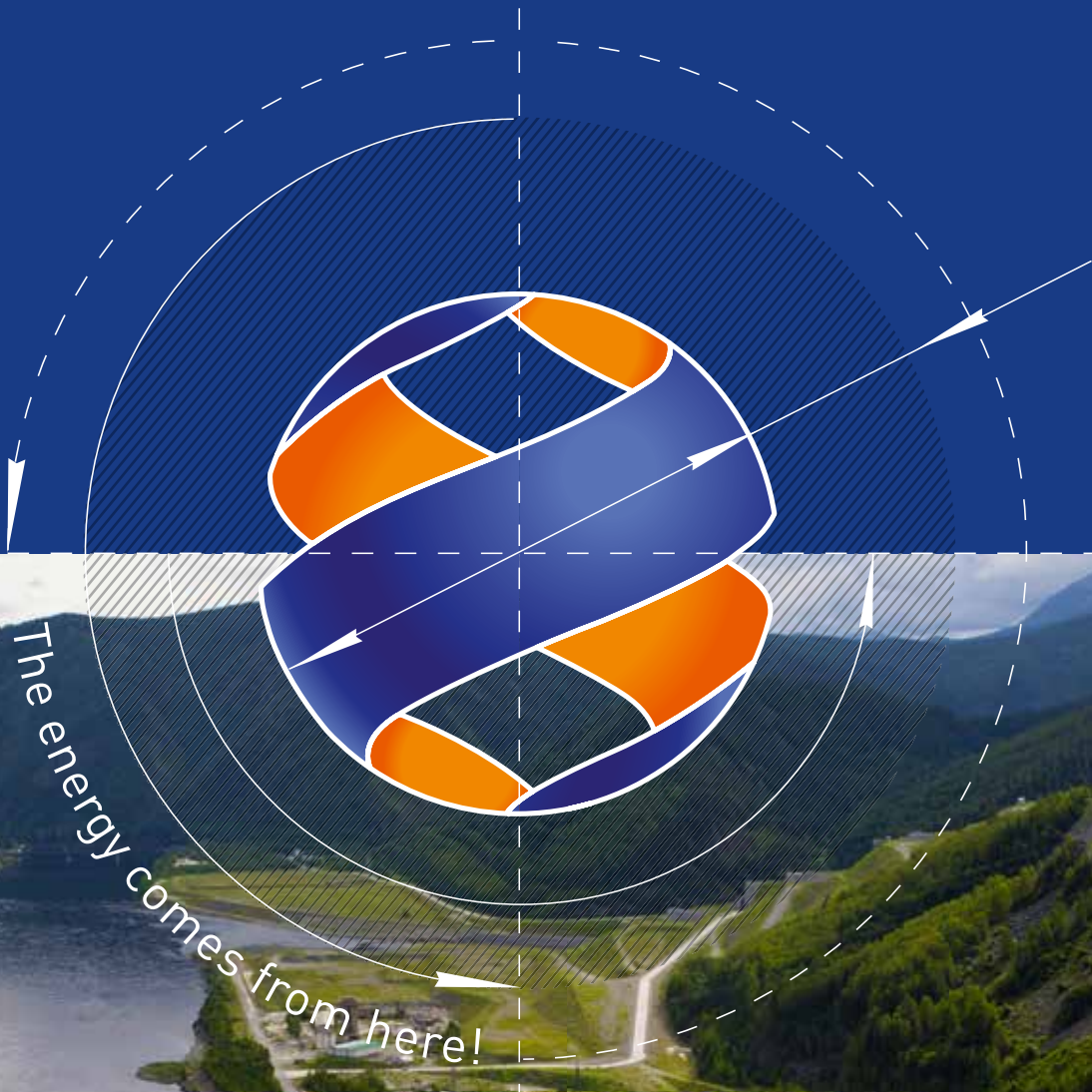


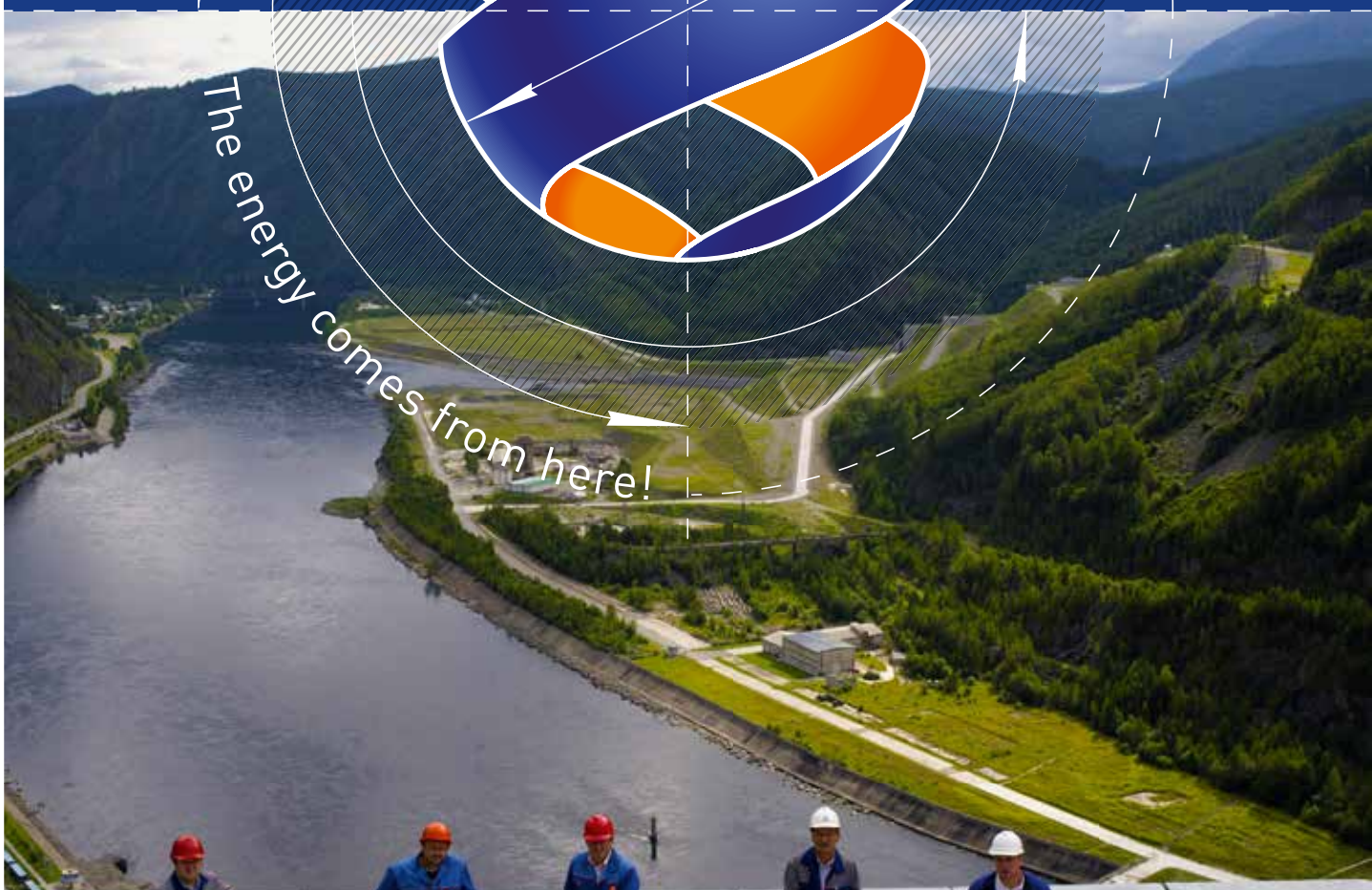
REPORT ON SUSTAINABLE  
DEVELOPMENT  
AND CORPORATE SOCIAL  
RESPONSIBILITY  
OF THE RUSHYDRO  
GROUP FOR 2014



RusHydro / THE 10<sup>th</sup> ANNIVERSARY



The energy comes from here!



# SUSTAINABLE DEVELOPMENT ENERGY

RESPONSIBILITY. SUSTAINABILITY. DEVELOPMENT.

Report on Sustainable  
Development and Corporate  
Social Responsibility  
of the RusHydro Group for 2014



**RESPONSIBILITY. SUSTAINABILITY. DEVELOPMENT**

This non-financial report reflects the analysis of the RusHydro Group's companies (RusHydro Group) activities in the field of corporate social responsibility and sustainable de-

velopment, as well as essential facts and 2014 operational results in labor management, health protection, occupational and environmental safety, responsible stakeholder engagement, and participation in the socio-economic development of the regions.

**CONTACT INFORMATION:**

Public Joint Stock Company Federal Hydro Generating Company (PJSC RusHydro) <sup>G4-3 and G4-7</sup>

Mailing address: 7 Malaya Dmitrovka Street, Moscow, Russia, 127006 <sup>G4-5</sup>

Office location: 7 Malaya Dmitrovka Street, Moscow, Russia, 127006

51 Arkhitektor Vlasov Street, Moscow, Russia, 117393

Telephone: 8(800) 333-8000

Fax: +7(495) 225-3737

Corporate website: www.rushydro.ru

**THE CONTACT PERSON TO BE ADDRESSED**

on issues in this report or its content: <sup>G4-31</sup>

Maksim V. Zavalko, Deputy Director of the Corporate Governance and Property Management Department  
ZavalkoMV@rushydro.ru  
Phone: 8 (800) 333-8000, +7 (495) 225-3232 ext. 1025

Roman Y. Sorokin, Head of the Unit of the Corporate Governance and Property Management Department

SorokinRYU@rushydro.ru  
Phone: 8 (800) 333-8000, +7 (495) 225-3232 ext. 1821

**CONTENTS**

**SECTION 1: RUSHYDRO – 10 YEARS OF SUSTAINABLE DEVELOPMENT ..... 6**  
 ABOUT THE REPORT ..... 7  
**SECTION 1. ENERGY OF SUSTAINABLE DEVELOPMENT ..... 12**  
 1.1 CLEAN ENERGY – BENEFIT OF SUSTAINABLE DEVELOPMENT ..... 12  
 1.2 SUSTAINABLE DEVELOPMENT STRATEGY AND CORPORATE GOVERNANCE ..... 21  
 1.2.1. The Company's Mission, Strategic Aims and Values ..... 21  
 1.2.2 Corporate Governance in the Interests of All Shareholder Groups ..... 26  
 1.2.3 Key Risks/Impacts and Opportunities ..... 28  
 1.3 FINANCIAL DISCIPLINE AND FAIR BUSINESS PRACTICES ..... 32  
 1.3.1. Ensuring Creditworthiness in the Medium- and Long-Term ..... 32  
 1.3.2. Control over the targeted use of funds ..... 33  
 1.3.3. Performance Compliance with Legal Standards and Fair Business Practices ..... 38  
**SECTION 2: SUSTAINABLE DEVELOPMENT OF THE TECHNICAL SYSTEM OF HYDRO-GENERATION ..... 44**  
 2.1 RELIABILITY AND SAFETY – THE BASIS OF SUSTAINABLE DEVELOPMENT ..... 44  
 2.1.1 Production Supervision as a Standard of an Uninterrupted Operation ..... 46  
 2.1.2. Management of the Risks Connected to Providing Safety and Reliability during Operation ..... 52  
 2.1.3. Management and Quality Control during Design and Construction ..... 56  
 2.2 ENERGY EFFICIENCY AS CLEAN ENERGY POTENTIAL ..... 60  
 2.2.1. Implementation of the 2014 Comprehensive Facilities Modernization Program ..... 60  
 2.2.2. Energy Consumption and Energy Efficiency ..... 64  
 2.3 INNOVATION – A FAST TRACK TO SUSTAINABLE DEVELOPMENT ..... 66  
 2.3.1. The Company's Innovative Development Priorities ..... 66  
**SECTION 3: SOCIAL RESPONSIBILITY ..... 72**  
 3.1 ENERGY DEVELOPMENT AS A CONTRIBUTION TO THE SUSTAINABLE DEVELOPMENT OF THE REGIONS ..... 72  
 3.1.1. The Group's Role in the Economic Development of the Presence Regions ..... 74  
 3.1.2. Main Results of the Implementation of Investment Projects: 2014 ..... 80  
 3.1.3. Restoration and Comprehensive Modernization of the Sayano-Shushenskaya HPP: 5 years of Restoration Works ..... 81  
 3.1.4. Construction and Commissioning of Facilities in Russia and Abroad ..... 82  
 3.1.5. Program for the Construction of New Thermal Power Generation Facilities in the Far East ..... 87  
 Selection Results and Basic Parameters of Competitive Procedures ..... 91  
 3.2. HUMAN RESOURCE DEVELOPMENT AS A LONG-TERM GROWTH GUARANTEE ..... 92  
 3.2.1. Implementing Social Policy ..... 93  
 3.2.2. Maintaining a High Qualification Level of Employees and Developing Human Resources ..... 97  
 3.2.3. Labor Organization and Ensuring of Employee Occupational Safety ..... 100  
 3.3 RESPONSIBLE INTERACTION AS A PREREQUISITE FOR SOCIAL CORPORATE RESPONSIBILITY ..... 103  
 3.3.1 The Key Groups of Stakeholders: the Mechanisms and the Main Topics of Interaction in 2014 ..... 103  
 3.3.2 Social Partnership in the Regions ..... 110  
 3.3.3 Charity and Volunteering ..... 112  
 4.1 ENVIRONMENTAL SAFETY AS A CRITERION OF SUSTAINABLE DEVELOPMENT ..... 122  
 Equipment of Sources of Waste Water Discharged into Water Bodies with Water Treatment Facilities ..... 125  
 4.2 ENVIRONMENTAL RESPONSIBILITY AND INTERACTION ..... 126  
 4.3 RESEARCH AND ADVANCED DEVELOPMENT: DECREASING INDUSTRIAL LOAD ON THE ENVIRONMENT ..... 131  
**GRI CONTENT INDEX SERVICE FOR THE KEY VERSION OF THE REPORT PREPARED "IN ACCORDANCE" WITH THE SUSTAINABILITY REPORTING GUIDELINES OF THE GLOBAL REPORTING INITIATIVE ..... 137**  
**INDEPENDENT AUDITOR REPORT EXPRESSING LIMITED CERTAINTY, PREPARED FOR THE MANAGEMENT OF RUSHYDRO ... 144**  
**THE OPINION OF THE COUNCIL OF THE RUSSIAN UNION OF INDUSTRIALISTS AND ENTREPRENEURS CONCERNING NON-FINANCIAL REPORTS ON THE RESULTS OF REVIEWING OF RUSHYDRO GROUP'S 2014 SUSTAINABLE DEVELOPMENT REPORT ..... 145**  
**A LIST OF TERMS AND ABBREVIATIONS USED IN THE REPORT ..... 148**  
**BOOK OF APPENDICES ..... 150**



## MANAGEMENT BOARD CHAIRMAN – CEO'S STATEMENT <sup>G4-1</sup>

### Dear Colleagues,

I am pleased to present the seventh non-financial report of the RusHydro Group, one of Russia's largest energy holdings and the leader in renewable energy generation, having more than 70 facilities with a total capacity of 38.5 GW.

In 2014, the Company celebrated its tenth anniversary. By this anniversary, we had managed to fully achieve the most important goals that we had set at the beginning of our ten-year path: to create a highly professional structure that would be able to actualize Russia's powerful hydropower potential, and become one of the leaders in the global hydropower industry.

These goals would not have been achieved without corporate social responsibility, which is rightly a source of pride for our entire team.

In our activities, we have proceeded from the assumption that RusHydro, as a large company partially owned by the government, is not just a tool for solving economic problems. The Company should be a tool for achieving goals set by the society and the State, both in the economic and social sphere.

RusHydro is a piece of Russia, as a whole, and we did not avoid the difficulties that Russia faced in 2014 either. But, these difficulties did not preclude RusHydro's several thousand employee strong team from working in an efficient and systematic way.

The RusHydro team will remember 2014 as the year of the rebirth of our pearl – the Sayano-Shushenskaya HPP. We had been pursuing this goal for five years. The power plant restoration was a top priority for us, though we were simultaneously solving many other problems: commissioning new capacities in different regions of the country, and building partnership relations with foreign colleagues. Yet, our main thoughts and feelings were with Khakassia. We have not just restored the plant. We have equipped it with state-of-the-art hydropower equipment. We have also performed our social obligations – we have transformed Chermushki into a modern settlement with developed infrastructure.

In 2014, we completed construction of the Boguchanskaya HPP – another labor success. Russia has received a powerful and most up-to-date hydropower plant.

We are continuing to update old generating facilities and build new ones. This is a great dual goal that has been designed for decades. Around fifteen new plants are being built currently. And the Far East is now our main priority. This region in the past was also near and dear to us and it has now become RusHydro's main construction site. These power plants we are building in the Far East on behalf of the State are only the beginning of great and long work, because it means the socio-economic development of a huge part of Russia, in a region that has great growth potential.

There are numerous interesting and demanding tasks ahead, each being a challenge to our professional worth. Today, we are implementing a wide range of measures to develop the human resources of the Company, and its branches, subsidiaries and dependent companies, which includes professional development programs for employees and their career progression. We help schoolchildren and students take their first steps into our profession. We are working with the population of the towns where our hydropower facilities are located, promoting the undeniable advantages of clean energy.

We feel optimistic about the future and are undertaking new tasks, because the guarantor of their successful solution is our people.

On behalf of the Company, I would like to thank everyone who has been and has remained with us these ten years for their support and loyalty.

We will do our best to continue to justify it in the future.

Yours sincerely,

**Evgeny Dod,**  
Chairman of the Management Board –  
CEO, PJSC RusHydro



## ABOUT THE REPORT

This Report on sustainable development and the corporate social responsibility of the RusHydro Group for 2014 (hereinafter – the Report) reflects essential facts about the activities of the RusHydro Group companies within the scope of the Report from January 1 to December 31, 2014, inclusive. <sup>G4-28</sup>

PJSC RusHydro has adopted an annual cycle for non-financial reporting. <sup>G4-30</sup> This Report is the seventh non-financial Report of the RusHydro Group.

The Report is prepared taking into account requirements and recommendations of the Sustainability Reporting Guidelines of the Global Reporting Initiative (GRI, version G4) and the GRI Electric Utilities Sector.

### NOTIFICATION OF USE <sup>G4-32</sup>

THE REPORT IS PREPARED "IN ACCORDANCE" WITH THE SUSTAINABILITY REPORTING GUIDELINES OF THE GLOBAL REPORTING INITIATIVE (HEREINAFTER – GRI), GRI G4, IN THE CORE OPTION.\*

\* The Report is registered with the GRI Public Sustainability Reporting Database at [www.database.globalreporting.org](http://www.database.globalreporting.org)

The 2013 Report on corporate sustainability and social responsibility was published in accordance with the GRI Guidelines (version GRI-G3.1) and can be found at [www.rushydro.ru/sustainable\\_development/socialotvetstvenost/kso](http://www.rushydro.ru/sustainable_development/socialotvetstvenost/kso). <sup>G4-29</sup>

### The following terms are used in the Report:

#### RusHydro or the RusHydro Holding:

relates to the group of companies including PJSC RusHydro and subsidiary companies included within the Report scope. The full list is shown below (see the RusHydro Holding within the Report scope).

#### The RusHydro Group or the Group:

relates to the group of companies, including PJSC RusHydro and subsidiary companies, which are tied to PJSC RusHydro by control and management relations. A full list and structure of the Group's assets are available on the website: <http://www.rushydro.ru/company/structure/>

#### PJSC RusHydro, RusHydro or the Company:

relates to the Holding, and includes the executive apparatus of PJSC RusHydro and branches of PJSC RusHydro.

#### Report scope <sup>G4-20 and G4-21</sup>

The scope of this Report includes the main subsidiary companies, except for JSC RAO Energy Systems of the East, as well as subsidiary companies which are tied to JSC RAO Energy Systems of the East by control and management relations due to the fact that said company publishes its own non-financial report, independent from the RusHydro Group. However, given the importance of the Far Eastern District and the presence in the Far East of its own facilities, which are closely integrated into the activities of JSC RAO Energy Systems of the East, RusHydro aggregates certain reporting figures with those of JSC RAO Energy Systems of

the East (in particular, information on capacity, and commissioning of new capacities, etc.).

As of December 31, 2014, PJSC RusHydro owned 84.39% of the authorized capital of JSC RAO Energy Systems of the East.

More detailed information about the Report's scope is presented in the Diagram "Scope and Terms Used in the Report", page 14.

### Changing the scope (new inclusions)

<sup>G4-13 and G4-23</sup> As distinct from the 2013 report, the Boguchanskaya HPP for the first time is included within the scope of this Report due to commissioning full capacity during the reporting period (the Boguchanskaya HPP<sup>1</sup> is part of the joint BEMO project being implemented on a parity basis with UC RUSAL).

<sup>G4-22</sup> In order to bring reporting figures of the previous reporting period into accordance with the change of scope, the following indicators were adjusted by including Boguchanskaya HPP data for the respective period:

- The total installed capacity figure for 2013;
- The power generation figure for 2013;
- The net electricity supply figure for 2013.

This Report includes the data of subsidiaries that constitute the repair and construction and research and development complexes. In the 2013 report, this data was not presented or was not presented in full, due to the structural reorganization of these complexes during the previous reporting period.

No other significant changes in the scope of the Report, rewordings or changes in comparable data as compared with earlier reports occurred. <sup>G4-13 and G4-22</sup>

### Company profile

Since its inception in 2004, PJSC RusHydro's main economic activity has been the production of electricity by hydro-power plants in accordance with the RCEA<sup>2</sup>. <sup>G4-4</sup>

### Forward-looking statements:

Data included in the Report on the sustainable development and corporate social responsibility of the RusHydro Group for 2014 that relate to the future are based on forward-looking information. Such words as "believe," "anticipate," "expect," "estimate," or "intend" as well as other words of similar meaning indicate the fact that they are forward-looking statements. Actual future results may differ materially from the plans, goals, estimates and intentions set out in these forward-looking statements. Any forward-looking statements refer only to the date of the 2014 Report on the RusHydro Group's social responsibility and sustainable development. There is no guarantee that the anticipated results will be achieved, so these statements should not be regarded as the most likely or standard scenario.

### Approach regarding external assurance

The report was submitted for the GRI Content Index Service, and GRI confirmed the accuracy of the GRI G4 Content Index.<sup>3</sup> In addition, the Report passed an independent audit

<sup>1</sup> JSC Boguchanskaya HPP is a part of RusHydro's joint activities with UC RUSAL, and its performance results are recognized in the RusHydro Group's consolidated financial statements under IFRS by the equity method.

<sup>2</sup> The Russian Classification of Economic Activities.

<sup>3</sup> The GRI's G4 Content Index at the page 184 [prepared "in accordance" and the text of the Report contain cross-references to the corresponding DMAs and Indicators.

in compliance with ISAE 3000. PricewaterhouseCoopers CJSC<sup>4</sup> acted as the independent auditor. <sup>G4-33</sup>

The Report also underwent the public assurance procedure of the Russian Union of Industrialists and Entrepreneurs (RSPP)<sup>5</sup>. During the current reporting period, the Company has tried to take into account the RSPP experts' recommendations received following the public assurance of the 2013 non-financial statements of the RusHydro Group. <sup>G4-33</sup>

### Methods for defining the Report's content

Due to the transition to the GRI G4 reporting version, corporate procedures necessary for the disclosure of general standard reporting elements were refined<sup>6</sup>. In addition, for the first time a brand new approach to identifying a set of material themes and aspects<sup>7</sup> to be included in the Report was used.

In the process of determining the contents of the Report, the CORE OPTION of reporting IN ACCORDANCE WITH GRI G4 was chosen which is the most suitable for the Company's needs and enables it to meet the information needs of its stakeholders.

This Report reflects the RusHydro Group's range of activities

and contains Disclosures on the Management Approach (DMA), as well as Indicators on identified material aspects – environmental, social and economic performance and the impact of RusHydro companies.

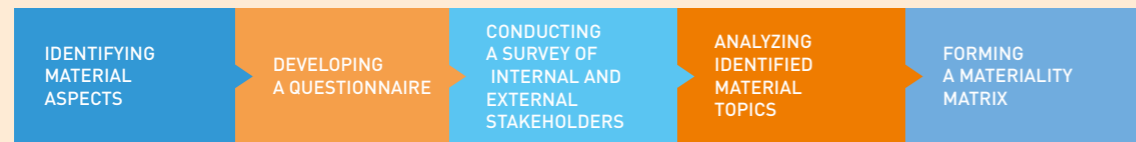
“MATERIAL ASPECTS ARE ASPECTS THAT REFLECT THE ORGANIZATION'S MATERIAL ECONOMIC, ENVIRONMENTAL AND SOCIAL IMPACT OR SUBSTANTIVELY INFLUENCE THE ASSESSMENTS AND DECISIONS OF STAKEHOLDERS.” GRI G4 GUIDELINES

### The process of defining the Report's content <sup>G4-18</sup>

In defining the content and scope of information to be included in the Report, the Company was guided by THE GRI G4 GUIDELINES REPORTING PRINCIPLES. Identification of material themes and aspects to be included in the Report was conducted with the use of the CRITERIA OF COMPLIANCE with these Guidelines. The materiality of activity aspects to be included within the Report is the basic principle in the approach to defining report content.

The process of identifying material themes to be included in the Report is presented below. <sup>G4-18</sup>

## THE PROCESS OF IDENTIFYING MATERIAL THEMES: KEY STAGES



Based on the analysis of survey results, the 23 most important themes and aspects were selected, the significance ratio of which stood at 20 percent and more. The identified material themes are important for all companies within the scope of the Report. The Company works on identifying the scope of aspects beyond the Group, each of which reflects the material economic, environmental and social impact of the Company and substantively influences the assessments and decisions of stakeholders. <sup>G4-20 and G4-21</sup>

The survey results for internal and external stakeholders are represented in the diagram below. The Report includes all 23 themes and aspects identified in the survey of external and internal stakeholders. In this case, the ten most material themes (indicated in the diagram) are highlighted in the Report in more detail than the others. The full list of material themes and aspects is presented below, as well as in the names of the relevant sections of the Report<sup>8</sup>. <sup>G4-18</sup>

**DMA** Disclosures on the Management Approaches (DMA) for the 10 most material aspects are marked with the DMA index throughout the Report.

<sup>4</sup> The Independent Auditor's Report is presented on page 144.

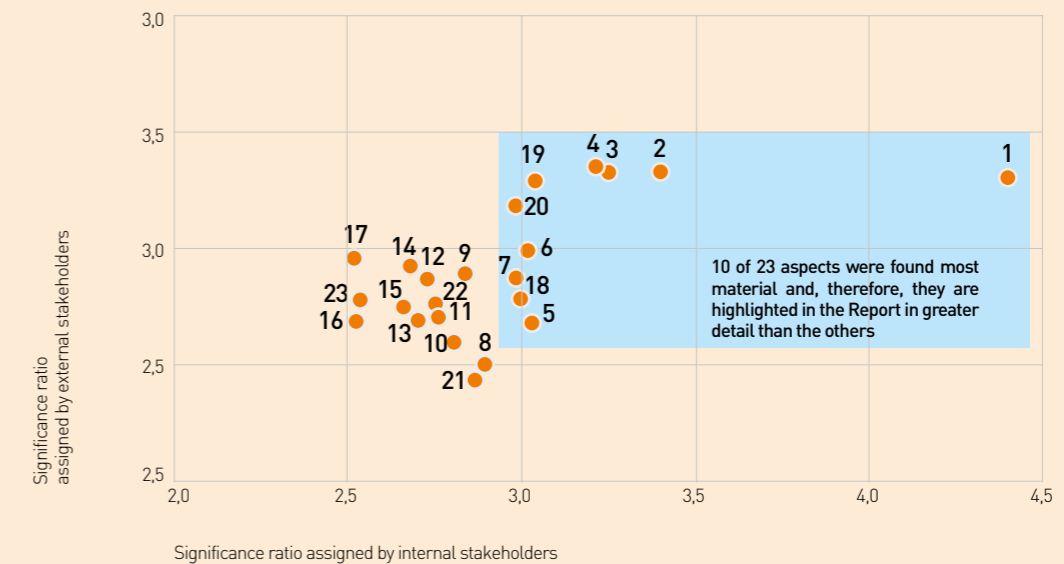
<sup>5</sup> The RSPP's Non-financial Reporting Council's opinion is presented on page XX.

<sup>6</sup> General standard elements of the Report include seven topical directions: Strategy and analysis, Organizational profile, Identified significant aspects and boundaries, Interactions with stakeholders, General information about the Report, Corporate governance and Ethics and fair practices.

<sup>7</sup> In accordance with the GRI G4 Guidelines, the term "theme" is used in this Report to refer to any of the possible themes of sustainable development; the term "aspect" is used in this Report to refer to one of the themes covered within these Guidelines.

<sup>8</sup> Section 1.2 Material themes and aspects and performance indicators included in the Report.

## THE MATRIX AND THE LIST OF MATERIAL THEMES IDENTIFIED WITHIN THE PROCESS OF DEFINING THE REPORT'S CONTENT <sup>G4-19, G4-20 AND G4-21</sup>



### The list of material themes and aspects identified within the process of defining the Report's content

- H1. Areas of activity (electric energy generation and supply, construction)
- Financial and economic performance of the Group.
- The Company's mission, strategic aims and values
- The Company's development priorities and their implementation
- Implementation of the Social Policy
- Implementation results for investment projects
- Implementation of the 2014 Comprehensive Facilities Modernization Program
- Construction program for new thermal generation facilities in the Far East
- Restoration and comprehensive modernization of the Sayano-Shushenskaya HPP (the fifth anniversary of restoration work)
- Ensuring creditworthiness in the medium- and long-term
- Priority areas of the Company's innovative development
- Production supervision over compliance with industrial safety requirements at hazardous production facilities
- Implementation of the Environmental Policy, including international environmental cooperation
- Control over the targeted use of funds
- Key opportunities and risks (including the risk management system)
- Compliance of the Group's activities with legislative regulations
- Quality control during design and construction
- Constructing and commissioning facilities (including RES) in Russia and abroad
- Reliability and safety of hydro-power structures, including the disaster and emergency prevention and relief system
- Occupational health and safety of personnel
- The Group's role in developing the presence regions
- Maintaining a high employee skill level and human resource development (creation of a talent pool and training programs)
- Energy consumption and energy efficiency

### Scope and terms used in the Report

	RusHydro (within the scope of the Report)	The RusHydro Group
<b>PJSC RusHydro</b>	PJSC RusHydro and subsidiary and dependent companies	RusHydro (within the scope of the Report) and JSC RAO Energy Systems of the East
PJSC RusHydro, including executive apparatus and branches	Current hydro-power plants and those under construction	The full list and structure of the Group's assets are available in the RusHydro Annual report for 2014: <a href="http://www.eng.rushydro.ru/upload/iblock/492/Annual-Report-2014.PDF">http://www.eng.rushydro.ru/upload/iblock/492/Annual-Report-2014.PDF</a>
The list of branches is presented in the Section 1.1 CLEAN ENERGY – BENEFIT OF SUSTAINABLE DEVELOPMENT, the list of companies within the Report scope and their areas of activity	Sales companies	
	Science and technology and design complexes	
	Repair and construction complex;	
	Others (non-core companies)	
	The full list is presented in section 1.1.2.1 Areas of Activity	

1.

## ENERGY OF SUSTAINABLE DEVELOPMENT

“Under current conditions, the concept of social responsibility for a major State-owned company is becoming pervasive. Today, our understanding of social responsibility includes all key business areas of RusHydro.”

Evgeny Dod, Chairman of the Management  
Board – CEO of PJSC RusHydro



## 1.1 CLEAN ENERGY – BENEFIT OF SUSTAINABLE DEVELOPMENT

### RUSHYDRO IN 2014

#### The RusHydro Group

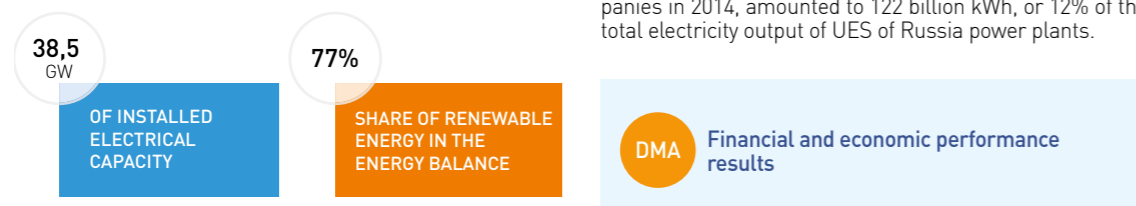
The RusHydro Group, one of Russia's largest energy holdings and a leader in renewable sources-based electricity production, is an important sustainable development element in the Russian power industry. <sup>G4-4</sup>

THE RUSHYDRO GROUP:  
12% OF RUSSIA'S ELECTRICITY  
GENERATION IN 2013

The RusHydro Group companies are core companies and key State institutions to develop the economy's basic industry – the electric power industry. In 2012, in accordance with a Decree of the Russian President, PJSC RusHydro was included in the list of strategic enterprises and strategic joint stock companies. <sup>G4-9</sup>

<sup>G4-DMA</sup> The RusHydro Group operates within the framework of the Unified Energy System of Russia in eight federal districts. Generating enterprises include 112 energy facilities with a total installed capacity of more than 38.5 GW, which are located in seven operating areas and are included in seven Unified Energy Systems (UES).

Electricity output, produced by the RusHydro Group's companies in 2014, amounted to 122 billion kWh, or 12% of the total electricity output of UES of Russia power plants.



#### The RusHydro Group: generating capacities and electricity output in 2014, indicating the energy source <sup>G4-EU1</sup>

	Type of generation	Total installed capacity, GW	Share, %	Output, billion kWh
RusHydro	Hydro-generation and other renewable energy sources	29.5	77	90.8
RAO Energy Systems of the East	Thermal generation	9.0	23	31.2
Total for the RusHydro Group		38.5	100	122.0

NOTE: The first 3 hydro-power units of the Boguchanskaya HPP (part of a joint project between RusHydro and UC RUSAL) have been in commercial operation since December 1, 2012.

#### The RusHydro Group: Net electricity supply<sup>9</sup>, billion kWh <sup>G4-EU2</sup>

	2012	2013	2014	Change, %
RusHydro	79.8	97.7	89.5	-8%
RAO Energy Systems of the East	27.9	26.5	27.6	+4
Total for the RusHydro Group	107.7	124.2	117.0	-6%

In total, the Group's net supply of electricity decreased 6% during 2014 to 117 billion kWh. During the same time, net electricity supply from RusHydro facilities within the scope of the Report fell 8% compared with the previous year to 89.4 billion kWh, mainly due to insufficient water inflow at key Group facilities, including: the Volga-Kama Cascade of HPPs and the Sayano-Shushenskaya HPP. The share of renewable energy in the production structure has not changed in comparison with 2013 and stood at 77%.

THE SHARE OF ELECTRICITY PRODUCED FROM RENEWABLE ENERGY SOURCES WAS 77% OUT OF THE RUSHYDRO GROUP TOTAL.

<sup>9</sup> Net supply – electricity supply excluding power plants' own needs, losses in electric grids and production needs.

#### The RusHydro Group: 2014 key financial indicators, RUR million<sup>10 G4-EC1</sup>

Indicator	2012	2013	2014
Total assets	854,267	856,112	883,770
Total liabilities	313,862	259,405	288,619
Equity	515,086	579,530	578,921
Revenue	298,805	313,632	329,560
Government subsidies (JSC RAO Energy Systems of the East)	10,796	13,246	12,428
Capitalization of PJSC RusHydro	212,966	180,291	202,977

#### RusHydro within the Scope of the Report

The RusHydro companies' main economic activity within the scope of the Report is the production of electricity, and the method of production is hydro-generation. As a major energy resource, the hydro-resources of the Russian Federation are used. Sea tides, wind and geo-thermal energy-based generation is also developed. <sup>G4-4</sup>

**Electricity Production.** The generating assets of the Company within the scope of the Report are located in the Russian Federation, as well as in the Republic of Armenia. These assets include more than 70 hydro-generating facilities with a total installed capacity of 29.5 GW. In 2014, the aggregate share of electricity produced by RusHydro's HPPs amounted to 54% of the total electricity output of Russia's hydro-power plants.

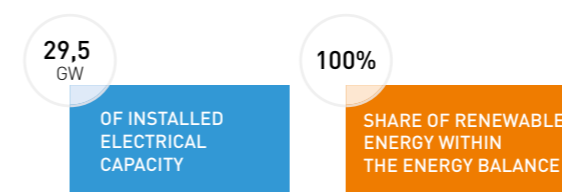
**Supply.** The structure of the Holding includes four electricity supply companies in four Russian regions, with their management centralized in JSC ESC RusHydro, PJSC RusHydro's subsidiary company, (hereinafter collectively referred to as ESC RusHydro). The total net electricity supply of the ESC RusHydro's electricity supply companies in 2014 was 37.6 billion kWh.

**Generating facilities under construction.** The Report's scope include SDCs that construct and upgrade hydro-power facilities. The construction of energy facilities are large-scale investment projects that reflect the intention of the RusHydro Group for sustainable development and for making a significant impact on the socio-economic development of the presence regions.

**Repair and construction complex.** The Report's scope includes companies engaged in the construction of new generating facilities, as well as the reconstruction and modernization of current power facilities.

**Research and design complex.** The Report's scope includes five institutions that provide support for ongoing and promising projects of the RusHydro Group's companies. Design and research and development are designed to improve the reliability of the power facilities and enhance the innovative development and scientific and technological progress of RusHydro and hydropower as a whole. Having its own research and design base is a significant competitive advantage and lays the foundation for sustainable development.

#### THE RUSHYDRO HOLDING 54% OF THE TOTAL ELECTRICITY OUTPUT OF THE HPPS OF THE RUSSIAN FEDERATION



#### Main Areas of Activity

**DMA** <sup>G4-DMA</sup> RusHydro's activity includes the following areas:

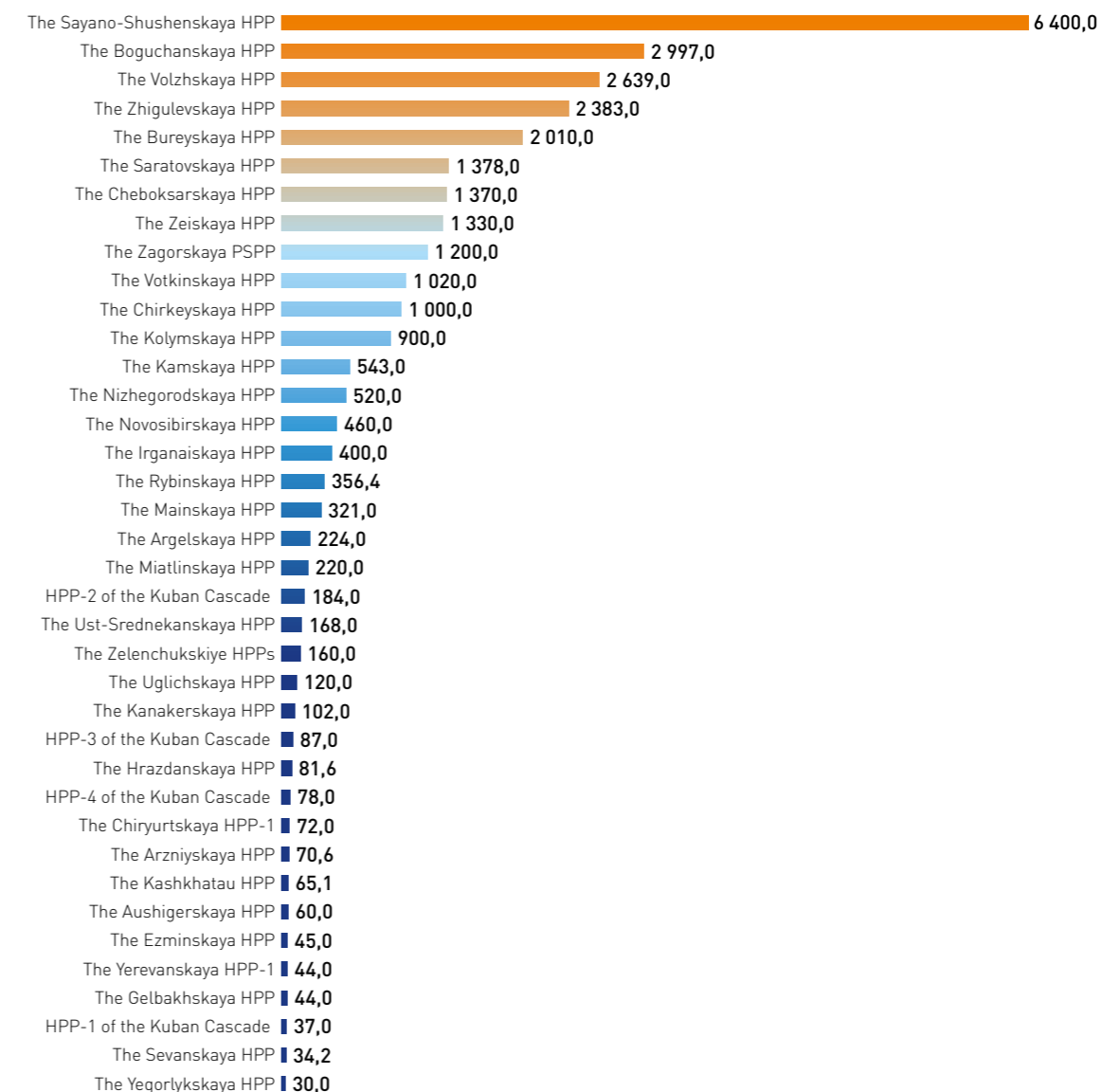
<sup>10</sup> Here are some details of the consolidated financial statements of the RusHydro Group prepared in accordance with IFRS. See also Quantitative Performance Indicators in

Appendix 1. For more information refer to the 2014 Annual Report of JSC RusHydro (<http://www.eng.rushydro.ru/upload/iblock/492/Annual-Report-2014.PDF>).

The list of the companies within the scope of the Report and their key business areas <sup>G4-17</sup>

Electricity Production	Generating facilities under construction	Supply	Repair and construction complex	Research and design complex
PJSC RusHydro executive apparatus	1. The Boguchanskaya HPP	1. Krasnoyarskenergosbyt	1. Hidroremont VCC	1. VNIIG named after B. E. Vedeneev
PJSC RusHydro branches:	2. Geotherm	2. Ryazan Energy Retail Company	2. Montazhen-ergo	2. Hidroproject Institute
1. The Bureyskaya HPP	3. The Zaramagskiye HPPs	3. Chuvash Energy Retail Company	3. Ust-SrednekanG-ESstroy	3. Lengidroproject
2. The Volzhskaya HPP	4. KamGEK	4. Energy Supply Company of Bashkortostan	4. Chirkey-GESstroy	4. Mosoblgidroproject
3. The Votkinskaya HPP	5. Kolymaenergo	5. ESK RusHydro	5. ESCO UES	5. NIIES
4. The Dagestan branch	6. MEK (the Republic of Armenia)			
5. The Zhigulevskaya HPP	7. The Pauzhet-skaya GeoPP			
6. The Zagorskaya PSPP				
7. The Zeiskaya HPP				
8. The Kabardino-Balkaria branch				
9. The Kamskaya HPP				
10. The Upper Volga Cascade of HPPs				
11. The Kuban Cascade of HPPs				
12. The Karachay-Cherkessia branch				
13. The Corporate Hydro-power University				
14. The Nizhegorodskaya HPP				
15. The Novosibirskaya HPP				
16. The Saratovskaya HPP				
17. The Sayano-Shushenskaya HPP named after P.S. Neporozhniy				
18. The North Ossetian branch				
19. The Cheboksarskaya HPP				

THE INSTALLED ELECTRIC CAPACITY OF HYDRO-POWER PLANTS AND POWER INSTALLATIONS OF PJSC RUSHYDRO BRANCHES AND SDCS (AS OF 01.01.2015) <sup>G4-EU1</sup>  
THE RUSHYDRO HOLDING: THE INSTALLED CAPACITY OF HYDRO-POWER PLANTS, MW (EXCEPT SHPPS)



### Key features and competencies

RusHydro plays a backbone role in the Russian electric power industry. <sup>G4-EC8</sup>

#### RUSHYDRO COMPANIES WITHIN THE SCOPE OF THE REPORT:

- support key infrastructure for Russia's vital activities and key utility systems, ensure their operation and safety;

- represent an instrument of State policy, which can resolve complex social and economic problems;

- ensure the growth of business value, both through the technical upgrading of existing facilities and by investing in new assets.



RusHydro is a unique element within Russia's power sector, as a(n):

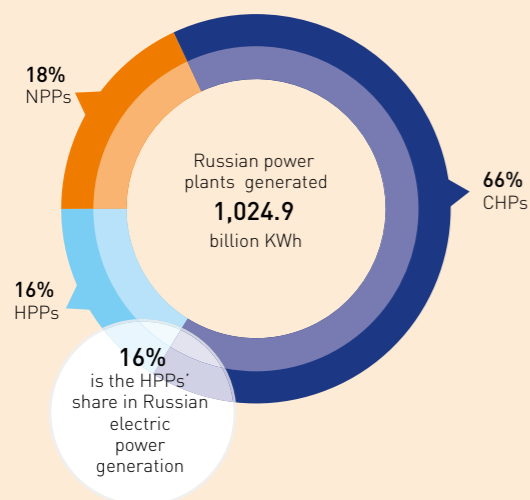
- Generator of clean electric energy;
- Energy efficient enterprise;
- Base for system reliability;
- Initiator of renewable energy innovations;

- Corporation controlled by modern managers with extensive experience in managing hydro- power assets.

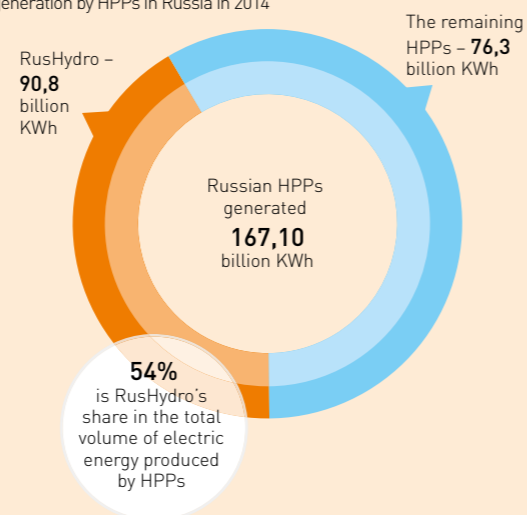
The key features and competencies of the RusHydro Holding can strengthen the RusHydro Group's positions and role both within the country and abroad.

## RUSHYDRO: A BACKBONE ROLE IN THE RUSSIAN ELECTRIC POWER INDUSTRY

2014: The structure of electrical generation in Russia in 2014 (billion KWh)



2014: RusHydro's share in the total electrical generation by HPPs in Russia in 2014



Source: 2014 Operational information of JSC SO UES <sup>11</sup>

### Geographic Footprint <sup>G4-9</sup>

The generating facilities of RusHydro are located in 20 Russian Federation subjects, including six republics and 14 autonomous districts (inter alia territories and regions).

The development of alternative RES facilities is primarily being implemented in the North Caucasus (small HPPs) and in the Murmansk Region (the North Western Federal District), where the Holding is implementing a tidal energy development project, and in Kamchatka (FEFD), where there are geo-thermal power plants.

The hydro-power systems of the RusHydro Holding are located on the Volga, Kama, Cunha, Bureya, Zeya, Yenisei, Ob, Kolyma, Sulak, Kara Koisu, Terek, Gizeldon, Aksaut, and Maruha Rivers, on the Great Stavropol Canal and the Nevinnomysskiy Canal and at the Kuban Reservoir. The water reservoirs of RusHydro Holding hydro-power plants are federally owned. The management of water facilities, as well as their protection and environmental safety, are the responsibility of federal authorities.

### Foreign assets <sup>G4-9 and G4-6</sup>

In 2011, the plants of the Sevan-Hrazdan Cascade of HPPs in the Republic of Armenia, which PJSC RusHydro owns through its subsidiary company, CJSC International Energy Corporation, were included in the number of RusHydro Holding's assets. In March 2014, an agreement was concluded with Lengidroproject Institute to perform the functions of the general designer, and in October, construction of the main structures for the Naryn Cascade of HPPs in the Republic of Kyrgyzstan were launched. Also in 2014, a design study for the reconstruction and construction of the Perepadnye Cascade of HPPs in Abkhazia commenced; it will take up to 5 years. An increased presence in foreign markets is a long-term corporate strategic priority for PJSC RusHydro.

### Development of low power renewable energy generation

In 2014, the Company's portfolio included 39 low power plants (less than 30 MW), operating using advanced renewable energy sources (small rivers, geothermal energy,

and tidal energy). The gross installed capacity of low power renewable energy projects amounted to 352 MW, or 1.2% of the total installed capacity of the Holding's generating facilities, of which 275 MW was the gross installed capacity of small hydro-power plants (SHPPs). The lowest powered facility is the Khorobrovskaya SHPP (a part of the Upper Volga Cascade of HPPs), which has a gross installed capacity of 160 kW.

The Company implements low-head SHPP projects (with a capacity of less than 30 MW), mainly, in the North Caucasus, as this region has good hydro-generation potential. In 2014, PJSC RusHydro developed a program for constructing small hydro-power plants with a total capacity of up to 500 MW<sup>12</sup>.

### Contribution to the development of regional economies <sup>G4-EC8</sup>

RusHydro, due to the nature of its activities, makes a significant contribution to developing the energy potential of the presence regions and creating competitive territorial industrial clusters. An example of such is the Boguchansk Energy and Metallurgic Association, which is being built in conjunction with UC RUSAL in the Krasnoyarsk Region. In 2014, the last hydro-power unit of the Boguchanskaya HPP on the Angara River was commissioned and the plant reached its design capacity (2,997 MW).

The RusHydro Group's companies implement large-scale capital construction projects. The largest are the following (the design capacities of plants under construction are shown here in decreasing order)<sup>13</sup>:

- The Nizhne-Bureyskaya HPP in the Amur Region (320 MW);
- The Ust-Srednekanskaya HPP in the Magadan Region (310.5 MW);
- The Yakutskaya SDPP-2 in the Republic of Sakha (Yakutia) (193 MW);
- The Zelenchukskaya HPP-PSPP in the Karachay-Cherkessia Republic (140 MW);
- The CHP plant in Sovetskaya Gavan in the Khabarovsk Region (120 MW);
- The Sakhalinskaya SDPP-2 in the Sakhalin Region (120 MW);
- The Blagoveshchenskaya CHP plant in the Amur Region (120 MW) (2nd stage);
- The Gotsatinskaya HPP in the Republic of Dagestan (100 MW).

<sup>11</sup> UES – Unified Power System.

<sup>12</sup> For additional details see Section 3.1.4. Constructing and launching facilities (including RES facilities) in Russia and abroad.

<sup>13</sup> For additional details see Section 3.1. Social and economic development of the presence regions.

## THE RUSHYDRO GROUP'S GEOGRAPHIC FOOTPRINT



## Electricity and capacity markets <sup>G4-8</sup>

RusHydro's companies conduct transactions with electric power and capacity in the wholesale electricity and capacity market and retail electricity markets.

Wholesale market participants include: generating companies, electricity export/import operators, energy sales organizations, grid companies (in terms of purchasing electricity to cover transmission losses), and major consumers.

Retail market participants include: consumers, public utility services providers, guaranteed supply companies, energy sales and energy supply organizations, electricity (capacity producers) in retail markets, grid companies, operational and dispatching management entities in the electric energy sector, and exercising operational and dispatch management in retail markets (the system operator and operational and dispatching management entities in technologically isolated territorial electric power systems).

The wholesale electricity and capacity market (WECM) 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 the 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 carried out via special rules.

The territories of the Amur Region, the Primorsky Region, the Khabarovsk Region, the Jewish Autonomous Region and the Southern part of the Republic of Sakha (Yakutia) are united into the non-pricing zone of the Far East wholesale electricity and capacity market. These territories have peculiarities of organizing the market relationship in electric power due to competition limitations among electricity suppliers and grid limitations in respect to electricity exchange.

