipping orphanages with teaching aids, educational games;

 social support of the Program introduction of the list of benefits, incentive payments for supervisors, mentors and other target groups of participants of the program;

- organization of volunteer movement among the Company's employees with the purpose of participating in the life of orphan children in the regions where JSC RusHydro operates;
- consulting, organizational and psychological support for the target group of the Program participants;
- interaction with industry-specific educational institutions;
- interaction with ministries, departments and other government bodies authorized to deal with orphans and children left without parental care.

In 2013, hydropower volunteers from the Company's employees conducted thirty events for 270 children from orphanages in Yaroslavl and Volgograd Regions, in Khakassia, in Perm and Stavropol Regions. During the year, the Company carried out training seminars and practical training for teachers and volunteers of the Program, the training business game "My Rights" for children from orphanages in the five regions. In December 2013, in JSC RusHydro a pre-New Year's charity event was held to raise funds for children from orphanages. The funds raised were transferred to the Company's volunteers for holding the New Year's holidays for children from orphanages participating in the Program.

#### Public receptions

To implement a socially responsible position, JSC RusHydro has implemented largescale support measures in connection with recent emergencies in the regions in which it operates. A (public reception) mechanism for collecting information on the need for assistance and the development of targeted support measures was devised and put into place. The aim of the public reception lies in ensuring direct access to JSC RusHydro's management for each employee (as well as a victim or any citizen).

Everyone, who applies to public reception, receives consultations and clarifications on matters relating to the possibility of obtaining legal benefits, compensation, material aid and assistance in addressing economic issues, sanatorium-resort treatment, education and employment, and placing children in kindergarten and organizing youth leisure, as well as about renovating and upgrading social infrastructure.

Public reception was introduced after the accident at the Sayano-Shushenskaya HPP (named after P.S. Neporozhny) in August 2009. A similar experience was gained during the liquidation of flooding consequences in 2013 in the Far East.

In 2013, hydro-power volunteers from the Company's employees conducted thirty events for 270 children from orphanages in Yaroslavl and Volgograd Regions, in Khakassia, in Perm and Stavropol Regions.

RusHydro Annual report 2013

#### Interaction with regional authorities

Making social and economic cooperation agreements is one of the forms JSC RusHydro interacts with regional authorities to address socio-economic problems of the regions. At the end of the reporting year, 16 cooperation agreements were entered into with the following regions:

- The Republic of Altai;
- The Republic of Bashkortostan;
- The Republic of Dagestan;
- The Kabardino-Balkarian Republic;
- The Republic of North Ossetia-Alania;
- The Republic of Khakassia;
- The Krasnoyarsk Region;
- The Stavropol Region (two agreements);
- The Amur Region (two agreements);
- The Astrakhan Region;
- The Moscow Region;
- The Saratov Region;
- St. Petersburg;
- The Magadan Region.

# Charity and Sponsorship

Social responsibility is an integral and important part of JSC RusHydro's activities. Fully involved in the economic and social life in the regions in which its facilities are present, the Company develops long-term programs to address societal humanitarian and educational problems.

## Assistance to flood victims in the Far East

As part of implementing a full-scale assistance program to flood victims in the Far East, RusHydro Group has transferred more than RUR 245 million.

Based on a decision of the Company's Chairman of the Management Board, Evgeny Dod, to eliminate the consequences of abnormal flooding in the Far Eastern Federal District, the Company directed RUR 200 million. RUR 100 million out of these funds was transferred for the assistance of the Amur Region, which was the first region to be affected by the natural disaster, and RUR 50 million was transferred to both the Khabarovsk Region and the Jewish Autonomous Region.

JSC RusHydro took part in a charity event "All Together", organized by Channel One, and allocated RUR 20 million as a contribution to assisting the Far East.

Thanks to corporate employees who wished to transfer their one-day earning to help victims in the Far East, the Charity Fund "Awareness", under the auspices of JSC RusHydro, received more than RUR 9.4 million. The Company's subsidiaries, including the Holding JSC "RAO Energy System of East", transferred more than RUR 14 million to the Charity Fund "Awareness". JSC RusHydro`s fund-raising initiative was supported by the Association of Employers in the Electricity Industry, the all-Russian Electric Trade Union and many power sector enterprises, that have transferred more than RUR 8 million to the Fund. In addition to the humanitarian aid, RusHydro Group has allocated an additional RUR 2.2 million.