The tariffs for electricity supplied by the energy companies of the Far East to consumers (end tariffs) are approved by regulators on the basis of the overall tariff level approved by the Federal Tariff Service for the regulated period.

## RusHydro: 2014 Key Operating Results <sup>G4-DMA</sup>

	Installed Capacity, MW	Output, million KWh	Net Supply, million KWh
The Far East	4,508.4	14,911.7	14,424.2
Siberia	10,178.0	30,854.2	30,673.8
Center	11,530.1	38,334.4	37,743.9
South	3,236.1	6,732.2	6,167.02
<b>TOTAL</b>	<b>29,452.65</b>	<b>90,832.5</b>	<b>89,474.3</b>

NOTE: The Table reflects the data for companies that are included within the scope of the Report. The complete list is available in the Chapter About the Report. A detailed analysis of 2014 financial and operating results of the Group is given in the 2014 Annual Report of PJSC RusHydro (<http://www.eng.rushydro.ru/upload/iblock/492/Annual-Report-2014.PDF>). See also Quantitative Performance Indicators in Appendix 1.

In April 2014, the Russian government approved measures to liberalize the HPP capacity market for the second pricing zone (Siberia). In accordance with the changes made, starting from May 1, 2014 to December 31, 2015, the percentage of capacity sold by the HPPs in the second pricing zone under regulated contracts (excluding supply to the population) is set at 35%. However, it is envisaged that this percentage will be reduced to 20% in 2016.

A number of sectors with various terms of transactions and supply terms function in the wholesale electricity market: the regulated contracts sector, the day-ahead market, the free bilateral contracts sector and the balancing market.

In 2014, all electricity sold in the pricing zones of the wholesale market by the RusHydro Holding's companies was sold at non-regulated prices excluding electricity supplied to the population and similar categories of consumers, as well as to consumers of the North Caucasus Region and the Republic of Tuva.

In retail electricity markets, electricity purchased on the wholesale electricity and capacity market is sold to end consumers, including by RusHydro companies which are a part of ESK RusHydro.

Within the territories of the constituent entities of the Russian Federation united in the pricing zones of the wholesale market, electricity is sold at non-regulated prices except for electricity sold to the population and similar categories of consumers.

Electricity supply to the population and similar categories of consumers is conducted on the basis of regulated prices (tariffs) established by the executive authority within the sphere of the State regulation of tariffs of the constituent entity of the Russian Federation.

In 2014, RusHydro Holding companies acted as retail market participants within the territory of the Republic of Bashkortostan, the Krasnoyarsk Region, the Republic of Chuvashia, and the Ryazan Region<sup>14</sup>.

## 1.2 SUSTAINABLE DEVELOPMENT STRATEGY AND CORPORATE GOVERNANCE

### 1.2.1. The Company's Mission, Strategic Aims and Values

**DMA** <sup>G4-DMA</sup> 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

The Development Strategy of JSC RusHydro is represented as the Strategic Plan till 2015, with future development till 2020<sup>15</sup>.

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

- The Concept of the long-term socio-economic development of the Russian Federation until 2020;
- The long-term forecast of Russia's economic development until 2030;
- The Energy Strategy of Russia until 2030;
- The general layout of electricity generation facilities' locations until 2020 (with an outlook until 2030);
- Regional socio-economic development strategies and regional energy strategies;
- Sector strategies and long-term development plans for the oil and gas industries, non-ferrous metallurgy, and transport infrastructure, etc.

### STRATEGIC GOALS

RELIABLE AND SAFE PERFORMANCE OF THE COMPANY'S FACILITIES	Ensuring the reliable and safe functioning of equipment and hydro-power for society and the environment, taking into account the economic feasibility of funds allocated to minimize risks and reduce potential damage	
ENERGY EFFICIENCY AND THE SUSTAINABLE DEVELOPMENT OF RES-BASED GENERATION	The Company makes every effort to increase the share of renewable energy source in the energy balance, holding Russia's leading position in RES usage	
GROWTH OF THE COMPANY'S VALUE	RusHydro seeks to maximize its value to the State, shareholders, society and employees	

### The Company's Key Values

#### Clean energy

<sup>G4-DMA</sup> The basics of life and human development are environmental safety, and respect for natural resources, which requires the gradual transition of the power industry to renewable energy sources.

#### Prosperous society

<sup>G4-DMA</sup> Reliability and infrastructure development, the sustainable use of water resources, development of a hydro generation potential and expanded use of renewable energy sources that promote the development of territories, economic growth and increase in welfare and prosperity of society.

#### Leading company

Ensuring the Company's success and leadership by combining the efforts of personnel and resources, and a business component in the pursuit of excellence in every venue.

#### Single team

Fair remuneration and development opportunities for employees, team spirit, self-expression and personal fulfillment. The ultimate goal is personal success for each team member. The necessary framework for the Company's development is the energy of the ideas of people working for it.

<sup>14</sup> A detailed description of the markets in which RusHydro operates is presented on the Company's website and in the 2014 Annual Report of JSC RusHydro (<http://www.eng.rushydro.ru/upload/iblock/492/Annual-Report-2014.PDF>).

<sup>15</sup> Approved by JSC RusHydro's Board of Directors June 16, 2010.

## Long-Term Development Program of the RusHydro Group

It is a new strategic management tool. The Long-Term Development Program of the RusHydro Group<sup>16</sup> is a key tool in the vertical system of strategic planning in companies with State participation and is aimed at improving corporate efficiency and upgrading the governance system of the main shareholder – the Russian Federation.

The Long-Term Development Program of the RusHydro Group was formed for the 2015-2019 period on the basis of the Strategic Plan, the medium-term consolidated business plan of the RusHydro Group and the approved program documents of the RusHydro Group (PJSC RusHydro and JSC RAO Energy Systems of East): production programs, investment program, and innovative development programs.

The program contains proposals to upgrade the operating efficiency and competitiveness of PJSC RusHydro and JSC RAO Energy Systems of East Holding, including implementation of arrangements for public-private partnerships in hydro-power and activities to upgrade the corporate governance system.

In October 2014, the program was reviewed at a meeting of the Government of the Russian Federation's Expert

Council's Working Group on reviewing the Long-Term Development Program. Working Group participants included: representatives of the Russian Ministry of Energy, the Investor Protection Association, OJSC Sberbank of Russia, JSC "Foresight" Strategic Energy Foundation, JSC Holding Company Composite, RUSNANO Management Company LLC, Energy Group, the Strategic Research Center Foundation, and Deloitte & Touche. In November 2014, the program was agreed upon by the Government of the Russian Federation's Expert Council<sup>17</sup>.

### Development Priorities and Their Fulfillment

**DMA** <sup>G4-DMA</sup> The development priorities of PJSC RusHydro<sup>18</sup> are a list of key tasks and activities, the implementation of which is considered a priority in the current year and are one of the key elements of the motivation system for the Company's senior management team.

#### New priorities planned for 2015

Upgrading the corporate governance system

#### Long-term (Rolling) Strategic Priorities

Providing for the reliability of existing assets and their modernization;

Ensuring sustainable operation of the Company's hydro-power facilities in flood periods;

Increasing installed capacity via investment project implementation;

Efficiently utilizing funds for the investment projects of JSC RAO Energy Systems of the East;

Providing high-quality services to customers of the power supply companies;

Increasing the competitiveness of the design complex;

Expanding the Company's presence in foreign markets;

Developing human resources;

Creating an efficient system for innovation management and forming an uninterrupted innovative process in the Company's activities;

Approving strategic documents.

#### Short-term Priorities Implemented in 2014





Structuring RusHydro's service activities

## Interconnection of Strategy and Sustainable Development Goals

In the reporting year, sustainable development was provided for by large-scale work on upgrading the reliability of generating facilities' operation, carrying out operating and investment activity programs, and increasing the shareholder value of Company assets, the main results of which are shown below. This work was based on the balanced management of economic, environmental and social aspects of corporate responsibility. These results, according to the Company's management team, demonstrate the interconnection between corporate strategy and sustainable development.

Key events of RusHydro's anniversary year are grouped into ten categories. During the process of preparing and developing the structure of this Report, these categories were identified as the most important in the opinion of stakeholders. Material aspects which are considered below have been selected based on key stakeholder interviews utilizing materiality criteria, using the GRI.4 Guidelines criteria. Detailed information on management approaches and the Company's operating results in each specific area is presented in the relevant sections of the Report, as well as in Appendix 1 (Quantitative Performance Indicators).

## 2014 Material Aspects and Key Events







MATERIAL ASPECTS <sup>19</sup>	2014 RESULTS
1. Principal activities (generation and sale of electricity, construction)	 <p>1. The main volume of the Sayano-Shushenskaya HPP restoration and comprehensive reconstruction work was completed. All work was carried out in strict accordance with the schedule approved by the Russian government in 2009.</p> <p>2. The Boguchanskaya HPP was commissioned.</p> <p>3. Installation of the turbine at the Gotsatlinkskaya HPP was completed.</p> <p>4. Installation of the unique underflow water conducts at the Zelenchukskaya HPP-SDPP was completed.</p> <p>5. The supply contract for the third hydro-power unit of the Ust-Srednekanskaya HPP was signed.</p> <p>6. The activity plan to structure the Holding's service activities, including: transport support, operation of the information systems, immovable property consolidation, and management and maintenance was realized and the efficiency of the Holding's corporate services was upgraded.</p>
2. Financial and economic performance results	 <p>7. Refinancing of existing loan debt in the amount of RUR 2,776 million for a period of 8 years from OJSC Sberbank of Russia was organized.</p> <p>8. The AGM was held, at which Company shareholders approved 2013 dividends, which for the first time were calculated according to the new dividend policy. The total dividend amounted to RUR 5.2 billion.</p> <p>9. A transaction on the Company's exit from the share capital of JSC Krasnoyarskaya HPP was completed. The transaction was fully non-monetary. In return for the share package (25% minus 1 share) of JSC Krasnoyarskaya HPP, the Company received from JSC EvrosibEnergo a parcel of its own shares (3.39%).</p>
3. Mission, strategic goals and values of the Company	 <p>10. The GSEP summit was organized in Moscow with the participation of the world's largest energy companies.</p> <p>11. The Government approved measures to liberalize the HPP capacity market for pricing zone 2 (Siberia).</p> <p>12. The President of the Russian Federation signed a decree "On the further development of JSC RusHydro," which authorizes an additional share issue, provided that the State's share in the equity capital is maintained at not less than 60.5%.</p> <p>13. A new version of the dividend policy was adopted, in accordance with which dividends are calculated based on net income in accordance with IFRS (the amount of profit allocated to dividends has not changed and is 25%).</p> <p>14. The Board of Directors extended the powers of the Company's Chairman of the Management Board – the General Director for a new 5-year term until June 20, 2019.</p>
4. The Company's development priorities and their implementation	 <p>15. The Report on the implementation of 2014 development priorities was approved by the Board of Directors.</p> <p>16. The Company's Board of Directors developed and approved the Long-Term Development Program of JSC RusHydro Group – a new strategic management tool.</p> <p>17. The 2014-2018 Investment Program of the RusHydro Group was adopted in the amount of RUR 360,868.55 million, including VAT.</p> <p>18. A package of documents was signed with the Chinese companies Power China and Dongfang Electric on cooperation in the field of hydro-power construction in the Far Eastern Federal District and the implementation of joint activities on the investment, design, construction, operation and technological development of hydro-power projects within this framework.</p>

<sup>16</sup> The Long-term Development Program of the RusHydro Group was developed pursuant to the assignments of the President of the Russian Federation (№ Pr-3086 dated December 27, 2013) and the Government of the Russian Federation (Minutes № 3 dated January 30, 2014). Considered at a meeting of the Government Commission for the Development of the Electric Power Industry on October 15, 2014 (Minutes № 16) and approved by JSC RusHydro's Board of Directors November 20, 2014 (Minutes №206).

<sup>17</sup> Opinion № EC-044-11-14 dated November 12, 2014

<sup>18</sup> JSC RusHydro's 2014 development priorities were approved by the Board of Directors (Minutes №190 dated November 29, 2013). For more information about the development strategy and implementation of JSC RusHydro priorities refer to the 2014 Annual Report of JSC RusHydro (<http://www.eng.rushydro.ru/upload/iblock/492/Annual-Report-2014.PDF>).

<sup>19</sup> The aspects are grouped in decreasing order by the level of their significance.

MATERIAL ASPECTS <sup>19</sup>	2014 RESULTS
5. Implementation of social policy	 <p>19. Changes in the organizational structure of the Company to optimize management and workforce were approved.</p> <p>20. A plan of activities to attract, motivate and develop employees was realized as part of the corporate social programs, including within the framework of the new Collective Agreement for electricity industry workers.</p> <p>21. The Company spent approximately RUR 1.5 billion for its employees' insurance, which was included in the wages fund.</p> <p>22. The Company organized and held numerous external sponsorship programs and charity events, interacting with local communities in the presence regions and other stakeholders.</p> <p>23. Development of the Loyalty Consumer Increase Program was completed and all planned 2014 activities within its framework were fulfilled.</p>
6. Investment project implementation results	 <p>24. All necessary approvals were received for 4 thermal power plant construction projects in the Far East. The Company attracted additional target financing for its investment program as part of implementing priority investment projects in the Far East.</p> <p>25. Construction of the Yakutskaya SDPP-2 began.</p> <p>26. Concrete work started on the foundation base of the CHP Plant in Sovetskaya Gavan.</p> <p>27. Installation of the main equipment for the 2nd stage of the Blagoveshchenskaya CHPP commenced.</p>
7. Implementation of the 2014 comprehensive facilities modernization program (CFMP)	 <p>28. Numerous key stages of implementing priority projects as part of the Comprehensive Modernization Program were finished. Financing of the 2014 Retrofitting and Upgrading Program stood at RUR 34,525.3 million (including VAT). The Retrofitting and Upgrading Program's activities made it possible to commission additional capacity in the amount of 56.5 MW and to upgrade generation reliability and efficiency.</p> <p>29. The Company provided project financing to modernize the Saratovskaya HPP – two credit lines of EUR 190 million guaranteed by OeKB, an export credit agency, from a syndicate of ING Bank and Credit Agricole Corporate &amp; Investment Bank Deutschland.</p>
8. Constructing and commissioning facilities (including RES facilities) in Russia and abroad	 <p>30. The Company has selected the project realization scheme and the general designer and started construction of the main structures of the Upper Naryn Cascade of HPPs (Kyrgyzstan).</p> <p>31. The plan of activities for elaborating on and making a feasibility study for the Drop HPPs reconstruction and construction project (Abkhazia) was fulfilled.</p> <p>32. A design contract for the largest HPP in India, Upper Siang II, was signed.</p> <p>33. The design for the reconstruction of the Kainji and Jebba HPPs in Nigeria was completed (Preparation of a feasibility study for the HPP reconstruction project in Nigeria).</p>
9. Reliability and safety of hydro-power structures, including the system to prevent and rectify natural disasters and emergencies	 <p>34. Implementation of the Construction Program for Flood Control Facilities on Amur River tributaries began.</p> <p>35. Development of professional standards in the HPPs / PSPPs was completed. The work was performed in cooperation with the industry expert community.</p> <p>36. The program to implement "Production supervision of the JSC RusHydro Information System," integrated with the federal "Monitoring" supervisory system, was adopted and the action plan was fulfilled in full.</p> <p>37. Regulations on production supervision over compliance with industrial safety requirements have been developed / updated for all RusHydro company facilities.</p> <p>38. All activities planned for 2014 to ensure the industrial safety of the main and auxiliary equipment of head hydro-power structures have been implemented in full, in accordance with the approved schedule.</p>
10. Labor protection and the industrial safety of personnel	 <p>39. The action plan in the field of Industrial Supervision, and industrial and occupational safety has been implemented in full.</p> <p>40. The development of professional standards for HPP / PSPP operation was completed. The work was performed in cooperation with the industry expert community.</p>

## Material topics and aspects and evaluation indicators included in the Report

Category	Material topics and aspects	Quantitative indicators of efficiency evaluation <sup>20</sup>
SUSTAINABLE DEVELOPMENT OF THE HYDRO-POWER INDUSTRY (including the Electric Utilities Sector Supplement figures)	<ol style="list-style-type: none"> <li>Business activities (generation and sale of electricity, construction) (1)</li> <li>Mission, strategic goals and values of the Company (3)</li> <li>The Company's (Holding's) development priorities and their implementation (4)</li> </ol>	<p>EU1 Installed capacity broken down by energy sources and control mode</p> <p>EU2 Net generation broken down by energy sources and control mode</p>
ECONOMIC CATEGORY (including the figures of the relevant section of the GRI Guidelines)	<ol style="list-style-type: none"> <li>Financial and economic performance results (2)</li> <li>Investment project implementation results (6)</li> <li>Construction and commissioning of facilities (including RES facilities) in Russia and abroad (18)</li> </ol>	<p>EC1. Created and distributed direct economic value, including: revenues, operating costs, employee benefits, donations and other community investments, residual economic value, payments to capital providers and the State in the reporting year</p> <p>Debt-equity ratio</p>
SOCIAL CATEGORY (including the figures of the relevant section of the GRI Guidelines)	<ol style="list-style-type: none"> <li>Implementation of the social policy (5)</li> <li>Labor protection and industrial safety of personnel (20)</li> </ol>	<p>4.10. Total labor force, by employment type, labor contract, region and gender</p> <p>4.10. Total labor force, by employee category and gender</p> <p>LA9. Average training hours per employee per year, broken down by gender and employee category (2014)</p> <p>LA11. The percentage of PJSC RusHydro branches' employees who underwent performance career development assessment, by gender and employee categories</p> <p>LA6. Industrial injuries rate and number of work-related fatalities and occupational illness rate</p> <p>LA6. Industrial injuries rate, the level and types of occupational diseases, lost day rate, absentee rate, and the total number of work-related fatalities, by gender and regions</p> <p>EU18. Information on the number of employees of PJSC RusHydro and SDCs, their contractors and subcontractors who have received health protection and workplace safety training</p>
ECOLOGICAL CATEGORY (including the figures of the relevant section of the GRI Guidelines)	<ol style="list-style-type: none"> <li>Implementation of 2014 comprehensive facilities modernization program (7)</li> <li>Reliability and safety of hydro-power structures, including the system to prevent and rectify natural disasters and emergencies (19)</li> </ol>	<p>EN2. The total volume and the proportion of wastewater reused by another organization</p> <p>EN8. The total volume of water drawn, by source, thousands of m3/year</p> <p>EN22. The total volume of waste water, indicating the quality of wastewater and the receiving facility, thousands of m3/year</p> <p>EN31. The total amount and structure of environmental protection costs and investments</p>

<sup>20</sup> Performance evaluation of management, including according to these aspects, is carried out within the framework of standard business processes (quarterly, semi-annual, and annual) using KPIs, the targets of which are included in the Long-Term Development Program.

nual, and annual.) using KPIs, the targets of which are included in the Long-Term Development Program.

## 1.2.2 Corporate Governance in the Interests of All Shareholder Groups

### Values, Principles, Standards and Codes of Conduct of the Company

<sup>64-56</sup> The Company strives to constantly improve the quality of corporate governance, following best practices in corporate social responsibility and sustainable development. The Company's corporate governance principles and procedures are entrenched in its Articles of Association and internal regulatory documents<sup>21</sup>.

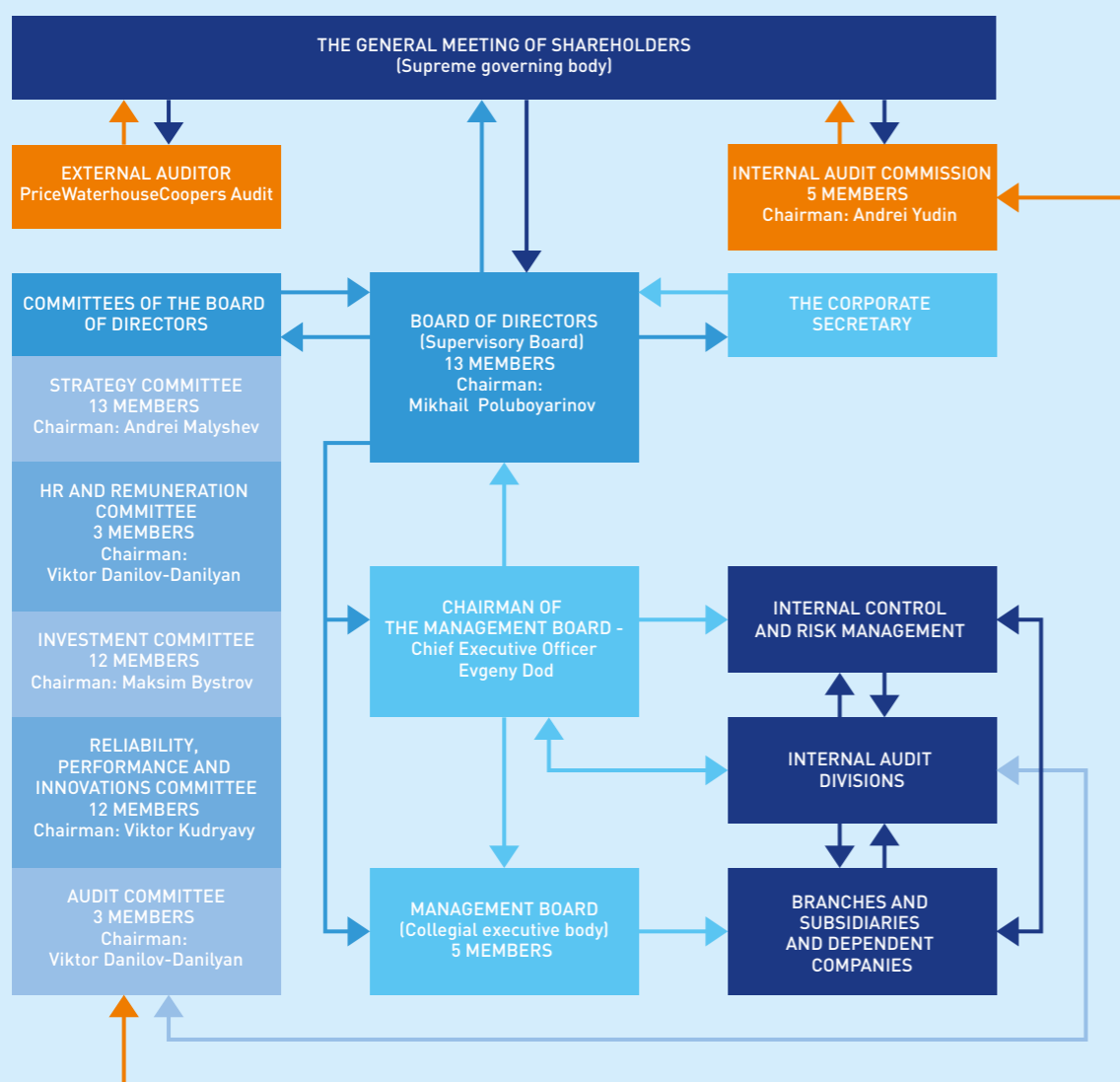
Corporate governance in PJSC RusHydro is carried out in strict accordance with:

- Russian legislation;
- Recommendations of the Russian Code of Corporate Conduct;

- Requirements for companies listed on MICEX;
- Requirements for companies listed on the London Stock Exchange.

The corporate governance system is based on PJSC RusHydro's internationally recognized principles enshrined in JSC RusHydro's Code of Corporate Governance: transparency, accountability, fairness and financial discipline.

### Structure of PJSC RusHydro's Corporate Governance and Control Bodies <sup>64-34</sup>



### Corporate governance: SDCs

The Company participates in the authorized capital of companies engaged in the production and supply of electricity and the construction of power generating facilities. Decision-making on the management issues of the SDCs falls under the competency of the Company's Management Board, except for decisions on the strategic issues of SDCs concerning: re-organization, liquidation, changes in authorized capital, and the approval of major transactions and the participation of SDCs in other organizations, which are attributed to the competency of the Company's Board of Directors.

The Company manages SDCs through its representatives at General Meetings of Shareholders, the Boards of Directors and control bodies of the SDCs, in accordance with the Articles of Association and the Procedure for JSC RusHydro's Interaction with organizations in which the Company participates (adopted in 2010).

HOLDERS OF PJSC RUSHYDRO SECURITIES INCLUDE 304,831 RUSSIAN AND FOREIGN INVESTORS

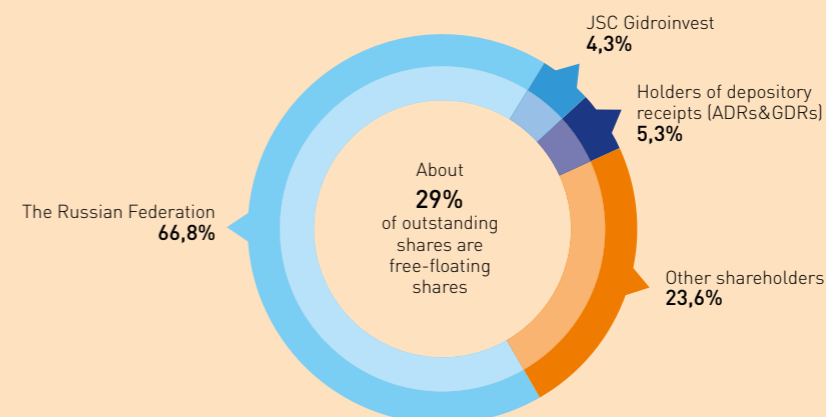
### Structure of Authorized Capital

As of December 31, 2014, the Company's authorized capital included 386,255,464,890 ordinary shares, of which, according to different estimates, approximately 28.85% were free-floating, with quasi-treasury shares accounting for 5.64%.

The Company's major shareholder is the Russian Federation, represented by the Federal Agency for State Property Management. The State holds a controlling stake, which as of December 31, 2014 was 66.84% of the Company's authorized capital.

The Company's shares are traded on the MICEX Stock Exchange, as well as outside the Russian Federation in the form of depository receipts on the Main Market of the London Stock Exchange (LSE) and on the US OTC market (OTC-QX). The percentage of shares traded outside the Russian Federation in the form of depository receipts, at the end of the reporting period, stood at 5.3% of the total number of shares.

### TRANSPARENCY: PJSC RUSHYDRO'S SHAREHOLDER EQUITY STRUCTURE AS OF DECEMBER 31, 2014



### Accountability: The Board of Directors

The Board of Directors (the Supervisory Board) is responsible for the general management of the Company's activities, except for issues that fall under the competence of the General Meeting of Shareholders (based on current Russian law). PJSC RusHydro's Board of Directors consists of 13 directors, who are elected annually by the Annual Shareholders Meeting.

New membership of the Company's Board of Directors was elected by the Annual General Meeting of Shareholders of PJSC RusHydro (June 27, 2014, serving as of December 31, 2014), which consisted of 13 members, 3 of whom were independent directors. <sup>64-38</sup>

Criteria for director independence (members of the Supervisory Board of Directors) are set out in JSC RusHydro's Corporate Governance Code<sup>22</sup>, which was adopted in 2010. <sup>64-56</sup> The Board of Directors has five committees, as shown

in the diagram "Structure of the Board of Directors elected June 27, 2014." The Chairman of the Board of Directors is not a member of the collegial executive body (the Management Board). <sup>64-39</sup>

The Board of Directors' activity is regulated by Regulations for the procedure on convening and holding meetings of the Board of Directors of JSC RusHydro<sup>23</sup>.

Remuneration to members of the Board of Directors is calculated in accordance with the Regulations for remuneration paid to members of the Board of Directors of JSC RusHydro<sup>24</sup>. In accordance with these Regulations, remuneration is paid to members of the Board of Directors who have the status of "independent" directors, and members of the Board of Directors who are authorized representatives of the interests of the Russian Federation on the Board of Directors. According to Russian Federation legislation, remuneration is not paid to members of the Board of Directors who have the status of government officials.

<sup>21</sup> More information about the structure of corporate governance, personal composition and the powers of the main management and control bodies, the number of meetings of the Board of Directors (including Committees) is presented in the 2014 Annual

Report of JSC RusHydro (<http://www.eng.rushydro.ru/upload/iblock/492/Annual-Report-2014.PDF>).

<sup>22</sup> JSC RusHydro's Corporate Governance Code is available on the website <http://www.rushydro.ru/corporate/>.

<sup>23</sup> Regulations for the procedure on convening and holding meetings of the Board of Directors of JSC RusHydro are available on the website [http://www.rushydro.ru/corporate/regulations\\_and\\_docs](http://www.rushydro.ru/corporate/regulations_and_docs).

<sup>24</sup> Regulations for remuneration paid to members of the Board of Directors of JSC RusHydro are available on the website [http://www.rushydro.ru/corporate/regulations\\_and\\_docs](http://www.rushydro.ru/corporate/regulations_and_docs).

## STRUCTURE OF THE BOARD OF DIRECTORS, ELECTED JUNE 27, 2014



### INDEPENDENT DIRECTORS ON THE BOARD OF DIRECTORS:

1. Eduard Volkov
2. Viktor Danilov-Danilyan
3. Vyacheslav Pivovarov

### Assessing the performance of the Board of Directors

In 2014, for the first time, two assessments of the performance of the Board of Directors were performed. The first one evaluated the individual contribution of Russian Federation representatives – BoD members to the work of the Board of Directors. Said assessment was performed based on a method approved by the Russian Federal Property Management Agency. The assessment confirmed the control of the federal authority over State representatives on the Board of Directors.

The second assessment was performed by an independent expert – the Association of Independent Directors. It was conducted remotely during the period from the end of 2014 to the beginning of 2015 with Board of Directors members filling out questionnaires on the partner's website. The assessment resulted in a report that was presented to the Board of Directors in February 2015 and a plan of initiatives to improve the work of the Board was provided.

### Fair Practices: The Management Board

The Management Board consists of five members. It is headed by the collegial executive body – the Chairman of the Management Board – CEO. According to the Federal Law "On Joint Stock Companies" and the Company's Articles of Association, the Chairman of the Management Board – CEO cannot be elected the Chairman of the Board of Directors. <sup>G4-39</sup>

Members of the Management Board periodically undergo performance assessment using key performance indicators (KPIs). This list was designed in accordance with recommendations of the Russian Ministry of Energy. <sup>G4-44</sup> KPI target values for the Management Board are approved by the Board of Directors based on the approved business plan and strategic development priorities. The Regulations for the procedure on paying remuneration and compensation to members of JSC RusHydro's Management Board provide for quarterly and annual bonuses for performance based on individual KPIs. <sup>G4-51 and G4-52</sup>

### Optimization of the organizational structure

In October 2014, the Board of Directors approved changes to the Company's organizational structure. According to the new organizational structure, the number of members of the Management Board was reduced from 14 to 5 persons. The position of Deputy Chairman of the Management Board was replaced with the Deputy Area CEO position (8 persons). The position of Area Director was excluded from the structure (18 persons), as well as the Directorate division (10 structural units). The number of departments fell from 40 to 22.

The reorganization aimed to optimize the Company's structure, reducing the number of administrative personnel, and decreasing administrative and management costs in accordance with a directive of the Government of the Russian Federation and the assignment of the Company's Board of Directors.

### Financial Discipline: The Dividend Policy

The main objective of PJSC RusHydro's dividend policy is to ensure the strategic development of the Company and the wealth growth of its shareholders by establishing an optimal balance between dividend payments to shareholders and profit capitalization.

The Company's current dividend policy (which was adopted in its new edition in 2014) involves dividend payments in the amount of not less than 5% based on net profit determined in the consolidated financial statements under IFRS.

In 2014, RUR 5,248 million (25% of the RusHydro Group's net profit according to IFRS) was allocated for the 2013 dividend payment, which in monetary terms is 43% more than in the previous dividend period (RUR 3,676 million in 2013).

### Managing Sustainable Development

Efficient corporate governance and organizational development is intended to be used to successfully address the goals and objectives of the Holding Companies' sustainable development. The key issues of sustainable development, such as the planning and progress of constructing hydro-power facilities, and the performance of targeted programs, are considered at meetings of the Company's Board of Directors and the Management Board <sup>G4-25</sup>.

An important role in the management of the RusHydro Group's sustainable development is played by the Reliability, Performance and Innovations Committee of the Board of Directors. The Committee at its meetings preliminarily considers issues on the long-term planning of hydro-power and other RES-based generation development, on the elaboration of functional policies (for example, technical policy, environmental policy, energy saving policy and energy efficiency policy), and corporate standards in the field of technical regulation, etc.

More information about the corporate governance and organizational development that took place during the reporting period are presented in the 2014 Annual Report of PJSC RusHydro (<http://www.eng.rushydro.ru/upload/iblock/492/Annual-Report-2014.PDF>).

### 1.2.3 Key Risks/Impacts and Opportunities

#### Risk Management System <sup>G4-2</sup>

The Company's management believes that its responsibility for the sustainable development of RusHydro's business is not only to plan development strategy, but also to ensure the efficiency and sustainability of the business processes. This is what the Company's risk management activities are

directed at. The Company annually updates the Strategic Risk Management Plan, which includes a list of key risks and response measures taking into account all material aspects of the Company's sustainable development.

### Management Approach to Risk Management

<sup>G4-DMA</sup> The corporate risk management system covers all RusHydro Group companies and provides for the management of potential impacts in order to reduce the probability and adverse consequences of risk occurrences. This system includes internal procedures and a set of preventive measures in accordance with the Risk Management and Internal Control Policy (hereinafter referred to as the Policy), as adopted by RusHydro <sup>G4-26</sup>.

Since 2010, the Company has had a special structural unit for the organization of the risk management processes. Its main objectives are:

- Organizing the functioning of an efficient risk management system;
- Developing and monitoring the execution of plans and system improvement programs;
- Controlling the disclosure of information on the risks of the Company and its subsidiaries and dependent companies (SDCs).

As part of Policy implementation, a List of the Strategic Risks of PJSC RusHydro is drawn up annually, specifying risk owners, and is approved by the Company's Management Board. The list is used both for disclosing information on the Company's risks to shareholders, the rating agencies, the auditor and other stakeholders, and for further developing and monitoring the implementation of measures to optimize risks within the framework of the realization of the Company's strategy. Prioritizing risks and possibilities is determined by their impact on the key financial, environmental and social aspects, taking into account the established strategic goals and development priorities and social mission of the Company.

A strategic risk management plan is drawn up and approved by the Company's Management Board for critical and material risks, specifying the action implementation term, people responsible for implementation and the results expected as of the end of the reporting period. The list and an action plan for risk management are formed for the forecast period of two years and updated annually.

### The Risk Management System: Actions Taken during the Reporting Period

To systematize the aims and objectives to improve the Company's risk management system, as part of the Long-Term Development Program of the RusHydro Group, a Development Program for Corporate Risk Management and Internal Control System for the period until 2019 was developed in 2014 (hereinafter referred to as the Development Program for RMS).

To determine the main development directions of the risk management system (hereinafter referred to as the RMS), a compliance assessment of RMS with the requirements of external regulators, as well as a compliance self-assessment of the Company's RMS with best risk management practices were carried out. The subject of the self-assessment was the implementation status of management procedures throughout the Company's corporate structure (structural units and the SDCs).

### The Development Program for RMS is based on the following principles:

- Encouraging informal communication to ensure the fullest possible analysis and disclosure of risks across all management levels of RusHydro;
- Justifying management decisions at all levels with an obligatory risk analysis;
- Risk owner (employee) action assessment taking into account, whether he/she has developed scenarios for rare and unexpected (but real) events (risks) and risk response plans.

The program is divided into time segments within the framework of the Long-Term Development Program of the RusHydro Group. The transition to a new stage means successful implementation of the previous one and a certain maturity level for the RusHydro Group's RMS as a whole, which is necessary for the implementation of next stage activities.

### Risks/Impacts: Internal and External Influences

In the course of its business activities, the Company acts as an object of influence of internal and external factors (the Company's risks), and at the same time, is a subject of impacts and potential risks for stakeholders (external influences).

Responsible interaction with all stakeholders, impact and management assessment within the process of the Company's activities is an integral part of Group risk management. <sup>G4-26</sup>

"UNDER CURRENT CONDITIONS, THE CONCEPT OF SOCIAL RESPONSIBILITY FOR A MAJOR STATE-OWNED COMPANY IS BECOMING PERVASIVE. TODAY, OUR UNDERSTANDING OF SOCIAL RESPONSIBILITY INCLUDES ALL KEY BUSINESS AREAS OF RUSHYDRO."

EVGENY DOD, CHAIRMAN OF THE MANAGEMENT BOARD – CEO OF PJSC RUSHYDRO

The process and current risk/effect management procedures of the Company classify them in three aspects: economic, environmental and social. The Company identifies stakeholders that are vulnerable to the potential impact in case specific risks occur. As can be seen from the Diagram "External Influences: Key Factors and Aspects," the influence of environmental and social risks is much greater than economic risks, because the risk group is much wider and includes more stakeholders (compared with economic risks).

### Social Responsibility and the Approach to Risk/Impact Management

<sup>G4-DMA</sup> Identifying significant aspects, risks and impacts is part of the strategic planning throughout the RusHydro Group's activity area. The Company's list of development priorities includes material aspects identified in the preparation of this Report. As part of the risk management system, the Company identifies stakeholder groups which are influenced by the Company in the normal course of its business.

In addition, the Company aims at upgrading risk/impact management efficiency. The functions to assess risk management system efficiency are assigned to the Company's internal audit. The Company regularly reports on the effi-

More information on the number of Management Board and Board of Directors' meetings, meeting agendas and resolutions made, the system of remuneration to members of the Board of Directors and the Management Board, the SDCs and second-tier

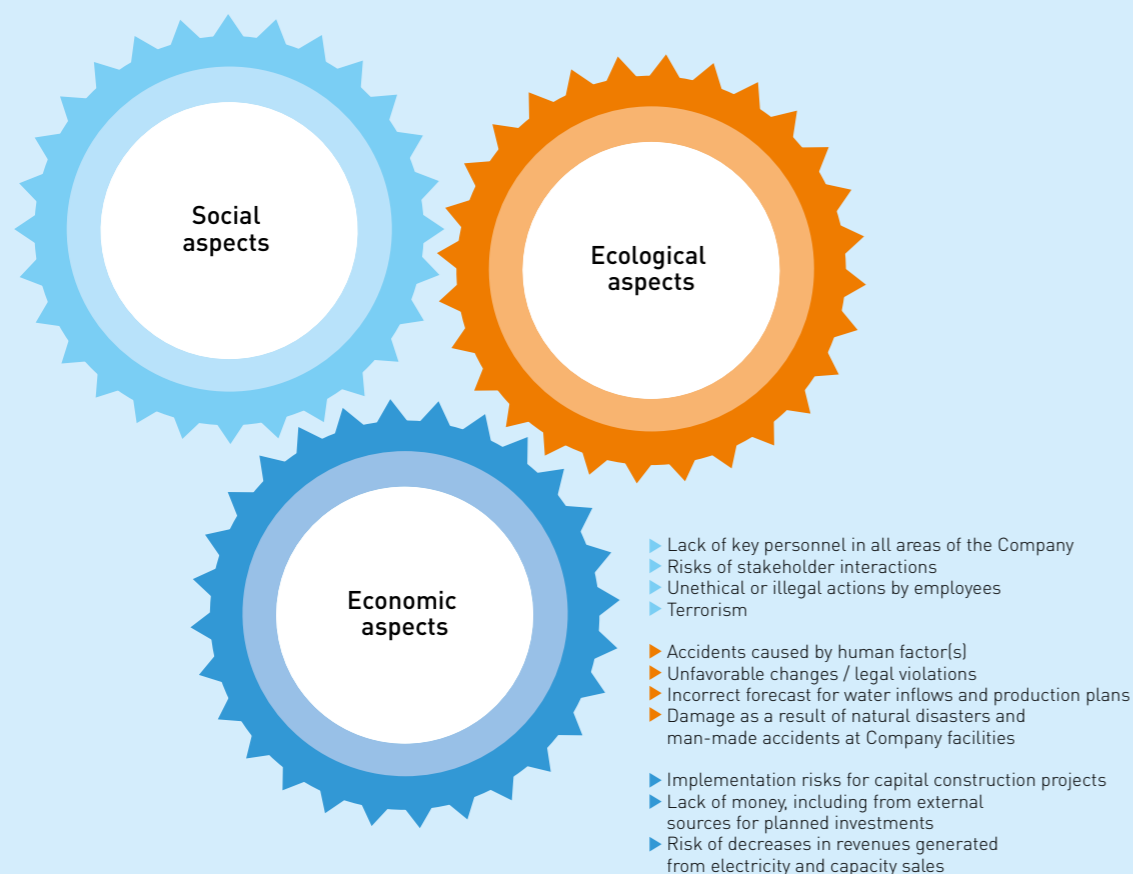
subsidiaries and dependent companies management system is presented in the 2014 Annual Report of JSC RusHydro (<http://www.eng.rushydro.ru/upload/iblock/492/Annual-Report-2014.PDF>).

<sup>26</sup> JSC RusHydro's Risk Management and Internal Control Policy was approved by the Board of Directors December 30, 2010.

ciency and development of the risk management system to the Audit Committee of the Board of Directors and discloses relevant information in its annual reports to inform all stakeholders. Risks and impact effectiveness are assessed, taking into account the influence of the risk/impact on RusHydro's objectives, by evaluating the impact on targets

of the Group's Long-Term Development Program, the Company's annual KPIs and quarterly management KPIs.

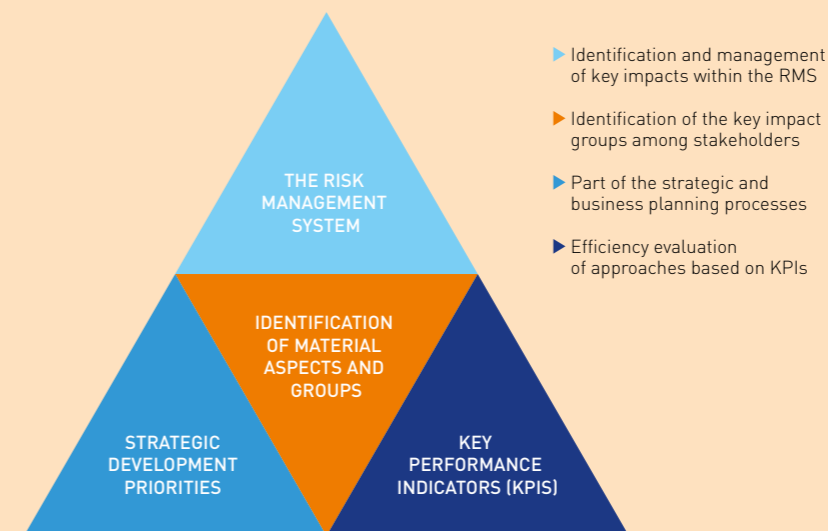
## EXAMPLES OF RISKS/IMPACTS: KEY FACTORS AND ASPECTS



### Risk/Impact Management<sup>27</sup>

- The Company pays considerable attention to implementing sustainable development policy in relation to all stakeholders as part of the system of risk management, apart from minimizing possible direct damage.
- The Company's key impacts on sustainable development and on the influence on stakeholders, including impact on the rights of the latter, are determined in accordance with national law and international standards.

## MATERIAL ASPECTS AND MANAGEMENT: MANAGEMENT APPROACHES



- The risk management plan includes key risks and response measures, taking into account all material aspects in the field of the Company's sustainable development.
- JSC RusHydro's internal control and risk management policy has formulated the following basic principle for evaluating the effectiveness of the risk response measures and minimizing external and internal influences:

"MEASURES MUST COMPLY WITH THE PRINCIPLE OF CORPORATE SOCIAL RESPONSIBILITY AND ECONOMIC VIABILITY: THE COST OF MEASURES BEING INTRODUCED SHOULD NOT EXCEED THE EXPECTED DECLINE IN DAMAGE CAUSED BY RISK REALIZATION OR LEAD TO A TANGIBLE SOCIAL EFFECT."

JSC RUSHYDRO'S INTERNAL CONTROL AND RISK MANAGEMENT POLICY.

### Key Opportunities

A comprehensive long-term analysis of key impacts, risks and opportunities of the Company's business activities forms the basis of strategic planning for sustainable corporate development.

The Company's management believes that during the reporting period activities undertaken within the framework of the material aspects of sustainable development were implemented in full and with expected quality.

Specific measures undertaken by the Company to manage risks and reduce the impacts on every aspect (economic, environmental, and social) are described within the relevant sections of the Report

<sup>27</sup> Detailed information on the RusHydro Group's Risk Management System is presented in the 2014 Annual Report of JSC RusHydro (<http://www.eng.rushydro.ru/upload/iblock/492/Annual-Report-2014.PDF>).



## 1.3 FINANCIAL DISCIPLINE AND FAIR BUSINESS PRACTICES

### 1.3.1. Ensuring Creditworthiness in the Medium- and Long-Term

<sup>G4-DMA</sup> The sources to ensure creditworthiness in the medium- and long-term are own funds, as well as funds received from external sources: rouble bonds, credit lines, undrawn balances of approved bank limits at leading banks, and available-for-sale marketable equity investments.

The RusHydro Group's debt portfolio features a smooth repayment schedule, effective duration and a balanced low-risk structure. As of December 31, 2014, more than 90% of the RusHydro Group's debt has been denominated in Russian rubles. The Group's loan portfolio increased 17% from the beginning of 2014 to RUR 177 billion, with long-term debt funds standing at 67% of the total loan portfolio<sup>28</sup>.

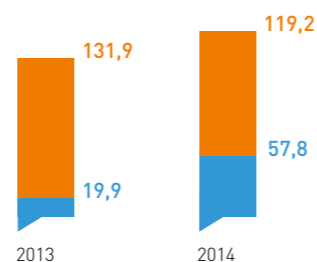
#### Observing restrictive conditions on loan agreements

The Group is under the influence of numerous restrictive conditions of loan agreements. As of December 31, 2014 and December 31, 2013, all restrictive conditions of the loan agreements were complied with.

#### Loan portfolio structure

An analysis of the short-term and long-term debt funds and the structure of the loan portfolio: short-term and long-term debt funds (the Group's IFRS) by maturity (as of December 31, 2014) are presented below.

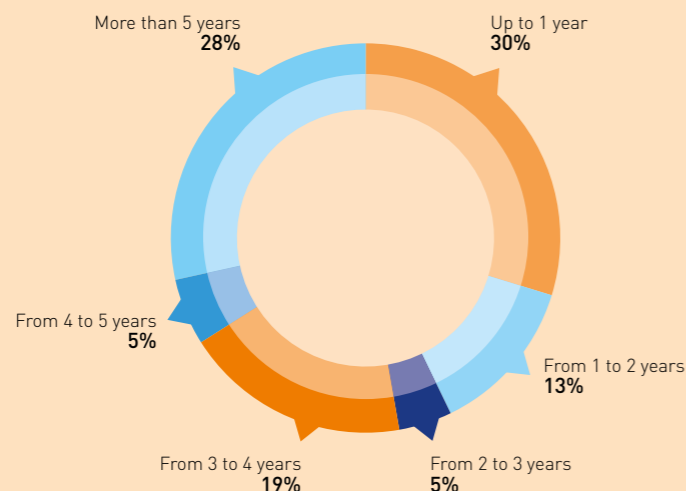
Loan Portfolio Duration Dynamics: 2013-2014 (RUR billion)



▶ Long-term debt funds  
▶ Short-term debt funds (including the short-term part of long-term debt funds)

### THE BALANCED STRUCTURE OF THE LOAN PORTFOLIO BY MATURITY (AS OF DECEMBER 31, 2014)

The structure of the loan portfolio: short-term and long-term debt funds (the Group's IFRS)



NOTE:  
The Diagram is based on undiscounted cash flow data, which differs from the amounts presented in the consolidated statement of financial position, based on discounted cash flows.

### Ensuring Creditworthiness: 2014 Major Milestones

- In March 2014, the Group entered into a loan agreement with Crédit Agricole Corporate and Investment Bank Deutschland and ING Bank in the amount of EUR 190 million for a period of 15 years to finance the modernization project of the Saratovskaya HPP's hydro-power turbines. According to the annual international EMEA Finance magazine review, this loan was recognized as the best sustainable development deal in Central and Eastern Europe in 2014.
- In April 2014, the Group was granted RUR 2,776 million as part of a non-revolving credit facility agreement with JSC Sberbank of Russia to finance ongoing operating, financing and investing activities, including to refinance credits and loans. JSC Sberbank of Russia is the Company's largest creditor: as of December 31, 2014, the volume of debt funds borrowed from JSC Sberbank of Russia was RUR 51,804 million.

### Liquidity Risk Management

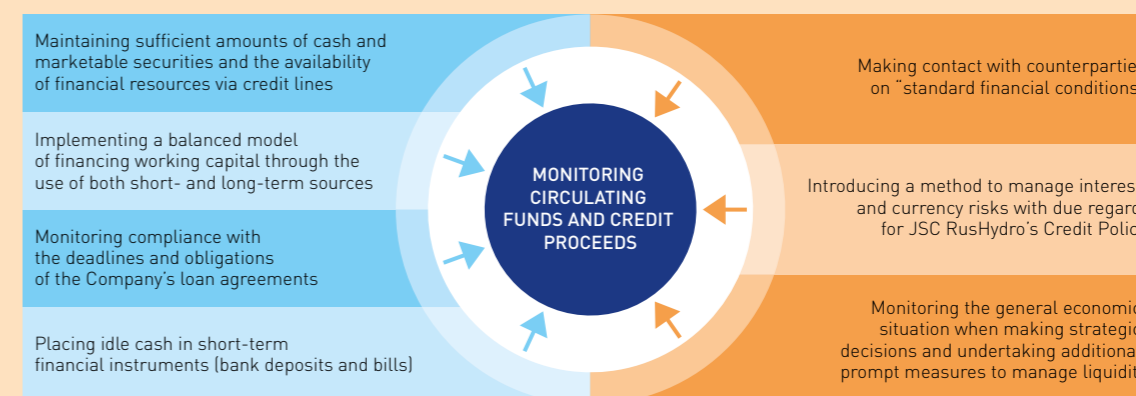
Sound liquidity risk management implies maintaining sufficient amounts of cash and marketable securities, as well as the availability of financial resources via credit lines.

The Group adheres to a balanced model of financing working capital through the use of both short-term sources, and long-term sources. Idle cash is placed in short-term financial instruments: mainly, bank deposits and short-term bank bills. Current liabilities are primarily represented by accounts payable to suppliers and contractors.

The Group has implemented a system to control the contract-making process, using standard financial procedures, which include standards for structuring the payment, terms of payment, the relationship between the advance payment and the amount paid at the final repayment, etc. This is how the Group controls its capital structure by maturity.

Liquidity risk and the risk of the lack of funds to carry out planned investment in the Company are managed, among other things, by undertaking the following measures:

### ENSURING CREDITWORTHINESS AND SOLVENCY IN THE MEDIUM- AND LONG-TERM



### 1.3.2. Control over the targeted use of funds

<sup>G4-DMA</sup> The Company has an effective system to control the targeted use of funds.

The internal control system created within the Company is complex and multi-level. It suggests a continuous exchange of information among its subjects. Both the Company's control bodies and structural units act as subjects of the internal control system. This system makes it possible to implement all possible forms of control, namely: preliminary, current and subsequent control, to promptly interact and respond in a timely manner to emerging risks, including to prevent the misuse of funds.

The main tool for implementing this control is the internal control and risk management system established in the Company and aimed at ensuring:

- Efficiency and sustainability (cost effectiveness) of operations;
- Financial and management reporting reliability;
- Compliance with Russian Federation legislation.

<sup>28</sup> Here and further in Section 1.3.1, separate data of the consolidated financial statements of the RusHydro Group prepared in accordance with IFRS are presented. For more details, see the 2014 Annual Report of JSC RusHydro (<http://www.eng.rushydro.ru/upload/iblock/492/Annual-Report-2014.PDF>).