RusHydro's public reception processed data on victims and provide targeted assistance to them in Seya in the Amur Region, where the Zeyskaya HPP is located. Based on the results of its activities, more than 309 families received lump sum payments, including families of injured employees of the Holding JSC "RAO Energy System of East", in the total amount of RUR 13 million. The Company provided aid to four infrastructure sites most affected by the flooding in the Amur Region. The boarding school in the village of Ovsyanka was completely renovated and newly furnished. For this purpose, the Company transferred RUR 6.6 million. JSC RusHydro repaired the water intake from the Zeya River worth more than RUR 1.6 million. The Company acquired a special vehicle for sewage suction in Beregovov worth RUR 979 thousand. The Company allocated RUR 7.5 million for the construction and renovation of the "Kolosok" kindergarten in the village of Ovsyanka.

From August 15 to November 1, JSC

JSC Rushydro has adjusted its charity and sponsorship program in connection with implementing the assistance program to flooding victims in the Far East. In addition, all funds intended for the purchase of gifts for the Company's partners were also transferred to support the Far East.

#### The Corporate Charity Fond "Awareness"

For the purpose of assisting employees and persons, who are particularly in need of corporate support, a Corporate "Charity Fund" Awareness" was established.

In 2013, the Fund implemented programs worth more than RUR 48 million;

namely assisting employees and other applied persons in handling difficult life situations, implementing target church restoration programs, helping religious organizations, renovating the profile chair of the Moscow Power Engineering Institute, and implementing assistance program to flooding victims in the Far East.

#### Motherhood and Childhood

In 2013, in the Saratov Region, JSC RusHydro acted as the patron for the construction of a new kindergarten "Ostrovok", which is equipped with state-of-the-art technologies of life support, sports and games facilities at playgrounds. To construct and equip the kindergarten, the Company transferred RUR 150 million.

In 2012, the "Born by Energy" project started. The project's main purpose is to provide maternity hospitals and maternity departments with costly diagnostic and rehabilitation equipment in cities in which the Company's facilities are located. Continuing this work in 2013, the Company allocated RUR 6 million to

## Charitable and Sponsorship Activities, 2011-2013, RUR billion



RusHydro Annual report 2013

purchase hematology analyzers which can promptly calculate a number of blood factors for newborns, computer devices for diagnosing the condition of a fetus during a high-risk pregnancy, artificial lung ventilators, an intensive phototherapy care system for newborns with jaundice, and an automatic defibrillator.

Last year, the Company continued to provide financial assistance for sponsored orphanages and boarding schools, comprehensive and music schools, and creative teams.

Last year, the Company continued to provide financial assistance for sponsored orphanages and boarding schools, comprehensive and music schools, and creative teams. To support social projects in the Karachay-Cherkessia Republic, the Company purchased equipment for the children's preschool institution, "Ogonyok", and the secondary comprehensive school in Pravokubansky (village), which was worth more than RUR 5 million.

#### Educational programs

The "Energy Development" contest of student works in the field of hydropower and renewables, which marked its fifth anniversary in 2013, is the basic educational project of the charity program. Over the years of the contest about 100 technical colleges have accepted the invitation to participate in it and more than 500 undergraduate and graduate students have submitted their works. According to the results of the project, more than 30 participants from the winners decided to link their professional path with hydropower. In 2013, 7 research topics related to the Company's real research works and projects were presented.

With the financial support of JSC RusHydro, the publishing house DETGIZ released an

informative book "Water is unusual in the usual" for secondary and high school-aged children. The book presentation took place in all regions where the Company operates and a large part of the circulation was given to the children's homes, schools and libraries.

#### Ecology

The principal priority of JSC RusHydro is high environmental responsibility. As part of the environmental program, the Company implements large-scale social, humanitarian, and awareness-raising programs, as well as environmental actions and projects in the regions in which it operates. For a ninth consecutive year the Company holds a federal environmental campaign "oBEREGAI" devoted to cleaning up rivers and reservoirs, taking care of the coastal areas, getting to know the role of hydro power plants in the regulation of water regimes, as well as to forming young people's responsible attitude towards nature. In 2013, the Company's employees and volunteers collected 5,270 bags of garbage. In cooperation with the reserves, the Company organizes environmental tour itineraries, ecological trails, and develops recreation zones, as well as provides support for biological diversity and the natural habitat of rare and endangered animal and plant species. In 2013, the Company allocated approximately RUR 8 million for these purposes.

#### Sports

RusHydro has cooperated with the Russian Whitewater Federation for 6 years. During this time, the Company has helped organize an all-Russian competition at a high level and has supported this sport in some Russian regions.

In 2013, the Company continued to support Football Club Alania activities, namely financing the Club`s current activities and developing the Children and Youth Football School of the North Caucasus and the South of Russia.

Children's sports development in the regions in which the Company operates is also a very important part of the charity program and includes renovating and upgrading sports grounds and organizing competitions at different levels.

#### **Cultural and Historic Heritage**

The Company attaches great importance to preserving cultural and historical heritage and renovating Christian shrines. In 2013, assistance for various religious organizations amounted to more than RUR 50 million. With the participation of JSC RusHydro, a new Cathedral to honor the Annunciation of the Blessed Virgin Mary was constructed on the territory of the Holy Trinity Seraphim-Diveevo Monastery. The Charity Program`s funds were directed

### In 2013, assistance for various religious organizations amounted to more than RUR 50 million.

to restoring the Church of the Tikhvin Icon of the Mother of God, renovating the Ascension of the David Desert Monastery and restoring the Assumption Cathedral of the Joseph-Volotsky Monastery.

In the past year, the Company continued to collaborate with the Russian Geographical Society. The Company has assisted in forming a grant fund for carrying out thematic research expeditions and compiling a cartographic encyclopedia of Russia.

## Safety and Environmental **Protection**

Ensuring a reliable energy supply and the safe operation of equipment and hydropower engineering for the population and the environment is one of the key strategic objectives of JSC RusHydro.

Approaches used to ensure energy supply reliability and the safety of equipment, buildings and structures are fixed in provisions of JSC RusHydro's Technical Policy, which came into force in 2011. The instrument used to implement the Technical Policy is the Production Program, which consists of several subprograms.

The Production Program is developed based on the results of evaluating equipment condition, the forecasts of energy consumption in the regions and the water content of rivers, as well as the requirements of industry standards. The Program's activities are planned for the medium (6 years) and long-term (15 years).

To identify and analyze insurance risks at production assets, the Company conducts surveys (independent technical expertise), and introduces a system of key performance indicators (KPIs) and limits (control figures), including monitoring how the object can be protected in the event of natural disasters.



performing routine maintenance of the equipment between overhauls

Research and **Development Program** (R&D) inspecting and analizing equipment condition and safety of hydraulic structures

2013 Implementation of the Production Program

	2013 Plan , RUR million	Program performance, RUR million	Execution, %
Technical Rehabilitation and Reconstruction Program	27,096.8	25,257.4	93.20
Repair Program	2,766.6	2,610.1	94.3
Maintenance Program	884.3	806.7	91.2
R&D Program	666.2	632.8	95.0

#### **Comprehensive Modernization** Program of power generating facilities

The main problem of the Russian hydropower industry is high equipment wear. In 2011, the Board of Directors approved a **Comprehensive Modernization Program** (CMP) for the generating facilities of JSC RusHydro for the 2012-2025 period. Its objective is to maintain the reliability and safety of the Company's generating facilities in the long run.

#### Policy of ensuring safety for the production processes

Ensuring reliable and safe energy production is one of the Company's major problems. To address this problem, the Company implements the Policy of Ensuring Safety for Production Processes.