## Principles of and Approaches to the Organization of the Internal Control System

The principles of and approaches to the organization of the internal control and risk management system are defined in the Company's Internal Control and Risk Management Policy<sup>29</sup>. In accordance with Policy provisions, the following basic internal control procedures are used in the Company by its authorized supervisory bodies and officials:

The Company has implemented an intracorporate loop to monitor the targeted use of monetary resources, as part of its internal control and risk management system. It provides for a special system for reporting to the Company's Management Board (on a quarterly basis within the investment sessions), as well as a number of standards and control regulations to carry out corporate monitoring of the SDCs performance at all stages of project implementation. Special on-site inspections are regularly carried out at each construction site. All these measures provide maximum transparency and full control by the State, other shareholders and stakeholders in implementing strategically important infrastructure projects.

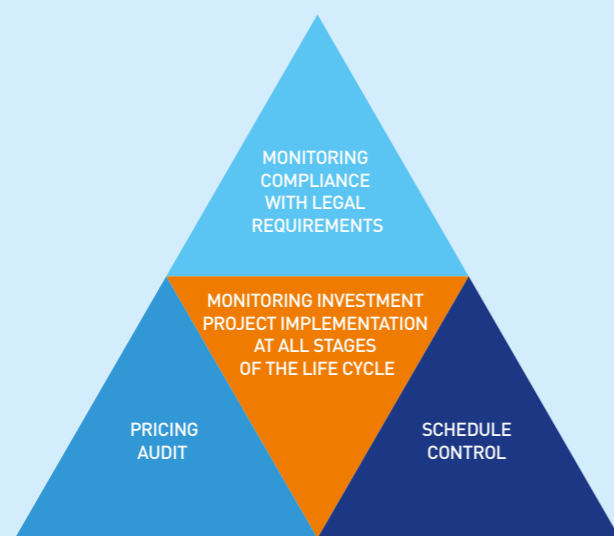
The Company has approved and has in place numerous local regulatory documents (acts) to prevent the misuse and inefficient use of funds. Particular attention is paid to the procurement regulation and monitoring the targeted use of funds channeled for investment projects and repairs.

### Procurement Regulation

The procurement regulation provides for the application of procedures that are obligatory for the Company's employees and which make a provision for the careful planning of product needs; market analysis; procurement transparency; actions aimed at achieving equality, impartiality, the absence of discrimination and unjustified restrictions on competition in relation to procurement participants, and the targeted and cost-effective expenditure of funds for the purchase of goods, work, services and other activities.

For the purposes of the procedural regulation of procurement and to ensure that the Company is provided with products, work and services on a timely basis and in a good manner, as well as with a view to the economic use of Customer funds, the Company applies Regulations on the procurement of goods for the needs of JSC RusHydro<sup>30</sup>.

## MONITORING IMPLEMENTATION AT ALL STAGES OF THE INVESTMENT PROJECT LIFE CYCLE



JSC RUSHYDRO'S INVESTMENT ACTIVITY REGULATIONS

### Monitoring of the Targeted Use of Funds Channeled for Investment Projects and Repairs

- In accordance with the Regulations for conducting the public technology and pricing audit of large investment projects of JSC RusHydro<sup>31</sup>, investment projects worth more than RUR 1.5 billion are subject to an audit;

- JSC RusHydro's Investment Activity Regulations<sup>32</sup> provide for monitoring implementation of investment projects at all stages of the life cycle and include pricing audit, schedule control, and monitoring compliance with Russian legislative requirements;

<sup>29</sup> The Internal Control and Risk Management Policy was approved by the Board of Directors [Minutes №116 dated December 30, 2010]. The full text is available at: [www.rushydro.ru/upload/iblock/fa2/politika---vnutrennij-audit.pdf](http://www.rushydro.ru/upload/iblock/fa2/politika---vnutrennij-audit.pdf).

<sup>30</sup> Approved by the Board of Directors of JSC RusHydro [Minutes № 139 dated December 2, 2011] with subsequent amendments and additions. Detailed information on Procurement is presented in Section 1.2.6. Compliance of the Group's activities with legal standards [Procurement management].

- At the end of each stage of investment project implementation, as well as after the project is put into pilot operation, a report on the implementation or completion of the investment project shall be submitted to the Board of Directors for consideration. In addition, issues on the implementation of the investment program and individual investment projects can be submitted to the Board of Directors for consideration at the initiative of any member of the Board of Directors at any stage in the implementation process;
- The Company has established and is operating a hotline to optimize and upgrade the efficiency of specialized communication feedback channels with PJSC RusHydro employees and the Company's counterparties on fraud management/anti-corruption and addressing illegal activities.<sup>33</sup>

### Public Technology and Pricing Audit

From the beginning of 2014, PJSC RusHydro has had in place Regulations for conducting a public technology and pricing audit of the Company's large investment projects<sup>33</sup> in respect to projects worth RUR 1.5 billion and more, in-

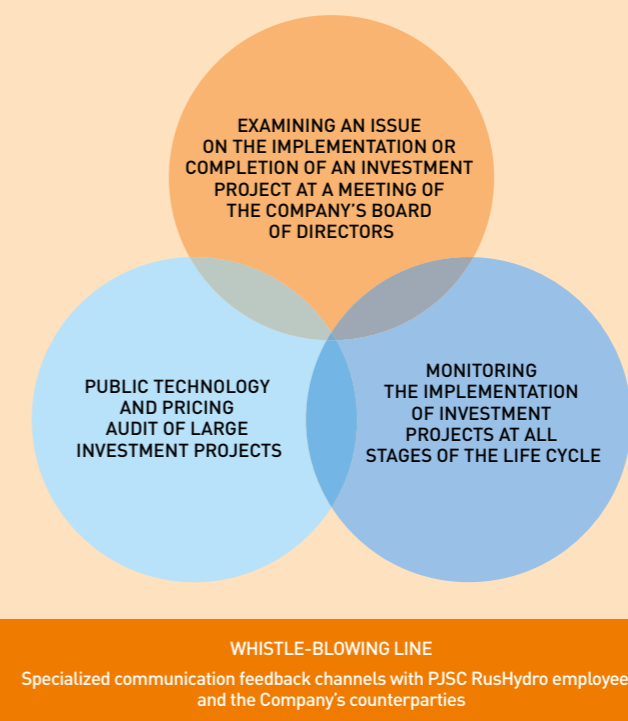
cluding projects for which financing is planned to be carried out without the involvement of federal budget resources, the budget of the Russian Federation (municipalities) and budgetary allocations of the Russian Investment Fund.

The public technology and pricing audit aims to optimize project construction time and cost, increase production competitiveness as a result of realizing investment projects, including selecting the best technological and design solutions, and modern building materials and equipment when creating an investment medium as part of the investment project.

The results of the technology audit for the investment project are subject to public debate on RusHydro's Internet site and are then reviewed by NP STC UES experts.

If the technology and pricing audit of the investment project receives a positive opinion, including a favorable opinion of the NP STC UES, the project can then be included in the investment program of PJSC RusHydro in accordance with the procedure established by the local regulatory documents of PJSC RusHydro regulating the management process of investments in the form of capital investments.

## MONITORING THE TARGETED USE OF FUNDS CHanneled FOR INVESTMENT PROJECTS AND REPAIRS.



<sup>33</sup> Approved by the Board of Directors [Minutes № 189, dated November 13, 2013].

In 2014, the Board of Directors of PJSC RusHydro approved the list of investment projects that are subject to a public technology and pricing audit. In 2014, 8 PJSC RusHydro projects underwent a technology and pricing audit. These projects include:

1. The Volzhskaya HPP (comprehensive turnkey modernization of the 500 kV open switchgear equipment);
2. The Votkinskaya HPP (comprehensive replacement of hydro-power units);
3. The Zhigulevskaya HPP (replacement of the auto-transformer group and the transformer group with the reconstruction of oil receivers);
4. The Chirkeyevskaya HPP (replacement of hydro-power turbines № 1, 2, 3, and 4, and hydro-power generators № 1, 2, 3, and 4);
5. The Nizhegorodskaya HPP (comprehensive replacement of hydro-power generators and hydro-power turbines);
6. The Ust-Srednekanskaya HPP on the Kolyma River;
7. The Gotsatinskaya HPP;
8. The Zaragizhskaya SHPP (the Kabardino-Balkarian Republic).

Each of these projects was discussed by experts at a meeting of the NP STC UES, which is one of the stages of the public technology and pricing audit. The NP STC UES has a Scientific and Technical Board, whose members are leading experts in power generation, including members of the Academy of Sciences, corresponding members of the Russian Academy of Sciences, doctors and masters of sciences. Open discussion makes it possible to maximize the effect from the technology and pricing audit and hear different experts' points of view.

In accordance with the Standard, all materials related to the technology and pricing audit of PJSC RusHydro investment projects are posted on the Company's corporate website for the purpose of providing public access.

Materials on the 2014 public technology and pricing audit results, including the auditor's opinions and reports, as well as the Minutes of the meetings of the Board of the Non-commercial Partnership "Scientific and Technical Council of the Unified Energy System" are available on the Company's website ([http://www.rushydro.ru/activity/invest/pricing\\_audit/2014/](http://www.rushydro.ru/activity/invest/pricing_audit/2014/)).

### Monitoring the targeted use of funds: Major milestones during the reporting period

In 2014, to improve the Company's management efficiency, including monitoring the targeted use of funds, the Company carried out staffing measures to improve the current internal control and risk management system and bring it in line with current requirements and recommendations of the regulatory documents issued by regulatory authorities during the past year, in particular:

- Regulations on the Internal Audit, Control and Risk Management Department (approved by the Company's Order № 981 dated November 28, 2014), which defined goals, objectives and functions in internal control and risk management;
- Information from the Russian Ministry of Finance № PZ-11/2013 (dated December 25, 2013), "The organization

and implementation by an economic entity of internal control over its business operation items, the maintenance of accounting records and the preparation of accounting (financial) statements" was taken into consideration;

- Letter of the Bank of Russia № 06-52/2463 (dated April 10, 2014) "On the Corporate Governance Code" was received and taken into consideration.

In 2014, a special system to control and monitor the targeted use of budgetary funds continued to successfully operate, in particular to implement investment projects within the framework of the Far East Power Economy Development Program. The system, which had been established in 2013 with the participation of the Russian Chamber of Accounts, the Ministry of Economic Development and Trade, the Ministry of Energy and JSC Sberbank of Russia, allows the State to monitor in real time the use of targeted budgetary funds received by the Company as part of the additional issue.

As part of staffing measures carried out by the Company in 2014, the Internal Audit, Control and Risk Management Department was assigned functions to continuously monitor the implementation of investment projects within the framework of the Far East Power Economy Development Program for the prevention of and rapid response to possible deviations from established requirements.

### The Mechanism to Monitor Spending of Federal Budget Resources

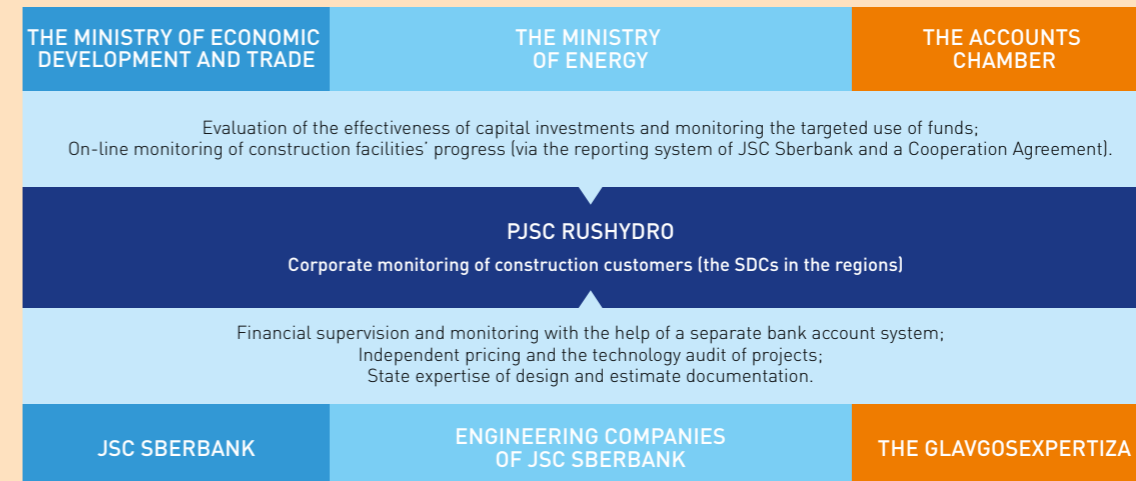
"RUSHYDRO IS INTERESTED IN ENSURING THE FULL TRANSPARENCY OF BUDGETARY FUND EXPENDITURES ALLOCATED BY THE STATE FOR BUILDING NEW GENERATING CAPACITIES IN THE FAR EAST, AND CONSIDERS IT A TOP PRIORITY TO ORGANIZE AN EFFECTIVE MONITORING SYSTEM FOR IMPLEMENTING THESE PROJECTS WITH THE PARTICIPATION OF ALL INTERESTED MINISTRIES AND DEPARTMENTS."

EVGENY DOD, CHAIRMAN OF THE MANAGEMENT BOARD OF PJSC RUSHYDRO

- In order to ensure the targeted and efficient use of federal budget funds received by the Company under contracts for granting budgetary investments (1) to finance the construction of four thermal generation facilities in the Far East (the CHP Plant in Sovetskaya Gavan, the Sakhalinskaya SDPP-2, the Yakutskaya SDPP-2, and the Blagoveshchenskaya CHPP), a special project financing system has been set up and the following mechanisms to monitor the targeted spending of federal budget resources are provided for by the Company:
- To ensure construction of the Far East facilities, the Company established four dependent and subsidiary companies (one for each construction facility), which are construction customers of the relevant construction facilities. In order to finance the construction of the Far East facilities, the federal budget resources received by the Company are transferred to the authorized capital of the subsidiary companies as payment for shares.
- Control over the targeted spending of budgetary funds is exercised in accordance with separate bank account agreements concluded for each of the four investment projects. For this purpose:

1. A banking servicing system was created, which provides for the expenditure of targeted budgetary funds through a four-level system of special accounts (separate bank accounts) opened in JSC Sberbank of Russia;
2. Settlements for work performed, procurement of equipment and materials shall be made exclusively through these accounts with mandatory supervision and the acceptance of the Bank and its technical agents;
3. The opening of funding is performed exclusively after receiving the positive opinion of Glavgosekspertiza for each project and an audit conducted by an independent engineering company;
4. Independent engineering companies selected by JSC Sberbank of Russia on a competitive basis conduct a technology and pricing audit of projects and provide expert support for construction;
5. To ensure the efficiency and transparency and reliability of settlements with contractors, a single standard package of banking servicing agreements has been prepared.
6. Income received from the placement of temporarily disposable monetary resources is allocated solely to finance the project through separate bank accounts opened with JSC Sberbank of Russia;
7. The Company signed a cooperation agreement with the Accounts Chamber of the Russian Federation: PJSC RusHydro on a quarterly basis and based on one-time requests sends information to the Russian State Duma for preparing reports for the Deputies;
8. A system of interactions with the Russian Ministry of Energy and the Ministry of Economic Development and Trade in terms of operational and regular reporting in established formats.

### THE MECHANISMS TO MONITOR THE TARGETED SPENDING OF FEDERAL BUDGET RESOURCES ALLOCATED TO FINANCE INVESTMENT PROJECTS



### 1.3.3. Performance Compliance with Legal Standards and Fair Business Practices <sup>64-DMA</sup>

#### Procurement Activities

<sup>64-DMA</sup> PJSC RusHydro carries out procurement activities in accordance with the provisions of Federal Law № 223-FZ dated July 18, 2011 "On the procurements of goods, work and services by certain legal entities."

All information about plans for procurement, procurement now being made and procurement which has already been made is posted on the relevant official website of the Russian Federation. To expand the competitive environment when carrying out procurement activities, a specialized electronic trading platform (B2B-energo) is used. More than 60% of the Company's competitive procedures are carried out on this platform. Suppliers get free access to information on procurement, which makes it possible to almost completely eliminate geographic and bureaucratic barriers to procurement. The priority procurement method is an open tender procedure<sup>35</sup>.

#### Supplier management

To implement production programs for the reconstruction, repair and maintenance of the Company's generating facilities, the Company involves its dependent and subsidiary companies that are engaged in the corresponding business activity (repair, design, and/or research).

IN 2014, THE COMPANY MADE ABOUT 405 PURCHASES FOR RUR 35.7 BILLION WITHIN THE FRAMEWORK OF THE TECHNICAL MODERNIZATION, RECONSTRUCTION AND NEW CONSTRUCTION PROGRAMS.

Purchases of large and multi-dimensional orders within the framework of the investment program are carried out on a turnkey basis, which provides for the whole range of reconstruction work – design work, equipment supply, installation and warranty services.

To carry out large and complex purchases, the Company engages an independent third-party tendering authority – a specialized organization with positive experience in holding similar competitive tenders. The contracts are mainly made with Russian manufacturers.

### Partnership program with small- and medium-sized enterprises in the regions

JSC RusHydro's Partnership Program with small- and medium-sized enterprises (hereinafter referred to as the Program), which was adopted in 2014, was developed within the framework of JSC RusHydro's Procurement Policy<sup>36</sup> and the Action Plan of the Government of the Russian Federation to expand the access of small- and medium-sized enterprises (hereinafter referred to as SMEs) to procurement made by infrastructure monopolies and companies with State participation<sup>37</sup>. The program is designed to create a network of qualified and responsible partners from SMEs for the procurement of goods, work and services for the Company's needs, actively involve innovative SMEs in the Company's activity and provide assistance to SMEs that are members of the Partnership Program.

The partnership program includes providing organizational support for SMEs by organizing conferences and information sessions, training for professionals of different categories on provisions and local regulatory requirements, including JSC RusHydro's management quality standard, as well as informing them about the plans, programs and prospective development lines of procurement activities for PJSC RusHydro on the corporate website: [www.zakupki.rushydro.ru](http://www.zakupki.rushydro.ru)

The Partnership Program provides for:

- Creating and applying the Company's procurement system on the principles established by Law 223-FZ;
- Offering access to the Program following the examination of the application to PJSC RusHydro;
- Creating and maintaining a public SME register;
- Providing measures to assist SMEs when making contracts for the delivery of products for Company needs: kick-off meetings, ongoing meetings, and negotiations;
- Allowing for the participation of representatives of SME associations and development institutions in JSC RusHydro's innovative development programs as elaborated on and implemented by the Company;
- Providing for the possibility of financial support for SMEs, based on the fact that the relevant decision is agreed upon by the Board of Directors;
- Ensuring voluntary participation in the procurement of PJSC RusHydro needs by SMEs who have joined this Partnership Program.

### The system of internal control bodies: Structure and competences

<b>THE AUDIT COMMITTEE OF THE BOARD OF DIRECTORS</b>	The main function of the Audit Committee is to ensure the efficient work of the Board of Directors in resolving issues that fall within its competence and guaranteeing that the Company's Board of Directors exercises direct control over the Company's financial and economic activity.
Elected by the Board of Directors August 8, 2014 The Chairman: Viktor I. Danilov-Danilyan The Committee consists of 3 persons Term of office: from August 8, 2014 till the election of the new composition of the Board of Directors Acts on the basis of Regulations on the Audit Committee of the Board of Directors	The full text of the Regulations on the Audit Committee of the Board of Directors (adopted October 15, 2013) is available at <a href="http://www.rushydro.ru/corporate/committees/audit">www.rushydro.ru/corporate/committees/audit</a> .
<b>INTERNAL AUDIT COMMISSION</b>	The main goals of the Internal Audit Commission are:
Elected annually by the General Shareholders Meeting in the membership of 5 people. - Acts in the interests of the Company's shareholders and in its activities is accountable to the Company's General Shareholders Meeting. - In its activities, the Internal Audit Commission acts independently of management body officials and the Company's structural unit managers.	Supervising the Company's financial and business performance; Monitoring the compliance of the Company's financial and business transactions with Russian Federation law and the Company's Articles of Association; Independently evaluating information on the Company's financial condition. The full text of the Regulations on the Internal Audit Commission of JSC HydroOGK (adopted April 6, 2005) is available at: <a href="http://www.rushydro.ru/file/main/global/investors/disclosure/documents">www.rushydro.ru/file/main/global/investors/disclosure/documents</a> .
<b>THE INTERNAL AUDIT, CONTROL AND RISK MANAGEMENT DEPARTMENT</b>	The main tasks and functions of the Internal Audit, Control and Risk Management Department are:
The Department is a structural sub-division of the Company and is administratively subordinate to the Chairman of the Management Board – CEO. In terms of performing internal audit tasks, the Department functionally reports to the Audit Committee of the Board of Directors. Head of the Department: I. O. Posevina Number of employees: 22 persons	In terms of the internal audit: Organizing and performing internal audits of the Company and its subsidiaries and dependent companies (SDCs); Evaluating the efficiency of the Company's internal control and risk management system and the corporate governance system applicable to the Company, and its subsidiaries and dependent companies (SDCs); Organizing methodological support and control over the activities of the representatives of the Company on the Audit Commissions of the Company's dependent companies; Liaising with the Audit Committee attached to the Company' Board of Directors. In terms of internal control: Organizing an effective corporate internal control system and anti-corruption system operating in the Company; Developing and monitoring the implementation of plans and programs to upgrade the corporate internal control system of the Company and its subsidiaries; Interacting with the territorial authorities of the Russian Federation, the Accounts Chamber of the Russian Federation, the Audit Commission of the Company and other supervisory bodies on internal control, as well as in the course of their audits of the Company and its SDCs. The Regulations on the Internal Audit Policy is available at: <a href="http://www.rushydro.ru/corporate/regulations_and_docs/documents">www.rushydro.ru/corporate/regulations_and_docs/documents</a> .

<sup>35</sup> Procurement activity details are available on the Company's website at: <http://zakupki.rushydro.ru/default.aspx>.

<sup>36</sup> Approved by Order № 568 dated July 16, 2014; Regulations on the procurement of products for the needs of JSC RusHydro, approved by the Board of Directors of JSC RusHydro and posted on the corporate website at: [www.rushydro.ru](http://www.rushydro.ru).

<sup>37</sup> Order № 867-r of the Government of the Russian Federation dated May 29, 2012 on approval of the issue "Expanding the access of small- and medium-sized enterprises to procurement made by infrastructure monopolies and companies with State participation."

<sup>38</sup> The Comprehensive Program for Preventing Employees from Committing Illegal Actions was approved by the Company Order № 659 dated July 26, 2012.

## Combating Corruption and Illegal Actions

<sup>G4-DMA</sup> PJSC RusHydro rejects corruption in all its forms and manifestations. The Company regularly monitors corruption risks as part of the Comprehensive Program for Preventing Employees from Committing Illegal Actions<sup>38</sup> (hereinafter referred to as the Program). Based on results of the risk analysis, the Company develops and implements anti-corruption procedures that meet international standards and monitors their execution. The Company's Director of Internal Audit, Control and Risk Management performs on-line monitoring of compliance with regulatory requirements. In 2014, there were no cases of the non-renewal of contracts with business partners due to violations associated with corruption, and completed legal actions associated with corrupt practices against companies of the Holding or their employees. <sup>G4-S04 and G4-S05</sup>

<sup>G4-S7 and G4-S8</sup> Starting in 2011, the Company has had a Whistle-blowing Line – a specialized communication feedback channel with RusHydro employees and counter-party representatives to receive information concerning illegal activities by corporate employees and preventing corruption. The procedure to prevent illegal actions by employees and contractors is regulated by the Company's procedures and the Regulation for the procedure on receiving, reviewing and responding to applications received on PJSC RusHydro's Whistle-blowing Line. All information received on the "Help-line" during 2014 was analysed and discussed. The Company conducted internal investigations on the most essential facts, and all necessary information was reported to the Chairman of the Management Board – the CEO, and the Heads of the responsible structural divisions, branches and SDCs.

### The Anti-Corruption Charter of the RUIE

The Anti-Corruption Charter of Russian Business, adopted by the business community in 2012, is the implementation of the National Anti-Corruption Plan. The Company signed the Anti-Corruption Charter of the Russian Union of Industrialists and Entrepreneurs in July 2013, undertaking numerous voluntary commitments, including compliance with transparency and openness in procurement procedures, cooperation with the government, and the refusal to obtain illicit benefits.

"RUSHYDRO'S SIGNING ON TO THE ANTI-CORRUPTION CHARTER OF RUSSIAN BUSINESS DEMONSTRATES THE COMPANY'S COMMITMENT TO CONSTANT IMPROVEMENT AND TO ENHANCING THE TRANSPARENCY OF ITS ACTIVITIES IN THE PUBLIC SPHERE."

IRINA POSEVINA, INTERNAL CONTROL AND RISK MANAGEMENT DIRECTOR AT PJSC RUSHYDRO

## Product Liability

<sup>G4-DMA</sup> RusHydro electricity supply companies jointly referred to as ESK RusHydro (controlled by JSC ESK RusHydro) implement product liability and customer service quality, providing the market with accurate, complete and timely information about its services. In accordance with the approved Customer Service Standard, information necessary for both existing and potential customers is available on ESK RusHydro company websites and at information stands in customer-oriented offices. All information about services

are disclosed on the website [www.esc.rushydro.ru](http://www.esc.rushydro.ru), on the websites of regional retail companies and in other public sources, as well as in promotional materials, contracts and invoices. All disclosure procedures fully meet all regulatory requirements.

<sup>G4-DMA</sup> For all consumers – the customers of ESK RusHydro, the Company guarantees legitimate rights to the non-disclosure of personal information, and a safe living environment, as well as equal rights, regardless of gender and cultural features. The marketing policy of ESK RusHydro companies and approaches to consumer interactions are based on this in all regions. The companies use the personal data of consumers only for core activities and do not use data to promote other services and products, or for purposes that the client did not consent to. ESK RusHydro companies have not received any claims and/or complaints for violations of Russian Federation legislative requirements on personal data protection. In 2014, there were no incidents of the non-compliance of the quality of provided services with regulatory requirements and voluntary codes concerning the impact of products and services on consumer health and safety. <sup>G4-PR2, G4-PR8 and G4-PR9</sup>

### Fair Business Practices

<sup>G4-DMA</sup> The Company informs employees on ethical norms and recommended actions in case any signs of illegal actions are identified. The Company performs employee surveys to rate business processes in terms of the degree of risk of illegal actions. The Company also has an interactive anti-fraud training course to inform employees about initiatives to prevent fraud and corruption.

JSC RusHydro's Code of Corporate Conduct<sup>39</sup> includes the concept of the conflict of interests of employees and members of the Board of Directors, and establishes the duty of members of the Board of Directors to annually provide information about their affiliations. This practice is aimed at identifying and avoiding conflicts of interest in decision-making at the Board of Directors-level and helps to implement a precautionary principle at the level of the Management Board and the Board of Directors. <sup>G4-41</sup>

Additional mechanisms to prevent the abuse of power of members of Management Bodies' official positions are contained in JSC RusHydro's Regulations on Insider Information.

### Preventing the Use of Insider Information <sup>G4-41</sup>

In 2014, the Company issued 92 notices on the inclusion and/or exclusion of persons in/from the list.

The insider information list, adopted in its new version May 14, 2014, is drafted in both Russian and English for publication on the Company's website<sup>40</sup>. The insider information is published by the Company in Russian on the Interfax newsfeed, the authorized information agency<sup>41</sup>. The English language version of the information is published on the RNS newsfeed<sup>42</sup>.

A new version of the Insider Information Policy came into effect September 15, 2014. The Policy regulates the Company's practices of observing Russian law pertaining to the prevention of the illegal use of insider information and market manipulation. The Policy has been developed taking into account international corporate governance practices, including the requirements of the Disclosure and Transparency Rules of the UK Financial Conduct Authority.

## Preventing Conflicts of Interest

To identify and prevent conflicts of interest for corporate employees, the Company has established requirements for senior managers of the RusHydro Group to present annual declarations on income, property and material obligations in relation to themselves and their close relatives. The Company has a procedure for disclosing the chain of beneficiaries by agents and a HR Commission is in place.

The Company has established an automated process for checking declarations. The automation is implemented in the form of Affiliated Persons' Customer Software<sup>43</sup>. The system has broad functional capabilities and allows for the creation of a unified register of data on affiliated persons with the possibility of quickly analyzing and finding relevant information.

The automation of the processes mentioned above was highly commended by experts of the Russian Union of Industrialists and Entrepreneurs who in 2014 analyzed data on anti-corruption measures taken by more than 50 Russian companies. The experts noted that the Company's anti-corruption activity was one of the best ones in the country<sup>44</sup>.

Implementation of this software resulted in a considerable decrease in labor costs related to checking submitted data, thus allowing for the minimization of risks associated with the human factor.

In 2014, the Company examined the facts of the false declaration of information and the conflict of interest, and proposed disciplinary measures following inspection results. Also, the check showed that there appeared to be a trend toward a decrease in the number of similar violations by employees compared with 2013, which is proof of the positive results of the activities.

<sup>38</sup> The Comprehensive Program for Preventing Employees from Committing Illegal Actions was approved by the Company Order № 659 dated July 26, 2012.

<sup>39</sup> Code of Corporate Conduct of JSC RusHydro is available on the website ([http://www.rushydro.ru/corporate/regulations\\_and\\_docs/documents/board/](http://www.rushydro.ru/corporate/regulations_and_docs/documents/board/)).

<sup>40</sup> [www.rushydro.ru](http://www.rushydro.ru) and [www.eng.rushydro.ru](http://www.eng.rushydro.ru).

<sup>41</sup> [www.e-disclosure.ru](http://www.e-disclosure.ru)

<sup>42</sup> <http://www.londonstockexchange.com/exchange/prices-andnews/news/market-news/market-news-home.html>

<sup>43</sup> The system is patented by certificate № 2014617320 dated July 17, 2014 issued by Federal Intellectual Property, Patent and Trademark Service.

<sup>44</sup> [www.against-corruption.ru/news/item/70-dannie-o-realizacii.html](http://www.against-corruption.ru/news/item/70-dannie-o-realizacii.html).

**2.****SUSTAINABLE DEVELOPMENT  
OF THE TECHNICAL SYSTEM  
OF HYDRO-GENERATION**

The sustainable development of the RusHydro Group and the industry, as a whole, and reducing energy consumption and decreasing the industrial load on the environment were defined as the main vectors of innovative development in 2014.



## SECTION 2: SUSTAINABLE DEVELOPMENT OF THE TECHNICAL SYSTEM OF HYDRO-GENERATION

### 2.1 RELIABILITY AND SAFETY – the basis of sustainable development



RusHydro companies are backbone and have a significant impact on the state of the industry's industrial and energy security, guaranteeing reliable and uninterrupted power supply to consumers.

Ensuring the reliable and safe operation of energy facilities is a strategic circulating priority of the Company, and is one of the ten most significant aspects identified during Report preparation. Given the potential risks and possible effects, this aspect is of great economic, environmental and social importance for a wide range of stakeholders, including the industrial staff of the Company and the local communities.

- The term "reliability" means the ability of equipment and hydro-power structures to operate during the operational period, while maintaining pre-set parameters.
- The concept of corporate "safety" is treated as providing conditions under which there are no unacceptable risks associated that cause harm to human health, the environment, and/or the property of individuals and legal entities, the State and municipal property.

"THE STATE OF SECURITY, WHICH WE HAVE TODAY, AND WHICH ALL CONSIDER AS A NORM, SUGGESTS THAT THERE IS GREAT EVERY-DAY WORK BEHIND IT. AND IT IS NOT OUR MERIT – IT IS OUR DUTY, AND HENCE IT IS THE NORM THAT HAS TURNED INTO THE STATE."

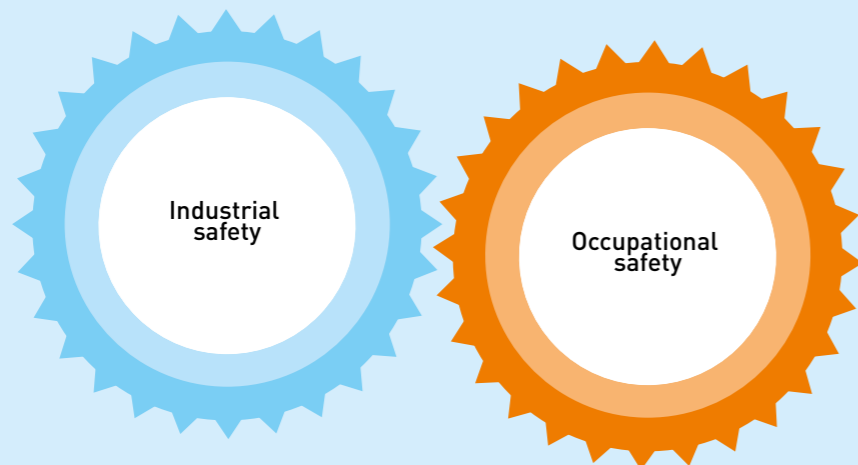
TARAS SHEVCHENKO, DEPUTY SECURITY DIRECTOR OF PJSC RUSHYDRO BRANCH – THE SAYANO-SHUSHENSKAYA HPP NAMED AFTER P.S. NEPOROZHNIY

#### The Concept of Reliability and Safety Management of Hydro-Power Structures

The hydro-power industry is an industry that operates under strict regulations and State and departmental supervision. The operation of hydro-power plants is carried out in strict accordance with legal requirements and regulatory and engineering standards in the field of the industrial safety of hazardous production facilities and the safety of hydro-power structures at all facilities of Group companies<sup>45</sup>.

Operational safety and the reliable operation of HPPs are achieved by organization, management and control of industrial and occupational safety throughout RusHydro facilities. Management and control are organized within the framework of the Management System of the Company's Technical System and regulated by the Technical Policy and

### ENSURING RELIABLE AND SAFE OPERATION OF FACILITIES: THE INTEGRATED PRODUCTION PROCESS SAFETY MANAGEMENT SYSTEM



other integrated standards and instructions that are based on legal and regulatory requirements. Compliance with requirements is provided by work quality control at all stages of the power facility's life cycle.

The organization of timely maintenance, planned repairs and modernization of power plants' equipment, buildings, facilities and communications has a significant impact on the reliability and safety of existing assets, and especially, on the extension of their service life and uninterrupted operation.

#### Management Approach in the Field of Industrial Safety, Security and Reliability of Hydro-Power Structures

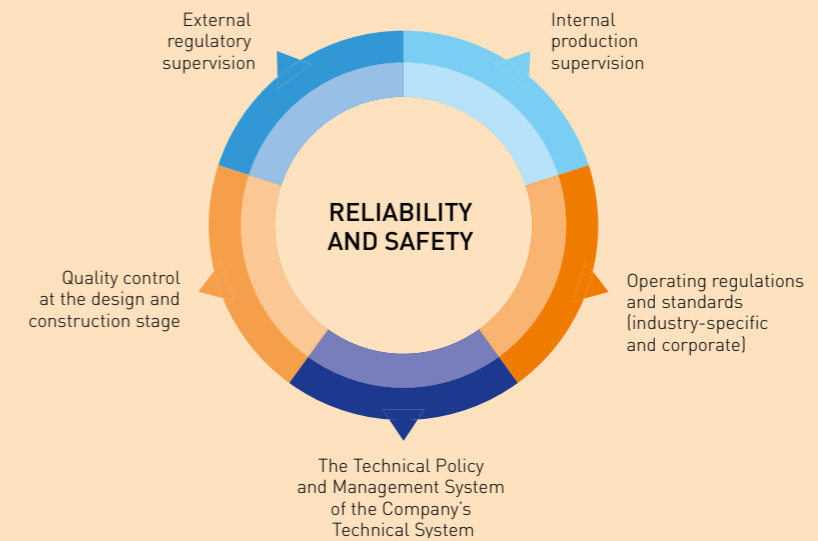
RusHydro's adopted Technical Policy and efficient management of the Technical System provide work quality control throughout the project life cycle. JSC RusHydro's Technical Policy defines the requirements for an integrated safety

management system of production processes, which includes an occupational health and safety management sub-system.

Quality control of design and construction and installation work at the project implementation stage is an essential condition for proper functioning and the safe operation of future hydro-power plants. At the same time, possible defects in work design and performance are identified, analyzed and summarized during the operation of HPPs in order to avoid them in the future.

The effectiveness of the safety and reliability management system for current facilities is achieved by a dual control system (1) internal: via production control over compliance with the requirements of industrial and occupational safety at hazardous industrial facilities, and (2) external: by government oversight authorities.

### MECHANISMS TO ENSURE THE FUNCTIONING RELIABILITY AND SAFE OPERATION OF POWER PLANTS



#### These mechanisms are intended to:

- Improve and continuously upgrade the industrial safety of RusHydro's hazardous production facilities to a level that corresponds to the best performance in power generating companies worldwide by providing timely technical upgrading and improving the reliability of process equipment, and ensuring its safe and uninterrupted operation;
- Create and maintain in RusHydro an effective and efficient system of production supervision in industrial safety, which provides for the planning and solving of the most important industrial safety problems facing the Company;
- Ensure a steady decline in the accident rate and the industrial risks related to operating hazardous industrial facilities by improving production control, repair quality and undertaking industrial safety inspections;
- Ensure the safety and reliability of hydro-power structures.

<sup>45</sup> Federal Law N 35-FZ dated March 26, 2003 "On the power generating industry," Federal Law N 117-FZ dated July 21, 1997 "On the safety of hydro-power structures," Federal Law N 116-FZ dated July 21, 1997 "On the industrial safety of hazardous production facilities." The full list of regulatory legal and other acts and regulatory and technical documents in the field of industrial and environmental safety, the safety of electrical

and thermal installations and networks, the safety of hydro-power structures, industrial safety, construction safety in construction, as well as in the area of operation and maintenance of hydro-power structures and equipment of power facilities is presented in the section THE RELIABILITY AND SAFETY – TECHNICAL REGULATION on the Company's website: [www.rushydro.ru/sustainable\\_development/safety/library/](http://www.rushydro.ru/sustainable_development/safety/library/).

**And implemented through a set of interrelated organizational and technological processes, including:**

1. Production supervision over compliance with industrial safety requirements at hazardous production facilities;
2. Monitoring and assessment of hydro-power structures, diagnostics and forecasting of the technical condition of hydro-power equipment at the HPPs;
3. Planning and implementation of an action plan to extend the service life of existing assets and improve operational performance<sup>46</sup>;
4. Work quality control and management across all project implementation stages, including design and construction;
5. Management of the risks associated with safety and reliability;
6. Effective management of the hydrological regimes of the HPPs;
7. Prevention and elimination of disasters and emergencies;
8. Organization of labor and health protection of the Company's industrial staff<sup>47</sup>;

9. Environmental control over the functioning of equipment and power facility as a whole throughout its life cycle<sup>48</sup>;
10. Innovative development of the technical system, development and implementation of advanced technologies in hydro-power and a reduction in the industrial impact on the environment<sup>49</sup>.

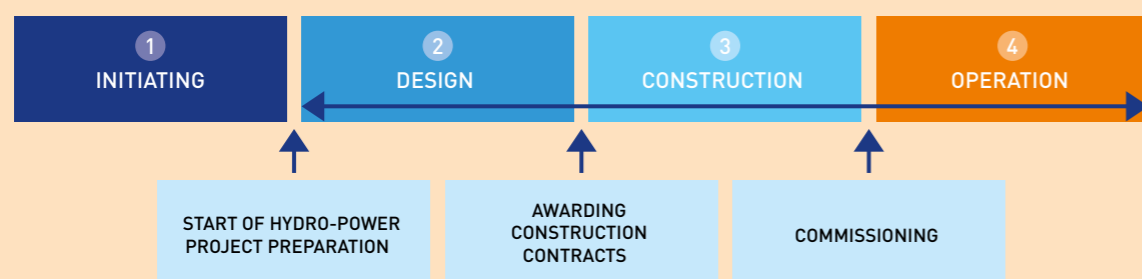
**2.1.1 Production Supervision as a Standard of an Uninterrupted Operation**

**Compliance with industrial safety at hazardous production facilities**

Production supervision over compliance with industrial safety rules is a prerequisite for the uninterrupted operation of power facilities.

The organization of timely maintenance, planned repairs and modernization of power plants' equipment, buildings, facilities and communications significantly impacts the quality of production and technological complexes, primarily, the extension of the service life and the uninterrupted operation of existing assets.

**OPERATION STAGE: MONITORING THE SAFETY AND FUNCTIONING RELIABILITY OF POWER FACILITIES<sup>50</sup>**



**4 PROJECT LIFE CYCLE STAGE: OPERATION**

- ▶ Production supervision over the technical condition of equipment, buildings, structures and compliance with occupational and industrial safety rules
- ▶ The organization of timely maintenance, planned repairs and the modernization of power plant equipment, buildings, facilities and communication
- ▶ Monitoring compliance with the requirements of authorized departmental, technical and technological supervision bodies
- ▶ External technical and technological supervision over operation in accordance with legal requirements and provisions of the regulatory documents

RUSHYDRO HAS ORGANIZED AND CARRIES OUT AT ALL ITS EXISTING POWER PLANTS THE FOLLOWING MEASURES TO ENSURE MONITORING OF THE IMPLEMENTATION OF INDUSTRIAL SAFETY MEASURES AND RELIABLE OPERATION IN ACCORDANCE WITH LEGAL REQUIREMENTS AND INDUSTRY-SPECIFIC TECHNICAL AND ENVIRONMENTAL STANDARDS:

- Systematic monitoring of power plant management;
- Periodic monitoring of the condition of power plants' equipment, buildings and structures;
- Periodic technical inspections;
- Monitoring of compliance with medium and major repair timeframes established by technical standards;
- Monitoring the implementation of measures and provisions of regulatory and administrative documents;
- Controlling and organizing investigations into the causes of fires and technological disturbances at power plants;
- Investigating and maintaining records of accidents and industrial injuries;
- Adequacy assessments of preventive measures at facilities controlled by public oversight and supervisory authorities, ensuring the priority of preventive measures to response measures;
- Industrial and occupational safety education and training of operations and production personnel;
- Record-keeping of the implementation of emergency preventive and fire preventive measures at facilities controlled by public oversight and supervisory authorities.

**Production supervision over compliance with industrial safety regulations<sup>64-DMA</sup>**

- At each power facility, there is both permanent and periodic monitoring (inspections, technical examinations, and investigations) of the technical condition of power installations (equipment, buildings and structures) organized, persons responsible for their technical condition and safe operation are defined, the technical and technological supervision personnel are assigned and their job functions are approved.
- The permanent monitoring of the technical condition of equipment is carried out by operational and operation, maintenance and repair personnel of the power facility, whereas periodic inspections of equipment, buildings and structures are conducted by persons who control their safe operation. The control volume is set in accordance with regulatory document provisions. The control procedure is established by local working instructions and duty regulations.
- The service life of the majority of RusHydro's power facilities exceeds 25 years. These facilities necessitate increased requirements for industrial safety control. Monitoring of compliance with orders issued by authorized departmental, technical and technological supervision authorities is performed at all power facilities via an automated system – an integrated automatic emergency database registrar (IEDR).
- All technological systems, equipment, buildings and structures forming part of the power facility undergo periodic technical inspections. A check of compliance with orders issued by public oversight and supervisory authorities and activities identified following the results of the investigation of the power facility operation violations and accidents that took place in the course of its service, as well as activities developed during the previous technical examination are performed along with the technical inspections.
- Each year, before the spring flood and in some cases the summer-autumn flood, a special commission is appointed at power plants to check the preparation of all hydro-power structures, their mechanical equipment, lifting devices for the flood (high water), and to direct the flood (high water) discharge and re-examine the structures after it is over.

**Arrangements for production supervision**

Production supervision level	Responsible persons
Shift-time control	Operational staff, personnel operating the technical installations, responsible persons.
Level 1 production supervision	Persons responsible for the serviceable condition and safe operation of technical installations used at hazardous production facilities
Level 2 production supervision	Commission appointed by PJSC RusHydro branches' orders Person responsible for the implementation of production supervision.
Level 3 production supervision	Branch Director, Chief Branch Engineer, Deputy Chief Engineer for Operations.
Level 4 production supervision	The Executive Office's Commission appointed by PJSC RusHydro order

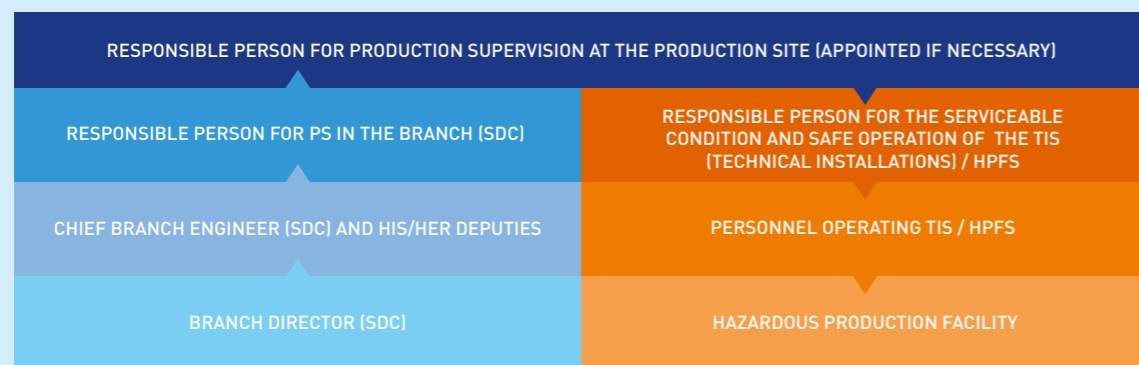
<sup>46</sup> Section 2.1.1 Production supervision is a standard of uninterrupted operation.  
<sup>47</sup> Section 3.2.3. Work organization and ensuring the occupational safety of personnel.  
<sup>48</sup> Section 4.2 Environmental responsibility and interaction.

<sup>49</sup> Section 2.3.1. The Company's innovative development priorities.  
<sup>50</sup> The Diagram does not include the liquidation stage, as this stage is irrelevant for the purposes of the report (there were no liquidation cases in the reporting period).



# SUSTAINABLE DEVELOPMENT OF THE TECHNICAL SYSTEM OF HYDRO-GENERATION

## ORGANIZATIONAL STRUCTURE OF A UNIFIED SYSTEM OF PRODUCTION SUPERVISION (PS) AT THE HAZARDOUS PRODUCTION FACILITIES (HPFS) OF PJSC RUSHYDRO



A standard organizational structure for production supervision at PJSC RusHydro branches is shown in the diagram.

### 2014: Major Results in the Field of the Organization of Labor, Industrial and Occupational Safety

Implementation of JSC RusHydro Production Supervision's information system, which is integrated with the "Monitoring" supervision system of the Russian Federal Service for Ecological, Technical and Atomic Supervision was an important 2014 outcome. The system made it possible to harmonize and speed up the processes for preparing and submitting data in a timely manner on industrial safety at PJSC RusHydro's hazardous production facilities pursuant to Federal Law №116-FZ "On the industrial safety of hazardous production facilities."

In addition, Regulations on production supervision over compliance with industrial safety at hazardous production facilities of JSC RusHydro<sup>51</sup> were developed/updated at all RusHydro power facilities in 2014. Persons responsible for organizing and implementing production supervision at hazardous production facilities have been assigned at each power facility. JSC RusHydro's Regulations on production supervision over compliance with industrial safety at hazardous production facilities at each PJSC RusHydro branch have been submitted to the territorial departments of the Russian Federal Service for Ecological, Technical and Atomic Supervision for notification purposes.

In 2014, the Company also carried out the following activities to further optimize the unified corporate system of production supervision over compliance with industrial safety requirements:

- Carrying out technical audits at RusHydro's facilities;
- Developing a method for the identification, classification and registration of PJSC RusHydro's hazardous produc-

tion facilities in the State Register of dangerous industrial facilities, taking into account the extent of risk related to their operation and the new requirements of Russian legislation on industrial safety, agreeing the draft method with all structural units of the production department, as well as with the Russian Federal Service for Ecological, Technical and Atomic Supervision;

- Revising the functions of the occupational safety and production supervision departments at PJSC RusHydro's facilities to improve the quality of the introductory briefing and basic training on occupational and fire safety conducted among contractor's employees;
- ✓ Approving a corporate information exchange register on occupational, industrial, fire and environmental safety, and production supervision, which is unified for all RusHydro companies;
- ✓ Regulating the procedure for planning, reporting, controlling and overseeing, and providing analysis and methodological support in the area of occupational, industrial, fire and environmental safety, and technical and technological supervision, which is also unified across all RusHydro's companies.

### Implementation of the Action Plan to Ensure Industrial Safety

All activities planned for 2014 to ensure the industrial safety of the main and auxiliary equipment of pressure hydro-power structures<sup>52</sup> were fully implemented in accordance with approved plans for the reporting year and within the time specified. These include expert examination of industrial safety, primary, periodic and extraordinary inspections, repairs and liquidation. Also, the Company carried out in full and within the specified time all activities to ensure the industrial safety of hoisting facilities, including the expert examination of industrial safety, partial and full technical inspection and repairs.

<sup>51</sup> Developed in accordance with JSC RusHydro Order № 52 dated January 29, 2014<sup>4</sup> "On the approval of standard Regulations on production supervision over compliance with industrial safety at hazardous production facilities of JSC RusHydro"

<sup>52</sup> Equipment operating at surplus steam, gas, liquids and water pressure > 0.07 MPa at a temperature of > 115°C.

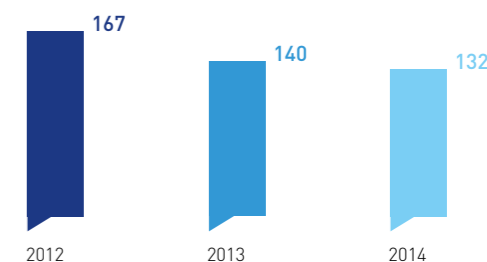
### Statistics and Causes of Technological Incidents

In 2014, in generating branches of PJSC RusHydro, there were 132 accidents, of which 26 (20%) resulted in damage to equipment. Average commissions established that erroneous and incorrect actions on the part of the power plants' own personnel had caused the accidents in 16 cases.

Within the context of the Company's comprehensive reconstruction and modernization of HPP equipment, the number of accidents decreased 6% compared with 2013. The number of accidents with equipment damage fell by 26% (from 35 to 26) and the cases in which accidents occurred through the fault of the power plants' personnel decreased by 30% (from 23 to 16). Damage from accidents decreased 3% in 2014. There were no accidents at hazardous production facilities in 2014, nor were there any fires.

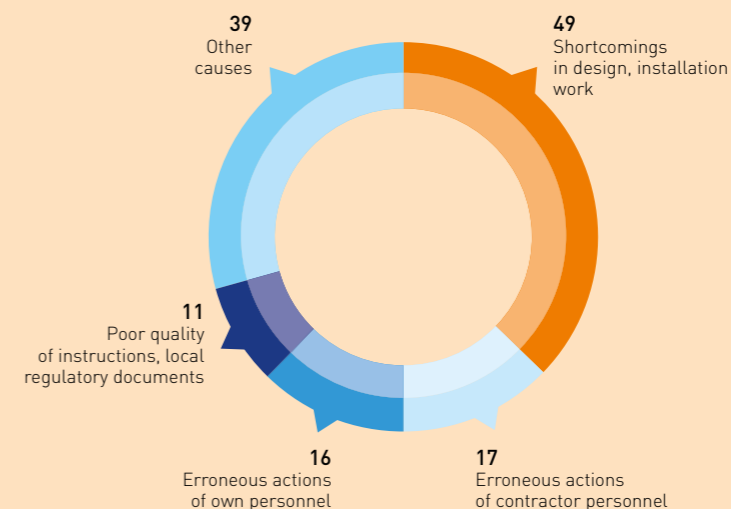
Following the results of investigations into the causes of accidents, four main reasons for the technological incidents that took place in 2014 were established:

### 2012-2014: DYNAMICS OF TECHNOLOGICAL INCIDENTS RELATED TO EQUIPMENT



Production supervision: stable dynamics of the decline in technological incidents (accidents) at PJSC RusHydro branch facilities

### CAUSES OF TECHNOLOGICAL INCIDENTS AT THE FACILITIES OF PJSC RUSHYDRO BRANCHES IN 2014 (EQUIPMENT)



- Shortcomings in design and installation work;
- Erroneous actions of contractor personnel;
- Erroneous actions of own personnel;
- Poor quality of instructions, local regulatory documents.