Basic principles of the Policy of Ensuring Safety for the Production Processes

>

Preserving employees` life and health during employment



international agreements of the Russian Fedederation, standards in the field of occupational safety, industrial, fire and environmental safety

In 2013, as part of the Program of Operational Actions to Prevent Industrial Injuries at the Facilities of JSC RusHydro, the Company has implemented measures in occupational safety and health and production safety:

- upgrading the quality of safety inductions and initial trainings, carried out by occupational safety and the health and production monitoring divisions in generating branches, on occupational and fire safety for organizations-contractors` employees and monitoring the organization of safe working conditions at the facilities;
- holding monthly conference calls with the personnel of occupational safety and health and production monitoring divisions of the branches and subsidiaries on issues related to production activities;
- introducing a new level of the single corporate system of production monitoring for compliance with safety standards;
- introducing the comprehensive emergency database registrar (KRAB-3), which can upgrade the efficiency of monitoring processes via the automation of recording, analysis



and scheduling of the performance of

measures pertaining to occupational, production and fire safety as prescribed by the government, and departmental and corporate supervisory bodies;

 conducting technical audits of the Company's facilities: the Upper Volga HPP Cascade, the Cheboksarskaya HPP, the Volzhskaya HPP, the Zhigulevskaya HPP and the Ust-Srednekanskaya HPP.

## Occupational safety and health and production monitoring

The Company has implemented an information system "Production Monitoring of JSC RusHydro". This system is an integral part of the production monitoring system "Monitoring" of the Federal Service for Ecological, Technological and Nuclear Supervision (Rostechnadzor) and forms a single information space between JSC RusHydro and Rostechnadzor in the field of industrial safety. The system unified and enhanced the quality of the preparation processes and reporting in a timely manner concerning production safety at the Company's hazardous production facilities.

The Company has a modern occupational safety and health management system, which is being updated to reflect changes in federal legislation in this area, as well as structural changes within the Company. The Company annually implements measures related to preventing accidents, carrying out sanitary and hygienic measures to prevent workplace diseases, improving general working conditions, and providing employees with individual protection equipment, as well as certifying employee workplaces.

#### **Environmental Policy**

RusHydro is one of Russia's largest electricity producers, providing consumers

with highly effective, environmentallyfriendly energy from renewable sources.

The Environmental Policy of RusHydro defines environmental protection as one of the most important and ongoing priorities, following the general principles of environmental safety, as well as continuously upgrading both the Company's environmental performance and its management system.

The Company fulfills Russian legislative requirements in the field of environmental protection; participates in the performance of Russia's obligations that arise from international conventions in the field of environmental protection, as ratified by the Russian Federation; and aims to continually reduce its (negative) influence on the environment and to prevent environmental pollution.

The Company develops and implements standards in the environmental safety sphere. Also, in the environmental safety sphere, the following projects have been implemented by the Company:

- developing effective methods to protect the flow of the HPP from forming riverborne zebra mussels;
- increasing HPP eco-efficiency with hydro-power units that allow fish passage through the hydro-power tract;

Expenditures on Occupational Safety and Health, 2011-2013, RUR million



- parameter ground of under construction and operated reservoirs of the HPP on greenhouse gas emissions;
- optimizing the usage of environmentally-friendly lubricants in hydro-power turbines.

The introduction of new techniques and technologies is subject to environmental policy requirements, in terms of reducing the negative impact of the Company's technical system on the environment across all stages of the life cycle, including its impact on the aquatic environment.

# RusHydro Group's Sustainable Development Report

To provide more details about RusHydro's sustainable development, the Company prepares its Sustainable Development Report, which covers the most notable corporate achievements in the economic, environmental and social spheres.

The 2012 Report received public acknowledgment from the Council on Non-financial Reporting of the

Russian Union of Industrialists and Entrepreneurs (RSPP). Experts emphasized that the Report reflects the Company's contribution to socioeconomic development in the regions in which it operates. JSC RusHydro Group's enterprises provide the infrastructure base for many of these regions` economic development. Constructing new hydro-power facilities, creating power generation complexes, developing mechanical and industrial engineering and improving regional energy efficiency were highlighted as key activity areas for regional development.

For a second consecutive year, the Social Report received public acknowledgment from RSPP, proving the Company's consistency in developing a reporting process and ensuring the transparency of its activities.