### Monitoring and Assessing the Technical Condition of Hydro-Power Structures, Diagnostics and Prediction of the Technical Condition of the Hydro-Power Equipment of HPPs

PJSC RusHydro regularly carries out internal control measures at its facilities and on its equipment conditions, in accordance with approved procedures, including with the participation of third-party organizations.<sup>G4-DMA</sup>

The process of assessing the condition of hydro-power structures (HSEs), which can determine the degree of HS compliance with established HS safety and reliability standards and regulations, consists of:

- Operative HS condition diagnostics that include the comparison of diagnostic HS condition indicators (qualitative and quantitative) with HS safety criteria;
- Comprehensive HS condition assessments that include the comprehensive analysis of monitored HS condition indicators (qualitative and quantitative), actual loads, natural and anthropogenic impacts, data on the level of the facilities' operation, HS safety and reliability level assessments and change forecasts.

To improve the level of monitoring and assessing the condition of hydro-power structures, the Company carries out:

- Specialized surveys of hydro-power structures with the involvement of specialized organizations;
- Multi-factor studies of hydro-power structures which have service lives of more than 25 years, assessing their strength, stability and operational reliability with

the involvement of specialized organizations. Following the results of the studies, measures to ensure the technically sound state of hydro-power structures and their safety are undertaken;

- Reconstruction of instrumentation, automation of instrumentation, installation and updating of information and diagnostic systems to monitor the condition of hydro-power structures;
- Installation and modernization of seismometric and seismological monitoring networks.

As part of equipment monitoring, RusHydro uses modern systems for production asset condition monitoring and diagnostics, conducts periodic instrumental inspection of main equipment, including flaw detection for hydro-power installation units, thermal and vibration tests, high voltage tests, and inspections using non-destructive control methods.

### Analytical Center

The central element of HS safety and reliability management systems is PJSC RusHydro's Analytical Center (AC). The Center improves the quality of technological decisions made by the Chief Engineer's Services, providing reliable and sufficient information on production activities and the system's technical readiness for operation.

The AC, with the help of the expert-analytical center and the information analytical center, monitor and assess the technical condition of HPPs during their operation, receive scientific rationale and use global best practices of technical solutions and analogues in the facilities during solutions aimed at providing reliability and safety.

Center employees and experts from leading institutes in the hydro-power industry supervise the operation of the Holding's companies' HPPs during their life-cycle and work closely with the plants' technical and engineering staff.

### Diagnostics and Extending the Operational Life of Existing Assets

The Scientific Research Institute of Energy Structures (NIIES, part of the RusHydro Group) Center for the Control of Hydro-power Equipment Safety (CCHES) and a special diagnostic laboratory to test equipment and materials by non-destructive methods when constructing, installing, repairing, and operating at enterprises which belong to the group of hazardous production facilities, have been operating since 2011. Center specialists are certified by Rostekhnadzor to conduct diagnostics via non-destructive testing methods.

Extending the operating life of the main equipment and improving energy efficiency during its operation are provided for by complex annual work in technical rehabilitation, reconstruction, repair and maintenance at facilities and equipment<sup>53</sup>.

### Management of Industrial and Occupational Safety, Operational Reliability of RusHydro's Technical System

General management of activities on production supervision over compliance with industrial and occupational safety requirements at hazardous operations industrial facilities with the right to make a decision on changing the process is carried out by a member of the Management Board, First Deputy CEO – Chief Engineer B.B. Bogush

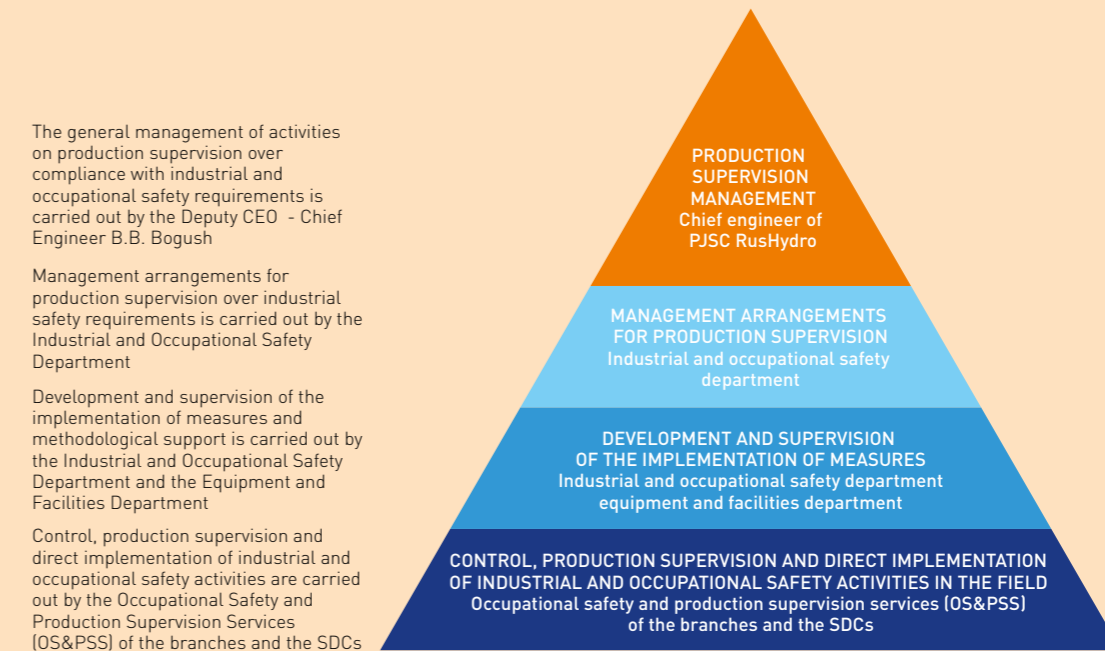
Management arrangements for production supervision over industrial and occupational safety requirements at hazard-

ous production facilities of PJSC RusHydro are carried out by the Industrial and Occupational Safety Department.

The development and supervision of the implementation of measures and methodological support for industrial and occupational safety are carried out by the Industrial and Occupational Safety Department, the Operations Department.

Control, production supervision and direct implementation of industrial and occupational safety activities are carried out by the Occupational Safety and Production Supervision Services (OS&PSS) of branches and SDCs.

## MANAGEMENT STRUCTURE FOR INDUSTRIAL AND OCCUPATIONAL SAFETY AND THE RELIABLE OPERATION OF PJSC RUSHYDRO'S POWER FACILITIES



### External supervision system for power facilities' safety and reliability

In accordance with legal requirements, they pertain to the safety declaration. Relevant safety declarations for the hydro-power structures have been drafted for all of the Holding's HSEs. These declarations have been approved by the Russian Federal Service for Ecological, Technological and Nuclear Supervision. Drafting the declaration is preceded by a complete examination of the HSEs with the mandatory participation of representatives from the Russian Federal Service for Ecological, Technological and Nuclear Supervision and the Russian Emergency Ministry. The Safety Declaration undergoes State expert review and is then approved by the Federal Service for Ecological, Technological and Nuclear Supervision.

- The Safety Declaration for the hydro-power structures of the power facility is the main document that provides for HS safety, and ensures their compliance with the criteria for safety, design, and the current technical regulations and rules, as well as determines the nature and extent of potential accidents and measures to ensure safe operation.
- Declaring hydro-power structures safety is implementation of measures for the development / revision of safety declarations for HSEs, including the development / revision of safety criteria and making calculations to determine the probable harm as a result of HSEs failure.

The Company's facilities which are hazardous production facilities also undergo the procedure for preparing and approving industrial safety declarations.

### Internal Documents and Rules to Ensure Control over the Reliability and Safety of the Technical System<sup>64-DMA</sup>

The effective management of the reliability and safety of hydro-power structures is regulated by numerous internal corporate documents, of which fundamental ones are:

- The Concept of the Safety and Reliability Management System of Hydro-power Structures, or HSEs (the Concept) adopted in 2009, which highlights major risk groups and control mechanisms;
- A new version of JSC RusHydro's Technical Policy adopted in 2011, which establishes a comprehensive approach to ensuring the reliability and safety of equipment and the power facility as a whole throughout its life-cycle;
- The Company's Production Program which is a main instrument for implementing JSC RusHydro's Technical Policy. The Technical Policy provides for the development of measures for the Company's Production Program in the mid-term (a six-year outlook) and the long-term (a 15-year time horizon);
- The Production Program includes the Retrofitting and Upgrading Program (RUP) as part of the Comprehensive Modernization Program for the Holding's generating facilities, which was adopted in 2011 (for the period until 2025);
- The Technical Policy also provides for the development of corporate regulations and standards – specifying industry standard provisions taking into account specific HS features.

<sup>53</sup> For details, see paragraph 2.2.1 Implementation of the 2014 Comprehensive Facilities Modernization Program.

The Company has developed and successfully introduced the following documents and processes governing industrial safety matters, within the framework of the industrial safety control system:

- Standard regulations on production supervision over compliance with industrial safety at hazardous production facilities<sup>54</sup>;
- The JSC RusHydro Production Supervision information system, which has been fully implemented at PJSC RusHydro branches<sup>55</sup>.

## 2.1.2. Management of the Risks Connected to Providing Safety and Reliability during Operation<sup>64-2</sup>

### Reduction in the Number of Technical Incidents and Accidents at the Company's Facilities

Accidents that threaten the health and safety of people, lead to power failures and electricity and capacity shortfalls can be caused by any of the following factors:

- Design flaws which become apparent during operation;
- Physical wear of equipment;
- Violation(s) of operating conditions;
- Untimely repairs and retrofitting and upgrading;
- Human factor(s);
- Abnormal natural phenomena.

### Measures to Reduce the Risk of Accidents

- According to the Company, the probability that equipment and/or facilities will fail is at an average level. To reduce this risk, the Company is undertaking activities within the framework of implementing the comprehensive equipment modernization program and the advanced vocational training of the Holding's personnel engaged in the operation and maintenance of facility equipment and structures. The Company also regularly carries out comprehensive measures to ensure the reliability of equipment and facilities at an appropriate level, as shown in the diagram.
- As of December 31, 2014, all hazardous facilities (HPOs and HSEs) of the RusHydro Group were insured under a compulsory insurance contract for the civil liability of a hazardous production facility owner for harm as a result of an accident at a hazardous facility,<sup>56</sup> in the total amount of RUR74.43 million. According to contracts concluded with the insurer (JSC Alpha Insurance), insurance policies that cover civil liability for harm due to an accident at a hazardous facility were obtained for each hazardous production facility's production site.
- To mitigate the risks of seasonal floods and freshets, a hydro-meteorological monitoring system operates within the framework of the RusHydro Holding. The Company manages water regimes, regulates reservoirs, and builds and manages spillways, etc. In 2014, PJSC RusHydro developed a construction program for new flood-control hydro-power facilities on Amur River tributaries. The Company also began to develop a feasibility study to construct flood-control HPPs and construction projects for dam HPPs in the Far East to address future extreme floods.
- The seismic hazard for territories in which RusHydro's

facilities are located is not significant as a rule, with the exception of HPPs located in the North Caucasus and Siberian regions. These HPPs are equipped with seismic monitoring systems.

- The Company pays special attention to possible risks related to terrorist activities in the North Caucasus territory. To mitigate this risk, the Company has implemented a complex safety and anti-terrorism protection program.

The Company has created a functional sub-system to prevent and address emergencies. Round-the-clock monitoring is organized at power facilities, and rapid response readiness and coordination under special conditions and in the case of an emergency is ensured within the framework of this sub-system.

### Ensuring Sustainable Operation of Hydro-Power Facilities in Flood Periods

#### Managing Hydropower Regimes of HPPs

Each step by hydro-power engineers in operating hydro-power plants is very strictly regulated and controlled by the State: the regimes of filling and drawing down reservoirs, and flood discharge at HSEs are established by the Russian Ministry of Natural Resources, which is represented by the Federal Agency for Water Resources (Rosvodresursy). This Agency has territorial divisions in Russian regions – the BWMBs (the Basin Water Management Board), which define the operation of each HPP located in said region.

The territorial BWMBs provide instructions for the reservoirs' operational regimes, which are agreed upon at meetings of inter-departmental working groups on regulating the operational regimes of reservoirs, with the territorial bodies of the Russian Emergency Ministry, the Ministry of Agriculture, Rosselkhozadzor, Rosmorrechflot, Rosstroy, and JSC SO UES. The territorial BWMBs also take into account the interests of all water users and the tasks that these departments face. Rosvodresursy and its territorial bodies, when determining the operational regime of reservoirs and hydro-power systems, are guided by Russian Federation water legislation provisions and the Rules for the Use of Water Resources of Reservoirs (PUWR).

### Hydropower Situation in 2014

Control of the hydro-power plants' operating conditions and the ability to regulate river flow fulfill an important function during special periods, such as: water scarcity (droughts), floods or freshets.

2014 will go down in history as one of the lowest water years ever. Water reserves in almost all PJSC RusHydro HPP water storage reservoirs were significantly below normal. It will be particularly noted for the unprecedented water shortage in the Upper Volga Region, where for the first time in the entire observation period there were virtually no floods. Thanks to effective planning, in cooperation with the Federal Agency for Water Resources, of HPP operating conditions, the Company managed to redistribute water between the water storage reservoirs of the Volga-Kama HPPs Cascade in the Upper Volga Region, maintaining navigation and not disturbing the water supply of adjacent regions. 2014 was also a low water year in the Angara River basin.

The Ob River basin, in contrast, experienced flooding which severely damaged the Altai Territory. The efficient work of the Novosibirskaya HPP made it possible to avoid flooding

in Novosibirsk. Due to the development of hydrological conditions (increased water flow), as well as taking into account the operational forecast by the Novosibirsk Weather Control and Environmental Monitoring Service of high-water rainfall floods in the Altai and Novosibirsk Regions, by a decision of the Upper Ob BWMB, HPP personnel were able to start with sufficient time to draw down additional water by spills through the spillway dam. This increased the reserve capacity of the reservoir to ensure the safe passage of flood waters during the flood peak. The water storage reservoir of the Novosibirskaya HPP accumulated a third of the total inflows during the flood peak and protected the 20th part of Novosibirsk against flooding.

The most effective way to regulate the spillway during the flood period is to construct regulating reservoirs (re-regulating HPPs)<sup>57</sup>.

### Prevention and Relief System for Disasters and Emergencies

#### Hydro-Power Structures Preparedness for Disasters and Emergencies

Work in this field is performed in full compliance with Russian legislative requirements for hydro-power facilities. The Company has set up an insurance fund to document hazardous facilities. This is kept by the State. The fund is intended to be used when carrying out accident rescue operations and emergency response and restoration activities.

PJSC RusHydro has created a functional sub-system of the single state system for preventing and addressing emergencies, which is integrated into the nation-wide system. Monitoring the protection status and organizing civil defense, and preventing and responding to emergency situations across the RusHydro Group companies is carried out by the Center for Monitoring the Protection Status and Operation of Facilities. In 2014, warning and informing the

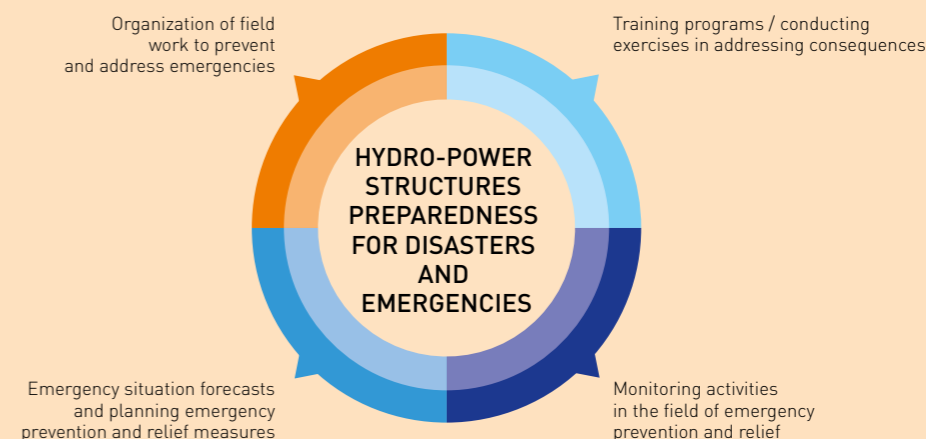
Company's management team on preventing and addressing emergencies were carried out round-the-clock.

According to JSC RusHydro's Order № 130 (dated February 26, 2014) "On the establishment of reserve funds for responding to natural and man-made emergency situations," the Company has formed a financial reserve for emergency responses, which is 1% of the average monthly revenue from the sales of electricity and capacity.

### All RusHydro operating hydro-power structures have:

- Action plans for preventing and responding to emergency situations that are both natural and man-made (hereinafter referred to as Emergency Prevention and Response Plans) agreed upon with the territorial bodies of the Russian Ministry of Emergency Situations;
- Safety certificates for hazardous production facilities;
- Agreements with professional emergency rescue teams to conduct accident rescue operations, including those related to accidental oil spills;
- Specialized vehicles for the rapid elimination of possible damages and accidents (at facilities where there are facility-based (contractual) fire brigades);
- Minimum emergency supplies;
- Emergency and rescue equipment and tools, in accordance with the list of equipment for emergency rescue teams in the amount of 100% of needs;
- Non-professional emergency response teams trained and certified to conduct rescue operations, ready to act in emergency situations as intended;
- Material resource reserves for emergency response in the amount of more than RUR 70 million (in all Holding companies operating hydro-power structures).

## PLANNING AND PREPARING MEASURES TO RECTIFY THE CONSEQUENCES OF NATURAL DISASTERS AND CATASTROPHES



<sup>54</sup> Approved by Order № 52 dated January 29, 2014.  
<sup>55</sup> Commissioned by Order №1170 dated November 27, 2013.

<sup>56</sup> In accordance with requirements of Federal Law № 225 [dated July 27, 2010] "On compulsory civil liability insurance for a hazardous production facility owner for harm as a result of an accident at a hazardous facility."

<sup>57</sup> For details, see Section 3. Climate change and improving the safety of hydro-power systems, as well as Section 4. Flood-control SHPPs in the Amur River Region.

## Organization of Work in the Field of Preventing and Addressing Emergencies

The Company's functional sub-system of the single state system for preventing and addressing emergencies (the functional sub-system) includes:

- Commissions on emergency prevention and response and fire safety (CEPR and FS) (coordinating bodies across all levels);
- The Monitoring Center for protection status and the operation of PJSC RusHydro's facilities (hereinafter PJSC RusHydro's Monitoring Center) and employees of the branches, who are specially authorized to resolve problems in civil defense and emergency situations (permanent management body);
- A twenty-four-hour duty shift for PJSC RusHydro's Monitoring Center and duty shifts under the supervision of power plant shift supervisors (duty-dispatching services) (day-to-day management bodies);
- Emergency response teams (professional and non-professional emergency response teams);
- A communications system and a system for warning management authorities and the forces of the functional sub-system;
- Reserves of material and technical and financial resources;
- Local warning systems.

The Chairman of the Commission on emergency prevention and response and fire of PJSC RusHydro is a member of the Board, First Deputy CEO – Chief Engineer, whereas in the Company's branches, this position is carried out by the First Deputy Directors – Chief Engineers. The annual work plans of the CEPR and FS include arrangements for the safe passage of flood waters during the spring and summer period and preparation for the autumn-winter peak load period, as well as measures to ensure the stable functioning during fire dangers and storm periods.

## Emergency Situations Forecast and Planning of Emergency Prevention and Relief Measures

- All RusHydro companies have developed and approved at their facilities the HS Safety Declarations which are updated (revised) at least every 5 years from mandatory examination of HSEs by specially appointed commissions (with the involvement of design and research organizations). In 2014, the safety declaration procedure was successfully conducted and relevant operational permits were received for the hydro-power structures of the Gizeldonskaya HPP, the Head Zaramagskaya HPP, the Dzaudzhikaukskaya HPP and the Pavlodolskaya HPP of the North Ossetian branch, the Sayano-Shushenskaya HPP named after P.S. Naporozhniy, the Novosibirskaya HPP, the Yegorlykskaya HPP, the Zeiskaya HPP, the Zagorskaya PSPP, the Gelbakhskaaya HPP, the Gergebilskaya HPP, the Chiryurtionskaya HPP-1 and HPP-2, the Volzhskaya HPP, and the Bureyskaya HPP.
- Emergency Response Plans are updated annually in accordance with the key action plans on emergency prevention and civil defense. The Plans are revised at least every 5 years, as a rule, concurrently with conducting a pre-declaration survey of the HSEs.
- All RusHydro company operating facilities that use petroleum products in their production activities have de-

veloped oil and petroleum product spill prevention and response plans and trained and equipped non-professional emergency response teams, which are able to localize and eliminate local oil spills on their own or via contracts with professional rescue units certified for this type of work.

- To ensure timely warning of the local population and territorial authorities, the Holding facilities have 24 local warning systems. In 2014, the local warning systems' preparedness was inspected by joint commissions with the participation of territorial bodies of the Russian Emergencies Ministry at all Holding HPPs. RUR 170 million will be spent on subsequent modernization of local warning systems for the period until 2020.
- To ensure operational communication between PJSC RusHydro and the National Emergency Management Center of the Russian Ministry of Emergency Situations (the National Emergency Management Center), there are joint Information Exchange Regulations in place dated November 11, 2013, which stipulate the procedure for operational communication between PJSC RusHydro and the operational duty shifts of the National Emergency Management Center;
- To address the issues on preventing and addressing emergency situations and other events affecting the operation of power generation facilities, there is an agreement between PJSC RusHydro and the Situational and Analytical Center of the Russian Ministry of Energy dated December 2, 2013.

## Training Programs/Conducting Exercises in Addressing Consequences

Beginning on their first working day, all Company employees are provided with personal respiratory protective equipment of the filtration type.

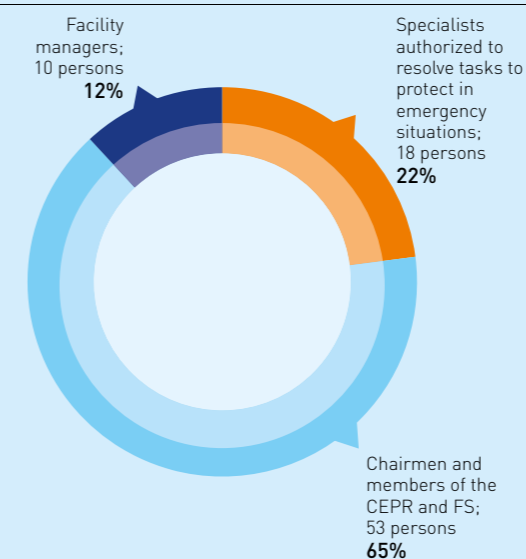
Emergency protection training for the Company's employees is organized and conducted in accordance with the corporate emergency protection and civil defense training program. The list of persons who must undergo training is defined in accordance with Russian Federation regulatory requirements.

In accordance with the key action plan on civil defense and emergency prevention and relief, the Company regularly conducts emergency protection training activities at its facilities. Rescue workers from non-professional emergency response teams are trained in accordance with rescue training programs at least once every 3 years, and during pre-certification training – in accordance with a 20-hour program based on plans and programs developed by the Company.

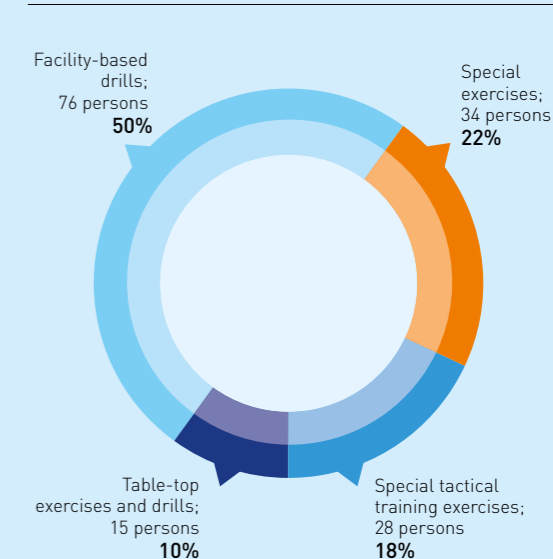
In 2014, the following activities were carried out by PJSC RusHydro within the framework of emergency response preparation:

- Personal protective equipment (PPE) stocks were renewed at seven facilities in the amount of more than RUR 4 million;
- A remote training system for executive apparatus employees, using an automated knowledge-level monitoring and training system; also, an automated knowledge-level monitoring and training system for branch employees, was developed and prepared for introduction in 2015;
- More than 80 employees underwent civil defense training at training centers;

## EMERGENCY SITUATIONS PROTECTION TRAINING CONDUCTED IN 2014



## CIVIL DEFENSE AND EMERGENCY SITUATIONS EXERCISES AND DRILLS CONDUCTED IN 2014



- More than 150 emergency protection exercises and drills were carried out;
- 67 Company employees underwent appraisal and were assigned (confirmed) rescuer status, and 6 non-professional emergency response teams were certified to conduct rescue operations;
- In cooperation with the territorial bodies of the Russian Ministry of Emergency Situations and local search and rescue organizations, comprehensive emergency training exercises on the theme "The organization and implementation of measures to improve the sustainability of hydro-power plants under the threat of peacetime emergencies" were carried out in the PJSC RusHydro branch – the Volzhskaya HPP.

## Monitoring Activities in the Field of Emergency Prevention and Response

To ensure a timely response to the state of affairs in disaster prevention, in 2014, the Company established a system for monitoring the functional elements of the functional sub-system. For this purpose, PJSC RusHydro issued Order №733 (dated September 15, 2014) "On the routine report schedule," which defines the procedure for presenting required information and its scope.

Each year, internal commissions of the RusHydro Group with the involvement of representatives of the territorial bodies of the Russian Ministry of Emergency Situations conduct a check of HPP preparedness to work during the autumn and winter period by issuing appropriate certificates. In 2014, all HPPs received certificates of readiness for the 2014-2015 autumn-winter period.

Checks carried out at the Company's facilities by supervisory authorities of the territorial departments of the Russian Ministry of Emergency Situations did not reveal serious violations in emergency protection activities either.

In addition, Civil Defense and Emergency Situations specialists of the Monitoring Center for Protection Status and the Operation of Facilities regularly conduct on-site inspections of the functional sub-system condition. In 2014, such inspections were carried out in the following branches of PJSC RusHydro: the Sayano-Shushenskaya HPP named after P.S. Naporozhniy, the Volzhskaya HPP, the Zagorskaya PSPP, the Volzhskaya HPP and the Dagestan branch.

## Facilities Security: Preventing and Rectifying the Consequences of Subversive Actions and Terrorist Activities

The Company on an annual basis implements a comprehensive plan to strengthen facility security. Information and technical security audits are performed, factors affecting the security status of the Company's facilities are monitored. Among these are the following activities:

- The Company assesses the most dangerous threats and develops consequence management plans together with the Civil Defense and Emergency Situations Service of the constituents of the Russian Federation at the locations of the Company's generating asset;
- 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 hydro-power facilities, there are robust access regimes and internal security regimes. Power facilities are protected by armed guards of the FSUE Departmental Security Agency of the Russian Ministry of Energy;
- The Company's fixed assets insurance package includes insurance against terrorism. In 2014, the Company held a road-show and undertook similar measures to mitigate negative effects of the occurring insured events related to terrorism and the sabotage risk on the Company's position in the international insurance market.

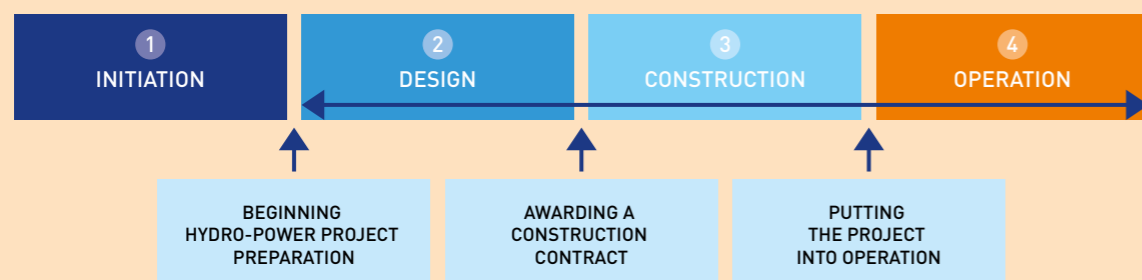
## 2.1.3. Management and Quality Control during Design and Construction

<sup>64-DMA</sup> The foundation of safe and trouble-free operation for hydro-power structures and the process equipment of HPPs is laid at the project implementation stage (including: the design and construction stages) and depends on many factors, starting from the results of project documentation,

the quality of structures and materials, compliance with construction technologies, and the qualification of performers, including both engineering and technical personnel and workers.

**The implementation phase: The foundation of safety and the functioning reliability of power facilities**

### PROJECT LIFE CYCLE PHASE: IMPLEMENTATION



- 2**
- ▶ Quality control of the processes and the results of design work
  - ▶ Using advanced methods and technologies that mitigate environmental impact
  - ▶ Planning activities to reduce the negative impact, and mitigation measures during the construction phase.

- 3**
- QUALITY CONTROL AT THE CONSTRUCTION PHASE INCLUDES:**
- INTERNAL QUALITY CONTROL:
- ▶ performed by all construction participants: the general contractor, the construction customer and the designer (as part of the designer's supervision);
  - ▶ carried out to assess the compliance of construction and installation work, constructed structures and engineering infrastructure systems for buildings or structures with the requirements of technical regulations, design and working documentation;
  - ▶ includes, among other things: incoming operational, acceptance inspection, as well as the work performance record, and the final inspection of work performed and a preparation of a report on conformity
- EXTERNAL SUPERVISION:
- ▶ performed by the Federal Environmental Industrial and Nuclear Supervision service of Russia (Rostekhnadzor) and other bodies of the State technical supervision

### Research and Design Complex

The quality level of the operational characteristics of the HPPs' technical structures and equipment is set at the design stage and is largely determined by the quality of processes and the design results. Design of RusHydro Group facilities is conducted by its own research and design complex. After that, each project's documentation undergoes State examination. In this case, PJSC RusHydro and the RusHydro Holding companies act as customers (construction customers).

The research and design institutes of the RusHydro Group carry out the full range of R&D in designing hydro-technical

construction, energy sector construction, industrial and civil engineering and water management; work to diagnose and extend the operational life of existing assets is performed; technologies are developed to improve the performance of the HPPs' hydro-power structures and equipment and to increase the reliability and safety of the power facilities, as well as to reduce their industrial environmental impact<sup>58</sup>.

THE DESIGN COMPLEX OF PJSC RUSHYDRO TODAY HAS MANY YEARS OF EXPERIENCE, A UNIQUE R&D BASE, HIGHLY SKILLED SPECIALISTS AND AN INTEGRATED MANAGEMENT SYSTEM.

All design institutes of the RusHydro Group have quality standards in place, in accordance with which design work is carried out, have developed and implemented a work quality management system from the beginning of hydro-power project preparation to putting the project into operation. The control system of processes and design results is strictly regulated by local regulations developed within the framework of JSC RusHydro's Technical Policy, and industry-specific and international technical standards throughout the design cycle. Design product quality control processes are integrated into the design process. In addition, the high quality of the projects is provided by using the best practices and technologies, which meet the hydropower development prospects, advanced materials and structures, as well as by planning activities to reduce negative impacts, and mitigation measures during the construction phase.

The environmental impact assessment of a capital construction project is a compulsory condition for project approval at the initiation phase. The development of environmental measures during construction and operation is an integral part of the design phase.

### Design Documentation Quality Control System

Design and estimate documentation and engineering survey reports developed by the Institutes are subject to review by PJSC RusHydro, JSC MC Hydro OGC, the SDCs and branches of PJSC RusHydro (Customers) as elaboration progresses in accordance with provisions of JSC RusHydro and JSC MC Hydro OGC's joint Order №762/1n-56 (dated July 29, 2011) "On the approval and introduction into effect of the Regulations on the management and control of the implementation of the investment project in terms of elaborating documentation for the new construction of JSC RusHydro facilities."

Design documentation and engineering survey reports are considered by the Customers before being submitted to the Scientific and Technical Council of PJSC RusHydro for discussion.

Detailed design documentation is subject to full verification by the Customers (the SDCs and PJSC RusHydro branches), as well as random inspection by PJSC RusHydro and JSC MC Hydro OGC for compliance with design solutions, and information adequacy to carry out construction and installation work.

Estimate documentation is subject to full verification by the SDCs and PJSC RusHydro branches, (the Customers), as well as PJSC RusHydro and JSC MC Hydro OGC for accuracy of the scope of work, prices and the resulting cost of work indicated in the estimates.

### The Scientific and Technical Council of PJSC RusHydro (the STC of PJSC RusHydro)

The design and estimate documentation and engineering survey reports developed by the Institutes and checked by the SDCs and PJSC RusHydro's branches, (Customers), PJSC RusHydro and JSC MC Hydro OGC are subject to review by the Scientific and Technical Council of PJSC RusHydro (hereinafter referred to as the STC). Within its competence, the STC provides expert support for forming and implementing the process of the Technical Policy at all stages of the life cycle of the production complexes according to the Regulations on the Scientific and the Technical Council of JSC RusHydro<sup>59</sup>.

To upgrade the quality of decisions made, the STC forms an expert community which includes leading scientists, specialists of PJSC RusHydro, the SDCs, branches, research, design-and-engineering, educational, scientific and production, construction and installation, and repair and construction organizations, and manufacturers irrespective of their departmental affiliation and the form of ownership on issues within their area of competence.

In particular, to ensure environmental safety in forming new technical solutions, the STC has created a section "Water reservoirs and environmental protection."

The section consists of experts from:

- Moscow State University of Environmental Engineering
- Institute of Water Problems of the Russian Academy of Sciences (RAS);
- The Gidroproject Institute named after S.Y. Zhuk;
- The Lengidroproject Institute;
- JSC VNIIG named after B. E. Vedeneev;
- The Department of State Policy and Regulation in the Field of Water Resources;
- Experts with a degree of doctor of philosophy and/or doctor of sciences.

After examining the documentation, the STC of PJSC RusHydro either states that it needs improvement or gives recommendations to submit the documentation for State examination.

### State Examination

In accordance with the provisions of the Town Planning Code of the Russian Federation<sup>60</sup> and the RF Government Decree № 145 (dated March 5, 2007) "On the procedure for organizing and conducting a State examination of design documentation and engineering survey results," design documentation and engineering survey results are subject to State examination.

The subject of the State examination of design documentation is to assess its compliance with technical regulations, including sanitary-epidemiological, environmental requirements and the requirements of State protection of cultural items, fire safety, industrial, nuclear, radiation and other safety requirements, as well as engineering study results.

The subject of the State examination of engineering survey results is to assess their compliance with technical regulation requirements.

State examination must cover all sections of the design documentation and (or) engineering survey results that are submitted to the State examination in accordance with Russian legislation.

The findings of the State examination is an opinion containing conclusions on compliance (favorable opinion) or non-compliance (negative opinion) of the design documentation with the engineering survey results, the requirements of technical regulations, including sanitary-epidemiological, environmental requirements, the requirements for State protection of cultural items, fire safety, industrial, nuclear, radiation and other safety requirements, and the requirements on the content of design documentation sections as provided for in accordance with Part 13 of Article

<sup>58</sup> Environmental activities are considered in detail in Section 4.3 R&D: reduction of industrial load on the environment.

<sup>59</sup> The Regulations on the Scientific and Technical Council (STC) of JSC RusHydro were approved by of JSC RusHydro's Order № 196 (dated March 1, 2013).

<sup>60</sup> № 190-FZ dated December 29, 2014.

48 of the Town Planning Code of the Russian Federation, as well as compliance or non-compliance of the engineering survey results with technical regulation requirements.

### Public Technology and Pricing Audit

From the beginning of 2014, the Regulations for conducting a public technology and pricing audit of large investment projects of JSC RusHydro<sup>61</sup> has functioned in respect to Company projects worth RUR 1.5 billion and more. The public technology and pricing audits aim, among other things, to select the best technological and design solutions, modern building materials and equipment when creating an investment medium as part of the investment project.

### Designer Supervision

Designer supervision over the construction of buildings and structures is carried out by specialists – designer engineers of detailed design documentation for the facility (part of the facility) on which the construction and installation work is being performed, in accordance with the provisions of Rules and Regulations 11-110-99.

Design organizations' supervision is carried out during the entire period of constructing and commissioning completed facilities to ensure that technological, architectural and construction and other technical solutions and technical and economic indicators of commissioned facilities comply with solutions and indicators provided for in the approved designs (working designs), as well as to increase the responsibility of design, construction and installation companies and customers for ensuring the high quality of constructed buildings and structures and observing their estimated cost.

### Integration of Management and Quality Control Processes into the Design Process

The Integrated Management System (IMS), including the Quality Management System, the Environmental Management System and the Occupational Safety and Health Management System certified in accordance with international standards, is implemented in three design institutes. This system is the basis that defines a comprehensive approach to quality control processes and the results of performed design work, and provides a high level of reliability for design facilities and their environmental safety at all stages of the life cycle of projects.

**JSC Gidroproject Institute** has a certified Environmental Management System (ISO 14001: 2004); a Quality Management System (ISO 9001: 2008) and an Occupational Safety and Health Management System (certified under IMS). IMS compliance with international standards was confirmed by one of the world's leading expert organizations – the German company TÜV SÜD Management Service (Germany), one of the world's leading organizations in providing technical services, following results of the certification audit in 2013.

**In JSC Lengidroproject, IMS** compliance with international standards in quality control (ISO 9001: 2008SMK), and occupational safety and environmental management were confirmed as part of the 2014 re-certification audit. The audit and certification were carried out by the Norwegian company DNV GL – a world leader in certifying quality, safety and operational efficiency. The ISO 14001 standard has also been implemented in the Institute.

**JSC Mosoblgidroproject** has had a Quality Management System (ISO 9001: 2008QMS) since 2005. The audit and cer-

tification process were carried out by experts from the German company TÜV Rheinland Group – a leader in providing technical services in the international market.

### Work Quality Control at the Construction Phase

Quality control at the construction and installation stage is carried out to assess the compliance of construction and installation work, constructed structures and engineering infrastructure systems for buildings or structures with the requirements of technical regulations, design and working documentation to ensure further reliable and trouble-free operation of power facilities and to reduce dead expenses during the operation phase.

This includes:

Internal quality control:

- Performed by all construction participants: general contractor, construction customer and designer (as part of the designer's supervision);
- Provides incoming operational, acceptance inspection, as well as the work performance record, the final inspection of work performed and the preparation of a report on conformity;

And external supervision performed by the Russian Federal Environmental Industrial and Nuclear Supervision Service (Rostekhnadzor) and other State technical supervision bodies.

### Internal quality control at the construction phase (the Customer)

During the construction of hydro-power facilities, the RusHydro Holding companies act as construction customers and place stringent demands on the quality of construction and installation work. Construction and installation work is conducted both by RusHydro Group companies and with the involvement of external contractors.

The Company has a construction quality control system which provides for the compliance assessment of a project under construction with design and working documentation and consists of:

- Production Unit Control System;
- Engineering and Capital Construction Control System;
- Customer Service Control System;
- Design Organization Control System;
- General Contractor Control System;
- Sub-contractor Control System;

### Contractor requirements

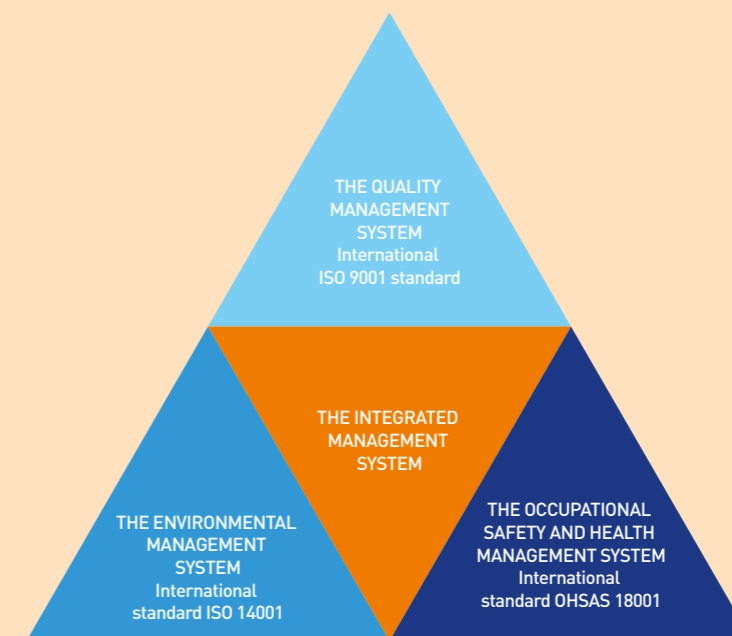
The Company places high demands on its contractors. They must have a workable, efficient management system that takes into account all the peculiarities of the territorial distribution of PJSC RusHydro's assets and also have sufficient production capacities and qualified personnel, as well as provide quality guarantees and maintenance services.

At the equipment procurement stage, PJSC RusHydro concludes contracts with the manufacturing plant to train its personnel to work on equipment, on troubleshooting and on procedures to repair purchased equipment.

- During the construction and installation of buildings and structures, the compulsory interim acceptance of equip-

and pricing audit in open joint stock companies with State participation." For more details, see Section 1.3.2. Control over the targeted use of funds (Monitoring the targeted use of funds for investment projects and repairs).

## INTEGRATION OF MANAGEMENT AND QUALITY CONTROL PROCESSES INTO THE DESIGN PROCESSES



ment and facilities units, as well as of hidden work, is carried out, trial starts are performed prior to the comprehensive testing of power facilities;

- In accordance with legal requirements and power plant operating rules, prior to commissioning, a power facility must undergo individual equipment tests and functional tests of individual systems followed by trial starts of the main and auxiliary equipment; comprehensive equipment testing;
- Trial starts check the working ability of the equipment and technological schemes, and the safety of their operation; all control and supervision systems are inspected and then adjusted;
- To prepare the power facility (the start-up complex) for being presented before the acceptance committee, a provisional commission is appointed, which accepts the equipment according to an acceptance certificate after the equipment has undergone individual comprehensive testing.

Operational control, acceptance, inspection, and geodetic control are performed at the production site at all construction stages.

To this end, the following measures have been implemented at all PJSC RusHydro power facilities under construction:

- Regular compliance checks of buildings and structures, building materials, products and structures with regulatory requirements;
- Measures for the timely detection of defects, their causes and activities to eliminate them during the construc-

tion phase;

- Activities to increase the contractor's responsibility for work quality have been performed;
- Analyzing the organization and functioning of the construction and installation work quality control management system.

### New facilities construction management: Major milestones during the reporting period

- As part of the changes in PJSC RusHydro's organizational structure, a single design and survey and construction unit headed by a member of the Management Board – First Deputy CEO Vladimir Tokarev was established in 2014.
- The Capital Construction Unit was reorganized to form the Capital Construction Department.
- Centralization and optimization of the management structure of eight subsidiaries – construction customers were completed – the functions of the sole executive body were transferred to the management company JSC MC RusHydro OGC (starting January 1, 2015).

### Regulation and supervision

Control of adequacy in the quality of construction and installation work, materials and structures applied is regulated by applicable statutory requirements, industry standards and requirements, corporate technical standards, and regulatory requirements of design documentation.

In addition to legal requirements and regulations at the federal level,<sup>62</sup> such as mandatory quality control standards,

<sup>61</sup> Adopted pursuant to Decree № 382 of the Government of the Russian Federation [dated April 30, 2013] "On conducting the public technology and pricing audit of large investment projects with State participation," Directive № 2988p-P13 of the Government of the Russian Federation [dated May 30, 2013] "On conducting the public technology

<sup>62</sup> The Town Planning Code and the RF Government Resolution N 468 [dated June 21, 2010] "On the procedure for conducting construction supervision during construction, reconstruction and capital construction of capital construction projects."

both industry and corporate (developed in RusHydro) standards are applied at all stages of construction work.

A unified system of conformity assessment (US CA) during construction (reconstruction and the capital construction of capital construction projects) and requirements for the monitoring procedure of the US CA are developed by the Supervisory Board of the Unified System of Conformity Assessment in Industrial, Environmental, Power Engineering and Construction Safety. Supervision of their execution is conducted by the Federal Service for Environmental, Technological and Nuclear Supervision (Rostekhnadzor).

At the construction stage, an automated diagnostic control system, which performs the automatic collection of readings and their computer processing to analyze the condition of the hydro-power system's facilities, has been introduced at plants. When hydro-power structures are commissioned, the construction company gives the customer instrumentation and all observation data from the construction period.

### Internal policies and other documents regulating quality control issues during the construction stage<sup>63</sup>:

- JSC RusHydro's Technical Policy. Approved by the Board of Directors and put into effect September 5, 2011;

- JSC RusHydro's Corporate Standards for Construction and Installation Work (construction customer's level):
- ✓ 70238424.27.140.028-2009 "Hydro-power plants. Organization of construction operations. Standards and specifications;"
- ✓ 70238424.27.140.029-2009 "Hydro-power plants. Work quality control during construction. Standards and specifications;"
- ✓ 70238424.27.140.046-2009 "Hydro-power plants. Construction and installation work performance. Standards and specifications;"
- ✓ 04.01.71-2011 "Hydro-power development. The procedure for determining the cost of construction and installation work. Recommended practices;"
- ✓ 01.02.85-2013 "Hydro-power development. Diary and network scheduling of hydro-power generation facilities construction projects. Standards and specifications;"

## 2.2 ENERGY EFFICIENCY AS CLEAN ENERGY POTENTIAL

### 2.2.1. Implementation of the 2014 Comprehensive Facilities Modernization Program

#### DMA Upgrading energy efficiency in the power generation system <sup>G4-DMA (former EU6)</sup>

As a systemically important federal company, PJSC RusHydro plays an important role in resolving comprehensive socio-economic problems raised by the Russian government within the Concept of the Long-term Socio-economic Development of the Russian Federation until 2020, as well as in the Energy Strategy of Russia until 2030.

The Government, the main shareholder of PJSC RusHydro, entrusts the fuel and energy complex with the demanding task of improving energy security and reducing the energy intensity of the energy sector. The Company plans its corporate development strategy for production activity development within the framework of these important challenges facing Russia's power engineers.

The 2014 total effect of implementing measures to upgrade energy efficiency and reduce indirect energy consumption has been evaluated by the Company as being equivalent to a 245 million kWh increase in production per annum. The total effect includes both increasing the energy efficiency of existing HPPs under the Comprehensive Modernization Program and the indirect one of optimizing water resource usage and reducing power losses in grids near the Company's plants. <sup>G4-EN5 and G4-EN6</sup>

#### Nationally Important Task

The Russian State Program "Energy Efficiency and Energy Industry Development" provides basic activity areas to up-

grade energy efficiency using all types of energy resources:

1. Energy saving and energy efficiency improvement;
2. Power industry development and modernization;
3. Development of renewable energy sources.

According to the Russian Ministry of Energy, the energy intensity of GDP in Russia is 2.5 times higher than the world average, and 2.5 – 3.5 times higher than in other developed countries. The high energy intensity of electricity production is directly due to high fixed asset depreciation. More than 90% of existing power plant facilities and 70% of processing equipment for electrical grids were built before 1990.

"FOR RUSSIA TO REACH THE WELFARE STANDARDS OF DEVELOPED COUNTRIES AGAINST THE BACKGROUND OF INCREASED GLOBAL COMPETITION AND EXHAUSTED EXPORT AND RAW MATERIAL SOURCES, IT WILL BE NECESSARY TO FUNDAMENTALLY UPGRADE THE EFFICIENCY OF UTILIZING ALL TYPES OF ENERGY RESOURCES."

RUSSIAN STATE PROGRAM "ENERGY EFFICIENCY AND ENERGY INDUSTRY DEVELOPMENT"

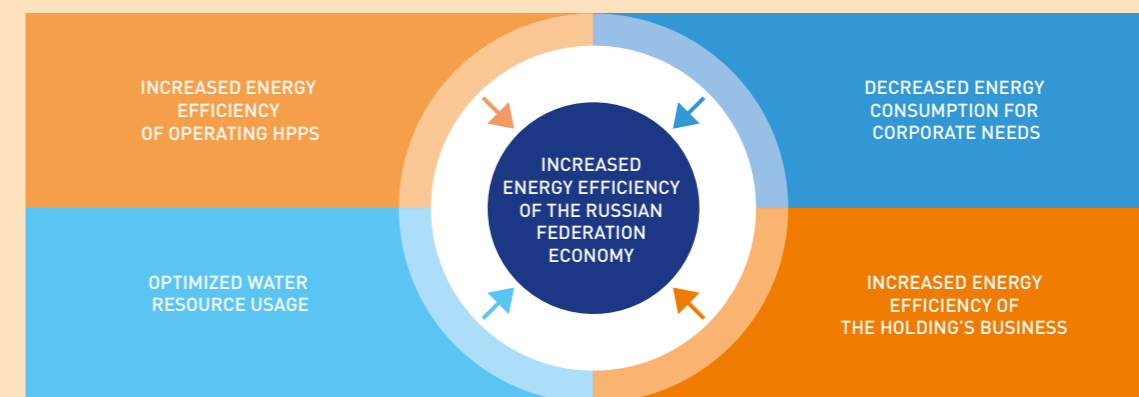
#### The 2010-2015 Program on Energy Conservation and Upgrading Energy Efficiency at RusHydro

The 2010-2015 Program on energy saving and upgrading energy efficiency at RusHydro (hereafter referred to as the Program) is the central link to the RusHydro Group's common approach to energy efficiency. <sup>G4-EN6</sup>

The document defines three main areas of activity to reduce the energy intensity of production:

- Upgrading energy efficiency at existing HPPs;
- Optimizing water resource usage;

### THE CONCEPT OF THE PROGRAM ON ENERGY CONSERVATION AND UPGRADING ENERGY EFFICIENCY <sup>G4-EN6</sup>



#### THE PROGRAM PROVIDES A RANGE OF ACTIVITIES TO:

- ▶ Reduce the Company's own energy consumption at HPPs and market losses;
- ▶ Develop generation based on renewable energy sources;
- ▶ Implement innovation in energy saving;
- ▶ Efficiently utilize water resources;
- ▶ To enter new service markets: energy saving, energy auditing, and energy metering.

- Reducing energy consumption for the Company's own needs.

The Program provides a range of activities to reduce the Company's own energy consumption at HPPs and market losses, develop generation based on renewable energy sources, implement innovation in energy saving, and efficiently utilize water resources, as well as measures to enter new service markets, such as: energy saving, energy auditing, and energy metering.

These priorities are also fixed in the Innovative Development Program and the Comprehensive Modernization Program, as well as supported by the Investment Program, which serves as a tool to implement the Strategic Plan on an annual horizon and which defines key tasks for each corporate activity.

The technological aspect of energy saving is at the forefront of the Program, firstly, an increased energy efficiency of the operating HPPs by modernizing the Holding companies' fixed assets and putting into operation new energy-efficient capacities through capital construction, including small hydro-power plants. <sup>G4-EN6</sup>

#### Renovating and Increasing the Energy Efficiency of Operating HPPs

<sup>G4-DMA</sup> To evaluate energy saving potential at its facilities, the Company conducts energy audits of power plants every three years. Based on the assessment of equipment and hydro-power structures' condition, the current wear and target deterioration by the year of CMP completion were defined. Based on energy performance certificates of the branches, a consolidated energy performance certificate for PJSC RusHydro was developed.

In 2014, the Company carried out energy audits at four PJSC RusHydro branches: the Dagestan branch (9 plants), the North Ossetian branch, the Kabardino-Balkarian branch and the Karachayev-Cherkessian branch. Based on complex energy audit results, the Company formed technical programs to upgrade energy efficiency.

#### Comprehensive modernization of production assets

According to the Russian Ministry of Energy, 15% fully worn-out fixed assets are operated in the industry. Turbines, generators, transformers and control wiring equipment are the most worn-out equipment at the facilities.

Approved by PJSC RusHydro in 2011, the Comprehensive Modernization Program for generating facilities (hereinafter referred to as CMP) provides for the replacement of all safety life-expired basic generating equipment by 2025.

The Program's defining feature is that it focuses not on the spot replacement of individual components and assemblies, but on the comprehensive modernization of generating facilities as unified technological complexes, with the replacement or reconstruction of main and auxiliary equipment, general station systems, and hydro-power structures.

CMP implementation will allow the Company to replace generating equipment with an aggregate capacity of 12,618 MW and increase the installed capacity of the Company's facilities by 779 MW, which is comparable in scope with seven GOELRO (the State Commission on Russia's Electrification) plans, by the time the Program ends. The planned generation increase due to Program activities will amount to 1,375.6 million kWh.

<sup>63</sup> A complete list of approved standards of JSC RusHydro is presented in the section RELIABILITY AND SAFETY – TECHNICAL REGULATION on the Company's website: [www.rushydro.ru/sustainable\\_development/safety/library/](http://www.rushydro.ru/sustainable_development/safety/library/).

## THE 2010-2025 COMPREHENSIVE MODERNIZATION PROGRAM (THE RUSHYDRO HOLDING)

### TECHNICAL PARAMETERS AND TARGETS

- Replacement of 154 turbines or 55% of the total turbine fleet;
- Replacement of 119 generators or 42% of the total generator fleet;
- Replacement of 176 transformers or 61% of the total transformer fleet;
- 396 high voltage switches;
- About 8 thousand units of control wiring equipment;
- More than 3 thousand units of auxiliary equipment

### KEY ASPECTS:

The Comprehensive Modernization Program (CMP) was approved by the Company's Board of Directors at the end of 2011;

During the period from 2014 to 2017, Program financing will be about USD 1 billion per year;

The financing plan for the CMP is approved and adjusted by the Management Board and the Board of Directors on an annual basis;

Major contractors within the framework of the CMP are: JSC Power Machines, Alstom, Voith AG, Turboatom, and ABB.

THE 2010-2015  
COMPREHENSIVE  
MODERNIZATION  
PROGRAM

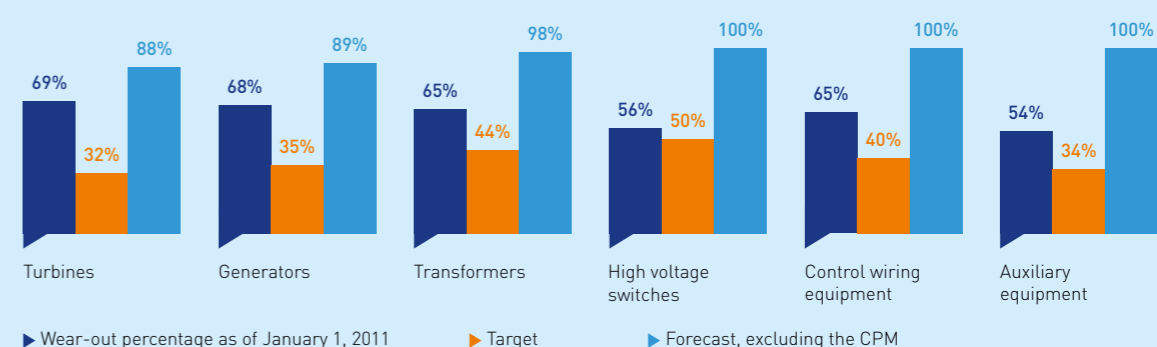
### ANTICIPATED KEY EFFECTS:

- Increasing the installed capacity by about 800 MW by 2025;
- Increasing power generation by 1.4 TWh/year;
- Increased facility reliability and safety;
- Life extension by 30-40 years;
- Efficiency upgrading;
- Reduced sterile spills during the flood period;
- Reduced operational costs.

### THE BASIC PREMISE FOR IMPLEMENTATION:

- Obsolescence and reduced reliability of equipment;
- Insufficient investment in the 1990s and 2000s;
- Strengthening of control by the Russian Federal Service for Ecological, Technical and Atomic Supervision (Rostekhnadzor) and the risks of not obtaining readiness certificates for numerous facilities;
- Need for a comprehensive approach to the Retrofitting and Upgrading Program.

## CMP TARGETS, WEAR-OUT PERCENTAGE FOR TOTAL EQUIPMENT FLEET



## Improving Energy Efficiency within the Framework of the 2014 CMP: Results Achieved

Energy saving in FIGURES: The CMP <sup>G4-EN5, G4-EN6 and G4-EN7</sup>

	2012	2013	2014	By 2018 (Target)
Gross installed capacity growth (MW)	67	181	56.5	779
Average long-term production growth (kWh/year)	81.5	220	155	1,376
Fuel saving (thousand tons of equivalent fuel per year)	27.8	75	53	469
Reduction in air emissions in terms of CO2 (thousands tons per year)	52.8	143	100	891

The greatest effect in resolving the problem of increasing energy efficiency at RusHydro facilities in 2014 was provided for by:

- Measures to increase the power and efficiency of hydro-power units;
- Measures to reduce electrical losses in power transformers;
- Installation of modern energy efficient equipment and machinery.

During 2014, the total installed capacity of the RusHydro Holding's generating companies increased 56.50 MW thanks to the comprehensive replacement and modernization of turbines and hydro-power units.

DURING THE REPORTING YEAR, CMP FINANCING AMOUNTED TO MORE THAN RUR 34.5 BILLION (INCLUDING VAT).

**DMA** Implementation of the Comprehensive Modernization Program for generating facilities in 2014

### CMP: 2014 major milestones and 2015 plans

In 2014, the Central Part of Russia remained the focus of the CMP: two modernized hydro-power units were commissioned at both the Zhigulevskaya HPP and the Volzhskaya HPP and one modernized hydro-power unit – at the Rybinskaya HPP

<sup>66</sup> In contrast with the 2013 report, during the reporting period, a technical adjustment of the calculation basis for the installed capacity of the Holding's companies was made due to the inclusion of BoHPP within the Report scope. The 2014 gross installed ca-

(The Upper Volga Cascade of HPPs), the Saratovskaya HPP and the Kamskaya HPP.

Hydro-power unit replacement and reconstruction work continued at the Kamskaya HPP, where the fourth hydro-power unit is now being installed. Modernization is scheduled to be completed in Q2 2015. Also, in 2015, the Company plans to conclude supply contracts for the new hydro-power units for the Votkinskaya HPP, the Nizhegorodskaya HPP and the Chiryurtskaya HPP.

A turnkey project to replace 21 hydro-power turbines and one hydro-power unit at the Saratovskaya HPP is the most difficult one, both technically and organizationally. The plant's adjustable-blade turbines are the world's largest equipment of this type (based on mass and dimension): the impeller diameter is 10.3 m, and the impeller assembly weight is 314 tons. It has been a long time since such a large-scale modernization was carried out at the plant. The project is being implemented with the participation of a foreign partner – Voith Hydro.

Thanks to the modernization of the Holding's main HPP hydro-power equipment, as a result of re-marking hydro-power units of the Volzhskaya HPP, the Zhigulevskaya HPP, the Kamskaya HPP, the Rybinskaya HPP and the Saratovskaya HPP, the gross installed capacity of the Holding's companies increased 56.5 MW<sup>66</sup> in 2014.

SEVEN HYDRO-POWER UNITS WERE PUT INTO OPERATION AT RUSHYDRO'S EXISTING HPPS IN 2014 AS PART OF THE CMP, WHILE GROSS INSTALLED CAPACITY INCREASED 56.5 MW.

capacity in the amount of 29.45 MW was calculated including the Boguchanskaya HPP, or 26.4 MW – excluding the Boguchanskaya HPP.

"IN 2025, WE WILL HAVE NEW FACILITIES ACROSS THE COUNTRY. IN ADDITION, THE NEW EQUIPMENT WILL MAKE IT POSSIBLE TO INCREASE CAPACITY BY 779 MW, WHICH IS THE SIZE OF ONE MORE MEDIUM POWER PLANT. THERE ARE NO OTHER SUCH LARGE-SCALE PROGRAMS IN THE INDUSTRY."

EVGENY DOD, CHAIRMAN OF THE MANAGEMENT BOARD – CEO OF PJSC RUSHYDRO

### The 2012-2025 Comprehensive Modernization Program

Within the framework of the Comprehensive Modernization Program, PJSC RusHydro plans to reduce (at its HPPs) the deterioration rate for the total turbine fleet down to 37%, for generators down to 33% and for transformers down to 21%, by late 2025. The Program's key requirement is the absence of safety life-expired basic generating equipment units by the completion of the CMP in 2025. <sup>G4-DMA (former EU6)</sup>

THE CMP IMPROVES PRODUCTION EFFICIENCY AND REDUCES THE ENVIRONMENTAL IMPACT.

Power equipment modernization is accompanied not only by an increase in capacity, but also by improved performance and power characteristics.

New turbines and generators designed and manufactured in accordance with the current level of power engineering have a higher efficiency, longer life, require much lower repair costs, and help reduce spills during flood periods. Replacing obsolete outdoor switch-gear with advanced gas insulated switchgears also significantly increase the energy efficiency of hydro-power structure equipment and the ability to control modes within the power system. Thus, successful CMP implementation leads to a reduction in operating costs and upgrades efficiency output and the energy efficiency of hydro-power structures' equipment.

In addition to operational characteristics, equipment modernization improves environmental performance and significantly reduces anthropogenic impact and greenhouse gas emissions.

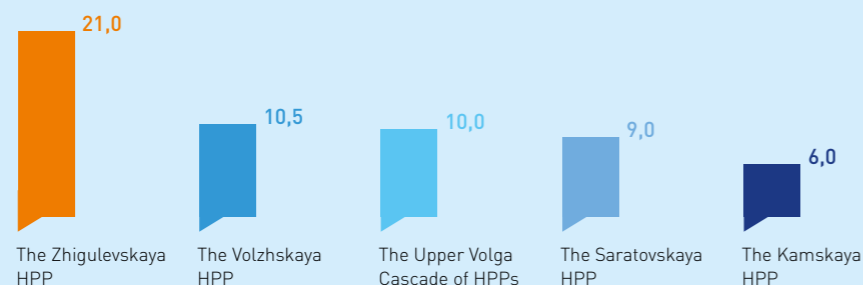
Thanks solely to these activities within the framework of the CMP, the total increase in installed capacity in 2014 was 56.5 MW. These facilities will bring PJSC RusHydro a 155 million kWh/year growth in electricity production as early as 2015. To generate the same amount of electricity using non-renewable fuel and energy resources, it would take 52.8 thousand tons of coal equivalent<sup>64</sup>. This is equivalent to reducing emissions 100 thousand tons (in terms of CO2)<sup>65</sup>.

<sup>64</sup> The index is calculated as follows: the index "growth in long-term average output" is translated into tons of coal equivalent (via the coefficient 0.341).

<sup>65</sup> To re-calculate the index, expressed in tons of coal equivalent, to the index "Reduction CO2 air emissions," the coefficient 1.9 is used [CO2 emissions amount to 1,900-3,000kg/ t, depending on the type of coal].



## COMMISSIONING NEW CAPACITIES IN 2014 (MW)



### 2014 CMP: installed capacity growth, MW

Automation of all HPP control processes and modernization of the automated control systems (ACS) is an important component of the CMP. Another important priority for PJSC RusHydro's Comprehensive Modernization Program includes replacing the obsolete equipment for outdoor switchgears (OS) with advanced GIS (gas insulated switchgears).

The service life of the new equipment manufactured by ABB is up to 50 years. New switchgears are already working at the Sayano-Shushenskaya HPP, the Votkinskaya HPP, the Baksanskaya HPP, and the Zagorskaya PSPP.

In 2014, as part of the modernization of the Sayano-Shushenskaya hydro-power complex, the outdoor switchgear, which had been in operation since 1985, was replaced at the Mainskaya HPP. Instead, a 220 kV gas insulated switchgear was installed and put into operation. In addition, an equipment vibration monitoring system was upgraded at the Mainskaya HPP in 2014.

Also during the reporting year, a 500 kV gas insulated switchgear was installed and put into operation at the Votkinskaya HPP. In 2014, installation of a 110 kV gas insulated switchgear began at the Zelenchukskaya HPP; SF6-insulated equipment for the Kuban Cascade of HPPs has been purchased and is ready for installation.

Within the framework of the Retrofitting and Upgrading Program, apart from replacing and modernizing hydro-power units, the hydro-mechanical and electrical equipment of the HPPs hydro-power units, RusHydro conducts annual large-scale reconstruction of hydro-power structures.

- The greatest amount of work in this area in 2014 was performed at the Yegorlykskaya HPP (construction of a new spillway), the Saratovskaya HPP and the Novosibirskaya HPP (concrete reconstruction at the variable level zones).
- Replacement of hydro-mechanical equipment (spillway dam gates and trash-rack structures) was conducted at the Nizhegorodskaya HPP, the Votkinskaya HPP, the Uglichskaya HPP, and the Zhigulevskaya HPP.
- In 2015, the last modernized hydro-power unit will be commissioned at the Kamskaya HPP. This will be PJSC RusHydro's first hydro-power plant to have its hydro-power equipment fully renovated.
- In 2015, within the framework of the CMP, the Company plans to put into operation a total of more than 10

modernized hydro-power units at the Volzhskaya HPP, the Zhigulevskaya HPP, the Kamskaya HPP, the Saratovskaya HPP, the Cheboksarskaya HPP, the Novosibirskaya HPP and the Miatlinskaya HPP. In addition, during the current year, the Company will begin construction of the Sengileyskaya Small HPP – the eleventh plant of the Kuban Cascade of HPPs.

### 2.2.2. Energy Consumption and Energy Efficiency Other Energy Saving Measures in 2014 and Achieved Results

In 2014, measures to optimize water resource usage brought the Company an additional electricity output of 90.9 million kWh per annum, which is equivalent to fuel saving in the amount of 31.1 thousand tons of equivalent fuel per year.

#### Optimizing Water Resource Usage <sup>64-ENG</sup>

During 2014, measures to control equipment configuration optimal selection modes within the framework of the relevant KPI were undertaken across RusHydro facilities. These measures allowed the Company to significantly decrease no-load water resource consumption and provide for energy-saving, equivalent to 90.9 million kWh growth in the long-term average annual electricity production (compared with 2013).

- The ability to accurately predict the volume of electricity produced in the medium- and long-term is an important mode control optimization condition. To this end, PJSC RusHydro is constantly improving its own forecasting system. In 2014, the following activities were carried out in this area:
- The development project for the hydro-meteorological observation network was completed on the Sulak and Samur Rivers (the Dagestan branch). During the period from 2012 to 2014, 22 hydrologic stations were installed. During 2014, calibration and adjustment work was carried out to check the accuracy of provided information;
- The development project for the hydro-meteorological observation network in the SHHPP dam lake was completed. During the period from 2012 to 2014, the reconstruction of hydrological stations and the installation of the Mostovoy automated hydrological complex were carried out in conjunction with the Russian Federal Service for Hydrometeorology and Environmental Monitoring (Roshydromet) in the Cheremushki Settlement and on Kuzminsky Island. 20 snow-measuring helipads

## INVESTMENTS AND DEVELOPMENT: 2014 major results

CMP	Commissioning	Construction
<p>Replacement and modernization of the hydro-power units</p> <ul style="list-style-type: none"> <li>• The Volzhskaya HPP: hydro-power turbine № 21 has been replaced;</li> <li>• The Zhigulevskaya HPP: two hydro-power turbines (№1 and № 18) have been replaced;</li> <li>• The Kamskaya HPP: hydro-power turbine № 13 has been modernized; two hydro-power units (№ 6 and № 10) have been reconstructed;</li> <li>• The Novosibirskaya HPP: hydro-power unit № 6 and transformer T6 have been replaced;</li> <li>• The Rybinskaya HPP (the Upper Volga Cascade of HPPs): hydro-power unit № 2 has been replaced;</li> <li>• The Saratovskaya HPP: hydro-power unit № 24 and hydro-power turbine № 10 (equipment delivery) have been modernized;</li> <li>• The Cheboksarskaya HPP: two hydro-power turbines (№ 15 and № 6) have been modernized;</li> </ul> <p>Replacement and modernization of outdoor switchgears (OS):</p> <ul style="list-style-type: none"> <li>• The Votkinskaya HPP: commissioning the 500 kV gas insulated switchgear;</li> <li>• The Mainskaya HPP: commissioning the 220 kV gas insulated switchgear;</li> <li>• The Zelenchukskaya HPP: installation of the 110 kV gas insulated switchgear has begun (the HPP operation has been suspended till construction of the HPP-PSPP is completed).</li> </ul>	<ul style="list-style-type: none"> <li>• Completion of restoration and comprehensive reconstruction of the Sayano-Shushenskaya HPP</li> <li>• Commissioning hydro-power unit № 4 at the Sayano-Shushenskaya HPP (640 MW)</li> <li>• Commissioning hydro-power unit № 3 at the Sayano-Shushenskaya HPP (640 MW)</li> <li>• Start-up of hydro-power unit № 2 (640 MW) and completion of the Sayano-Shushenskaya HPP restoration</li> <li>• Completion of the Boguchanskaya HPP construction</li> <li>• Start-up of the last 333 MW hydro-power unit (№ 9) and completion of the Boguchanskaya HPP construction</li> </ul>	<p>Priority projects in the Far East:</p> <ul style="list-style-type: none"> <li>• The Blagoveshchenskaya CHP Plant (phase 2);</li> <li>• The Sakhalinskaya SDPP-2 (phase 1);</li> <li>• The CHP Plant in Sovetskaya Gavan;</li> <li>• The Yakutskaya SDPP-2 (phase 1);</li> </ul> <p>Facilities under construction:</p> <p>The Gotsatlinskaya HPP</p> <ul style="list-style-type: none"> <li>• The Zagorskaya PSPP-2</li> <li>• The Zaramagskiye HPPs (construction suspended)</li> <li>• The Zelenchukskaya HPP-PSPP</li> <li>• The Leningradskaya PSPP (construction suspended)</li> <li>• The Nizhne-Bureyskaya HPP</li> <li>• The Ust-Srednekanskaya HPP</li> <li>• The Zaragizhskaya HPP</li> </ul>

NOTE: In terms of CMP, completion of the modernization of the hydro-power unit at the Kamskaya HPP happened outside the reporting period. For more information about the completion of the comprehensive reconstruction of the Sayano-Shushenskaya HPP, see Section 3.1.3. Restoration and comprehensive modernization of the Sayano-Shushenskaya HPP; for information about the completion of the Boguchanskaya HPP, see Section 3.1.2. The implementation results of investment projects (6):- about new construction, see Section 3.1.5. Constructing and commissioning facilities (including RES facilities) in Russia and abroad.

- were mounted. Phase 1 of the development of the mathematical model for inflowing stream forecasting was implemented;
- A feasibility justification for the development project for the hydro-meteorological observation network in the Volga-Kama Cascade was prepared and submitted to members of PJSC RusHydro's Management Board for approval;
  - Within the framework of the medium-term planning system implementation in the HPPs of the Far East and Siberia:
1. the medium-term planning module for the Novosibirskaya HPP, the Sayano-Shushenskaya HPP and the

- Mainskaya HPP was developed and introduced into industrial operation;
2. the Company started development of the medium-term planning module for the HPPs of the Angara-Yenisei Cascade, the Zeiskaya HPP, the Bureyskaya HPP, the Kolymkaya HPP and the Ust-Srednekanskaya HPP.
- An evaluation method for the energy effect of special release optimization was developed and adopted in 2014 as part of R&D on "Optimization of the water-and-energy mode of the Volga-Kama HPPs Cascade to increase power generation."

## Other Measures to Upgrade Energy Efficiency

### Reduction of Losses in Electricity Transmission and Distribution <sup>G4-EU12 and G4-EN5</sup>

Despite a slight decrease in the absolute value of actual losses in PJSC RusHydro, the loss ratio (the specific indicator against the growth in electricity generation during the same period) increased to 0.69% (compared with 0.65% in 2013), with actual losses of electrical energy in the near-station network standing at 543 million kWh (compared with 579.3 million kWh in 2013). The slight decrease in actual losses in the near-station network is due to relatively lower electricity output (compared with 2013).

PJSC RusHydro's branches operating in the wholesale and retail markets are equipped with automated measuring and information systems for electric power fiscal accounting. In 2014, all automated measuring and information systems for electric power fiscal accounting, which are subject to primary qualification or requalification, underwent a class "A" qualification procedure in accordance with the technical requirements of the wholesale market for electricity and power and were accepted into industrial service.

### Formation of Lean Behavior among Consumers

#### Popularizing and promoting energy conservation and energy efficiency among different regional population groups <sup>G4-EU7</sup>

In 2010, the 2010-2015 Program on energy conservation and upgrading energy efficiency was approved by PJSC RusHydro. The Program was designed to execute the Federal Law "On energy conservation and upgrading energy efficiency and on amendments to certain Russian legislative instruments."

As part of the Program, it was decided to establish the Regional Energy Efficiency and Energy Saving Centers (REEESC) on the premises of the energy sales companies of ESK RusHydro. REEESCs work in Krasnoyarsk, Ryazan and the Republics of Bashkortostan and Chuvashia and represent multi-disciplinary exhibition and educational sites for thematic forums and training seminars. Sessions are free for

all participants. The energy-saving work and projects of ESC RusHydro's energy sales companies have been repeatedly recognized by government, regional and industry-wide awards. <sup>G4-EC8</sup>

#### Educational events in the field of energy saving and upgrading energy efficiency <sup>G4-EU7</sup>

In 2014, the Company held the sixth annual all-Russian "The Energy of Water" contest for the best coverage in the mass media of issues related to the development of the most advanced and environmentally friendly renewable energy sources (RES) in Russia. The contest was attended by more than 50 journalists from different Russian regions, who presented more than 100 works to the jury.

"The Energy of Water" contest was established by PJSC RusHydro and has been held since 2008. Contest objectives are to engage the Russian media in a comprehensive and unprejudiced coverage of renewable energy sources as the most advanced and environmentally friendly energy sources and to promote to society, as a whole, the ideas of hydro-power industry development, and the need to modernize it and upgrade energy efficiency.

#### Interaction with the Government on Energy Efficiency in 2014 <sup>G4-EC8</sup>

"IT IS NECESSARY TO SUPPLEMENT ALL STATE PROGRAMS WITH ENERGY EFFICIENCY INDICATORS, THROUGH WHICH IT WILL BE POSSIBLE TO ASSESS THE RESULTS OF COMPLETED WORK."

**DMITRY MEDVEDEV**, PRIME MINISTER OF THE RUSSIAN FEDERATION

- RusHydro was a partner of the Third International Energy Efficiency and Energy Saving Forum "ENES-2014," aimed at promoting energy conservation policies on the international, federal, regional and municipal levels and familiarizing participants with advanced countries' experience in energy efficiency. RusHydro's educational programs were recognized as the best at ENES 2014.

- Construction and design materials and technologies;
  - Equipment materials and technologies for generation;
  - Ecology;
  - Water infrastructure and the utilization of water resources;
  - Developing new areas of activity.
- In the area of human resources:**
- Training the Company's personnel for innovative activities;
  - Using new and developing existing technologies to train RusHydro's personnel.

#### **In the area of information management technologies (IMS):**

- External information systematization and analysis;
- Knowledge management.

#### **In the area of corporate processes and methodology:**

- Implementing best management practices in the Company's business processes.

## Innovation and Sustainable Development <sup>G4-DMA (former EU8)</sup>

### Objectives and indicators of the Innovative Development Program

<b>Program Objectives:</b>
Growth in the Company's capitalization, the formation of strategic competitive advantages through integrating innovative solutions, methods, competencies and technologies into the business processes of the Company and the SDCs/second-tier subsidiaries and dependent companies (SDCs);
Significantly decreasing electricity generation costs, engineering costs and construction time (not less than 10% within 5 years);
Upgrading the environmental compatibility of generation, and increasing the reliability and safety of the RusHydro Holding facilities.
<b>Integrating innovative activities into business processes</b>
The Program's projects provide for the sufficient reliability and operational safety of the RusHydro Holding facilities;
Technologies and technical solutions being developed within the framework of the Program are also intended to upgrade energy efficiency and energy saving; they will be included in the list of recommended-to-use technologies of the Database of the Company's Technical Policy, if innovative projects are successfully implemented.
<b>Integrating innovative activities into Corporate Social Responsibility processes and sustainable development</b>
Energy efficiency: the total growth in electricity generation by implementing energy efficient measures – to 3.3 billion kWh (4.04%) (from 2011 till 2020);
Environmental compatibility: the share of alternative RES in the installed capacity structure – 5%;
Stakeholder interaction: the share of financing for R&D projects implemented with the participation of scientific and educational institutions out of the total R&D funds – up to 20% per annum (from 2011 till 2020);
The share of the Company's revenues allocated for financing innovative development (including R&D) by own resources – 3% per annum.

### Innovative Development Management

#### R&D and Research Activities for Sustainable Development

R&D approaches have been designed to ensure the reliability of the electricity supply and to achieve sustainable development goals.

PJSC RusHydro has formed a multi-level program to search for and select innovative projects. New developments related to accomplishing technical tasks to upgrade equipment operation are being resolved within the framework of research and development (R&D) and the research activity of the Production Program.

The Scientific and Technical Council (STC) and the Project Committee for Innovations of JSC RusHydro play an important role in forming an innovative environment. The STC includes about 200 leading Russian experts, academicians and industry practitioners. The decision of STC is the beginning of the practical implementation of the RusHydro Group's innovative projects, allowing for objective professional external evaluation.

#### New Technologies and Innovations in 2014

<sup>G4-DMA (former EU8)</sup> From implemented R&D and research activities, RusHydro selects only those projects that lay the foundation for the future hydro-power sector and RusHydro Group development to be practically implemented<sup>67</sup>.

So, in 2014:

- 63 applications for R&D implementation were reviewed, 22 of them (worth a total of more than RUR 980 million) were selected and approved for implementation;

- The Project Committee for Innovations reviewed 17 projects, 5 of which were approved for implementation (worth a total of more than RUR 465 million);

- 10 R&D contracts (worth a total of approximately RUR 382 million) were signed and results on 14 previously implemented research and development projects were obtained.

- Work on the research project "Optimization of JSC RusHydro's HPPs' operating modes taking into account climate change in the long-term in the water reservoir area" was completed;
- Work on the research and development project "Development of instrumentation and a technical control system for water resource assessment at HPPs" was performed;
- The Company continued work on the project "Optimizing the water and energy mode of the Volga-Kama HPPs Cascade to increase power generation;"
- The Company started work on the project "Developing design and technological solutions for additional watering of the Akhtuba River to optimize water spills from the Volzhskaya HPP and to increase electricity generation;"
- The Company obtained 6 patents for inventions and utility models, including:

## 2.3 INNOVATION – A FAST TRACK TO SUSTAINABLE DEVELOPMENT

### 2.3.1. The Company's Innovative Development Priorities Innovative Activities Concept

THE SUSTAINABLE DEVELOPMENT OF THE RUSHYDRO GROUP AND THE INDUSTRY, AS A WHOLE, AND REDUCING ENERGY CONSUMPTION AND DECREASING THE INDUSTRIAL LOAD ON THE ENVIRONMENT WERE DEFINED AS THE MAIN VECTORS OF INNOVATIVE DEVELOPMENT IN 2014.

In 2014, the Company continued to work on key priorities and targets for JSC RusHydro's 2011-2015 Innovative Development Program (with a view to 2021). The Innovative Development Program has been in place at PJSC RusHydro since 2011. It is integrated into the Company's strategic documents and programs system. <sup>G4-EU8 and DMA</sup>

The Company's innovative development priorities include:

#### **In the area of technology:**

- Increasing safety and reliability;
- Upgrading energy efficiency;
- New generation;

<sup>67</sup> For more information about the reduction in industrial impact on the environment thanks to the development of advanced resource-saving technologies using renewa-

ble energy (clean technologies), see Section 4.3 RESEARCH AND ADVANCED DEVELOPMENT: Decreasing Industrial Load on the Environment.

Title	Patent holder	Subject
Orthogonal turbine impeller	PJSC RusHydro	Development of standard equipment for low-head mini HPPs with orthogonal hydro-power units
Facility spillway	PJSC RusHydro	Efficiency evaluation of spill water aeration to increase the turnaround interval.
Method of constructing a thin-walled labyrinth spillway from pre-cast concrete units	PJSC RusHydro	Development of concrete work technology of a joint use of self-compacting concrete and building bar coupling connections for the construction of medium-head HPPs
Method of coupling a waterproofing geosynthetic material (WGSM) in a watertight diaphragm during a long construction interruption	PJSC RusHydro	Development of new designs for soil hydro-power structures using modern geo-technical materials
Method of a zigzag watertight diaphragm made of bentonitic mats (clay liners) with intermediate seams	PJSC RusHydro	Development of new designs for soil hydro-power structures using modern geo-technical materials
Device to control the air gap of the electrical machine.	PJSC RusHydro	Development of new equipment monitoring systems and devices.

## Creating an External Innovative Environment <sup>G4-DMA (former EU8)</sup>

In 2014, PJSC RusHydro continued scientific and technical activities in the field of energy efficiency with its own scientific institutes and in collaboration with scientific organizations and educational institutions. Some projects have been implemented by the Company with the involvement of industry-specific reference higher education establishments.

In 2014, the amount of financing for research and development activities performed by higher education institutions by order of PJSC RusHydro (including sub-contracts) amounted to RUR 31.9 million.

During the reporting year, PJSC RusHydro signed a supplementary agreement to the R & D Agreement between PJSC RusHydro and the National Research University Moscow Power Engineering Institute<sup>68</sup> (hereafter – MPEI), which expands the list of work under the contract previously concluded in 2013 and includes research, design and development and technological development activities to improve the reliability of radial-axial turbines. The execution period for the research and development project is 2015. Within the framework of the this project, MPEI develops criteria for evaluating water turbines planned for installation at PJSC RusHydro's facilities, based on operating characteristics and the best value for money. These criteria will be the basis for developing the new provisions of JSC RusHydro's Technical Policy.

In 2014, the Company continued to develop cooperation with the GSEP in the field of international partnership and cooperation with stakeholders on innovative development.<sup>64-26</sup> Within the framework of the GSEP Design Committee, joint pilot projects in renewable energy and small hydro-power plants in developing countries have been determined and are being implemented. To date, PJSC RusHydro has contributed USD 300,000 to the GSEP Patagonia project (Argentina)<sup>69</sup>.

GRI 4-17 Within the framework of cooperation with scientific organizations and development institutes, in 2014, PJSC RusHydro worked jointly with JSC RUSNANO in the field of

modern high-tech development, including nanotechnology equipment, materials and other products, as well as the creation of conditions to utilize the scientific and technical potential of design companies (which were established with the participation of RUSNANO). Projects to be implemented have been selected. At the same time, the Company has worked out the prospect for creating a joint fund with Russian development institutions. According to preliminary agreements with JSC RUSNANO, PJSC RusHydro is considering the possibility of establishing a mutual fund to make investments in the development of products and technologies which are of interest to the Company. Further steps in this direction are planned for 2015.

## Developing Advanced RES-based Technologies

Developing advanced RES-based technologies and upgrading energy efficiency through the wider use of the energy of small rivers, and geo-thermal power, etc., is one of the Company's strategic objectives.<sup>G4-DMA (former EU6)</sup>

A key element of this activity was the Company's work as a coordinator of the Technology Platform "Advanced Technologies of Renewable Energy" (hereinafter – the Technology Platform).

## The Technology Platform "Advanced Technologies of Renewable Energy" <sup>G4-DMA (former EU8)</sup>

The Technology Platform was created at the behest of PJSC RusHydro to form innovative development infrastructure and was approved by the Minutes of the Government High Technology and Innovation Commission Meeting in April 2011. Projects are financed from non-budgetary sources, as well as within the framework of the Federal Target Program "2014-2020 Research and Development on Priority Growth Areas of the Russian Scientific and Technological Complex."

In 2014, another 19 organizations joined the Technology Platform, so its membership increased 18% and included 127 organizations. During the year, 26 projects totalling RUR 1,487.4 billion, were implemented by Technology Platform participants within the framework of the 2014-2016 Research Program.

<sup>68</sup> MPEI, one of Russia's largest technical universities in the field of power generation, electrical engineering, electronics, and information technology, is JSC Hydro's backbone higher education institution. For more information on JSC RusHydro's interaction with backbone higher education institutions in the field of strategic partnerships,

see Section 3.3.1 The mechanisms and main themes of interaction with key stakeholders in 2014.

<sup>69</sup> Key events within the framework of the Partnership are presented in Section 3.3.1 The mechanisms and main themes of interaction with key stakeholders in 2014.

## The Technology Platform: 2014 major milestones

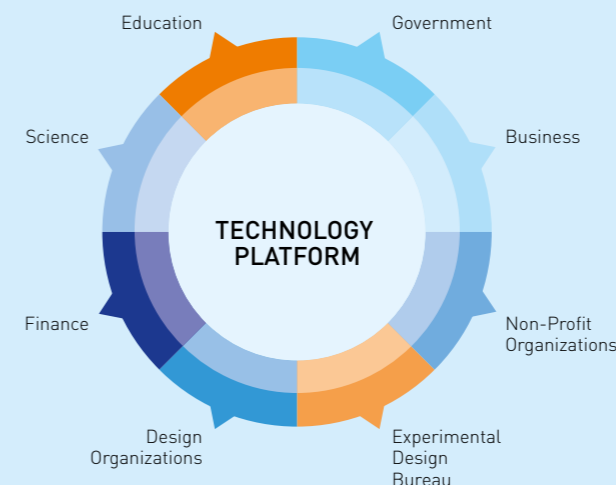
- The Company approved the revised Technology Platform's Strategic Research Program<sup>70</sup> taking into account the latest trends in the technological development of the Platform and participant proposals;
- The Technology Platform's Internet portal "TPVIE.RF" and "i-Renew.ru" (<http://www.i-renew.ru/>) were developed and put into operation;
- Information Support and Cooperation Agreements with the online magazines "The Fifth Element" and "The Technology Platform" were signed;
- Proposals on forming topics within the framework of the Federal Target Program "Research and Development" were prepared, proposals made by working groups on the scientific and technological areas of the Technology Platform were analyzed, and proposals (68 topics) were selected based on their compliance with the projects and the goals of the Technology Platform's Strategic Research and Development Program;

- In July and October 2014, numerous events were held under the Platform's auspices as part of the Second International Forum on Renewable Energy (REENFOR-2014), including a Roundtable for Renewable Energy;
- Work took place and regular scientific and technological seminars were held within the framework of the working groups on the Platform's areas.

"THIS ANNIVERSARY YEAR FOR RUSHYDRO WAS VERY SIGNIFICANT AND IMPORTANT IN TERMS OF STRENGTHENING OUR POSITION. WE ARE ALL EXPERIENCING AN EMOTIONAL LIFT, LOOKING AT WHAT IS HAPPENING AT THE SAYANO-SHUSHENSKAYA HPP, THE BOGUCHANSKAYA HPP, AT THE CONSTRUCTION SITE OF FUTURE PLANTS. OUR EMPLOYEES REGULARLY RECEIVE A SALARY, SEE PROSPECTS, AND UNDERSTAND WHAT THEY SHOULD STRIVE AND WORK FOR."

EVGENY DOD, CHAIRMAN OF THE MANAGEMENT BOARD – CEO OF PJSC RUSHYDRO

## MAIN DEVELOPMENT AREAS AND PARTICIPANT GROUPS IN THE TECHNOLOGY PLATFORM



Innovative development trends within the Technology Platform framework:

1. Hydro-power (including large-scale)
2. Wind Power
3. Power from Tides, Waves and Currents
4. Solar Power
5. Geo-thermal Power
6. Energy Storage Units
7. Hydrogen Power
8. Other RES-based Technologies
9. Power Supply Systems based on integrated RES utilization

## 2005-2014: TEN YEARS OF SUSTAINABLE DEVELOPMENT COMPARED WITH 2005, BY 2014:

- THE NUMBER OF COMPANY FACILITIES DOUBLED
- THE INSTALLED CAPACITY OF COMPANY FACILITIES INCREASED FROM 23.3 GW TO 38.5 GW
- POWER GENERATION INCREASED 1.7 TIMES
- THE RUSHYDRO GROUP EMPLOYS 80,000 PEOPLE, BUT THE NUMBER OF EMPLOYEE WILL CONTINUE TO GROW: PUTTING NEW PRODUCTION CAPACITY INTO OPERATION WILL CREATE NEW JOBS
- IN 2012, ACCORDING TO A DECREE OF THE RUSSIAN PRESIDENT, PJSC RUSHYDRO WAS INCLUDED IN THE LIST OF STRATEGIC ENTERPRISES AND STRATEGIC JOINT STOCK COMPANIES
- CURRENTLY, RUSHYDRO PLAYS A KEY ROLE IN THE RUSSIAN ENERGY SECTOR AND ENSURES THE NATION'S ECONOMY IS ENERGY INDEPENDENT

<sup>70</sup> Published on the Technology Platform's website [www.i-renew.ru/#/program/c21rb](http://www.i-renew.ru/#/program/c21rb).

## 3.

SOCIAL  
RESPONSIBILITY

The Company's priority in the field of labor organization, health protection and industrial safety is the preservation of life and health of employees in the course of their employment.



## SECTION 3: SOCIAL RESPONSIBILITY

### DMA Management Approach to Corporate Social Responsibility (CSR)

In its Social Policy PJSC RusHydro aims at following international standards and best practices in the field of human rights, labor relations, environment protection, anti-corruption and stakeholder engagement. The Company is governed by the Guidance on Social Responsibility (International Standard ISO 26000) and universal principles of the United Nations Global Compact (UNGC Corporate Sustainability) in the field of human rights, labor relations, environment protection and anti-corruption. <sup>G4-56 and G4-15</sup>

PJSC RusHydro shares and implements in practice the principle of Systematic dialogue based on mutual respect of Interests, Values, Attitudes and Differences of key Stakeholders, as set out in the Social Charter of Russian business, which the Company is a member since 2013. <sup>G4-15</sup>

**SOCIAL RESPONSIBILITY: THE RESPONSIBILITY OF THE ORGANIZATION FOR THE IMPACTS OF ITS DECISIONS AND ACTIVITIES (INCLUDING PRODUCTS, SERVICES AND PROCESSES) ON SOCIETY AND THE ENVIRONMENT THROUGH TRANSPARENT AND ETHICAL BEHAVIOR THAT:**

- CONTRIBUTES TO SUSTAINABLE DEVELOPMENT, INCLUDING HEALTH AND SOCIAL WELFARE
- TAKES INTO ACCOUNT THE EXPECTATIONS OF STAKEHOLDERS
- COMPLIES WITH THE APPLICABLE LEGISLATION AND IS IN CONSISTENT WITH INTERNATIONAL NORMS OF BEHAVIOR
- IS INTEGRATED INTO THE ORGANIZATION-WIDE ACTIVITIES AND APPLIED IN ITS STAKEHOLDERS' RELATIONS WITHIN ITS SPHERE OF INFLUENCE. (INTERNATIONAL STANDARD ISO / FDIS 26000)

- Corporate social responsibility is implemented by PJSC RusHydro in the process of interaction with society and local communities in the regions of presence and aims at creating a favorable social climate. <sup>G4-26</sup>
- Internal social policy is implemented in the field of personnel management of RusHydro's companies and is aimed at ensuring faster human resources development as the Company's main resource, and addresses large-scale production problems which face PJSC RusHydro, including the interests of the State, shareholders and labor collective.

### 3.1 ENERGY DEVELOPMENT AS A CONTRIBUTION TO THE SUSTAINABLE DEVELOPMENT OF THE REGIONS

#### SOCIAL AND ECONOMIC DEVELOPMENT OF THE PRESENCE REGIONS

<sup>G4-DMA</sup>As a participant in economic activity, taxpayer and employer, RusHydro contributes to the sustainable development of the regions and involves in planning and implementing socially significant national and sectoral development programs aimed at:

- developing the regional infrastructure of the UES of Russia engineering system and isolated areas via capital construction of new hydraulic structures, including RES-based;

- ensuring an uninterrupted supply of electricity and capacity in the Unified Energy System of Russia;

#### Direct and Indirect Socio-Economic Impacts of the Company's Activity

Among the Company's activity's direct economic impacts on the development of operations' areas are the following key areas:

1. solving problems of economic and social development of the regions through tax payments to the federal and regional budgets;

10 YEARS OF RUSHYDRO SUSTAINABLE DEVELOPMENT = 10 YEARS OF SUSTAINABLE DEVELOPMENT OF THE REGIONS



2. constructing infrastructure and creating the prerequisites for industrial and economic growth through investment and new construction;
3. technological and regional integration by creating energy industrial complexes;
4. developing new resources (RES-based energy) and
5. improving rivers' regulation and protecting the population against flooding through project development of flood control HPPs;
6. improving energy efficiency of the Russian regions.

#### DEVELOPMENT OF THE REGIONAL ECONOMY: DIRECT IMPACTS



#### DEVELOPMENT OF SOCIAL INFRASTRUCTURE: INDIRECT IMPACTS <sup>G4-DMA</sup>



G4-DMA Among 2014 indirect impacts should be noted:

1. creation of favorable corporate environment and improvement of the quality of RusHydro employees' and their families' life by implementing internal corporate social programs;
2. creation of favorable social environment and development of local communities in the presence regions by providing free services and external social programs;
3. formation of the Company's image as a socially responsible corporate member of society through responsible interaction with all stakeholders;
4. improvement of sectoral technical culture and prestige of hydropower engineer via corporate programs of vocational training.

### 3.1.1. The Group's Role in the Economic Development of the Presence Regions

#### Infrastructure Development - Creating the Prerequisites for Economic Growth <sup>G4-E7</sup>

In addition to its designated purpose - electricity production from renewable resources - hydropower sector additionally solves a number of important economic problems: creating drinking and industrial water supply systems, developing shipping industry, creating irrigation systems for agricultural sector, fish farming, regulation of rivers' flow that contribute to fighting against freshets and floods ensuring safety of the population.

It is scarcely an exaggeration to say that the development of hydropower industry creates the prerequisites for country-wide economic growth. Each commissioned hydropower plant becomes a point of economic growth in the region of its location: producing units grow up in its neighborhood, industry develops, new jobs are created and the economic foundation for the regional sustainable development and local communities is laid.

At the same time, the scope of PJSC RusHydro's social responsibility for local communities and society as a whole is expanded.

When implementing infrastructure and investment projects, RusHydro Group's management pursues a consistent policy aimed at developing natural-resource potential of the region on the one hand, and the conservation of natural resources, on the other hand.

#### Areas of Impact and Scope of the Aspect

##### RusHydro in the Siberian Federal District

The Sayano-Shushenskaya hydropower complex is located in the Siberian Federal District. Russia's largest hydropower plant, equipment of which was fully restored in 2014, is

a part of the complex. There are also the Novosibirskaya HPP and the Boguchanskaya HPP. The latter is the largest investment project of PJSC RusHydro, implemented in conjunction with UC RUSAL as part of BEMO project. In 2014, forty years after the beginning of construction, the last hydropower unit of the Boguchanskaya HPP was commissioned. The plant reached its design capacity and became the state of the art HPP in Russia.

RusHydro's objects located in the Siberian Federal District supply electricity to 12 subjects of the Russian Federation: the Altai Republic and the Altai Territory, Republics: Buryatia, Tuva and Khakassia; the Trans-Baikal and the Krasnoyarsk Territory, Irkutsk, Kemerovo, Novosibirsk, Tomsk and Omsk regions, while providing 15% of the consumption of Siberia.

SOCIAL AND ECONOMIC COOPERATION AGREEMENTS WITH THE REPUBLICS OF KHAKASSIA AND ALTAI, AND WITH THE GOVERNMENT OF THE KRASNOYARSK TERRITORY WERE IN FORCE IN 2014.

##### RusHydro in the Central and the Volga Federal Districts

Generation of RusHydro Group's HPPs which operates in the Central and Volga Federal Districts supplies electricity to the consumers of 10 subjects of the Russian Federation: Moscow, Penza, Samara, Saratov, Ulyanovsk and Nizhny Novgorod regions; Republics: Bashkortostan, Tatarstan, Chuvashia, Mari El and Mordovia, while ensuring 8% of the consumption of the central part of Russia.

The following power plants are located in these districts: the Kamskaya HPP, the Votkinskaya HPP, the Cascade of Upper Volga HPPs, the Nizhegorodskaya HPP, the Cheboksarskaya HPP, the Zhigulevskaya HPP, Saratovskaya HPP and Zagorskaya PSPP. At the same time, the Volga-Kama Cascade HPPs accounts for 26% of the installed capacity of the UES of Middle Volga (15% of the total installed capacity of hydropower plants of the UES of Russia).

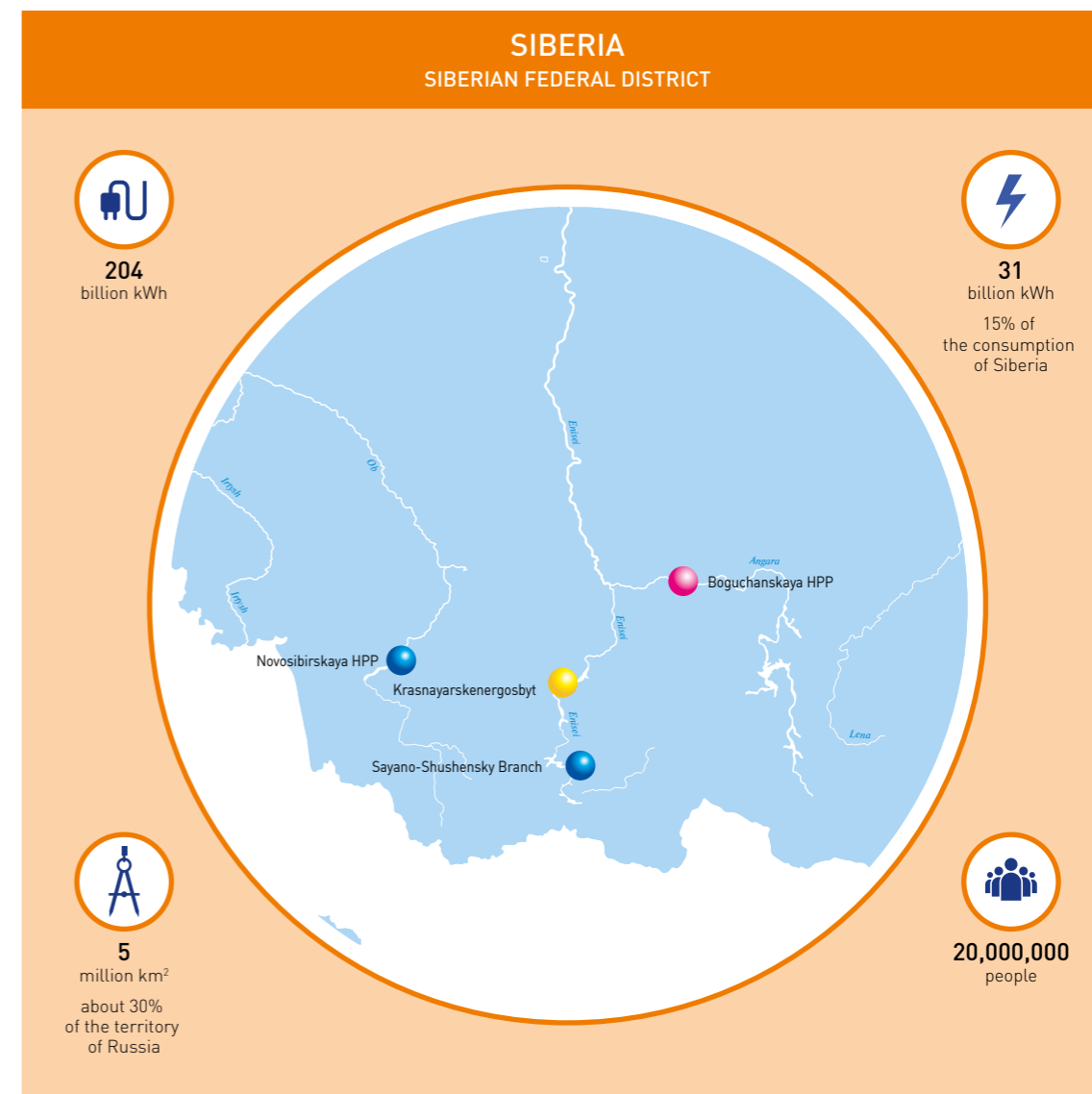
THE COMPANY CONCLUDED SOCIAL AND ECONOMIC COOPERATION AGREEMENTS WITH THE GOVERNMENTS OF THE MOSCOW REGION IN THE CENTRAL FEDERAL DISTRICT AND WITH THE GOVERNMENT OF THE REPUBLIC OF BASHKORTOSTAN IN THE VOLGA FEDERAL DISTRICT.

##### RusHydro in the Southern Federal and the North Caucasian Federal Districts

Generation of RusHydro Group's HPPs in the South and the North Caucasian Districts supply electricity to consumers of 13 subjects of the Russian Federation: the Republics of

#### RUSHYDRO: SOCIO-ECONOMIC DEVELOPMENT OF THE PRESENCE AREAS AND LOCAL COMMUNITIES

##### SOCIO-ECONOMIC DEVELOPMENT



Adygea, Dagestan, Ingushetia, Kabardino-Balkaria, Kalmukia, Karachay-Cherkessia, North Ossetia-Alania and the Chechen Republic; the Krasnodar and Stavropol Territories; the Astrakhan, Rostov and Volgograd regions, while ensuring 20% of electricity demand.

The following power plants are located in these districts: the Volzhskaya HPP (largest in Europe), the Kuban Cascade of HPPs, the Karachaevo-Cherkessia branch, Kabardino-Balkaria branch, North Ossetia branch and Dagestan branch, which are incorporated under the umbrella of the Unified Energy System of the South.

In the North Caucasian Federal District, the Company

mainly operates in the Stavropol Territory, the Republic of Dagestan, the Republic of North Ossetia-Alania and the Kabardino-Balkaria Republic. In 2014, PJSC RusHydro had effective social and economic cooperation agreements with all of them, as well as an effective agreement with the Government of the Astrakhan region in the Southern Federal District.

##### RusHydro in the Far Eastern Federal District

The Far East is one of the key and most promising regions of RusHydro Group's operation. In the Far Eastern Federal District (part of the UES of the East) the following power plants are located: the Bureyskaya HPP, the Zeiskaya HPP,



the Nizhne-Bureyskaya HPP which is under construction, the Kolymskaya HPP, Geotherm and the Ust-Srednekan-skaya HPP. The Bureyskaya HPP and the Zeiskaya HPP operate in the UES of the East which includes energy systems of the Amur region, the Primorsky, Kamchatka and Khabarovsk territories, the Jewish Autonomous Region, and supply electricity to all the consumers of the system.