# **Contacts and Administrative Details**

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Abbreviated name in English:	J
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Tax registration reason code (KPP)	9
General classifier of enterprises and organizations (OKPO)	7
Russian Classification of economic activities (OKVED)	4
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## Branches

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The Volzhskaya HPP Branch	1a Lenina Prospect, Volzhsky, the Volgograd Region, Russia Telephone +(7) 8443 34 13 13 http://www.volges.rushydro.ru/
The Votkinskaya HPP Branch	Chaykovsky, the Perm Region, Russia Telephone +(7) 34241 7 03 59 http://www.votges.rushydro.ru/

The Dagestan Branch	5 M. Khalilova Street, Kaspiysk, the Republic of Dagestan, Russia Telephone: +(7) 8722 55 06 05 http://www.dagestan.rushydro.ru/
The Zhigulevskaya HPP Branch	Zhigulevsk, the Samara Region, Russia Telephone: +(7) 84862 7 93 59 http://www.zhiges.rushydro.ru/
The Zagorskaya PSPP Branch	100 Bogorodskoye, the Sergiev-Posad District, the Moscow Region, Russia Telephone: +(7) 495 957 26 52, +(7) 49654 5 35 18 http://www.zagaes.rushydro.ru/
The Zeyskaya HPP Branch	Zeya, the Amur Region, Russia Telephone: +(7) 41658 2 45 31 http://www.zges.rushydro.ru/
The Kabardino-Balkarian Branch	1a Mechiyeva Street, Kashkhatau, the Chereksky District, the Kabardino-Balka Republic, Russia Telephone: +(7) 8662 77 94 05 http://www.kbf.rushydro.ru/
The Kamskaya HPP Branch	The Kamskaya HPP, Perm, Russia Telephone: +(7) 342 273 46 84 http://www.kamges.rushydro.ru/
The Karachaevo-Cherkessian Branch	Pravo-Kubansky, the Karachai-Cherkess Republic, Russia Telephone: +(7) 8782 26 70 40 http://www.kchf.rushydro.ru/
The Cascade of the Verkhnevolzhskiye HPPs Branch	Rybinsk, the Yaroslavl Region, Russia Telephone: +(7) 4855 29 74 59 http://www.kvvges.rushydro.ru/
The Cascade of the Kubanskiye HPPs Branch	360a, Vodoprovodnaya Street, Nevinnomyssk, the Stavropol Region, Russia Telephone: +(7) 86554 6 80 01 http://www.kkges.rushydro.ru/
Branch "CorUnG"	49 Architect Vlasov Street, Moscow, Russia Telephone: +7 495 225-32-32, ext. 4008 http://www.korung.rushydro.ru/
The Nizhegorodskaya HPP Branch	14 Privokzalnaya Street, Zavolzhye, the Gorodetsky District, the Nizhny Novgorod Region, Russia Telephone: +(7) 83161 7 96 79 morevasf@nigges.vohec.ru http://www.nizhges.rushydro.ru/
The Novosibirskaya HPP Branch	4 Novomorskaya Street, Novosibirsk, Russia Telephone: +(7) 383 345 95 55 http://www.nges.rushydro.ru/
The Saratovskaya HPP Branch	The Saratovskaya HPP, Balakovo, the Saratov Region, Russia Telephone: +(7) 8453 44 20 65 http://www.sarges.rushydro.ru/
The Sayano-Shushenskaya HPP named after P.S. Neporozhniy Branch	Cheremushki, Sayanogorsk, the Republic of Khakassia, Russia Telephone: +(7) 39042 3 26 27 http://www.sshges.rushydro.ru/
The Northern Ossetian Branch	63 Vaso Abayev Street, Vladikavkaz, the Republic of North Ossetia – Alania, Russia Telephone: +(7) 8672 53 66 34 http://www.osetia.rushydro.ru/
The Cheboksarskaya HPP Branch	34 Naberezhnaya Street, Novocheboksarsk, the Chuvash Republic, Russia Telephone: +(7) 8352 73 75 06 http://www.cheges.rushydro.ru/