The Kolymskaya HPP, Geotherm and the Ust-Srednekan-skaya HPP operate in the regions with energy systems functioning in isolation from the USE of Russia due to territorial and technological reasons. These are five subjects of the Russian Federation, including the Republic of Sakha

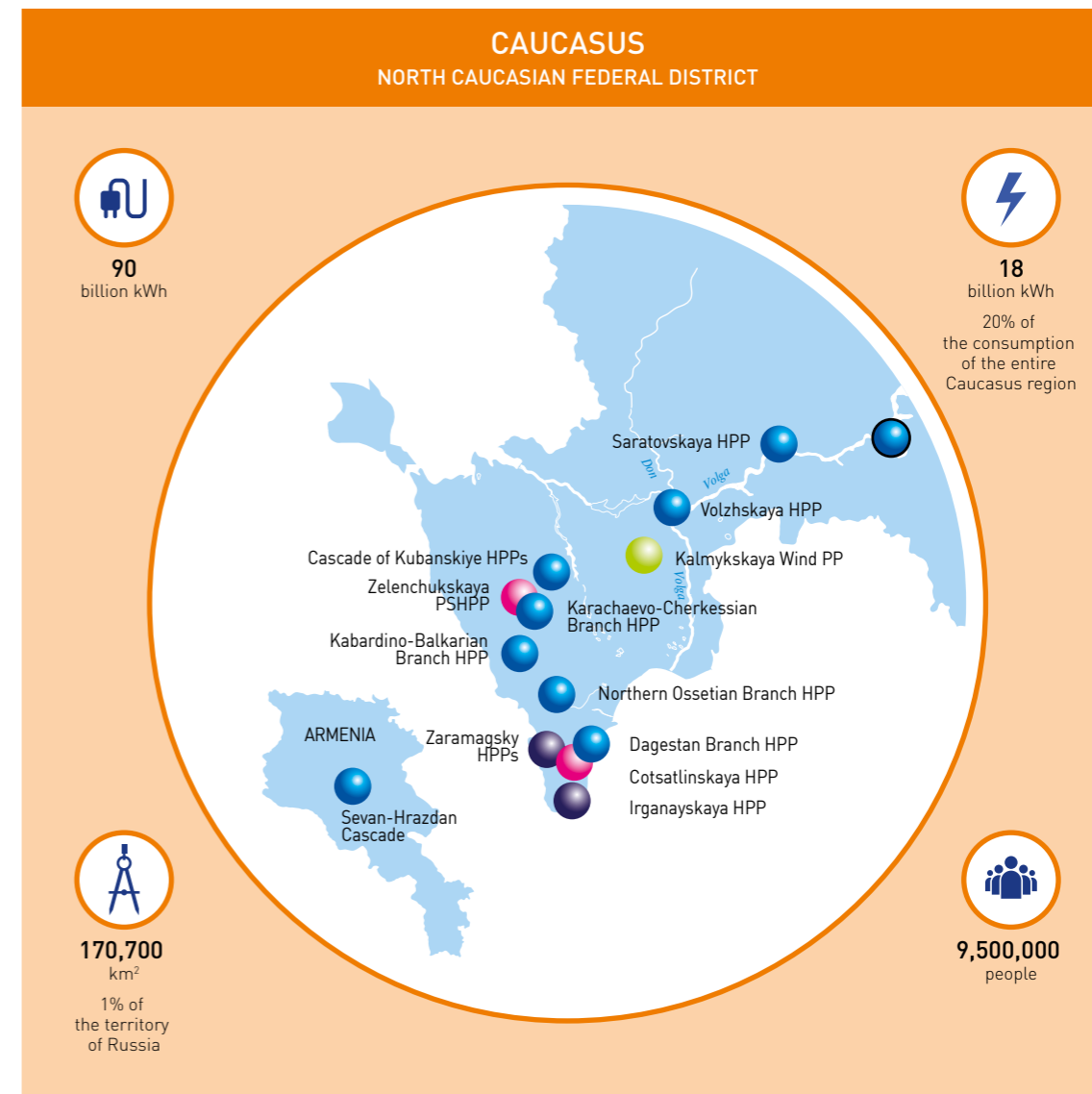
(Yakutia), the Kamchatka territory, the Sakhalin Region, the Magadan Region and the Chukotka Autonomous District.

The Kolymskaya HPP, Geotherm and the Ust-Srednekan-skaya HPP supply electricity to the consumers of the Magadan region, and Geotherm provide electricity to the consumers of the Kamchatka territory.

The hydropower plants provide 39% of electricity consumption in Russia's Far East.

**IN 2014, PJSC RUSHYDRO HAD SOCIAL AND ECONOMIC COOPERATION AGREEMENTS WITH TWO REGIONS IN THE FAR EASTERN FEDERAL DISTRICT: THE MAGADAN AND AMUR REGIONS.**

NOTE. Details of the social and economic cooperation agreements in the regions are available in Chapter 3.3.2. Local communities and social partnership.



**Contributing to the Presence Regions' Development**

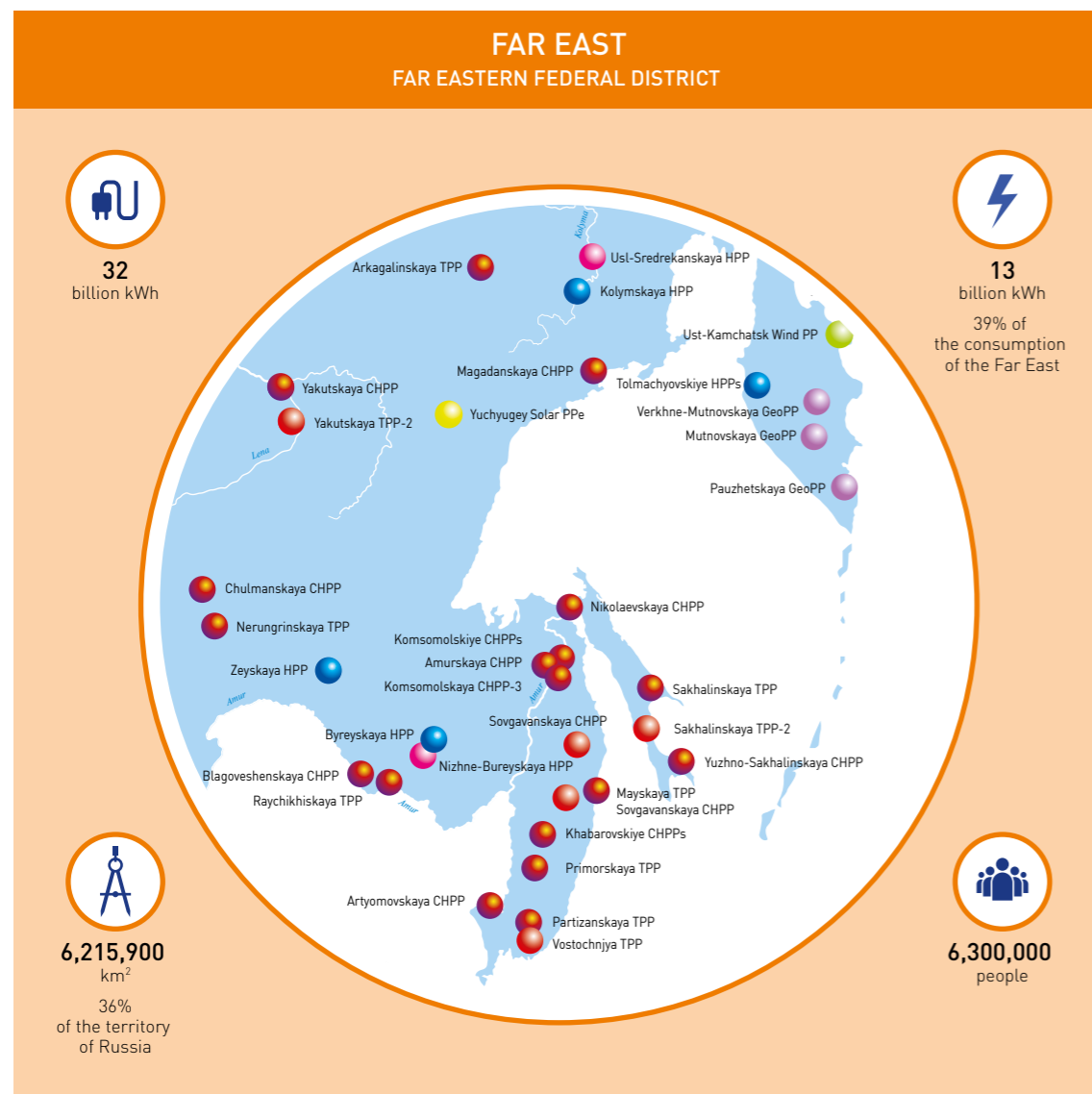
**Direct economic impacts: tax payments**

In most areas where RusHydro's existing plants are located, they play a city-forming function, as the basis for infrastructure to develop the economy and industry complex not only of cities and regions in which they are located, but also the region as a whole.

PJSC RusHydro is among the largest taxpayers subject to tax administration at the federal and regional levels. With this status, PJSC RusHydro as well as other large taxpayers, regardless of their legal address and location, is regis-

tered for tax purposes in the Specialized Interregional Tax Inspectorate (the Interregional Inspection of the Federal Tax Service of Russia for Major Taxpayers №4, Moscow). The tax administration and payment of federal taxes, including VAT, is carried out through this tax authority.

The bulk of PJSC RusHydro's regional tax payments falls on regional budgets where the Company's plants locate, including income tax, or rather a basic part (up to 18% out of 20%), which shall be paid to the budgets of the regions at the location of fixed assets and staff, and property tax paid at the property's location.



**Direct Economic Impacts: Investment in the Development of Industry Infrastructure**  
**Investment and Development**

The construction of generating facilities is the large-scale investment projects that reflect the sustainable development of RusHydro Group, and directly related to the economic and social problems-solving contributing to improving the investment and social climate in the region of construction. This particularly applies to areas of Siberia and the Far East, where State's plans to develop mining complexes are implemented.

**Managing Investment Activity's Issues**

DMA

The management approach to investment activity is aimed at improving investment and operating efficiency and reducing costs of PJSC RusHydro by making informed investment decisions within the optimization of PJSC RusHydro's investment activity and its subsidiary and dependant companies, more efficient use of financial resources and their concentration on the most promising and important projects, and as a consequence, improving the competitiveness of the Company, maximizing profit and ensuring reliable operation of the power system.

- PJSC RusHydro's Department of Economic Planning, Investment Programs and Controlling is PJSC RusHydro's responsible department for managing investment activity's issues.
- Approval of the investment programs of PJSC RusHydro is the responsibility of the Board of Directors of PJSC RusHydro.

**Management Approach to Investment Activity**

"WE ARE A VERY CONSERVATIVE COMPANY AND WE ARE NOT LOOKING FOR SOME KIND OF MEGA-PROJECTS. OUR GOAL IS THE PLANNED DEVELOPMENT AND THE PRESERVATION OF ENTRUSTED PROPERTY."

EVGENY DOD, CHAIRMAN OF THE MANAGEMENT BOARD - CEO OF PJSC RUSHYDRO

The investment decision-making system and inclusion of projects in the investment program for the year are based on the following principles and procedures:

- Development targets of PJSC RusHydro, including 2014 investment activity, are identified by the Long-term Development Program of RusHydro Group;

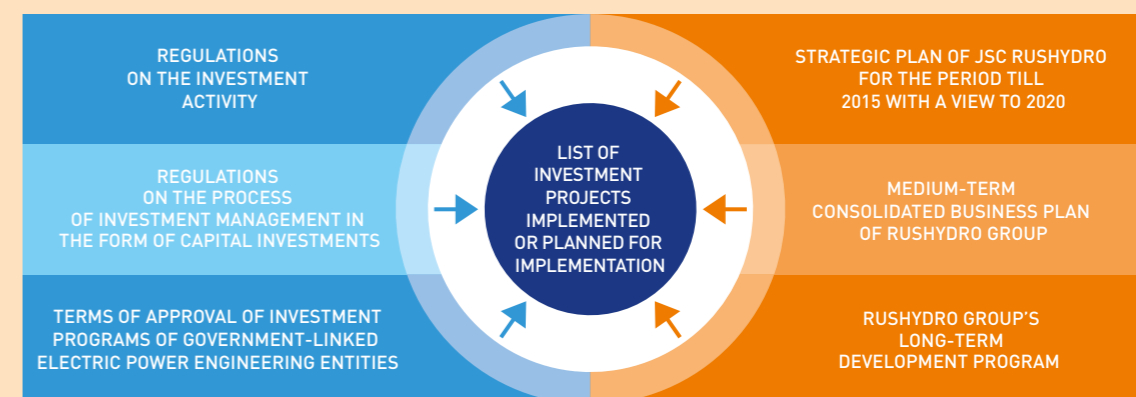
- The Company's investment activity is governed by the Regulations on the Company's investment activities<sup>71</sup> and the Regulations on the process of investment management in the form of capital investments<sup>72</sup>;
- In accordance with the Rules for the Approval of Investment Programs of Government-linked Electric Power Engineering Entities<sup>73</sup>, prior to the Board of Directors' approval, PJSC RusHydro's investment programs are agreed upon by the executive authorities and approved by the Russian Ministry of Energy;
- Simultaneously with the formation of drafts investment programs the Company annually form and approve the List of investment projects for conducting public technological and price audit for the current year.

NOTE. For more details see Section 1.3.2. Control over target use of funds (Public Technological and Price Audit).

**Implementation of the Investment Program: 2014 Highlights**

- As part of the implementation of the investment program in 2014, special attention was paid to 1). launching the construction of four thermal power plants in the Far East; 2). completing the implementation of key investment projects, like the restoration of the Sayano-Shushenskaya HPP and construction of the Boguchanskaya HPP and 3). implementing a comprehensive modernization of the Company's power plants.
- In February 2014 the Board of Directors approved 2014-2018 Group's investment program which provides for funding of RUR 360,868.55 million (including VAT).
- The total amount of financing for 2014 adjusted investment program<sup>74</sup> was RUR 85.7 billion (including VAT).
- The List of existing and planned for implementation investment projects as part of the investment program of JSC RusHydro for conducting public technological and price audit in 2014 was approved in March 2014<sup>75</sup>.
- The draft investment program of JSC RusHydro for 2015-2017 was approved by the Management Board and elaborated on the comments of the executive authority.

**INVESTMENT AND DEVELOPMENT: INVESTMENT DECISION-MAKING REGULATIONS**



71 Approved by the Board of Directors of JSC RusHydro, Minutes №102 as of June 29, 2010.  
72 Approved by Order №931 as of September 30, 2013.  
73 Approved by the Government Decree №977 dated 01.12.2009.

74 Approved by Order of the Ministry of Energy of Russia №919 dated December 12, 2014 and approved at the regular meeting of the Board of Directors on December 29, 2014.  
75 Approved by the Board of Directors, Minutes №195 as of March 28, 2014.



RUR 82.4 BILLION IS THE ACTUAL AMOUNT OF FINANCING OF PJSC RUSHYDRO'S INVESTMENT PROGRAM IN 2014.

RUR 361 BILLION IS THE TOTAL AMOUNT OF CAPITAL INVESTMENT TILL 2018.

"FOR US, THE MAIN GOAL IS RELIABILITY; SO, MOST OF THE INVESTMENT IN PJSC RUSHYDRO'S FIXED ASSETS GOES TO RE-EQUIPMENT AND RECONSTRUCTION. WE WILL UPDATE OVER 60% OF OUR PLANTS' EQUIPMENT AND IN 2025 ACTUALLY GET AN ABSOLUTELY NEW COMPANY.

THE SECOND DIRECTION IS THE COMPLETION OF THE "UNFINISHED CONSTRUCTIONS", MOST OF WHICH WAS STARTED IN THE SOVIET PERIOD. IT IS ABOUT 10 OBJECTS THAT WE WILL FINISH BY 2017. WE HAVE A LITTLE ABSOLUTELY NEW CONSTRUCTION: THE NIZHNE-BUREYSKAYA HPP AND SEVERAL SMALL HYDROPOWER PLANTS IN THE NORTH CAUCASUS."

EVGENY DOD, CHAIRMAN OF THE MANAGEMENT BOARD - CEO OF PJSC RUSHYDRO

### 3.1.2. Main Results of the Implementation of Investment Projects: 2014

#### DMA 2014 Investment Program

<sup>G4-DMA</sup> The main results of the implementation of 2014 investment projects were:

- Commissioning of the ninth, last in a row, hydropower unit of the Boguchanskaya HPP;
- Completion of work to restore and complete reconstruction of the Sayano-Shushenskaya HPP named after Neporozhniy.

In addition:

- In the Amur region the Nizhne-Bureyskaya HPP was actively constructed, by the end of the year about 60% of concrete was placed, installation of embedded parts of hydraulic turbines and gates was started. 2015 plans include the beginning of installation of hydropower units, the start of work on the earth dam and preparation for overlap of the Bureya River, which is scheduled for March 2016. Launches of all four units of the plant are planned for 2016;
- In the Magadan region at the Ust-Srednekanskaya HPP major works have been associated with the preparation of an earth dam's base, an agreement with JSC Power

Machines to supply third hydropower unit was signed. In 2015, it is planned to actively fill the dam;

- In 2014, the studies on flood control HPPs on the tributaries of the Amur River was initiated, a cooperation agreement between PJSC RusHydro and PowerChina in the field of pumped storage power plants was signed. As a pilot project, the parties have identified the construction of the Leningradskaya PSPP.

#### Low Head SHPPs

Derivation of the Zaragizhskaya HPP was built in the Republic of Kabardino-Balkaria, the construction of HPP's power house and the installation of embedded parts of hydropower units were started. Launch of the facility is planned for 2015.

Work is underway to finalize the design of six more SHPPs in the territory of the North Caucasian Federal District (the Bekeshevskaya SHPP, the Ust-Dzhegutinskaya SHPP, the B. Zelenchuk SHPP, the Stavropolskaya SHP, the Yegorlyk-skaya-3 SHPP, and the Barsuchkovskaya SHPP).

#### Creating Energy Industrial Complexes in the Regions: the Boguchanskaya HPP

One of RusHydro's key activities in the field of the sustainable development of the regions is the involvement in the formation of the state strategy to build competitive territorial industrial clusters.

An example of such a project is the construction of the Boguchansk Energy and Metallurgical Association (BEMO) in the Krasnoyarsk Territory. In 2006 PJSC RusHydro constructs the complex as part of a joint project with UC RUSAL and in accordance with the agreements signed.

The BEMO project is a key element of the program for the integrated development of the Lower Angara region - the largest investment project in Russia for the last 25 years. The development program of the region is based on the principles of public-private partnership and provides for the construction and expansion of transport and energy infrastructure, the development of natural-resource potential of the region and ensuring of the stability of the UES of Siberia.

In 2014, its first stage was completed - during 2012-2014 all nine of the Boguchanskaya HPP's hydropower units on the Angara River were put into operation. The plant started operating in industrial use from December 1, 2012. From the launch of the first hydropower units and up to the end of 2014 the HPP generated over 13 billion kWh of electricity.

The next step will be the commissioning of the first stage of producing unit at the Boguchansky aluminum plant. With the launch of the Boguchansky aluminum plant, electricity and capacity from the Boguchanskaya HPP will be purchased by it for own production needs.

#### Completion of the Construction of the Boguchanskaya HPP

- In December 2014 last hydropower unit No9 of the Boguchanskaya HPP was put into commercial operation. The launch ceremony of the ninth hydropower unit was held via the Moscow-Kodinsk teleconference.
- The Boguchansky reservoir's level by December 2014 was 204.5 meters above sea level. Upon reaching the design mark of 208 m of the reservoir's water level, the Boguchanskaya HPP will reach full capacity.

"THIS PLANT EMBODIES ALL THE LATEST ENGINEERING ACHIEVEMENTS; IT IS CONSTRUCTED IN ACCORDANCE WITH WORLD STANDARDS, HAS GREAT ECONOMIC POTENTIAL AND WITH PROPER OPERATION WILL WORK CENTURIES. I AM SURE, THIS WILL HAPPEN, HPP IS IN SAFE HANDS!"

ALEXANDER VOLYNCHIKOV, PROJECT ENGINEERING MANAGER (INSTITUTE GIDROPROJECT)

#### The Boguchanskaya HPP can rightly be Considered State of the Art Plant among Large Russian Plants:

- The HPP has the latest equipment operation monitoring and control systems;
- Among structures of the HPP the project provides for the construction of two spillways - primary and secondary which are able to pass the maximum possible extreme freshets through the dam;
- Inside rockfill dam of the plant is a diaphragm made of mastic asphalt. This is a unique development of Russian scientists, designed to ensure water resistance of the rockfill dam;
- Cement-grout curtain that prevents filtration through its base locates under the dam;
- In the future, applied and tested technologies at the HPP will be used to implement other hydropower projects both in Russia and abroad.

#### The Importance for the Region's Economic Development

Putting into operation the Boguchanskaya HPP, which construction lasted 40 years, is an event of great importance for the economic development of the Lower Angara region and the Siberian economic region;

- The Boguchanskaya HPP caters industrial customers in four regions of the Siberian Federal District, as well as the population of 11 districts of the Krasnoyarsk Territory and the Irkutsk Region;
- The HPP is the city-forming enterprise. Nearly 3.7 thousand new jobs employed for the construction period and nearly 0.6 thousand jobs employed for the operation period were created;
- It is planned that in the future the HPP's consumers, except BEMO, will become existing and under construction factories in the region, gold mining enterprises, timber industry complex, coal mining enterprises, iron ore mining enterprises and oil and gas extraction enterprises;
- As part of the project Development of the Lower Angara Area, the first bridge across the Angara River in the Krasnoyarsk Territory, railway spur Karabula-Yarky, dozens of bridges and hundreds of kilometers of automobile roads were built;
- The bridge across the Angara River opens a direct path to the development of the Yurubcheno- Tokhomskeye

field. The Boguchanskaya HPP will produce power for the development of the field;

- In September 2014 the first stage of the Boguchansky timber processing complex was put into operation;
- The reconstruction and expansion of the Razdolinskaya substation from which in 2015-2016 power transmission line to transmit power of the Boguchanskaya HPP to the fields of Polyus Gold will be built;
- Further, it is planned to construct a bridge and the automobile road along the crest of the concrete and rock-fill dam.

"THE BOGUCHANSKAYA HPP IS A STRONGHOLD OF THE LOWER ANGARA REGION'S DEVELOPMENT. WITH ITS LAUNCH, A NEW IMPETUS WAS GIVEN TO THE REGIONAL ECONOMY, WHOSE POTENTIAL IS HUGE."

VSEVOLOD DEMCHENKO, CEO OF THE BOGUCHANSKAYA HPP.

#### Pumping up the Budget

Successful production activity allowed the Company to increase the tax deductions. During 2014 the Boguchanskaya HPP paid taxes in the amount of RUR 1,881 million, which is 2.14 times more than in 2013.

- The Boguchanskaya HPP paid RUR 608 million, including VAT, in the amount of RUR 423 million to the federal budget;
- The amount of taxes paid by the Boguchanskaya HPP to the Krasnoyarsk Territory's budget in 2014 was RUR 1,273 million, an increase of 79% compared to 2013;
- The fee for the use of water objects increased almost 10 times compared to 2013 and totalled RUR 105 million.

#### 3.1.3. Restoration and Comprehensive Modernization of the Sayano-Shushenskaya HPP: 5 years of Restoration Works

##### Completion of the Restoration of the Sayano-Shushenskaya HPP <sup>G4-EC7</sup>

"THE 2014 ANNIVERSARY YEAR WAS MARKED WITH THE EVENT, THE VALUE OF WHICH CANNOT BE OVERESTIMATED NOT ONLY FOR RUSHYDRO, BUT ALSO FOR THE ENTIRE COUNTRY, - THE RESTORATION AND MODERNIZATION OF THE LEGENDARY SAYANO-SHUSHENSKAYA HPP WERE COMPLETED. THE HYDRO POWER PLANT WITH THE HIGHEST CAPACITY IN RUSSIA BECAME THE SAFEST ONE."

ALEXANDER NOVAK, MINISTER OF ENERGY OF THE RUSSIAN FEDERATION

<sup>G4-DMA</sup> After a five-year interruption, the Sayano-Shushenskaya HPP Russia's largest hydropower plant named after P.S. Neporozhniy (Khakassia) was put into operation again in 2014. During the reconstruction all 10 hydropower units were replaced. With the launch of hydropower unit No2 the tenth in a row and most affected by the accident in 2009, their total design capacity equalled 6,400 MW again.

All works were carried out in strict accordance with the schedule approved by the Government in 2009. In November 2014, a solemn launch ceremony of the last, the tenth in a row new hydropower unit No2 was held at the Sayano-Shushenskaya HPP. Russian President Vladimir Putin issued a command to energize the hydropower unit during a video conversation on November 12, 2014.

### CREATING ENERGY INDUSTRIAL COMPLEXES IN THE REGIONS: BEMO



CAPACITY OF THE BOGUCHANSKAYA HPP  
2,997 MW



CAPACITY OF THE BOGUCHANSKY ALUMINUM PLANT  
558 thousand tons per year



NEW JOBS  
10,000

A large part of the Sayano-Shushenskaya HPP's capital expenditures was allocated not for the restoration but for the replacement of outdated equipment which does not meet modern requirements. Thus, RUR 4.53 billion was spent to replace the plant's switchgear, which will make it possible to greatly improve the reliability of the plant's connection to the power grid.

As a result, the Sayano-Shushenskaya HPP is fully equipped with a completely new and state of the art equipment with improved power and performance capabilities, which meet all requirements of reliability and safety. The turbines are equipped with a more efficient process protection system designed to automatically shutdown the unit.

28.03.2014	Commissioning hydropower unit №4 of the Sayano-Shushenskaya HPP
04.07.2014	Commissioning hydropower unit №3 of the Sayano-Shushenskaya HPP
12.11.2014	The launch of hydropower unit №2 and the completion of the bulk of the restoration and complex reconstruction work of the Sayano-Shushenskaya HPP

**Flood Control Importance of the Sayano-Shushenskaya HPP**

The plant's operation can keep discharges at a safe level even with the passage of flash floods once in 100 and 1,000 years.

The Sayano-Shushenskaya HPP's dam formed a reservoir with a useful volume of 15.3 km<sup>3</sup> that contributes to controlling seasonal flow – water is accumulated in the flood spring and summer period and is gradually evacuated in the winter runoff low. Considerable capacity of the Sayano-Shushenskaya reservoir allows it to effectively fight against floods.

Flood control capabilities of the Sayano-Shushenskaya HPP have been clearly demonstrated in the passage of a flash flood (once in 25 years) in 2010. The maximum water inflows into the reservoir were 10,000 m<sup>3</sup> / sec, while the maximum discharges from the Sayano-Shushenskaya HPP were 5,700 m<sup>3</sup> / sec. HPP's dam accumulated significant portion of water inflow that almost double reduce the river discharges, thus preventing flooding.

**HPPs under construction: major investment projects (excluding SHPPs)**

Facility's name	Design capacity, MW	Start of construction	Completion of construction	Capacity commissioning 2015
<b>Priority projects in the Far East</b>				
2nd stage of the Blagoveshchenskaya CHPP	120.0	2011	2015	120
1st stage of the Sakhalinskaya SDPP-2	120.0	2011	2017	-
CHPP in Sovetskaya Gavan	120.0	2010	2016	-
1st stage of the Yakutskaya SDPP-2	193.5	2011	2016	-
<b>TOTAL:</b>				<b>120</b>
<b>Facilities under construction</b>				
The Ust-Srednekanskaya HPP	310.5	1991	2018	-
The Boguchanskaya HPP	2,997	1980	2016	-
The Gotsatinskaya HPP	100	2007	2016	-
The Zagorskaya PSPP-2	840	2006	2018	-
The Zaramagskiye HPPs	352	1976	2018	-
The Zelenchukskaya HPP-PSPP	140	2009	2015	140
The Nizhne-Bureyskaya HPP	320	2010	2017	-
<b>TOTAL:</b>				<b>140</b>

**3.1.4. Construction and Commissioning of Facilities in Russia and Abroad**



**The Nizhne-Bureyskaya HPP: Installation of Hydro Mechanical Equipment Was Started**

The main 2014 achievement was an accelerated rate of concrete work - the plan was exceeded by 8%.

The Nizhne-Bureyskaya HPP (design capacity of 320 MW) - the second plant of the Bureya energy complex which is being built by the Company in the Amur region. The Nizh-

ne-Bureyskaya HPP is constructed since 2010 and is one of the priority projects of the investment program of PJSC RusHydro. Capacity commissioning is planned for 2016 and completion of the construction in 2017.

**Social and Economic Importance of the Nizhne-Bureyskaya HPP**

- According to the project the plant under construction will be a compensating reservoir of the Bureyskaya HPP that will remove restrictions on its operation modes and eliminate a number of winter flooding of villages located downstream;
- Commissioning of the plant will go a long way in ensuring a reliable power supply designed and under construction industrial facilities in the Amur Region, the Republic of Sakha (Yakutia) and the Jewish Autonomous

Region, such as the Garinsky and Olekminsky iron-ore mining and processing plants and, gold-ore mining and processing plants, the Kimkano Sutarsky mining and metallurgical plant, the Eastern Siberia - Pacific Ocean oil pipeline, the Vostochny spaceport, the Elga coal deposit, the Power of Siberia Gas Pipeline and so forth;

- It is important to note that during the construction of HPP, a new infrastructure is created and already existing one is upgraded, including roads, power transmission lines, housing sector, community facilities that contributes to improving living conditions of the population of the adjacent areas of the Amur region.

**2014: Highlights**

- Hydro constructors reached a record monthly rates of placing concrete in structures at the Nizhne-Bureyskaya HPP and the annual placing concrete plan was fulfilled a month before the time;
- Smooth financing allowed us to over fulfill production plans: investment amount by the end of 2014 was RUR 8.9 billion. This exceeds capital investment in any other PJSC RusHydro's power plant under construction in the reporting year;
- In 2014, the external estimation experts estimated the project against the criteria of sustainable development based on the procedure of the International Hydropower Association (IHA)<sup>76</sup>.

**The Ust-Srednekanskaya HPP: Concrete Work Continued**

In accordance with the development strategy of the Magadan Region's power industry, the construction of the Ust-Srednekanskaya HPP is in progress, the second one in the Cascade of Kolyma HPPs. Construction of the Ust-Srednekanskaya HPP was begun in 1991. Design and estimate documentation was developed by JSC Lengidro-project. The plant's design capacity is 310.5 MW. Commissioning of the first two hydropower units with total capacity of 168 MW was in 2013.

**Social and Economic Importance of the Ust-Srednekanskaya HPP**

- The Ust-Srednekanskaya HPP will significantly increase the energy security of the region and create a reserve in the isolated Magadan's energy system, needs of which, before the launch of the first two hydropower units of the Cascade, were provided by 95% from Kolyma HPP;
- Refusal to construct thermal power plants will contribute to reducing the imported fuel consumption and decreasing the electricity tariffs' growth rate by reducing its production cost price;
- Implementation of the project will allow avoiding the increase in capacity of thermal power plants in favor of RES-based and improving the environmental situation in the region;
- HPP will contribute to shipping industry and flow control of the Kolyma River. Increased flood-control storage of the Ust-Srednekanskaya HPP will significantly enhance the safety of people, who live downstream of the Kolyma River, in the period of floods;
- Attainment of projected capacity by the plant will go a long way in developing the mining industry in the region, the Yana-Kolymskaya gold-bearing province, especially

the Nataka Gold Ore Deposit;

- Further, it is planned to implement a project to construct the Bilibino-Omsukchan power bridge for the Magadan Region and the Chukotka Autonomous District power system interconnection, which currently operate in isolation from each other. The project is of great importance for supplying power from the Ust-Srednekanskaya HPP to the Peschanka fields of the Baimsky mining and processing plant. In the first stage, the project involves the construction of power grid infrastructure as a part of HV line 220 kV Ust-Srednekanskaya HPP - Omsukchan; HV line 220 kV Omsukchan – step down substation - Peschanka.

**2014: Highlights**

- In 2014 placing of concrete to spillway, power and fixed dams works were in progress at the plant, coupling abutment within the limits of 260 - 266 m
- In 2015, it is planned to continue work on constructing waterfront to reach the design level of 276.5 m (above sea level), and preparatory works to put into operation the hydropower unit No3.
- In 2014, an agreement with JSC Power Machines for the supply of the core power equipment for hydropower unit No3 was signed. Completion of deliveries of the equipment is planned in 2016, commissioning of capacities in 2018.

**The Gotsatinskaya HPP: the Final Stage of Installation Work**

All core equipment of both hydropower units of the plant was assembled and prepared for the final stage of installation work

The construction of the Gotsatinskaya HPP with the capacity of 100 MW and annual output of 350 million kWh on the Avar Koisu River in Dagestan is in progress since January 2007.

**Social and Economic Importance of the Gotsatinskaya HPP**

In 2015, after commissioning, the Gotsatinskaya HPP will be the fourth in terms of capacity hydropower plant in the Republic of Dagestan. Putting the plant into operation will contribute to significantly reducing power deficit in the Republican power system, which is over 1 billion kWh, and supplying electricity to some mountain areas of Dagestan.

**2014: Highlight**

In 2014, the Gotsatinskaya HPP's dam was built to the design height. During 2014 the installation of hydro-mechanical equipment and auxiliary systems of HPPs was completed; high-voltage tests of gas-insulated switchgear (GIS-110 kV) were successfully conducted. At the end of the year the work to move generator's rotor to the crater of the hydropower unit №1 was completed. Thus, all core equipment of both hydropower units of the plant was assembled and prepared for the final stages of installation work.

**The Zagorskaya PSPP-2: Recovery and Completion Stage**

In 2014, the Company successfully completed arrangements for the stabilization of the Zagorskaya PSPP-2.

The second stage of construction of the Zagorskaya PSPP is under construction to cover the deficit of maneuvering regulation capacity in the Central region of Russia. The construction is underway in the vicinity of the existing Zagorskaya PSPP in the Sergiev-Posad District of the Moscow Region. JSC Zagorskaya PSPP-2 is a customer for the construction project. Completion is scheduled for 2018.

<sup>76</sup> For more details see Section 4.2 Environmental Policy Implementation, including International cooperation in the field of environmental protection.

## Social and Economic Importance of the Zagorskaya PSPP

- The Bogorodskoe-Krasnozavodsk road restored;
- During the enlargement of lower reservoir, transport infrastructure between these communities will be reconstructed;
- Municipal utilities that are within the construction area reconstructed;
- Grigorovo and Sementsevo villages of the Bogorodskoe Municipal District are provided with year-round access, and drinking water pipe-line is laid.

In addition, PJSC RusHydro has committed itself to construct community facilities: construction of community center of 500 seats and a sports complex in the Bogorodskoe village, landscaping of recreation area and a number of objects for domestic purposes in Krasnozavodsk;

During the implementation of the project over 5,000 workers is being attracted, another 200 permanent jobs to operate the plant will be created.

### 2014: Highlights

- In June 2014, work to fully drain water in the abutment area of the Zagorskaya PSPP-2 was completed, and in September at the operational headquarter meeting with the participation of RusHydro's specialists and independent experts, it was decided to shift to the next stage – recovery and completion of the object;
- In conjunction with the insurance companies a significant amount of work to revise and evaluate the equipment to be recovered was performed. The facility was insured by the three insurance companies: OJSC SOGAZ, OJSC Alfa Insurance and Open Joint-Stock Insurance Company Ingosstrakh. The occurrence was acknowledged insurable by OJSC SOGAZ and OJSC Alfa Insurance. Work to settle the event insured with Open Joint-Stock Insurance Company Ingosstrakh is underway. Work to stabilize the Zagorskaya PSPP-2 was begun immediately after foundation settlement of the facility under construction in autumn of 2013 and was carried out in strict accordance with a staged program developed by JSC Institute Gidroproject (general designer of the plant);
- Engineers of JSC Institute Gidroproject (general designer of the plant) have developed a variety of recovery options. All options were internally reviewed by the Company and were reviewed by the expert community of the UES of Russia, as well as by an independent expert - the German engineering company Lahmeyer International;
- JSC Institute Gidroproject will select a final recovery option on a competitive basis. The recovery project will be submitted to the state examination. In 2015, special engineering activities are planned to recover the building of the PSPP to a design position, and further pre-commissioning activities to prepare plant's units for putting into operation will begin.

### Construction of the Zaramagskiye HPPs

The construction of the Zaramagskiye HPPs on the Ardon River is the largest construction project of PJSC RusHydro in the Republic of North Ossetia-Alania. HPP is an integrated complex of two hydropower plants - the existing Golovnaya HPP (15 MW installed capacity) and the Zaramagskaya-1 HPP under construction (342 MW design capacity). Project management is carried out by JSC Zaramagskiye HPPs.

The Golovnaya HPP was commissioned on 18 September 2009. Completion of the construction is scheduled for 2018.

Long-time average annual electricity generation of the Golovnaya HPP is 28 million kWh. After the construction of the Zaramagskaya HPP-1, average annual generation of the Cascade will increase to 812 million kWh, which will ensure 80% of the electricity needs of North Ossetia.

### Social and Economic Importance of the Zaramagskiye HPPs

The completion and subsequent operation of the Zaramagskiye Cascade creates a powerful impetus to socio-economic development of North Ossetia via the creation of additional jobs and tax deductions to the budget of the Republic.

### The Zelenchukskaya HPP-PSPP

By the end of 2014, the mechanical part of work at the Zelenchukskaya HPP-PSPP in the Karachay-Cherkessia approached to 85% of preparedness.

Construction is in progress since 2009. The Company plans to commission design capacity in 2015. The average annual power generation will be 162 million kWh.

### Social and Economic Importance of the Zelenchukskaya HPP-PSPP

Construction of the reservoir of the Zelenchuk Cascade of HPPs improved the water supply to communities of the Karachaisky, Zelenchuksky, Adyge-Hablsky and Ust-Dzhegutinsky districts.

The implementation of the project is accompanied by the commissioning of numerous community facilities (residential buildings, bridges, automobile roads) which significantly improve the transport system and infrastructure in the region.

The Republic of Karachay-Cherkessia is rich in mineral resources. Chemical and petrochemical, food and light industries, resort and tourist sectors play a main role in the republic's economy. Investment attractiveness of the region and the development of all these sectors are directly related to the guaranteed power supply in the region.

### 2014: Highlights

- In 2014, concrete works were completed on water pipe-lines at the Zelenchukskaya HPP-PSPP - one of the key stages of construction of the plant. Along with the work in downstream of the plant, the assembly work of reversible hydropower units №3 and №4 was in progress in the turbine house, assembly work of hydropower unit No3 was completed in June.
- The Company began installation of second modern gas-insulated switchgear (GIS), which is scheduled for completion in H1 2015. The next major stage of the construction is the installation of transformer equipment and commissioning of hydropower units in 2015.

## SHPPs under Construction: Investment Projects

SHPP name	Stage of the project <sup>77</sup>	Design capacity, MW	Start of construction	Completion of construction	Capacity commissioning 2015
<b>Small HPPs in the North Caucasian Federal District</b>					
The Bolshoy Zelenchuk SHPP	C	1.2	2012	2016	-
The Barsuchkovskaya SHPP	D	5.01	2012	2017	-
The Bekeshevskaya SHPP	D	1	2014	2017	-
The Egorlykyskaya-3 SHPP	D	3.5	2013	2018	-
The Zaragizhskaya SHPP	C	30.6	2011	2015	30,6
The Stavropolskaya SHPP	D	4.7	2014	2018	-
The Ust-Dzhegutinskaya SHPP	D	5.6	2012	2017	-
<b>TOTAL:</b>					<b>30,6</b>

### Low-Head HPPs (SHPPs): New Construction

Prospects for the development of RES-based industry are directly associated with the development of mountain rivers' potential of the North Caucasus and the construction of balancing capacities in the major consuming regions (the Leningradskaya PSPP and the Zagorskaya PSPP-2).

The system for the support of RES-based projects in the wholesale market via the mechanism of capacity market (concluding capacity supply agreements) adopted in Russia provides for competitive selection of projects and compliance with the requirements for localization of equipment's manufacturing.

### Construction Program of Small HPPs

- In June 2014 projects of the Sengileyskaya, Barsuchkovskaya and Ust-Dzhegutinskaya HPPs have successfully passed the competitive selection of investment projects for the construction of RES-based generating facilities, organized by JSC ATS. In respect of these projects the investment agreements envisaged commissioning in 2017 were concluded.
- In December 2014, as part of the development of co-operation agreements in the field of small-scale energy fixed in an agreement between PJSC RusHydro and PowerChina in May 2014, the delegation of technical and economic experts of PowerChina visited these facilities.

### Social and Economic Importance

Small HPPs significantly improve reliability of power supply in remote regions, and their construction and operation create new jobs. The construction of small HPPs on the mountain rivers can completely revive the economy of entire regions of North Caucasus and be a powerful impetus for socio-economic development of the region by creating additional jobs and tax deductions.

### Implementation of Investment Projects of SHPPs: Highlights of the Reporting Period

#### The Zaragizhskaya SHPP: Completion of Construction Work

In 2014, the main stage of construction was completed at the Zaragizhskaya HPP (30.6 MW): all excavation work and much of the concrete work at all structures of the plant were completed, installation of hydropower and electrical equipment (outdoor switchgear-110 kV) was begun.

The Zaragizhskaya HPP is the third stage of the Nizhny-Cherek Cascade, lack of any head structure is its feature which reduces the price of design and avoids the flooding of soil. The plant will use water already used at the Aushigerskaya HPP. Project is managed by JSC Small HPPs of the Republic of Kabardino-Balkaria. Commissioning is planned for 2015.

### Social and Economic Importance of the Zaragizhskaya HPP

- The Nizhny-Cherek Cascade of HPPs is located in densely populated area with developed industry and agriculture of Kabardino-Balkaria, the completion of seven-year construction of the Zaragizhskaya HPP was the most important task of the republic's economic development. Putting it into operation will allow the Company to reach the total annual generation of hydropower plants of the cascade of 700 million kWh, which will be about 50% of the electricity consumed by the Republic.
- In addition to the incremental capacity and energy deficit reduction in the region, the new plant will create jobs and ensure additional revenues to the budget of the Republic.

### Geothermal Energy Sector

#### Qualifications of Geothermal Plants

NP Market Council recognized two geothermal power plants of PJSC RusHydro - the Mutnovskaya plant (50 MW) and the Verkhne-Mutnovskaya plant (12 MW) - as qualified generating facilities that operate by using renewable energy sources. According to the results of the audit of the generating equipment and documents, experts of NP Market Council confirmed the compliance of the GeoPPs with necessary criteria. The GeoPPs became the most powerful facilities in the register of qualified RES-based facilities.

Geothermal energy sector is not currently included in the RES-based generation support system in the wholesale and retail markets, which hinders its further development in Russia. Over 1,500 MW of electrical power can be obtained at the proven geothermal fields of the Kamchatka Region. Today, construction projects of electrical generating units worked on the reheat steam with the capacity of 13 MW and the second stage of the Mutnovskaya GeoPP (50 MW) are elaborated to the maximum extent.

### International Cooperation and Advanced Projects: RusHydro Group

PJSC RusHydro continues to pay special attention to the development of international activities the aim of which is

to expand its geographic footprint, attract foreign investment and technology in advanced projects in the field of hydropower sector and renewable energy sources, as well as bilateral cooperation with foreign electric power, design, engineering and power engineering companies.

"OUR STRATEGY PERTAINING TO THE FOREIGN ACTIVITY ENVISAGES OUR INVOLVEMENT IN THE PROJECTS, NOT AS AN INVESTOR BUT AS AN ENGINEERING CONTRACTOR. THE COMPETENCES OF OUR RESEARCH AND ENGINEERING COMPLEX ALLOW THE COMPANY TO EARN ON SUCH CONTRACTS. WE HAVE AN INTEREST IN AFRICA AND SOUTH AMERICA AS WELL AS IN CHINA AND JAPAN."

EVGENY DOD, CHAIRMAN OF THE MANAGEMENT BOARD - CEO OF PJSC RUSHYDRO

As part of carrying out of foreign economic activity, PJSC RusHydro on an ongoing basis sits in the intergovernmental commissions on the cooperation between the Russian Federation and foreign countries and energy working groups. PJSC RusHydro also participates in international forums held under the RUE and the CCI of the Russian Federation.

**The Sevan-Hrazdan Cascade of HPPs in Armenia**

PJSC RusHydro owns CJSC International Energy Corporation (JSC IEC). The property complex of JSC IEC includes seven hydropower plants of the Sevan-Hrazdan Cascade with the installed capacity of 561 MW, located on the Hrazdan River.

CJSC IEC is one of the main electricity producers in Armenia. The plants use natural flow of the Hrazdan river and irrigation water releases from Lake Sevan. Industrial and technological capacity of the cascade is 500 mln KWh, which is about 10% of domestic consumption of the Republic of Armenia. Hydropower plants are assigned functions of daily control over power grid and emergency reserve.

Currently JSC IEC implements modernization program of the Sevan-Hrazdan Cascade.

**The Upper-Naryn Cascade of HPPs in Kyrgyzstan**

Since 2013, the Group is implementing the Russian-Kyrgyz intergovernmental agreement dated September 20, 2012 to construct and operate the Upper Naryn Cascade, one of the largest infrastructure projects in Central Asia.

The Cascade will contain four successive stages: the Akbulunskaya HPP, Naryn HPP-1, Naryn HPP-2 and Naryn HPP-3 with a total installed capacity of 237.7 MW and average annual power generation of about 1 billion kWh.

In 2014, works to construct objects of the preparatory period of the cascade's construction were completed at the construction site of the Upper Naryn HPP. JSC Lengidroproject, which is the general designer of the Upper Naryn Cascade started design and survey work on the project.

**Social and Economic Importance of the Upper Naryn Cascade of HPPs**

It is planned that the implementation of the project will:

- ensure the growth of revenues of the population, local budgets by increasing tax deductions, improve the situation in the labor market, ensure the attraction of new investors in the mining and processing industry of the country and balance the summer and winter consumption of electricity in the Naryn and neighboring regions of the Republic;

- will stimulate the infrastructure development in the region and lead to the construction of new and upgrading of existing automobile roads and power transmission lines;
- it is assumed that part of the electricity produced will be used for the domestic needs and the economic development of the Republic, and another part will be exported that will improve the foreign trade balance of Kyrgyzstan.

**Developing HPP Projects in the Russian Federation with the Involvement of Chinese Companies**

PJSC RusHydro is engaged in an active dialogue with Chinese companies PowerChina and China Three Gorges Corporation. The focus of discussion is the construction projects of small HPPs and PSPPs in Russia, flood control HPPs on the tributaries of the Amur River in the Far East. These projects imply a new format of cooperation with Chinese companies and attraction of Chinese investment in the Russian economy.

**Constructing Flood Control HPPs**

Due to the massive flooding in 2013, both in the Russian territory of the Far East and north-eastern regions of China, PJSC RusHydro and China Three Gorges Corporation are working up the question to construct additional hydropower plants with a total capacity of up to 2,000 MW on the tributaries of the Amur River to reduce possible risks of new instances of flooding in the region:

- the Nizhne-Zeiskaya HPP (400 MW) on the Zeya River;
- the Selemdzinskaya HPP (300 MW) on the Selemdzha River;
- the Gilyuiskaya HPP (462 MW) on the Gilyui River;
- the Nizhne-Nimanskaya HPP (600 MW) in the basin of the Bureya River.

In November 2014, during the visit of Russian President Vladimir Putin to China, PJSC RusHydro and China Three Gorges Corporation signed Preliminary Agreement on main conditions of establishment of joint venture and further preparation of Shareholders' Agreement.

**Constructing small HPPs**

In May 2014 during the visit of Russian President Vladimir Putin to China an agreement on strategic cooperation between PJSC RusHydro and PowerChina Corporation was signed, according to which the companies focus on development of small hydropower generation projects on the basis of the joint venture. The priority projects identified are the Barsuchkovskaya SHPP (5.04 MW), the Ust-Dzhegutinskaya SHPP (5.6 MW) and the Sengileyskaya SHPP (10 MW).

**Constructing the Leningradskaya PSPP**

In November 2014 during the visit of Russian President Vladimir Putin to China PJSC RusHydro and PowerChina Corporation signed a cooperation agreement in the field of pumped storage power plants. As a pilot project, the parties identified the construction of the Leningradskaya PSPP (1,560 MW). Estimated project cost is RUR 138 billion.

"THE AGREEMENT OPENS A NEW CHAPTER IN RUSSIAN-CHINESE COOPERATION IN ATTRACTING CHINESE INVESTMENT, TECHNOLOGY AND MANAGEMENT EXPERIENCE TO THE RUSSIAN ENERGY SECTOR. WE ARE CONVINCED THAT THIS COOPERATION WILL CREATE ADDITIONAL VALUE FOR OUR SHAREHOLDERS AND WILL BE USEFUL FOR THE RUSSIAN ENERGY SECTOR AS A WHOLE."

EVGENY DOD, CHAIRMAN OF THE MANAGEMENT BOARD - CEO OF PJSC RUSHYDRO

The Leningradskaya PSPP is an advanced project of RusHydro which is not currently included in the Company's investment program. The PSPP is scheduled for location in the Leningrad region on Shapsha River and is designed to cover electricity deficit that occurs in peak and semi-peak hours of consumption in the power system of the UES of Northwest.

For more details about advanced projects in the field of international partnership of PJSC RusHydro see Section 3.3.1 Mechanisms and the main topics of cooperation with key stakeholder groups in 2014.

**3.1.5. Program for the Construction of New Thermal Power Generation Facilities in the Far East**

**The RusHydro Group: Program for the Construction of New Thermal Power Generation Facilities in the Far East**

The most important investment project of PJSC RusHydro is the construction of four priority facilities in the Far East in pursuance of Decree of the President of the Russian Federation "On Further Development of JSC Federal Hydro-Generating Company RusHydro<sup>78</sup>." RusHydro started to implement the Program in 2013. <sup>G4-DMA (former EU23)</sup>

**2015-2019 Volume of Thermal Generation Commissioned in the Far Eastern Federal District**

Capacity commissioning	Type of fuel	Year of commissioning	Capacity, MW
The approved investment programs			693
The Yakutskaya SDPP-2, 1st stage	gas	2016	193
The Blagoveshchenskaya CHP plant, 2nd unit	coal	2015	120
CHP plant in Sovetskaya Gavan	coal	2016	120
The Sakhalinskaya SDPP-2	coal	2017	120

Implementation of these projects is the first stage of the RusHydro Group's Program for the Far East Energy Sector Development aimed at replacing retired generation facilities and developing infrastructure of decentralized power supply sector.

Integrated management of all subsidiary and dependent companies of PJSC RusHydro, established specifically to construct thermal power generation facilities in the Far East, is performed by RAO Energy Systems of the East (part of the RusHydro Group).

"THESE OUR FOUR CONSTRUCTIONS IN YAKUTSK, BLAGOVESHCHENSK, SOVETSKAYA GAVAN AND SAKHALIN ARE THE FIRST LARGE-SCALE PROJECT WITH THE INVOLVEMENT OF PUBLIC FUNDS IN THE ENERGY SECTOR OF THE FAR EASTERN FEDERAL DISTRICT OVER THE PAST 30 YEARS."

EVGENY DOD, CHAIRMAN OF THE MANAGEMENT BOARD - CEO OF PJSC RUSHYDRO

The Program for the Far East Energy Sector Development provides for the construction of four facilities in the Far East: CHP plant in Sovetskaya Gavan, the Sakhalinskaya SDPP-2 (1st stage), the Yakutskaya SDPP-2 (1st stage) and 2nd stage of the Blagoveshchenskaya CHP plant.

The projects of new facilities construction are funded from the budgetary funds intended for the Far East energy sector development. For these purposes, the Government pursuant to Decree of President of the Russian Federation allocated RUR 50 billion as part of recapitalization of PJSC RusHydro. <sup>G4-EC4</sup>

"THIS IS A MAJOR STEP TOWARDS THE DEVELOPMENT OF THE FAR EAST. WITHOUT ENERGY, THE REGION CANNOT DEVELOP, SO WE, ALONG WITH PJSC RUSHYDRO CREATE THE CONDITIONS FOR BUSINESS DEVELOPMENT IN THE FAR EAST."

YURI TRUTNEV, DEPUTY PRIME MINISTER OF THE RUSSIAN FEDERATION - PRESIDENTIAL PLENIPOTENTIARY ENVOY TO THE FAR EASTERN FEDERAL DISTRICT

"THE FAR EAST HAS BECOME A MAJOR CONSTRUCTION SITE OF PJSC RUSHYDRO."

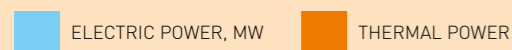
EVGENY DOD, CHAIRMAN OF THE MANAGEMENT BOARD - CEO OF PJSC RUSHYDRO

78 Decree №1564 dated November 22, 2012.

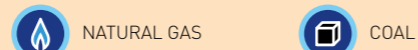
## PRIORITY PROJECTS OF THERMAL GENERATION IN THE FAR EAST: DESCRIPTION AND AIMS<sup>79</sup>

170  460	120  188	120  200	110  15
<b>1ST STAGE OF THE YAKUTSKAYA SDPP-2</b> Yakutsk, the Republic of Sakha (Yakutia) <b>2016</b>	<b>2ND STAGE OF THE BLAGOVESHCHENSKAYA CHP PLANT</b> Blagoveshchensk, the Amur Region <b>2015</b>	<b>CHP PLANT IN SOVETSKAYA GAVAN</b> Sovetskaya Gavan, the Khabarovsk Territory <b>2016</b>	<b>1ST STAGE OF THE SAKHALINSKAYA SDPP-2</b> Ilyinsky village, Tomarinsky District, the Sakhalin Region <b>2016</b> <b>Year of commissioning</b>
Replacing retired facilities of the Yakutskaya SDPP Moving consumers to centralized power supply Creating power reserve and improving reliability	Liquidating heavy deficit and covering future thermal power demand in Blagoveshchensk Decommissioning inefficient municipal boilers	Replacing retired facilities of the Maininskaya SDPP Ensuring growing electricity demand of special port economic zone Improving reliability of power supply to consumers of the Sovetskaya-Gavan power hub	Replacing retired facilities of the Sakhalinskaya SDPP Improving reliability of power supply to isolated Sakhalin island energy system Creating power reserve for economic growth of the region

### POWER OF THE PLANT:



### FUEL:



"THESE FOUR PLANTS ARE "A BREATH OF FRESH AIR" THAT ENERGY SYSTEMS NEED NOW IN VOLUME OF MORE THAN 500 MW. THREE TIMES OUT OF FOUR PLANTS ARE CONSTRUCTED TO REPLACE RETIRED FACILITIES – THE YAKUTSKAYA SDPP AND SAKHALINSKAYA SDPP-2 ARE DESIGNED TO REPLACE THE CORRESPONDING SDPP-1, WHICH HAVE LONG OUTLIVED THEIR USEFULNESS."

**SERGEI TOLSTOGUZOV**, CEO OF JSC RAO ENERGY SYSTEMS OF THE EAST

### Information about the Management Approach and Aims of 4 Priority Projects<sup>80</sup> of Thermal Generation in the Far East

"I AM CONVINCED THAT THE FAR EAST AND SIBERIA ARE A SPRINGBOARD FOR STRENGTHENING THE POSITION OF OUR COUNTRY, BOTH ECONOMIC AND POLITICAL. WE ALL HAVE TO BE HONEST WITH OURSELVES AND ADMIT OPENLY: AREAS BEYOND THE URALS, IN THE FUTURE, WILL FEED THE WHOLE COUNTRY."

**EVGENY DOD**, CHAIRMAN OF THE MANAGEMENT BOARD - CEO OF PJSC RUSHYDRO

The main purpose to implement the Program for Energy Sector Perspective Development in the Far Eastern Federal District is the maintenance of reliability and safety of power supply to existing consumers, and therefore, most of measures of the program are aimed at replacing generation facilities to be decommissioned, ensuring safety, improving efficiency and reliability of power supply.

## Main Stages of Development of the Program for Energy Complex Perspective Development in the Far Eastern Federal District till 2025<sup>81</sup>

Stage 1.	Research and analysis of current and forecast state and conditions of the Far Eastern Federal District energy complex operation, as well as of previously developed concepts for its development.
Stage 2.	Development of the construction program of new hydropower facilities on tributaries of the Amur River to control spillway to flood waters.
Stage 3.	Study of investment feasibility to implement priority investment projects on construction and reconstruction of power generation facilities.
Stage 4.	Basic technical solutions' development and action plan to develop energy facilities in the Far Eastern Federal District at the area of JSC RAO Energy Systems of the East responsibility.
Stage 5.	Research and analysis of social and economic impacts arisen from the implementation of measures of the Program for energy complex perspective development in the Far Eastern Federal District at the area of JSC RAO Energy Systems of East holding responsibility till 2025, for the regions and the Far Eastern Federal District as a whole.

Based on the analysis, more than half of all thermal generation plants in the Far Eastern Federal District were built over 30 years ago and now is worn out at 55-85%. About 2.6 GW of generating capacity is to be commissioned till 2025. As a result, a significant power deficit arises in the Far Eastern Federal District energy systems. To compensate it, RusHydro Group's investment programs provide for construction of new thermal power generation facilities in the Amur, Khabarovsk and Primorsk energy systems, as well as isolated energy systems of the Sakhalin region, the Chukotka and Kamchatka region.

"THE FAR EAST WILL NOT ATTRACT INTEREST OF INVESTORS OUT OF THE BLUE - WITHOUT ACCELERATED CREATION OF BASIC INFRASTRUCTURE, ENERGY INDUSTRY DEVELOPMENT, CONSTRUCTION OF ROADS AND NEW TRANSPORT HUBS, TAX BENEFITS. IT WILL MAKE THE REGION INVESTMENT-ATTRACTIVE AND COMPETITIVE, CREATE FAVORABLE ENVIRONMENT FOR DOING BUSINESS. IT WILL ENTICE ASIAN INVESTORS FROM OTHER MARKETS. BUT WITHOUT GOVERNMENT INFUSIONS IT CANNOT BE DONE."

**EVGENY DOD**, CHAIRMAN OF THE MANAGEMENT BOARD - CEO OF PJSC RUSHYDRO

Implementation of the projects, envisaged by the approved investment programs, does not ensure replacement of all capacity decommissioned. In addition, adopted moderate load growth forecast at an average of 1.6% per year till 2018, with acceleration to 7.1% per year till 2025 requires the commissioning of additional generation capacities in the south of the Primorye and Khabarovsk Territory. In this regard, plans are developed to construct additional thermal capacity in these regions and other regions of the Far Eastern Federal District.

"GIVEN THAT NOW OUR AGGREGATE CAPACITY IS 9 GW, IN THE COMING YEARS WE WILL REBUILD THE ENERGY SYSTEM ACTUALLY FROM THE SCRATCH, EVEN FOR THE IMPLEMENTATION OF A RATHER CONSERVATIVE SCENARIO.

AND IF ACTIVE IMPLEMENTATION OF PROJECTS OF ACCELERATED DEVELOPMENT TERRITORIES, WHICH NOW ARE BEING DISCUSSED BY THE GOVERNMENT, WILL START IN THE FAR EAST, THE REGION MAY NEED ANOTHER ABOUT 4 GW OF POWER."

**SERGEI TOLSTOGUZOV**, CEO OF JSC RAO ENERGY SYSTEMS OF THE EAST

### Progress Status of 4 Priority Projects of Thermal Generation in the Far Eastern Federal District

#### Priority Projects in the Far East: 2014 Major Results

- A full cycle of audits and approvals for all four projects was completed, including approval of the design and estimate documentation issued by FAI Glavgosexpertiza of Russia and an independent technical and pricing audit and discussion at the joint meetings of the Scientific and Technical Board of NP STC UES and the RAS Scientific Council on the problems of safety and reliability of large-scale power systems;
- Competitive selection of general contractors for construction works and supply of equipment was completed for all PJSC RusHydro's investment projects on the construction of thermal generation in the Far East in 2013 and 2014;
- The permission of the Ministry of Energy to spend budget funds allocated for the Far Eastern projects was received. During 2014 as part of the program for financing Far Eastern projects, RUR 9.4 billion was sent to pay construction and installation work and production of the equipment;
- By the end of 2014 at three sites, excepting the Sakhalinskaya SDPP-2, the construction has entered the active phase. The full-scale construction at the Sakhalinskaya SDPP-2 was started in the first quarter of 2015, i.e., after the reporting date:
  - Concrete work was begun at the base of foundation of the CHP plant in Sovetskaya Gavan;

<sup>79</sup> For the purposes of this Report the term "priority" includes four projects, which are financed by using special-purpose funding from the federal budget, with the exception of the Vostochnaya CHP plant in Vladivostok.

<sup>80</sup> For the purposes of this Report the term "priority" includes four projects, which are financed by using special-purpose funding from the federal budget, with the exception of the Vostochnaya CHP plant in Vladivostok.

<sup>81</sup> Details of the RusHydro Group's planned volumes of decommissioning of thermal generation in the Far Eastern Federal District and commissioning of thermal-generating capacity in 2015-2024 are available in the Appendix 2 [Program for the construction of new thermal power generation facilities in the Far East].

RusHydro Group: Progress Status of Priority Construction Projects in the Far East

1st stage of the Yakutskaya SDPP-2	The CHP plant in Sovetskaya Gavan	1st stage of the Sakhalinskaya SDPP-2	2nd stage of the Blagoveshchenskaya CHP plant
<p>In 2014, preparatory work to install monolithic force plate of the main building was began at the construction site</p> <p>This is an important step, as the core equipment of the future plant will be housed in the main building</p> <p>Active construction and installation work was carried out both on the primary and secondary sites, where by the end of the year, builders have installed about 4,000 piles</p>	<p>In 2014, a positive opinion of KGBU Unified state examination of project documentation and engineering survey results of the Khabarovsk Territory was received on a draft scheme of thermal power generation</p> <p>Specialists of the CHP plant in Sovetskaya Gavan started to place concrete in a foundations underneath framework of the main building and install metal columns, trusses and ceilings</p>	<p>In 2014, the Scientific and Technical Board of NP STC UES and the RAS Scientific Council on the problems of reliability and safety of large-scale power systems confirmed validity of the construction of the Sakhalinskaya SDPP-2 and endorsed the basic technical solutions</p> <p>In December 2014 Glavgosexpertiza of Russia issued a positive opinion on the estimated cost of the construction project of the Sakhalinskaya SDPP-2. The total estimated cost of 1st stage of the plant was RUR 34.753 billion</p>	<p>In 2014, crucial components of the turbine plant's generator - generator stator weighing 122 tons and generator rotor weighing 39 tons were delivered at the Blagoveshchenskaya CHP plant's site</p> <p>Installation of boiler unit and auxiliary equipment was started in boiler house, and more than 430 tons of boiler's steel structures were installed</p>

- The installation of core equipment at the 2nd stage of the Blagoveshchenskaya CHP plant is started;
- Construction of the Yakutskaya SDPP-2 is launched.

"I AM ABSOLUTELY CONVINCED THAT THE GOVERNMENT WILL NOT LOSE INTEREST IN THE FAR EAST. THERE ARE ALL PREREQUISITES FOR THAT. THE PRESIDENT IN HIS MESSAGE TO THE FEDERAL ASSEMBLY HAS DEFINED THE FAR EAST AS A NATIONAL PRIORITY FOR THE ENTIRE 21ST CENTURY."

EVGENY DOD, CHAIRMAN OF THE MANAGEMENT BOARD - CEO OF PJSC RUSHYDRO

The Blagoveshchenskaya CHP Plant

In December 2013, JSC Power Machines was selected to serve as general contractor for the construction of the 2nd construction stage of the Blagoveshchenskaya CHP plant. In 2014, works on assembling boiler unit and installing framework's blocks and heating surfaces were started at the site. About 420 tons of steel structures were installed. Works on installing formwork and reinforcing cages of the upper structure of turbine unit's basement were underway in the turbine room. At the construction site of cooling tower, foundations are made underneath its framework; reverse dumping of pit was performed.

The Yakutskaya SDPP-2

In January 2014, based on competitive selection results, JSC TEK Mosenergo was selected to serve as general contractor for the 1st construction stage of the Yakutskaya SDPP-2, General Electric was selected to serve as equipment supplier. Works were underway at primary and secondary sites of the Yakutskaya SDPP-2 since the spring of 2014. By the end of 2014, the bulk of work related to the construction site's preparation was completed at the facility; pitching of piles was started for all structures of the plant and preparatory work to install monolithic force plate of the main building was begun.

The CHP Plant in Sovetskaya Gavan

Based on competitive selection results, in June 2014 of JSC GlobalElektroServis was selected to serve as general contractor for the construction of the CHP plant in Sovetskaya Gavan. In 2014, works to bottom and place concrete in foundations underneath the framework of the main building were underway and works to prepare pits of joint auxiliary building and administration building were completed at the construction site of the CHP plant in Sovetskaya Gavan.

tractor for the construction of the CHP plant in Sovetskaya Gavan. In 2014, works to bottom and place concrete in foundations underneath the framework of the main building were underway and works to prepare pits of joint auxiliary building and administration building were completed at the construction site of the CHP plant in Sovetskaya Gavan.

The Sakhalinskaya SDPP-2 (1 stage)

In 2014, the Scientific and Technical Board of NP STC UES and the RAS Scientific Council on the problems of reliability and safety of large-scale power systems confirmed validity of the construction of the Sakhalinskaya SDPP-2 and endorsed the basic technical solutions and as a result in December 2014 Glavgosexpertiza of Russia issued a positive opinion on the estimated cost of the construction project of the Sakhalinskaya SDPP-2.

In December 2014, based on competitive selection results, JSC TEK Mosenergo was selected to serve general contractor for the 1st construction stage of the Sakhalinskaya SDPP-2. During the year, preparatory work to launch the construction was underway at the future plant's site.

Social and Economic Impact <sup>G4-EC7</sup>

The main objectives of the new thermal power plants in Yakutsk, in the Sakhalin Island and Sovetskaya Gavan are the replacement of worn-out facilities of old CHP plants and SDPPs operated in the regions. However, construction of new facilities will ensure reliable electricity and thermal power supply to existing customers and providing new infrastructure for future producing units, creating conditions to increase their investment attractiveness and further economic growth of areas of influence.

"REGIONS, IN WHICH OUR FOUR CONSTRUCTIONS ARE UNDERWAY, NOW, ARE THE MOST PROBLEMATIC AREAS ON THE ENERGY MAP OF THE FAR EAST. THE EARLY CONSTRUCTION OF NEW POWER FACILITIES THERE TO REPLACE WORN-OUT EQUIPMENT HAS BECOME A MATTER OF SURVIVAL FOR PEOPLE, CITIES AND SOCIAL INFRASTRUCTURE."

EVGENY DOD, CHAIRMAN OF THE MANAGEMENT BOARD - CEO OF PJSC RUSHYDRO

Four thermal generation facilities in Sakhalin, Yakutsk, Sovetskaya Gavan and Blagoveshchensk will provide almost 5,500 jobs for people who are directly engaged in the construction in the most peak periods, and for specialists who will operate the new plants.

Construction of the new Sakhalinskaya SDPP-2 in the island will increase coal production and will contribute to creating new jobs in Sakhalin Island.

Covering the deficit of thermal energy in the capital of the Amur region after commissioning of the second stage of the Blagoveshchenskaya CHP Plant should be a stimulus to growth in housing construction, contribute to the connection of new residential neighborhoods to heating supply. Blagoveshchensk, in virtue of implementation of a number of housing projects, experiences desperate shortage of thermal power. The existing CHP plant supplies to 80% of consumers in Blagoveshchensk; the deficit of heat in the city is 20%.

The CHP Plant in Sovetskaya Gavan will not only ensure power reserve and new jobs, but also the energy infrastructure for regional special port zone on the bank of the Tatar Strait in the Vanino village which provides for the construction of a multi-purpose port and ship-repair center, container and coal terminals, as well as fish and seafood processing plants. In addition, construction of the plant will be carried out taking into account energy needs of the Baikal-Amur Mainline.

Another set of expectations is the environmental improvement due to commissioning of the Yakutskaya SDPP-2, which will operate on natural gas from the Srednevelyuisky gas condensate field that will reduce the amount of harmful emissions into the atmosphere. After completion of the construction of the SDPP-2 part of urban boilers operated using liquid fuel will be decommissioned and the emission of pollutants into the atmosphere (decay products of diesel fuel) will be significantly reduced.

These projects already ensure sustainable growth of tax revenues to the budgets or will do so in the future, being, among other things, the sources to pump up the regional and local budgets and develop social environment.

Selection Results and Basic Parameters of Competitive Procedures <sup>G4-EC4</sup>

Project	Winner price bid, RUR billion	Starting (maximum) price, RUR billion	Contract	Winner
The Yakutskaya SDPP-2	17.381	19.687	general contract for construction	JSC TEK Mosenergo
The CHP in Sovetskaya Gavan	13.178	14.977	turnkey general contract	JSC GlobalElektroServis
The Blagoveshchenskaya CHP	7.316	7.917	turnkey general contract	JSC Power Machines
The Yakutskaya SDPP-2	1.519	2.053	general contract for construction of heat networks	JSC GlobalElektroServis
The Yakutskaya SDPP-2	3.49	4.008	general contract for the supply of equipment	GE Packaged Power Inc.
The Sakhalinskaya SDPP-2 (turnkey general contract)	29.999	30.236	turnkey general contract	JSC TEK Mosenergo

Financing the Construction of Four Priority Projects in the Far Eastern Federal District in 2014

IN 2014, THE COMPANY SENT MORE THAN RUR 9.4 BILLION OF BUDGETARY FUNDS FOR THE CONSTRUCTION OF THERMAL POWER PLANTS IN THE FAR EASTERN FEDERAL DISTRICT

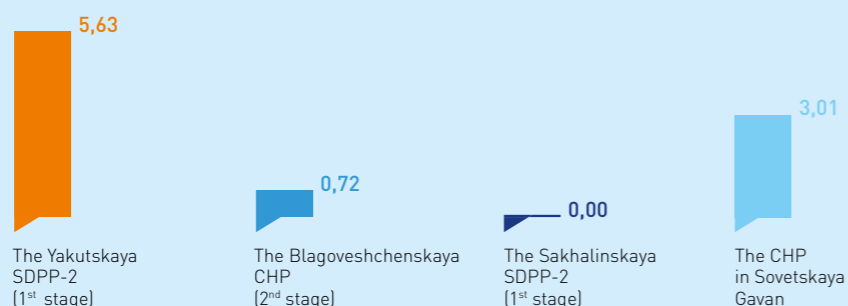
<sup>G4-EC4</sup> In March 2014, the Ministry of Energy issued PJSC RusHydro a permit to spend budgetary funds for the Far Eastern projects. During 2014 as part of the program the

Company sent RUR 9.4 billion to pay the construction and installation works and equipment production. Nearly RUR 4 billion more were transferred to the general contractor of the Sakhalinskaya SDPP-2 after the reporting date. Thus, by the beginning of active stage of construction of four Far Eastern facilities, the total amount of financing from budgetary funds received by PJSC RusHydro in pursuance of Presidential Decree for developing energy sector of the Far East was RUR13.4 billion.

Money was transferred in the framework of a mechanism to ensure full transparency of spending of budgetary funds<sup>82</sup>.

<sup>82</sup> For more details see Section 1.2.5. Monitoring Proper Use of funds.

## 2014: ACTUAL USE OF BUDGETARY FUNDS, RUR BLN



The amount of funding from special-purpose budgetary funds to develop energy sector of the Far East was RUR 13.4 billion, including RUR 9.4 billion in 2014

## 3.2. HUMAN RESOURCE DEVELOPMENT AS A LONG-TERM GROWTH GUARANTEE

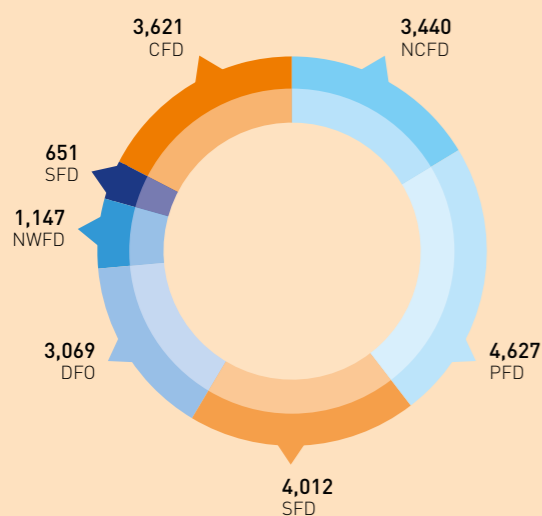
### Human Resources: Social and Human Resources Policies

<sup>G4-DMA</sup> Employees of RusHydro are a team of professionals who work at dozens of hydropower plants in the Russian Federation and abroad. The Company considers its employees to be the main resource. In recent years, a trend

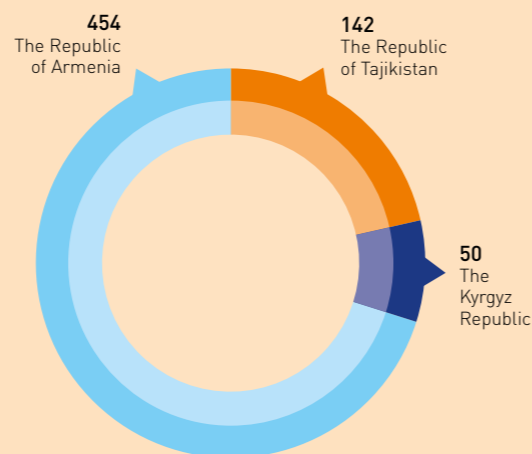
of influx of young cadres to RusHydro companies' objects is observed that can be considered to be a positive result of the programs in the field of personnel management.

### Total Labor Force <sup>G4-9 and G4-10</sup>

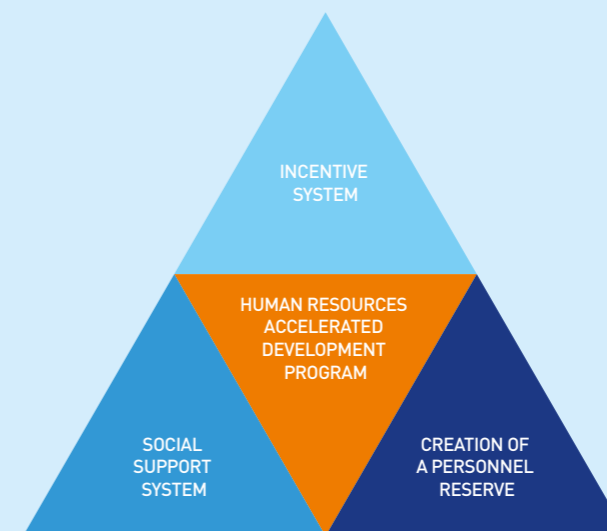
### THE RUSHYDRO HOLDING: THE NUMBER OF EMPLOYEES IN THE RUSSIAN FEDERATION BY THE SUBJECTS OF THE RUSSIAN FEDERATION (AS OF DECEMBER 31, 2014)



### THE RUSHYDRO HOLDING: THE NUMBER OF EMPLOYEES OUTSIDE THE RUSSIAN FEDERATION BY A REGIONAL BASIS (AS OF DECEMBER 31, 2014)



## CORPORATE AND SOCIAL POLICY OF PJSC RUSHYDRO: MEASURES TO ATTRACT AND RETAIN LABOR FORCE



IN 2014, THE ACCOUNTABLE NUMBER OF EMPLOYEES OF THE RUSHYDRO HOLDING WAS 21,213 PEOPLE (INCLUDING FACILITIES IN THE RUSSIAN FEDERATION AND ABROAD)

### Measures to Attract and Retain Labor Force

One of significant risks for PJSC RusHydro is the risk of shortage of key personnel. In accordance with the Strategic Risk Management Plan the Company implements human resources accelerated development programs and creates personnel reserve, incentive system and social support system. The measures should create long-term competitive advantage that will attract and retain skilled personnel.

Execution of these tasks should contribute to the implementation of PJSC RusHydro's socially responsible position and achievement of the following aims:

- Developing the State's national projects and implementing the Company's socially responsible position;
- Developing the mutual responsibility practice and social partnership;
- Improving PJSC RusHydro's attractiveness as an employer to attract and retain the best employees.

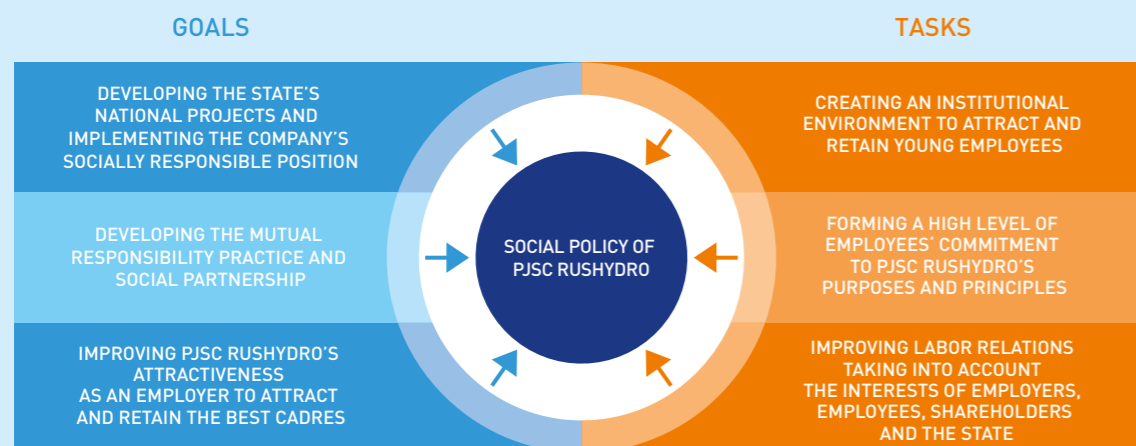
### 3.2.1. Implementing Social Policy

<sup>G4-DMA</sup> The Company approved PJSC RusHydro's Social Policy, adopted in 2013, which formulates "equal conditions for all employees during the organization of intra-corporate migration of employees" and identifies three main tasks in the field of personnel management and development:

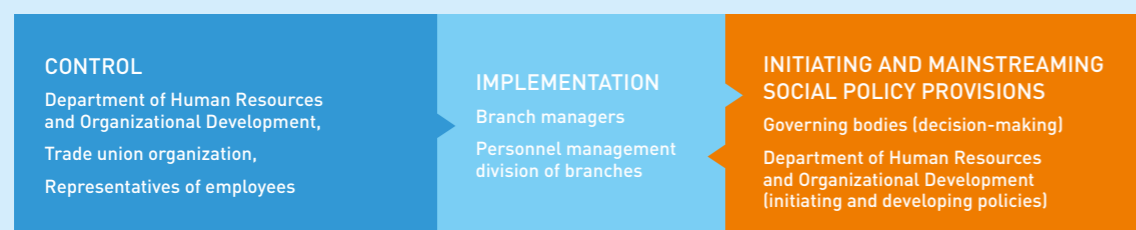
DMA

- Creating an institutional environment to attract and retain young employees;
- Forming a high level of employees' commitment to PJSC RusHydro's purposes and principles;
- Improving labor relations taking into account the interests of employers, employees, shareholders and the State.

## SOCIAL POLICY OF PJSC RUSHYDRO

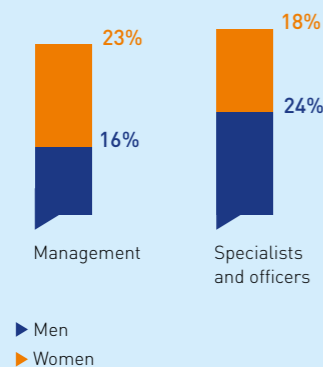


## MANAGING SOCIAL POLICY

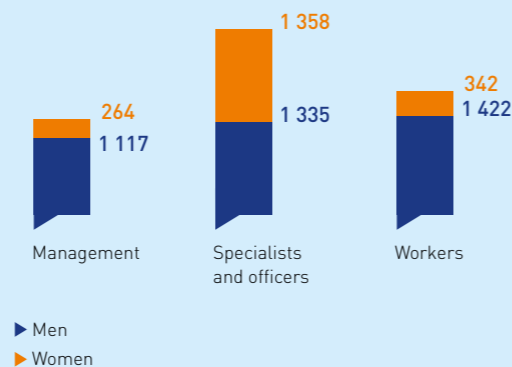


## PERCENTAGE OF EMPLOYEES OF PJSC RUSHYDRO'S BRANCHES, WHICH PERFORMANCE AND CAREER DEVELOPMENT WERE ASSESSED IN 2014, BY GENDER AND CATEGORIES, % <sup>G4-LA11</sup>

Percentage of the total number of employees



## THE TOTAL NUMBER OF EMPLOYEES AS OF DECEMBER 31, 2014 BY GENDER AND CATEGORIES, PERSONS <sup>G4-LA12</sup>



## Implementing Social Policy

### Personnel Management: Attracting and Retaining Labor Force <sup>G4-DMA (former EU14)</sup>

An important strategic area of RusHydro's activities, which ensures an effective implementation of its current and future aims and tasks, is the human resource development. Personnel development expenses are considered by the Company's management to be an important component of investment in human capital.

### Recruiting and Assessing Personnel

Personnel recruitment for all positions in a company of RusHydro Holding, including managerial positions is based on a competitive basis. All candidates, regardless of gender or nationality, have equal opportunities to take any given position taking into account their qualifications. Special procedures for locals' hiring are not developed in RusHydro Holding, but in critical regions where the Company operates, an increasing number of employees, including middle managers, are in fact locals. <sup>G4-EC8</sup>

The RusHydro Holding's personnel is periodically certified for the compliance with the position, in which the professional, business and personal qualities of employees and the results of their professional activity are assessed. Managers, specialists and employees of the Holding's companies, regardless of gender, are certified once every three years. A number of employees were certified as planned in 2014. <sup>83, G4-LA11</sup>

### Establishing an Efficient Incentive System for Employees <sup>G4-DMA</sup>

Establishing an efficient and flexible system to attract and retain employees lies at the root of activities in the field of personnel management. Much attention in this regard is paid to personnel motivation, material and moral incentives, as well as social protection. Starting in 2013, the growth rate of average wages for the year in PJSC RusHydro consistently outpaced the consumer price index (CPI).

In 2014, PJSC RusHydro's salary fund and insurance payments increased by 27% and amounted to RUR 10,635 million, including indexation of wages of employees for the consumer price index in accordance with the collective agreement, as well as contributions from salary fund and employment insurance expenses.

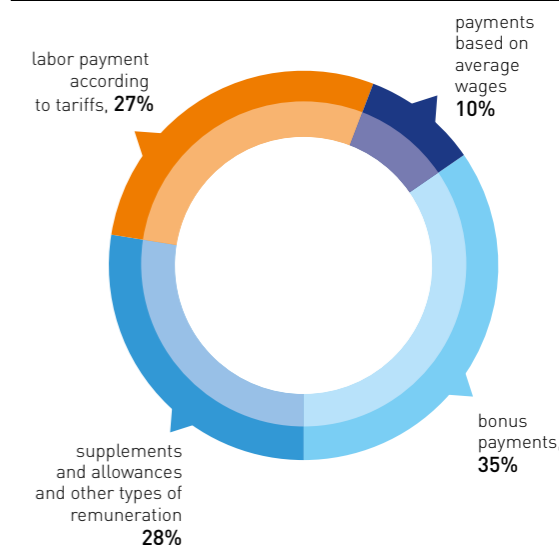
The average monthly wage per an employee of core activities increased by 119.8%. This is due to the quarterly indexation of the minimum monthly tariff rate for the consumer price index, in accordance with paragraph 3.3 of the Industrial Tariff Agreement in the Electric Power Industry. In 2014, 35% of bonus payments and 28% of supplements and allowances (including regional coefficient, northern allowance, continuous service benefit, and other types of remuneration) were in the average salary structure.

### Standard Collective Agreement (SCA)

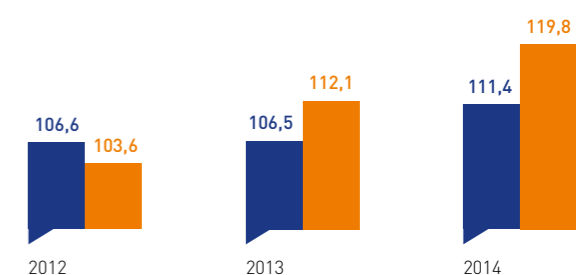
PJSC RusHydro is a member of the All-Russian Industrial Association of Employers in the Electric Power Industry, collective agreements are concluded in all branches, except the Corporate Hydropower University (CorHUN), and in most subsidiaries and dependent companies (60% of the total number). <sup>G4-11</sup>

The Standard Collective Agreement (SCA) is the main document that regulates social and labor relations in the RusHydro's companies. This document provides a number of guarantees and benefits for the Company's employees.

## 2014: SALARY STRUCTURE, %



## 2012-2014: CPI GROWTH RATES AND AVERAGE MONTHLY WAGES RATIO



- ▶ Consumer price index for goods and services in the Russian Federation
- ▶ Growth rates of the average monthly wages

In 2014, a new CA for the period till 2016 inclusive came into force. The new version of 2014-2016 JSC RusHydro's CA was finalized in accordance with the Industrial Tariff Agreement in the Electric Power Industry of the Russian Federation for 2013-2015, and in accordance with the Company's Social Policy approved in 2013.

Standard collective agreement is specified during collective bargaining process involving representatives of trade union organizations and labor collectives. The content, structure and procedure for entering into CA are defined in Article 41 of the Labor Code (LC) of the Russian Federation, which entitles the parties freely define the content and structure of the collective agreement through negotiations. The collective agreement does not include a provision on the minimum period of notice to employees due to significant changes in CA, the provision is governed by the Labor Code. <sup>G4-LA4</sup>

<sup>83</sup> Data are given only for JSC RusHydro and do not include SDCs as at the time of the report data on some SDCs were not presented. For more details see Quantitative



Standard minimum notice period to employees about the upcoming significant changes in the Company's activities, which may significantly affect their interests, is not less than two months (Article 180 of the LC RF). These changes, inter alia, include dismissal in case of liquidation of organization or staff redundancy. Negotiations may be held in case of disputable situations, including the collective with the involvement of trade unions. According to the Labor Code of the Russian Federation, the negotiations should be started within seven days after the request sent by the initiating party.

## Social Support System

### Social Guarantees and Benefits for Employees

<sup>G4-LA2</sup> All social guarantees and benefits for employees were retained in full in the new CA, and include:

- non-state pension provision and VMI;
- additional paid days of family responsibility leave;
- financial assistance to employees and their families, pensioners of a branch;
- one-off payments to employees;
- employees' child care;
- family and motherhood support;
- healthcare support, health maintenance and promotion of healthy lifestyle;
- socio-professional adaptation of children from orphanages.

The new CA version was supplemented with relevant provisions of the Social Policy and the Socio-Professional Adaptation Program for Children from Orphanages adopted by JSC RusHydro in 2013. In addition, the new CA includes a section on the benefits and payments to parents - adoptive parents and guardians. Besides, employees with family responsibilities received additional privileges: it provides for material benefits for parents of first-graders and graduates and additional paid leave for those who sees off child in first grade.

Guarantees and benefits included in the collective agreement apply to all employees, who have concluded an em-

ployment contract, regardless of the conditions of employment (for full-time, temporary or part-time employees). <sup>G4-LA2</sup>

### Insurance Programs

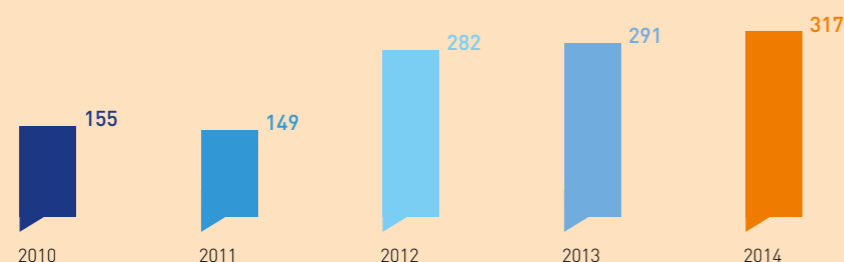
Corporate Insurance Program for employees is an effective tool to motivate and retain staff. In addition to the compulsory pension and medical insurance, PJSC RusHydro offers employees the opportunity to participate in the Non-State Pension Provision Programs (NSPP) and voluntary medical insurance (VMI). In 2013, the NSPP system covered about 50% of PJSC RusHydro's employees. This indicator is lower for RusHydro Group because the NSPP program does not cover all SDCs of the Company that depend on the financial performance of SDCs' activities in the long run. In respect of the pension obligations, RusHydro on an ongoing basis performs actuarial calculations, which minimize the risk of incomplete coverage of these obligations. <sup>G4-EC3</sup>

The selection of insurance companies which provide VMI coverage for RusHydro Holding's personnel is carried out annually on a competitive basis. Based on results of open competition, insurance companies that can provide the most reliable and complete personal health insurance coverage for RusHydro Holding's employees are selected. Official insurer on 2014 VMI programs was an insurance company Alliance.

### Housing Program for Employees

Young specialists under the age of 30 who do not have a separate home ownership as well as specialists who have moved from another region and key and highly skilled employees are granted the priority right to participate in the housing program. PJSC RusHydro compensates for mortgage interests, as well as rental home expenses of the employees who received diplomas in profiled professions and employed in the Company within three months after graduation from higher educational institutions of the Russian Federation whom a strategic partnership agreement have been concluded with. Furthermore, the Company assists all employees to improve their housing conditions by organizing cooperation between them and the credit, realtor and insurance organizations in order to establish preferential tariffs or other favorable conditions for its employees.

THE NUMBER OF PARTICIPANTS OF THE HOUSING PROGRAM IN 2010-2014, PERSONS



### New Areas of Social Programs Implemented in 2014:

- Developing and implementing the Healthy Generation Program, providing sanatorium-and-spa treatment and health improvement and tourist rest, organizing expanded medical surveillance of employees who hold key positions in the Russian and foreign clinics;
- In 2014, as part of the VMI Program and the Sanatorium-and-Spa Treatment Program, the Branch's employees were able to rest in sanatorium and spa resorts of the Crimean Federal District. PJSC RusHydro's employees as well as their spouses, children and parents benefited from the program. From August to December 2014 over 2,200 people visited the Crimea.

### Human Rights

The basic approach of PJSC RusHydro to respect for human rights is the fulfillment of all legal requirements of the Russian Federation. The Company does not conduct its activities and does not enter into investment agreements in the regions where a high risk of human rights violations is. <sup>G4-HR1</sup> The Company guarantees its employees observance of their right to work, rest, the right to maintenance in old age and in case of loss of working capacity. They are implemented in accordance with the Labor Code of the Russian Federation.

Employees of the Holding's companies are able to fully realize their right to freedom of association. Trade unions are established and operate freely in most companies of RusHydro Holding. <sup>G4-HR4 and G4-DMA</sup>

### Feedback Techniques and Influence of Labor Collective on Management

<sup>G4-DMA</sup> To improve the efficiency of interaction between labor collective and management, as well as employees of various SDCs between themselves, and in the framework of intra-corporate site there are internal corporate portal and forum ([www.blog.rushydro.ru](http://www.blog.rushydro.ru)). The Company periodically publishes news, regulatory and administrative documents of the Company and posts background information as well as information about the Group-wide performance at the portal. Internal corporate monthly print publication RusHydro Bulletin traditionally wins the competition among corporate print publications.

To connect governing bodies with the staff, inform and consult employees, as well as ensure feedback between employees and management, the public reception and dedicated communication feedback channel Whistle-blowing Line are created in the Holding's companies. When signing new collective agreements or changing current agreements, meetings and discussions between PJSC RusHydro's management and trade unions are held at the request of either party.

### 3.2.2. Maintaining a High Qualification Level of Employees and Developing Human Resources

#### Selecting and Developing Qualified Human Resources

#### Human Resources Accelerated Development Programs

Human resources development was and remains the Company's strategic task and was included in the list of priorities for 2014. Personnel development expenses are considered by PJSC RusHydro's management to be the most important component of investment in human capital. <sup>G4-DMA</sup>

AVAILABILITY OF QUALIFIED AND RESPONSIBLE MANAGERIAL PERSONNEL, SPECIALISTS AND WORKERS IS A KEY STRATEGIC TASK, WHICH THE COMPANY'S ACTIVITY IS FOCUSED ON IN THE FIELD OF PERSONNEL MANAGEMENT.

JSC RusHydro's Concept of Accelerated Development of Human Resources "From the new school to the workplace", implemented by the Company from September 2010, determines the personnel policy taking into account the forecast of RusHydro Holding's companies' required qualification labor supply.

The Company applied the "corporate lifts" model which helps it to train hydropower engineers from school, provide ample opportunities for career planning and professional growth at each stage. PJSC RusHydro aims to create an institutional environment that includes an internal mentorship in the workplaces system, the Corporate Hydropower University, the Sayano-Shushenskaya branch of the Siberian Federal University, located in close proximity to the largest HPP and a network of profile universities and colleges of the federal and regional levels.

The system is aimed at attracting and supporting future specialists from school to joining the RusHydro Holding's companies, at improving the image of the profession and retaining the dynasties of professionals of the hydropower energy industry.

"THIS IS A LARGE-SCALE VOCATIONAL GUIDANCE PROGRAM DUE TO WHICH OUR COMPANY WILL SOON EMPLOY HIGHLY QUALIFIED YOUNG EMPLOYEES, INVOLVED IN PROFESSION OF HYDROPOWER ENGINEER FROM THEIR CHILDHOOD AND MOTIVATED TO WORK IN THE COMPANY. WE WORK WITH MAJORITY OF SCHOOLS IN ALL REGIONS WHERE PJSC RUSHYDRO OPERATES, OPEN ENERGY CLASSES, ORGANIZE SUMMER EDUCATIONAL SCHOOLS, AND COOPERATE WITH UNIVERSITIES AND COLLEGES."

VADIM GALKA, HR DIRECTOR OF PJSC RUSHYDRO

### Corporate Lift – the New School Stage

In 2014, as part of the stage of Corporate Lift – the New School, the following educational projects were implemented:

#### Technical Creativity Centers (TCC) and Hydroenergy Classes for Secondary School Students

The Company organizes support and supports 16 technical creativity centers and seven hydroenergy classes of secondary schools in the regions of presence. The largest of these was organized in the village of Cheremushki, and during 2014 it admits about 105 secondary school students and includes 11 groups. In 2014, two new energy classes of Municipal Autonomous Educational Institution Secondary School №15 in Nevinnomyssk of Federal State Institution of Vocational Education Nevinnomyssk Energy College were launched in Balakovo.

With the support of PJSC RusHydro, the Company's TCC groups and secondary school students of energy classes participated in the World and International competitions, All-Russian, Republican competitions and contests, as well as two city's theoretical and practical conferences. In 2014, 45.95% of graduates entered the Energy HEIs, 32.43% of graduates were enrolled in technical specialties.

#### Summer Energy School 2013

In the Volgograd region, PJSC RusHydro's Corporate Hydropower University successfully organized and hosted the fourth Summer Energy School (SES), which was attended by 35 children from 11 regions. This project is held annually as part of PJSC RusHydro's human resources accelerated development program "From the New School to the Workplace", being implemented by the Company from Septem-

ber 2010. Following the results of the educational program, secondary school students developed projects "Hydropower industry in XXI century", which were presented to a commission of SES's teachers and PJSC RusHydro's experts.

### Energy of Education – 2014

In 2014, over 750 secondary school students from 48 regions of Russia and CIS countries took part in the Energy of Education Corporate Physics Olympiad for high school students organized by PJSC RusHydro, including students from hydroenergy classes. PJSC RusHydro holds Corporate Olympiad annually with methodical support of NRU MPEI, and is a qualification phase as part of the Hope of the Power Industry Federal Olympiad. In 2014, two Far Eastern Universities joined the Energy of Education Olympics – the Amur State University and the Far Eastern Federal University.

41 people were prize winners and winners at the Energy of Education Olympiad, 11 out of them were school graduates, more than half of which entered technical higher educational institutions.

### Learning the Foundations of Hydropower Industry

As part of the Energy of Education Vocational Guidance Program, educational-enrichment and guidance materials on the hydropower subject were distributed among teachers and secondary school students, and lectures on career guidance and methodical seminars were held for high school students and school teachers.

The book of History of Russian Hydro Power Industry was prepared and published in 1,000 copies, which is a continuation of the series of books of The History of Russian Water Power Engineering and The History of Water Power Engineering in the USSR.

### Corporate Lift-Educational Institution/Higher Educational Institution Stage

Availability of qualified personnel is a necessary condition for sustainable development and reliable operation of PJSC RusHydro's technical system. The Company in cooperation with profile institutions conducts systematic work to train qualified personnel, and is actively involved in the development of professional standards in the field of hydropower industry.

In 2014, 338 students undertook internship in the Company's branches and 55 graduates of higher educational institutions were employed by the Company. In 2014, 62 children of employees, who successfully studied the Company's profile professions in profile higher educational institutions, received corporate scholarships - thus, the Company seeks to increase the prestige of the profession and preserves dynasties of hydropower engineers within RusHydro Holding.

### As part of cooperation with partner universities in 2014 the Company organized:

- All-Russian scientific practical conference for young researchers, professionals, postgraduates and students "Hydroelectric power stations in 20th century";
- Competition of Student's Projects on Hydropower "Energy of Development 2014";
- professional and career development training seminars and workshops for students of SFU SSHF;
- adjustment of educational programs that are relevant to the Company in conjunction with the Amur State University;

- analysis of candidates (students of 4-5 courses of SFU SSHF (66 people)) to form a database of external personnel reserve of PJSC RusHydro;
- development of training programs at the base of and in conjunction with MPEI to improve the skills of employees of PJSC RusHydro in the field of hydro power industry;
- development in conjunction with the Lyceum No1502 of MPEI of 24 lectures and more than 150 drills on physics for Energy classes training programs;
- equipping laboratory complex of the basic Company's Chair "Hydropower and Renewable Energy Sources" of MPEI, to develop higher and continuing professional education system (including the purchase of equipment for the experimental laboratory complex and transfer of HPP switching training simulator, which students will learn to work during job training in 2015).

### Five HPP Operation Professional Standards approved

In 2014 with the active involvement of PJSC RusHydro the work to develop professional standards for the hydropower industry's employees was continued. The work resulted in the approval of the first package: on November 27, 2014 at the meeting of the National Council for Vocational Qualifications 8 professional standards on the hydropower industry first time in the fuel and energy complex have been recommended for approval by order of the Ministry of Labor of the Russian Federation.

To work on professional standards, heads of the production unit, executive apparatus of PJSC RusHydro, the best specialists of operating branches, repair units, research and development complex of RusHydro Holding were attracted.

The work was conducted as part of the implementation of the Presidential Decree "On Measures for Realization of the State Social Policy"<sup>84</sup> along with the basic partner universities of PJSC RusHydro, members of NP Hydropower of Russia and the Association of Employers in the Electric-Power Industry (ORaEI). In total 260 people were involved to work as experts.

### Corporate Lift - the Company Stage

RusHydro Holding's existing professional development and training system allows the Holding's employees on job to continuously improve the level of professional qualification, knowledge and skills, provide a stable personnel reserve and the Company's human resource growth. As part of the Corporate Lift - Company stage on-site and remote trainings are provided.

IN 2014, THE TOTAL STAFF TRAINING EXPENSES WAS RUR 185.3 MILLION.

Key elements to manage this system are PJSC RusHydro's Human Resources Management Department and branch the Corporate Hydropower University (CorHUN). CorHUN is a research, information, educational, methodical and consulting center of PJSC RusHydro. The primary tasks of the university are to maintain system reliability and sustainable development of PJSC RusHydro through the development of personnel competence and personnel training for the energy industry.

CorHUN includes multi-level training system on the basis of the existing training centers, with a possibility of on-site and remote trainings. The Sayano-Shushenskaya Training Center (SSH TC) is one of the centers.<sup>G4-LA10</sup>

### Competitions of HPP Operating Personnel

In 2014, the sixth year in a row, the annual All-Russian competitions of HPP operating personnel among Holding's employees organized by CorHUN, were held. To improve and assess the professional standard of hydroelectric power plants' operating personnel, disseminate best practices and new ways of working, competitions of professional skills are conducted. They are an integral part of personnel training.

In 2014 by the Decree of the Minister of Labor and Social Protection of the Russian Federation All-Russia competitions of HPP operating personnel received the status of All-Russian competition of professional skill "Best in Profession" in the nomination "Best Hydroelectric Unit Operator."

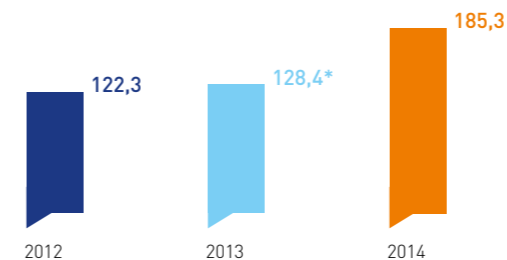
Personnel Training and Human Resource Development of PJSC RusHydro are planned and implemented at certain intervals using the following forms:

- further training - not less than once every three years;
- vocational education and training - according to the requirements of supervisory authorities in case of need to obtain a new profession;
- occupational retraining - new types of professional activities or preparation of a personnel reserve for operational reasons;
- corporate training - provided, if necessary, to address problems which are specific for the Company with the involvement of the Company's employees or external trainers;
- internal production and technical training - annually;
- short-term training programs of educational institutions - annually, depending on operational reasons;
- remote training - annually, depending on operational reasons.

In 2014, 6,305 employees of the Holding received vocational education and training. Half of them were specialists and employees (3,165 people), 34% were employees of executive level (2,121 people), and 16% were workers (1,019 people). Corporate Hydropower University conducted remote and on-site training for 4,410 employees.

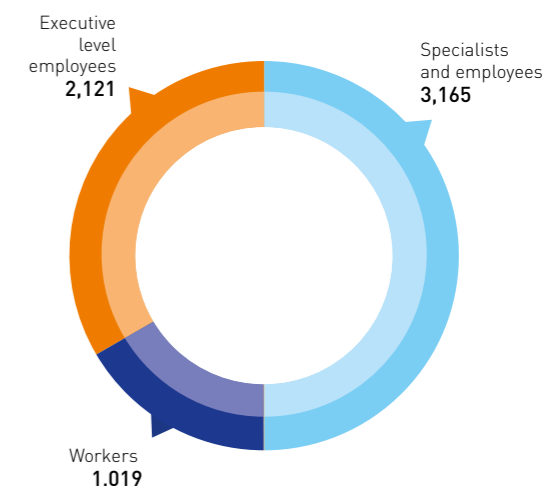
In 2014, human resource development aggregate costs, including all corporate lifts, were RUR 185.3 million.

### 2012-2014: DYNAMICS OF THE HUMAN RESOURCE DEVELOPMENT EXPENSES, RUR MILLION



\* Expenses involved in conducting the All-Russian competition of HPP operating personnel that PJSC RusHydro's held every two years were not reflected in 2013 expenses.

### HUMAN RESOURCE DEVELOPMENT: TRAINING OF EMPLOYEES IN 2014, BY CATEGORIES, PERSONS



### Forming and Training Personnel Reserve

As part of the human resource accelerated development program, the Company formed a functional personnel reserve of prospective employees not older than 30 years. Specialists undergone qualifying competitive selection are trained in the Corporate Hydropower University. The training program includes training modules with the involvement of the energy industry's advanced specialists, design sessions, internships and others. Along with students and postgraduate students of HEIs the involvement of the Company's young specialists to work on R & D projects is envisaged.

### As part of working with personnel reserve in 2014:

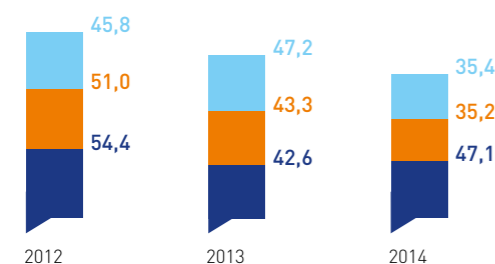
- based on results of the qualifying competitions, three current personnel reserves were formed;
- module training program for all functional personnel reserve was launched;
- training modules II and III were conducted for prospective personnel reserve RES-2 (19 people and 15 people, respectively);
- as part of module I training was organized and conducted:
- on the theme HPP Asset Management Key Approaches for the participants (10 people);
- on the theme Development of Professional Competence for the participants (23 people);
- on the theme Production Asset Management for the participants (84 people).

84 Decree №597 dated May 7, 2012.

2013-2014: competitions were held to select in the functional personnel reserve (for positions)	Selected in the reserve, pers.
Branch Director*	5
EMS and HTS*	13
Production and Technical Service *	16
Technical Deputy Chief Engineer	12
Deputy Chief Engineer for Operations	10
Operating Service	13
Chief Engineer	2

\* 2014 personnel reserve.