## **Glossary of Key Terms and Abbreviations**

Company	JSC RusHydro, including its branches and executive office	
Holding company	JSC RusHydro, including its subsidiaries and dependent companies (SDCs)	
The Holding JSC "RAO Energy System of East"	JSC RAO Energy System of the East	
SDCs	Subsidiaries and dependent companies - entities, in which another (main) economic entity due to its majority or greater participation in the charter capital or in accordance with a concluded agreement or in another way, has the opportunity to determine decisions adopted by said entities.	
JSC RAO UES of Russia	The Russian energy company (until July 1st, 2008). Full name - Open Joint Stock Company Unified Energy System of Russia. The Company previously united almost all Russia's energy sector under its umbrella. JSC RAO UES of Russia ceased to exist as of June 30th, 2008 due to comprehensive energy sector reform	
WGCs	Generating companies of the wholesale electricity market (WEM) – companies formed on the basis of power plants.	
TGCs	Territorial generating companies – companies formed during the inter-regional integration of generating assets of JSC-energy (regional generating companies), except generating assets tha are included in OGK(s)	
IES	Integrated Energy System (IES) – aggregated production and other electricity property assets, connected via a unified production process (including production in the form of the combined generation of electrical and thermal energy) and the supply of electrical energy under conditions of a centralized operating and dispatch management.	
НРР	Hydro-electric power plant – the power plant as a unified production and technological complex, combining hydro-technical constructions and equipment that transforms mechanical energy from water into electric energy. In the text of the annual report, except when otherwise noted, tidal power stations and PS HPPs are included as HPPs	
PS HPP	Pump storage hydro-electric power plant – pump-storage power plant, which works 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	
нтс	Hydro-technical constructions – dams, hydro-electric power plant constructions, spillways, drain and water-discharge constructions, tunnels, channels, pumping stations, navigation locks, boat lifts; buildings used to protect from floods and the destruction of water reservoir shores; dam constructions, protecting the liquid waste reservoirs of production and agricultural organizations; devices that protect against washing-away and other constructions designed to use water resources and to prevent any negative impact from water and liquid waste	
RES	Renewable energy sources – examples include: hydro, solar, wind, geo-thermal, hydraulic energy, energy from water currents, waves, tides, the temperature gradient of sea water, temperature differences between air masses and the ocean, heat from the Earth , animal bio- masses and vegetable and household waste	
WPS	Wind electric plants include two and more wind energy installations designed for conversion of wind energy into electric energy and its transmission to consumers	
FTS	Federal Tariff Service	
WEM, WECM	Wholesale electricity market (capacity) – sphere for turnover of electrical energy (capacity) within the framework of Russia's integrated energy system within the country's unified economic space with the participation of large electricity producers and consumers that have the status of wholesale market objects, confirmed in full accordance with the Russian Federal Law "On the electric power industry" (by the Russian Government). The criteria for including large electricity producers and consumers are also established by the Russian government	
Installed capacity	Total nominal active capacity of generators at electric power plants which are part of the Group's structure	

NM WEM	The new model of the wholesale elect of the regulated sector of the wholes concluded by wholesale market part volume of electricity not sold under f market" (at prices established as a r free agreements, where prices are r time, if the volume from the price ap the day-ahead market, the purchase the balancing market
RC	Regulated contracts are concluded by years. The prices in each of these ag by the Russian FTS. The primary con the agreed upon amount of electricit at competitive prices on either the da purchaser has to pay for the agreed
MW	Megawatt – a unit of measurement fo
kWh	Kilowatt-Hour – a unit of measureme
Gcal	Gigacalorie – a unit of measurement
Gcalh	Gigacalorie-Hour - a unit of measure

ectricity and capacity market foresees the transformation esale market into a system of regulated contracts (RCs), eticipants. Electricity and capacity will be sold under RCs. The RC s will be sold/purchased at free prices on the "day-ahead result of the competitive choice of price applications and with regulated by participants in the agreement(s)). At the same pplication of purchases did not undergo competitive choice on er will have to buy the respective volumes for consumption on

by participants in the wholesale market for a term of 1 to 3 greements are tariffs for energy suppliers and capacity set ndition of the RC is "take or pay". The supplier has to provide ity (capacity) and (only for electricity) buy in the market day-ahead market or via a free bilateral agreement. The I upon amount independent of its own planned consumption

for electrical capacity

nent for produced electricity

t for heating energy

rement for heating power