PJSC RUSHYDRO: TRAINING BY EMPLOYEE CATEGORIES OVER TIME (2012-2014). AVERAGE NUMBER OF TRAINING HOURS PER EMPLOYEE PER YEAR HOURS/PERSONS)\* G4-LA9



- Management
- Specialists and employees
- Workers

\* The graphs reflect the average indicator - the average number of people-hours, which is determined by summing the time actually spent on training (undergoing of special training programs aimed at improving the skills) for each category of employees with respect to the statistical number of employees in each category, both in main working time and beyond it.

### 3.2.3. Labor Organization and Ensuring of Employee Occupational Safety

**G4-DMA** PJSC RusHydro has a modern occupational health and safety management system, which is updated taking into account the changes in the federal legislation in this area and structural changes in the Company. Each year RusHydro carries out activities to prevent occupational injuries, perform sanitation measures to prevent occupational illnesses, provide employees with personal protective equipment, as well as assess employees' work places. Due to the nature of activities the Company pays great attention to the creation of safe and favorable working conditions for its employees.

### Goals and approaches of the management in the field of labor organization and occupational safety:

- continuously improving occupational safety and fire safety, ensuring control over implementation of these commitments;
- achieving steady decline in accidents and injuries;
- improving industrial safety of the Company's production facilities to a level that corresponds to the best performance in the energy generating companies in the world by providing timely technical re-equipment and improvement of reliability, safety and trouble-free operation of process equipment;
- establishing and maintaining the Company's effective and efficient management system in the field of occupational health and safety;
- reducing industrial risks at new and reconstructed facilities by improving the preparation quality of project documentation and executing examinations.

THE COMPANY'S PRIORITY IN THE FIELD OF LABOR ORGANIZATION, HEALTH PROTECTION AND INDUSTRIAL SAFETY IS THE PRESERVATION OF LIFE AND HEALTH OF EMPLOYEES IN THE COURSE OF THEIR EMPLOYMENT.

### Reflecting Health and Safety Issues in Formal Agreements with Trade Unions G4-LA8

Health and safety issues are fully included in Section "Occupational Safety" of the Sectoral Tariff Agreement in the Electric Power Industry of the Russian Federation for 2013-2015 and in Section "Occupational Safety" of the branches' Collective Agreements for 2014-2016. In addition, bylaws to ensure the safety and working conditions which comply with national statutory requirements in the field of occupational health and safety at each workplace and work site, shall be approved based on the reasoned opinion of the trade union organization (providing workers with personal protective equipment, a comprehensive plan for recreation activity, etc.)

### Key Strategies and Procedures G4-DMA (former G4-EU16)

RusHydro's key strategy is a systematic and integrated planning, management, reporting procedure, monitoring and improvement of management system of labor organization, occupational health and industrial safety.

### Internal Policies and Health Protection Requirements

JSC RusHydro's Technical Policy contains uniform require-

ments for the integrated control system of safety management of production process, which includes, inter alia, the occupational health and safety management subsystem.

The Company implements the Policy in the field of labor organization, occupational health and industrial safety as part of the Operational Action Program for Occupational Injury Prevention at the Company's facilities<sup>85</sup>, adopted in 2011 and the Plan of Action for Labor Protection, Industrial and Fire Safety at the Company's facilities for 2014 - 2020<sup>86</sup> adopted in 2014.

### International Standards

The Technical Policy's provisions in the field of occupational health and safety management are geared towards the requirements of the labor legislation of the Russian Federation, the Interstate standard GOST 12.0.230-2007<sup>87</sup> and the International Standard OHSAS 18001: 2007. Since

2011, pilot projects for the implementation and certification of occupational safety and health management system in accordance with the standard OHSAS 18001: 2007<sup>88</sup> were implemented in three branches.

In 2014, OHSAS 18001 certified management systems were audited:

- re-certification audit was conducted in the Cascade of Upper Volga HPPs branch;
- certification audit was conducted in the Nizhny Novgorod HPP branch.

### Measures and Results in the Field of Labor Organization, Occupational Health and Safety

In 2014, as part of labor protection's measures the following activities were carried out: in the Holding's companies

TO PREVENT OCCUPATIONAL INJURIES	TO PROTECT HEALTH AND PREVENT DISEASES AT WORKPLACE
<ul style="list-style-type: none"> <li>Conducting monthly telephone conferences with staff of the branches' Occupational Health and Safety and in Process Control Services (OHSPCS) and SDCs of the Company on OHSPCSs' production activities to improve the efficiency of work in terms of OHS and industrial safety with employees of contractors;</li> <li>Increasing technical and technological supervision, production control in the field of OHS of working teams of contractors;</li> <li>Holding monthly Days of occupational health and safety and fire safety;</li> <li>Carrying out mandatory medical examinations of employees engaged in work with harmful and dangerous production factors;</li> <li>Purchasing first-aid kits and medicaments to update medicine set of first-aid kits;</li> <li>Providing briefings on occupational health and safety and organizing training and testing of employees on OHS;</li> <li>Equipping cabinets and occupational safety and health desks with information stands, simulators, training programs;</li> <li>Practical training of personnel to provide first aid to the injured persons;</li> <li>Providing personnel with special clothing, safety footwear, personal protection equipment, as well as organizing storage of the said means, taking care of them, repairing and replacing;</li> <li>Assessing workplaces on working conditions, implementing action plans for the improvement and sanitation of working conditions based on the results of assessment of working conditions within workplaces..</li> <li>Providing persons employed in jobs with hazardous working conditions with milk or equivalent products..</li> </ul>	<ul style="list-style-type: none"> <li>Conducting pre-trip and post-trip medical check-up of drivers;</li> <li>Training in prevention of infectious diseases;</li> <li>Personnel vaccination;</li> <li>Organizing visits sports complexes and swimming pools as well as sanatorium-and-spa treatment of employees;</li> <li>Carrying out production control over observance of sanitary regulations and implementation of sanitary and anti-epidemic measures;</li> <li>Making the rounds and inspecting workplaces;</li> <li>Acquiring normative and technical documentation, including electronic information;</li> <li>Analyzing review of injuries in companies of the electric-power industry of the Russian Federation;</li> <li>Ensuring drinking regime of employees;</li> <li>Providing personnel with washing agents and detergents;</li> <li>Performing pest control and extermination works.</li> </ul>

<sup>85</sup> Approved by the order of JSC RusHydro №632 as of June 28, 2011.

<sup>86</sup> Approved by the order of JSC RusHydro №311 as of April 21, 2014.

<sup>87</sup> GOST 12.0.230-2007 Occupational safety and health standards system. Occupational safety and health management system. General requirements, adopted by the order

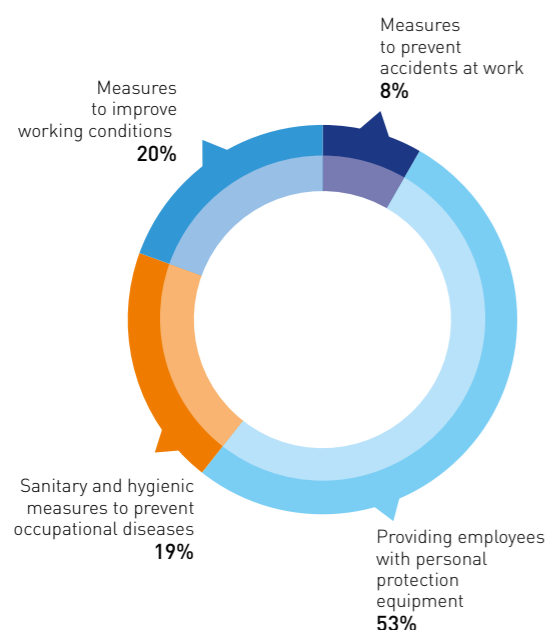
of the Interstate Council for Standardization, Metrology and Certification №28 dated March 27, 2007.

<sup>88</sup> OHSAS 18001: 2007 Occupational Health and Safety Management Systems.

## Labor safety expenses

In 2014, the Company's expenses for the organization of labor and occupational health and safety were RUR 155.3 million, which is 9% higher than in 2013. Of these, 53% (RUR 81.6 million) were expenses for the provision of employees with personal protective equipment, 20% (RUR 31.1 million) was aimed at funding measures to improve working conditions, 19% (RUR 30.1 million) - measures to prevent occupational diseases, and 8% (RUR 12.5 million) - measures to reduce injuries and prevent accidents.

### 2014: OCCUPATIONAL HEALTH AND SAFETY BUDGET RUR 155.3 MILLION



## Industrial Injuries <sup>G4-LA6</sup>

Rate of industrial injuries in PJSC RusHydro remains one of the lowest in the industry. In 2014, 8 accidents were recorded, including one fatal accident (at the Boguchanskaya HPP). Another 4 accidents were not associated with the Company's

personnel or works at HPPs, hydraulic or energy technical facilities. In accordance with the labor legislation, accident investigation and record keeping procedures, the accidents which contractors' or subcontractors' personnel is involved in, are investigated by contractor or subcontractor organizations<sup>89</sup>.

## Preventing Industrial Injuries

As part of the Immediate Action Program for the Prevention of Industrial Injuries at the RusHydro Group's Facilities, technical audits of a number of PJSC RusHydro's facilities were conducted.

In 2014 during the introduction of the Disturbance Base Integrated Recorder, recording processes, analysis and planning to execute determinations of the government, departmental and corporate supervision bodies in terms of the occupational health and fire safety were automated in the Company's branches.

In 2014, to further improve work in the field of occupational health and process safety the Company has revised functions of occupational safety and in process control services at the Group's hydropower facilities.

The measures taken also include the optimization and improvement of the quality of introduction and initial briefings on occupational health and in process safety which are conducted for employees of the contractors' organizations to tighten control over organization of their safe work at the Group's facilities.

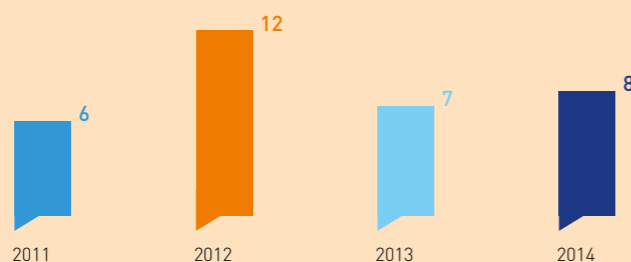
## Safety Training <sup>G4-EU16</sup>

Work organization includes mandatory safety training, which is periodically provided for the Group's companies' industrial staff: monthly for the workers, and every 3 years - for managers and specialists (office employees).

In 2014, 21,213 people, or 100% of the payroll number of employees involved in certain types of works completed labor safety training (including introduction and initial briefings on occupational health and safety). Employees were trained in techniques of first aid for victims in case of accidents at work; injury reviews in the electric power industry's organizations were studied; briefings and knowledge assessment were conducted for them<sup>90</sup>.

<sup>G4-EU18</sup> The Company does not keep a special record for the indicator for employees of contractors and subcontractors, since according to the legislation of the Russian Federation the employer is responsible for training in the sphere of occupational health and safety. However, safety-awareness

## DYNAMICS OF ACCIDENTS AT WORK: 2011-2014 (number of accidents)



89 For more details see Appendix 1 Quantitative Performance Indicators.

90 For more details see Appendix 1 Quantitative Performance Indicators.

briefing is conducted for all contractors and subcontractors' employees.

## Agreements with Contractors <sup>G4-EU18</sup>

Standard contracts for services being signed by PJSC RusHydro with contractors contain a mandatory condition - the observance of the industrial, fire, occupational health and environmental safety at PJSC RusHydro's facilities.

In addition, during the tender procedures for the selection of the contractors (with the general contractor's functions, and assembly supervision organization) to provide certain services (such as capital construction and reconstruction of facilities, repair work at the hydraulic engineering structures, water turbines and electrical equipment, adjustment and testing, materials and equipment supply) PJSC RusHydro must take into account such selection criteria as the special assessment of working conditions in the organization and not less than 100% availability of trained and qualified personnel.

Attraction of subcontractors must be agreed by the contractor with the customer. Permit of contractors and subcontractors to execution of the work, as well as control over the process of contracted work performance is carried out by the branches and subsidiary and dependent companies' authorized personnel in compliance with industry standards, technical standards and requirements of the legislation, and for violation of which a charging scheme is provided for. When violations are identified, work performance is suspended till the elimination of violations.

## Preventing Occupational Diseases

During 2014 in order to prevent occupational diseases the Company carried out medical examinations of the Group companies' employees and rehabilitation measures based on the results of these examinations such as the vaccination of employees, monthly days of labor protection and fire safety, assessment of workplaces with respect to working conditions.

According to the Program of Measures for the Occupational Health and Safety, Industrial and Fire Safety at the Compa-

## 3.3 RESPONSIBLE INTERACTION AS A PREREQUISITE FOR SOCIAL CORPORATE RESPONSIBILITY

### 3.3.1 The Key Groups of Stakeholders: the Mechanisms and the Main Topics of Interaction in 2014

#### The Analysis and Improvement of Social Responsibility Practices

RusHydro considers employees, shareholders and investors, the consumers of the Company products and services, business partners, suppliers and contractors, government and non-government organizations, and professional and local communities, mass media, higher education institutes and other educational establishments as its key stakeholders.

The Company has performed the analysis and developed PJSC RusHydro's Key Stakeholder Groups Map<sup>92</sup>, specifying the degree of their mutual influence during interaction. The Company identified the stakeholders in 2013 in order to update the formats and target groups and to broaden the corresponding interaction. <sup>G4-25</sup>

91 In accordance with Article 14 of the Federal Law dated 28.12.2013 №426 "On special assessment of working conditions" harmful conditions (class 3) are the working con-

ny's Facilities for the Period of 2014-2020 (approved by the Order of JSC RusHydro) organizational and technical measures to improve working conditions are carried out.

## Assessment of Workplaces

Plans to perform works on special assessment of working conditions (SAWC), taking into account the transitional provisions of the Federal Law "On Special Assessment of Working Conditions" dated 28.12.2013 №426-FZ, were developed at all Group's facilities.

In 2014, 3,779 work places were assessed (100% of the total number of places subject to assessment), 42% of which were found optimal and permissible (class 1 and 2). The remaining 58% were found work places with harmful working conditions (class 3.1 and 3.2). Total number of employees, employed in such jobs, comprised 2,991 people. The number of workplaces with harmful working conditions<sup>91</sup> did not change compared with 2013.

PJSC RusHydro has no hazardous jobs of Class 4 (employees involved in professional activities associated with a high risk of injury or a high risk of occupational diseases). <sup>G4-LA7</sup>

A comprehensive assessment of the state of working conditions in the workplace includes the results of assessments:

- class (subclass) of working conditions, fixed by the assessment results;
- compliance of working conditions with the hygienic standards;
- class of working conditions by injury risk;
- availability of personal protective equipment to employees.

Based on the results of workplaces' assessment the Company carries out activities to improve working conditions and deduct insurance premiums to the Pension Fund of the Russian Federation in accordance with the legislation provided for additional rates for jobs of class 3.1 or higher. In 2014, PJSC RusHydro assigned more than RUR 30 million for the implementation of measures to improve working conditions.

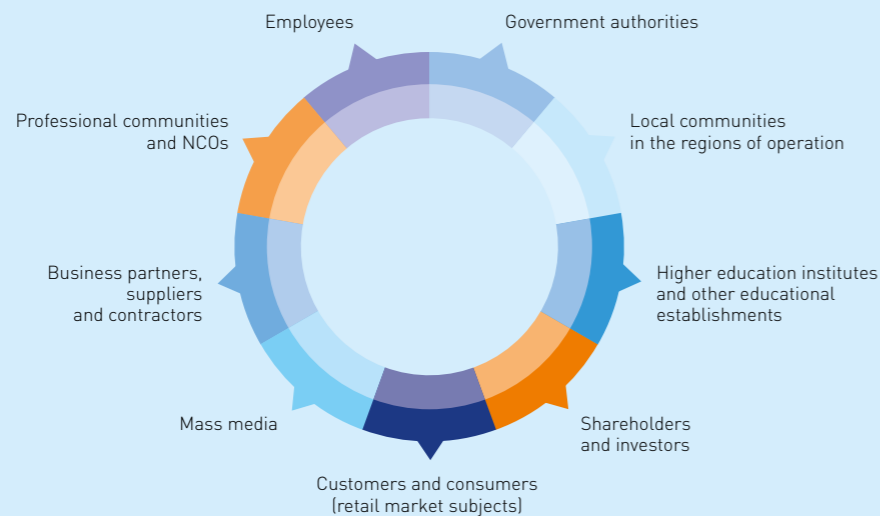
## Shareholders and Investors

PJSC RusHydro is a company open for contacts with the investment community. Disclosing information for investors the Company tries to go beyond the formal requirements of stock exchanges and market regulators, keeping in mind the best corporate practices. The Company pays much attention to the disclosure of non-financial information. RusHydro's Investor's Day was conducted in April 2014, attended by the Company management headed by E.V. Dod, Chairman of the Management Board - CEO of the Company. The Company proceeded with the practice of quarterly conference calls involving the Company management and intended for analysts, investors and rating agencies.

The stock market plays a significant role in assessing the Company's performance efficiency. The Company's market positions and corresponding perspectives are monitored by the industry analysts working in 15 top investment companies. During 2014 the Company took an active part in industry conferences and investment forums held in Russia and abroad.

ditions under which the exposure levels of harmful and (or) hazardous factors exceed the levels stipulated by the regulations (hygiene regulations) for working conditions.

## INTERACTION WITH STAKEHOLDERS: TARGET GROUPS\* G4-24



\* Professional communities include energy, environmental, charity and other organizations and expert communities.

The key topics important for the investment community and subject to IR activities included the following: transparency, industry regulation issues, investment projects, return on investments and dividend policies.

THOMSON REUTERS EXTEL EUROPE:  
TIMUR AKHMEDZHANOV NAMED THE BEST IR MANAGER AMONG THE POWER SECTOR COMPANIES

### Customers and Consumers (Retail Market Objects) G4-PR5

The development of energy retail sales providing for quality services and uninterrupted supply of power to consumers is one of the Company's strategic development trends. To pursue this development trend the Company interacted with the subjects of the energy retail market in 2014. The Company has developed the Consumer Loyalty Improvement Program and proceeded with its implementation. Starting from 2013 all regional power supply companies are guided by the corporate Customer Servicing Standard. In the reporting period, the front offices of all interregional power supply companies underwent the Standard compliance check.

THE COMPANY'S RETAIL CUSTOMERS INCLUDE OVER 1.65 MILLION HOUSEHOLD CONSUMERS AND OVER 69 THOUSAND ENTITIES.

<sup>G4-27</sup> The customers' growing accounts receivable remains one of the most pressing issues in the Company's interaction with customers (retail market subjects) in 2014. In 2014 the Company hosted "Reliable Partner"<sup>93</sup> – an all-Russian contest among the power consumers based on 2013 results. The most reliable consumers included 45 organizations from 23 regions of the Russian Federation.

The Reliable Partner initiative is implemented since 2014, proposed by JSC ESK RusHydro to foster the payment discipline among the industrial consumers of fuel and elec-

tricity resources and the management companies, and to develop an efficient dialogue among the suppliers and the consumers of electricity and utility services. The Company's proposal was supported by the Ministry of Energy of the Russian Federation and by the Council of the Federation of the Federal Assembly of the Russian Federation.

### Employees

Considerable efforts and funds were spent by the Company in 2014 to attract and retain labor resources and to establish safe and favorable labor conditions for the Company employees. The Company continues to pay much attention to the development of corporate culture and heightening the prestige of hydropower engineers as professionals.

2014 became the sixth year in a row for the Company to host the annual all-Russian competition among the operating employees of the Company HPPs. Pursuant to the order of the Minister of Labor and Social Protection the competition was granted the status of all-Russian "Best in Trade" Competition<sup>94</sup> in "Best Hydraulic Unit Operator" nomination.

The People of Light photo project<sup>95</sup> became another important event in the Company's corporate life in this jubilee year. New photo reports were published every week throughout 2014. The best Russian photographers travelled all over Russia to reflect the everyday life of hydropower professionals. The project tells the public about the most interesting events, and stories from locations where electricity is born. The project is also a thank you to the employees for their labor and loyalty to the Company.

ALL-RUSSIAN'S HR MANAGEMENT PRIZE AWARDED BY HR DIRECTOR MAGAZINE IN 2014:

"FROM NEW SCHOOL TO A WORKING PLACE" PRIORITY DEVELOPMENT PROGRAM BECAME THE WINNER IN "TALENT MANAGEMENT: THE BEST YOUTH ATTRACTION PROGRAM".

The Company pays much attention to maintaining feedback with its employees by publishing "VESTNIK RusHydro," a monthly corporate media<sup>96</sup>. The Company's monthly publication celebrates its ninth anniversary in 2014.

The key topics raised and identified during the interaction with employees in 2014 are covered in Section 3.2 Development of HR Potential as a Guarantee of Long-term Growth.

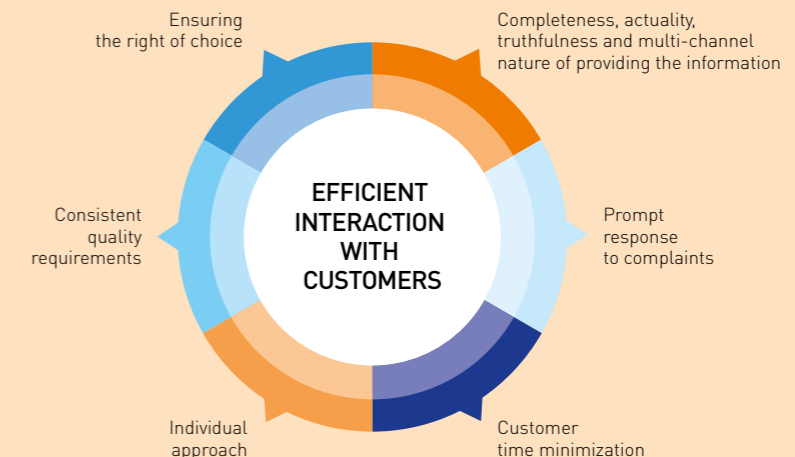
### Higher Education Institutions and other Educational Organizations

The Company is engaged in systemic preparation of qualified professionals and the development of occupational

standards for the power industry in cooperation with industry-specific higher education institutes and technical education establishments. The number of technical educational establishments covered by this cooperation grows with each passing year.

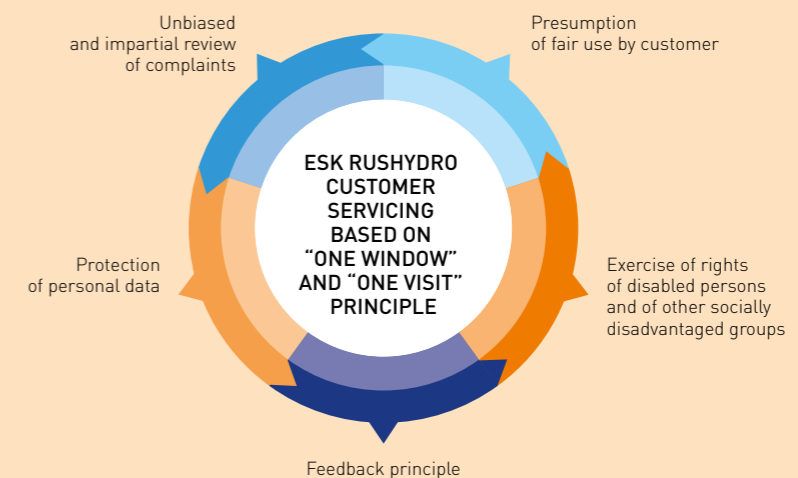
In 2014 RusHydro continued cooperating with key partner institutes, such as the Siberian Federal University, and the Moscow State Institute of International Relations attached to the Ministry of Foreign Relations. The Company has cooperation development plans for the institutes contracted by the Company in 2013.

## ESK RUSHYDRO CUSTOMER SERVICING BASED ON "ONE WINDOW" AND "ONE VISIT" PRINCIPLE



The ESK RusHydro customer servicing standard. The requirements to the process organization and implementation and to technical methods.

## ESK RUSHYDRO'S CORPORATE CUSTOMER QUALITY SERVICING STANDARD G4-PR5



The ESK RusHydro customer servicing standard. The requirements to the process organization and implementation and to technical methods.

<sup>92</sup> More information is available in 2013 RusHydro Group Corporate Social Report at [www.rushydro.ru/sustainable\\_development/socialotvetstvenost/kso/](http://www.rushydro.ru/sustainable_development/socialotvetstvenost/kso/).

<sup>93</sup> The detailed information on the initiative and the contest is available at [www.nprating.ru](http://www.nprating.ru).

"CREATING FUTURE", THE FIRST ALL-RUSSIAN CONTEST OF BEST HR RESERVE PRACTICES ORGANIZED BY THE MINISTRY OF EDUCATION OF THE RUSSIAN FEDERATION:

THE COMPANY'S PRIORITY HR POTENTIAL DEVELOPMENT PROGRAM "FROM NEW SCHOOL TO THE WORKING PLACE" BECAME THE WINNER OF THE CONTEST IN "OCCUPATIONAL PROFILING" NOMINATION.

The main topics and results of interaction with educational establishments in 2014 are disclosed in Section 3.2.2. Maintaining Advanced Qualifications of Employees and Developing the HR Potential.<sup>64-27</sup>

Industry-specific educational establishments covered by the cooperation in 2014:	Main topics covered by the media in 2014 within the frameworks of "Hydropower Professionals' School":
<ul style="list-style-type: none"> <li>The Amur State University</li> <li>The Far East State University</li> <li>The Moscow State Institute of International Relations attached to the Ministry of Foreign Affairs</li> <li>The National Research University MEI</li> <li>The St. Petersburg State Polytechnic University</li> <li>The Siberian Federal University</li> <li>The Divnogorsk Hydropower College</li> <li>The Nevinnomyssk Power College</li> <li>The Perm College of Commerce</li> <li>The Saratov College for Bridge Construction and Hydraulic Engineering</li> </ul>	<ul style="list-style-type: none"> <li>Development of renewable energy options and the Company's Modular HPP construction program</li> <li>Shallow water on lower Volga and further construction of the Cheboksary waterworks facility</li> <li>HPP water power operation regimes and regime management under special hydrologic conditions</li> <li>Innovative technologies in adjusting drainage and flood modelling</li> <li>The Boguchanskaya HPP construction progress and environmental impacts associated with the project</li> <li>The results of the complex reconstruction of the Sayano-Shushenskaya HPP</li> <li>The role of the Zeiskaya and the Bureyskaya HPP in preventing an abnormal flood of 2012 and the role of the midpoint pump stations in flood fighting</li> <li>The progress in the implementation of projects included in the Far East Federal District's power sector development program</li> <li>The flood at the Volga-Kama Cascade of HPPs in 2014</li> <li>The main stages and the results of 10 years of sustainable development of the Company</li> <li>Social programs and charity projects in the regions of operation, etc.</li> </ul>

### Mass Media

The development in technologies and new social resources led to greater diversity of the forms and formats of media and of disclosing the Company information to the public. Striving for greater openness and information transparency the Company goes beyond publishing a standard press kit on its website, using any opportunity to assist the journalists in studying the practical aspects of hydropower engineering in the operation of the Company facilities.

To develop the interaction with mass media the Company hosts different press events, implementing special initiatives and updating the information in the corporate blog, and social networks on a periodic basis. The Company also performs regular monitoring of the media.

Starting from 2009, the Company implements "Hydropower Professionals' School" information and educational project intended for the representatives of the media and for bloggers<sup>97</sup>. In 2014 the project celebrated its fifth anniversary. The Company's jubilee year became the year of peaking activities within the project, with 7 sessions of the School, including the sessions held in Irkutsk and Khabarovsk. The number of sessions has doubled compared with 2013. The experience gained during the implementation of such initiatives

only confirms the need of journalists and bloggers to learn more about the basics of the industry.

THE SILVER THREADS 2014 NATIONAL CONTEST OF CORPORATE INFORMATION RESOURCES ORGANIZED BY THE ACADEMY OF COMMUNICATIONS AND INFORMATION:

THE COMPANY BECAME THE WINNER IN THE MAIN CATEGORY – "LEADER COMPANY: THE BEST CORPORATE MEDIA COMMUNICATIONS SYSTEM."

THE COMPANY'S PUBLICATION VESTNIK RUSHYDRO, THE CORPORATE WEBSITE AND THE COMPANY'S INTERACTIVE 2014 ANNUAL REPORT WERE GRANTED THE HIGHEST AWARDS.

The Company also implements an annual information project called "The Power of Water" – an all-Russian contest for the best media coverage of the development of renewable sources of energy in Russia. In 2014 the contest was held for the sixth time with the number of participants exceeding 50 journalists from different regions of Russia. The works of 40 journalists from regional mass media were awarded with prizes and diplomas. The goal of the contest

is to popularize the ideas for the development of hydropower industry and the need for its modernization and the benefits of higher power efficiency.

### Business Partners: Development of International Activities<sup>64-DMA</sup>

The development of international activities is one of the Company priorities intended to enter new markets, to attract foreign investments and processes into the promising hydropower and renewable energy projects to be implemented on the territory of Russia and to widen the geography of the Company presence by involving the Company in the implementation of projects abroad.<sup>64-27</sup>

The approaches to international cooperation exercised by the Company management are based on the following principles:

- long-term and mutually beneficial cooperation;
- compliance with the geo-strategic interests of the Russian Federation;
- economic efficiency of international projects;
- possibilities for experience and process sharing.

In 2014 the Company proceeded with widening its partner relations with the major foreign companies by concluding inter-corporate agreements implying joint development and implementation of projects. The international cooperation allows for gaining access to best practices and participating in international projects, supporting and protecting the interests of the Russian Federation worldwide.

More information is available in Section 3.1.4. Construction and commissioning of facilities (including renewable sources of energy) in Russia and abroad.

### Suppliers and Contractor Organizations<sup>98</sup>

During 2014 PJSC RusHydro's companies worked with their contractor organizations on the basis of programs for technical re-tooling and repair, repairs, maintenance and research activities with the volume of contracted works performed amounting to RUR 37.5 billion (excluding VAT). Over 58% of said volume of works was performed by five Russian companies.<sup>64-EC9</sup>

The major suppliers and contractors involved in the programs listed above include:

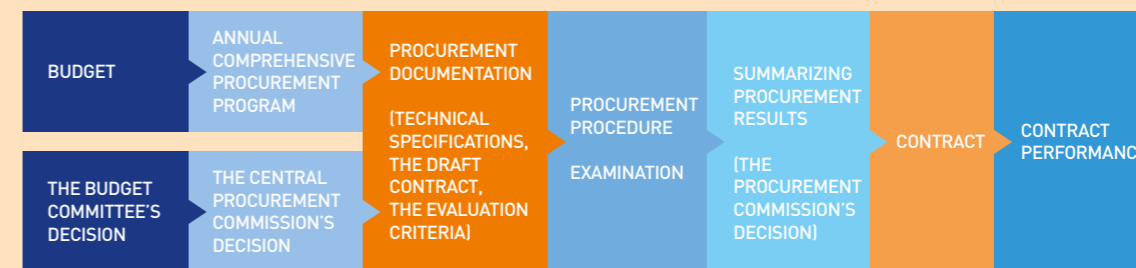
- JSC Hidroremont-VKK;
- JSC Mosoblgidroproject;
- JSC Power Machines;
- CJSC VNIIR Hidroelektroavtomatika;
- PromGidroEnergMash LLC.

### Information on Suppliers

- In 2014, the total value of procurement procedures carried out and accomplished (including unscheduled) with summarized winner selection results amounted to RUR 48.65 billion.
- Competitive procurements account for 72% of the total value of procurement procedures carried out and accomplished, or 26% of their total amount.

Procurement Category	Number of Purchases	Total Procurement Value, RUR billion
Competitive procurements	796	35.13
Single source procurement	565	13.17
Nonscheduled procurement	1,681	0.35
<b>TOTAL</b>	<b>3,042</b>	<b>48.65</b>

### THE ORGANIZATION'S SUPPLY CHAIN<sup>64-12</sup>



<sup>94</sup> Detailed information on "Best in Trade" competition is available at: [www.sorevnovanie.rushydro.ru](http://www.sorevnovanie.rushydro.ru).

<sup>95</sup> Detailed information on "People of Light" project is available at: [www.ludi-sveta.ru](http://www.ludi-sveta.ru).  
<sup>96</sup> All issues of VESTNIK RusHydro Monthly are available at: [www.rushydro.ru/press/vestnik](http://www.rushydro.ru/press/vestnik).

<sup>97</sup> More detailed information on the project is available at: [www.rushydro.ru/press/school](http://www.rushydro.ru/press/school).

<sup>98</sup> This Section contains data pertaining to local suppliers and contractors (in accordance with G4-EC9 index). The Section contains no data pertaining to international organizations.

The RusHydro Group has had a unified procurement management system since 2011. It is regulated by Regulations on procurement for the needs of PJSC RusHydro approved by the Board of Directors, taking into account legislation amendments, and model Procurement Regulations designed for SDCs / second-tier subsidiaries and dependent companies.

Detailed information on procurement activities, including procurement notices, information on procurement results and the contracts made (including information on procurement from small and medium enterprises) is regularly published in the special section on the corporate website ([www.zakupki.rushydro.ru](http://www.zakupki.rushydro.ru)).

**Professional Communities and NCOs**

The employees of the Company are active participants of professional conferences. They take part in the activities of the industry-specific non-commercial organizations. The membership in such associations plays an essential role in business cooperation, assisting the Company in the development of cooperation within the industry to achieve the goals set for hydropower professionals by the governmental program of development of the national fuel and power sector:

- Energy saving and improving energy efficiency;
- Development and modernization of the power industry;
- Development of use of renewable sources of energy.

THE XV TOP-100 LEADING RUSSIAN MANAGERS OF THE ASSOCIATION OF RUSSIAN MANAGERS AND KOMMERSANT PUBLISHING HOUSE, POWER INDUSTRY AND FUEL COMPLEX:

- EVGENY DOD, CHAIRMAN OF THE MANAGEMENT BOARD CEO OF PJSC RUSHYDRO WAS RATED THE FIFTH IN THE RATING FOR TOP MANAGERS;
- BORIS ZVEREV, THE COMPANY'S COMMUNICATIONS DIRECTOR, TOPPED IN THE RATING FOR PR AND CORPORATE AFFAIRS DIRECTORS.

In 2014 the Company continued to focus on improving reliability, industrial and environmental safety of operation of the Company's facilities and of the industry on the whole. Much attention was paid to coordinating the efforts of the expert community and developing industry-specific and inter-industry technologic platforms and research-based hydropower development projects.

The Company is a regular participant of international forums hosted by the Russian Union of Industrialists and Entrepreneurs and the Chamber of Industry and Commerce of the Russian Federation. The key topics and concerns raised or identified during the interaction with professional communities in 2014 are covered in greater detail in the corresponding sections of the Report.

In 2014, Company was the member of the following professional and public associations, Russian, as well as international: <sup>64-16</sup>

Russian industry-specific professional and public associations:	International organizations:
<ul style="list-style-type: none"> <li>• Market Council, a non-commercial partnership</li> <li>• All-Russian Association of Power Industry Employers (RaEI)</li> <li>• Council of Power Industry Veterans, a non-commercial partnership</li> <li>• Corporate Educational and Research Center of the Unified Energy System, a non-commercial partnership</li> <li>• Russian Hydropower, a non-commercial partnership</li> <li>• Scientific and Technical Council of the UES, a non-commercial partnership</li> <li>• Energostroyalians, a non-commercial partnership</li> <li>• Russian Union of Industrialists and Entrepreneurs, an all-Russian Association of Employers (RSPP)</li> <li>• Association of Owners and Investors in Land and Property, a non-commercial partnership</li> <li>• Research and Innovations Directors' Club, a non-commercial partnershi</li> </ul>	<ul style="list-style-type: none"> <li>• Global Sustainable Electricity Partnership, GSEP</li> <li>• World Economic Forum, WEF</li> <li>• International Hydropower Association, IHA</li> <li>• International Commission on Large Dams, ICOLD</li> </ul> <p>International governmental organizations and integration associations:</p> <ul style="list-style-type: none"> <li>• The CIS Electricity Council</li> <li>• The Eurasian Economic Commission</li> <li>• The International Energy Agency</li> <li>• Asia-Pacific Economic Cooperation</li> <li>• Baltic Countries Energy Cooperation</li> </ul> <p>International professional industry-specific organizations:</p> <ul style="list-style-type: none"> <li>• Centre for Energy Advancement through Technological Innovation, CEATI</li> <li>• Conseil International des Grands Reseaux Electriques, CIGRE</li> <li>• Réseau International des Organismes de Bassin, RIOB</li> </ul>

**Externally developed economic, environmental and social charters, principles and initiatives supported by the Company:** <sup>64-15</sup>

Title	Year of association	Countries where the document is used
Declaration on Water Reservoirs for Sustainable Development (International Commission on Large Dams, ICOLD)	2012	International document
Social Charter of Russian Business (Russian Union of Industrialists and Entrepreneurs)	2013	Russia
Anti-corruption Charter (Russian Union of Industrialists and Entrepreneurs)	2013	Russia
The Concept of Long-term Economic Development of the Russian Federation till 2020	2008	Russia
Assessing the Compliance of Hydropower Projects to the Sustainable Development Criteria (IHA)	2011	International document
Russian Federation Power Sector Tariff Agreement for 2013-2015	2013	Russia

**Declaration of Water Reservoirs for Sustainable Development (authored by ICOLD)** <sup>64-15</sup>

In 2012, the Company signed the Global Declaration on Water Reservoirs for Sustainable Development<sup>99</sup> authored by the International Commission on Large Dams (ICOLD). The Declaration is a call to unite the efforts of the world for the development of water infrastructure, including large dams and water reservoirs. The Declaration emphasizes the growing role of dams and water reservoirs in social and economic development. The Declaration was developed and agreed by a number of the world's leading water use organizations, with active participation of the representatives of the Company.

The International Commission on Large Dams (ICOLD) is a non-government international organization established to coordinate the efforts of the professional community in the sphere of safe and efficient hydraulic engineering. The ICOLD's Russian National Committee's youth department was established in 2013 with the support of the Company.

**The Social Charter of Russian Business (authored by the Russian Union of Industrialists and Entrepreneurs)** <sup>64-15</sup>

In 2013 the Company joined the Social Charter of Russian Business. The new version of the Charter was adopted by the Russian Union of Industrialists and Entrepreneurs in 2008. The Charter sums the basic principles of responsible business practices and defines the employee-employer relations, as well as the relations of the national business community with civil society institutions, authorities and local communities. The Charter also describes the principles related to environmental safety. By 2015 the Charter was signed by 256 organizations uniting over six million employees.

The Social Charter is recognized by business organizations and complies with internationally adopted documents. The Russian Union of Industrialists and Entrepreneurs is a member of the Russian network of the UN Global Compact, being also a permanent member of the Steering Committee.

**The Anti-corruption Charter (authored by the Russian Union of Industrialists and Entrepreneurs)** <sup>64-15</sup>

In July 2013 the Company signed the Anti-corruption Charter of the Russian Union of Industrialists and Entrepreneurs. The Company voluntarily undertook a number of obligations, including the adherence to transparent and open purchasing procedures, cooperation with the state, and refusal from obtaining any benefits illegally. The Anti-corruption Charter

adopted by the Russian business community in 2012 is an implementation of the National Corruption Prevention Plan. The Charter principles imply refusal from preferences, purchasing procedures based on open tender, financial control, HR training, assistance to law enforcement agencies and other initiatives.

Based on the results of the Charter implementation monitoring accomplished in 2014 the Company's performance in the field of corruption prevention was recognized as one of the best performances among the Charter member-companies.

**Government Authorities and Inter-government Programs**

Implementing its strategy the management of the Company and the experts maintain fruitful cooperation with a number of the federal and regional government authorities of the Russian Federation.

- The managers of the Company take an active part in the work of commissions and task forces attached to the President and the Government of the Russian Federation, with said commissions and task forces engaged in the development of fuel and energy complex and social and economic development of the regions of the Russian Federation.
- The interaction with field-specific government agencies also included a number of the federal target programs and international projects, and a number of industry-specific and educational programs of the Company having all-Russian significance.
- PJSC RusHydro is an active participant of inter-government commissions on trade, economic and scientific and technical cooperation established by the Russian Federation and foreign countries and implemented by the energy working groups.

**GSEP-2014**

The Russian year at GSEP became a milestone for Russian power industry and for the Company which chaired in the Partnership from June 2013 to June 2014. The discussions within the Partnership were predetermined by the topic suggested by the Company, formulated as "Innovations – a Fast Track to Sustainable World", as no issues pertaining to sustainable development can be solved without innovations.

- The meetings of the project, political and steering committees of the Partnership were organized by the Com-

<sup>99</sup> The text of the Declaration is available at: <http://www.rushydro.ru/press/material/18031.html>.

pany in March 2014 in Irkutsk, while in May 2014 there took place a GSEP Summit in Moscow, attended by CEOs and representatives of the world's major energy companies, the members of the Partnership;

- Besides, the Argentina – Patagonia Project implemented by GSEP with the participation of the Company had new developments in 2014, meaning the completion of construction and commissioning of hybrid wind-diesel power plants and a river micro hydropower plant in Patagonia, Argentina.

The key topics of interaction with government authorities in 2014 included sustainable development of fuel and power sector and of hydropower industry in particular, improved competitiveness of the national and regional economies, social development of regions based on adherence to the laws and transparency of the Company's activities.

The key results of the interaction are to be found in Section 3.1 Social and Economic Development of the Regions of Operation.

#### Participation in government commissions and working groups in 2014

Participation in commissions and working groups on the development of fuel and energy complex and social and economic development of the regions of the Russian Federation:

- The Presidential Commission on development strategy of fuel and energy complex and environmental safety
- The Government Commission on development of electric power industry
- The Government Commission on fuel and energy complex, reproduction of mineral and raw materials basis and energy efficiency improvement of the economy
- The Government Commission on social and economic development of Far East and Baikal regions
- The Government Commission on sustainable functioning of water utilization systems of Siberia and Far East
- Inter-agency working group monitoring the implementation of the General Power Facilities Layout Scheme for the period of up to 2030 and preparing corrective suggestions
- The Government Commission on social and economic development of Northern Caucasia Federal District
- Inter-agency working group preparing suggestions intended to improve the efficiency of power industry organizations

#### Regional and Local Authorities

The development of economic and social infrastructure of the regions constituted an important aspect of the corporate social responsibility of the Company in 2014.

The Company is consistent in its efforts to develop strategic interaction with regional and local authorities in the regions of operation of the Company also by developing regional social partnership. Often the Company develops such partnership in the form of agreements on social and economic cooperation.

THE CONSOLIDATED RATING OF NON-FINANCIAL STATEMENTS OF THE COMPANIES WITH STATE INTEREST, PREPARED BY EMERGING COMMUNICATIONS AGENCY:

THE COMPANY'S 2013 SUSTAINABLE DEVELOPMENT REPORT WAS RANKED FIRST BY THE AGENCY

The main issues of interaction are disclosed in Section 3.1. Social and economic development of the regions of operation or in greater detail at: [www.rushydro.ru](http://www.rushydro.ru).

#### Local Communities in the Regions of Operation

The Company is active in interacting with the people living on the territories where the Company operates. The Company focuses its efforts on the creation of auspicious conditions for the efficient development of the Holding's member-companies and maintenance of the image of the Company as a socially responsible corporate member of the society.

- The Company implements large-scale social programs and charity projects jointly with local communities in the regions of operation. The main topics and results of the interaction with local communities are listed in Section 3.3.3. Social programs and charity initiatives or in greater detail at: [www.rushydro.ru/sustainable\\_development/socialotvetstvenost/alms](http://www.rushydro.ru/sustainable_development/socialotvetstvenost/alms).

The Company exercises a responsible approach to the Environmental Impact Assessment and conducting public hearings during planning and implementation of its projects.

- In 2014, the Company proceeded with an efficient social dialogue on environmental issues, developing its interaction with local activists and international environmental organizations.
- Contrary to the expectations the Government made no decision as to further construction of Cheboksary water reservoir up to 68 meters mark in 2014, despite much work done by the Company on environmental impact assessment and the development of the project's feasibility study<sup>100</sup>.
- The key topics and results of the interaction with stakeholders are disclosed in Section 4.2 Environmental responsibility and interaction or in greater detail at: [www.rushydro.ru/sustainable\\_development/environmental](http://www.rushydro.ru/sustainable_development/environmental).

#### 3.3.2 Social Partnership in the Regions

##### The Company's contribution to the development of social infrastructure of the territories of operation

The Company's social activity in the regions of operation (where the Company's hydropower facilities are present) is based on establishing partner relations with all stakeholders, including regional authorities.

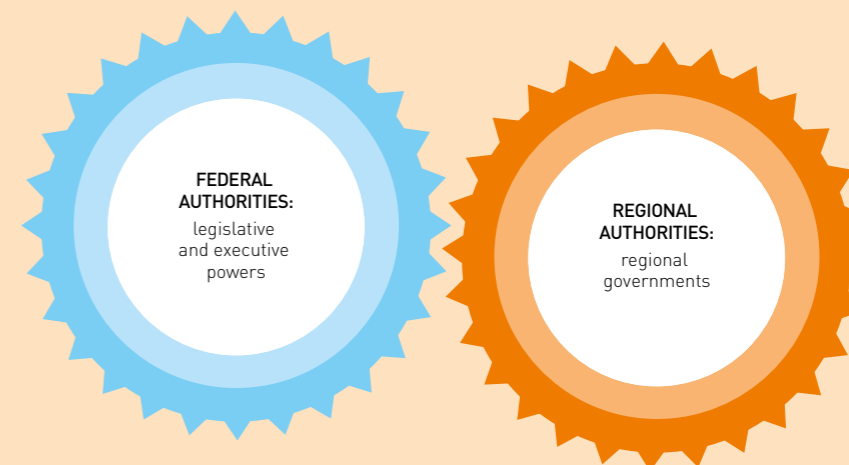
In practice this means establishing social and economic partnership in the regions, with the relations based on mutual interests and sponsorship and charity initiatives on behalf of the Company. The partnership is based on agreements on social and economic cooperation signed yearly.<sup>64-37</sup>

##### Interacting with Authorities on Solving Social and Economic Issues in the Regions

##### The Inclusion of Power Facilities into State-supported Programs<sup>64-37</sup>

In order to facilitate comprehensive development of the Russian hydropower industry in 2014 the Company has prepared suggestions on the inclusion of power facilities in state-supported programs:

#### INTERACTION WITH AUTHORITIES<sup>64-37</sup>



THE COMPANY'S PARTICIPATION IN COMMISSIONS, EXPERT AND TASK FORCES, INVOLVING THE ISSUES OF DEVELOPMENT OF FUEL AND ENERGY COMPLEX AND SOCIAL AND ECONOMIC DEVELOPMENT OF REGIONS OF THE RUSSIAN FEDERATION

SOCIAL AND ECONOMIC COOPERATION AGREEMENTS WITH CONSTITUENT ENTITIES OF THE RUSSIAN FEDERATION

The interaction is defined by way of equal consideration of the interests of the Company, the public and the governments

#### A LIST OF AGREEMENTS ON SOCIAL AND ECONOMIC COOPERATION CONCLUDED BY AND BETWEEN THE COMPANY AND THE SUBJECTS OF THE RUSSIAN FEDERATION IN 2014:

- |                                     |                                    |  |
|-------------------------------------|------------------------------------|--|
| 1. Republic of Altai                | 6. Republic of Khakassia           | 11. Moscow Region                      |
| 2. Republic of Bashkortostan        | 7. Krasnoyarsk Region              | 12. Magadan Region                     |
| 3. Republic of Dagestan             | 8. Stavropol Region (2 agreements) | 13. The Federal City of St. Petersburg |
| 4. Kabardino-Balkarian Republic     | 9. Amur Region (2 agreements)      |  |
| 5. Republic of North Ossetia-Alania | 10. Astrakhan Region               |  |

NOTE: 15 agreements were concluded as of December 31, 2014.

- The Company made suggestions on systemic development of small-scale power generation facilities included into "Energy efficiency of power industry" state-supported program, the federal target program "Development of water utilization systems of the Russian Federation in 2012-2020" and the target program "Development of small-scale hydropower facilities on small and medium rivers, and of non-energy hydropower units in Russian Federation in 2012-2020";
- The Company submitted suggestions to the Ministry of Regional Development pertaining to the development of hydropower sector of North Caucasia. The suggestions imply the inclusion of 500 MW capacity HPP and small-scale HPP construction projects into the state-supported program "Development of North Caucasia Federal District in the period up to 2025";
- The Company submitted a list of geo-thermal power facilities to the Ministry of Economic Development and Trade of Kamchatka Region to facilitate the development of the regional geo-thermal power sector by

the inclusion of said facilities into the corresponding state-supported regional development program;

- In 2014, JSC RAO Energy Systems of the East presented to the federal government a program on the development of renewable sources of energy in isolated districts of the Far East. The volume of investment required for the program implementation is RUR 11 billion. The program includes 170 facilities (including wind and solar power stations).

The Company's interaction with regional authorities is described in Section 3.3.2 Local communities and social partnership.

#### Agreements on Social and Economic Cooperation

The partnership agreements are guided by the tasks of social development of the territories and by the principles of corporate social responsibility of the Company. Pursuant to said agreements the Company participates in solving employment and budget issues for local people, providing solutions and financing for construction of social infrastructure facilities, providing urban amenities, supporting education and health care, contributing to the development

<sup>100</sup> Information on the status of further construction of Cheboksary water reservoir, the materials of the environmental impact assessment and a list of the community liaison offices is available at: [www.otmetka68.ru](http://www.otmetka68.ru).



of culture and sports, caring for veterans and disabled persons, implementing technical initiatives to decrease environmental impact and helping the victims of natural and other catastrophes. <sup>G4-S01</sup>

In 2014, RUR 1,171.3 million were allocated for charity.

The Company obligations and intentions listed in agreements on social and economic cooperation include:

- Participation in the construction of social infrastructure facilities;
- Placement of production facilities and economically efficient HPPs on the territory of regions in order to provide employment opportunities for local people, to improve the situation in labor market and to ensure the growth of taxes paid to regional budgets
- Attraction of local contractors from small and medium business to implement joint investment projects pertaining to the construction of HPPs on the territory of the regions of operation;
- Development of scientific potential, and the training and qualification advancement system for professionals and employees from local public;
- Participation in programs intended to develop hydropower resources and regional potential;
- Implementation of charity initiatives and sponsorship programs to support local people (from socially disadvantaged groups, including disabled persons and retired people), medical, educational and children's organizations;
- Implementation of other agreed social programs in healthcare, culture and sports.

### Social Partnership Program in Khakassia

#### Participation in the construction of socially significant facilities <sup>G4-EC7</sup>

A program for the complex development of social infrastructure of Chermushki settlement, developed jointly with the government of the Republic of Khakassia and with the participation of the administration of the city of Sayanogorsk can set an example of development of a partnership and fruitful cooperation with regional authorities. It is the sixth year by now that the infrastructural facilities in the settlement are being modernized and renovated.

In the period from 2009 to 2014 the Company invested over RUR 600 million into the development of infrastructure in Chermushki. Schools, kindergartens, a sports center and medical and cultural facilities have been reconstructed and equipped with up-to-date equipment. Also renovated have been the roads and the central square of the settlement.

The reconstruction of the building of secondary school №1 was completed in 2014, involving interior repairs and replacement of heating, electricity and water supply systems. The finishing stage of the construction of an information center was started in the end of 2013. The central square of the settlement has been completely renovated, including the restoration of the honors board. The Company's further plans provide a construction of a winter sports center.

A delegation of the representatives of the Council for the Development of Civil Society and Human Rights attached to the President of the Russian Federation visited the production and social facilities of the Company in Khakassia in 2014. The result of social investments of the Company in social and economic development of the region won high acclaim of the delegation, including such facilities as Eury-

dice High School and the polyclinic which were renovated and reconstructed using the Company funds and in accordance with the program for the complex development of the settlement.

#### Liquidation of Social Consequences of the Accident at Sayano-Shushenskaya HPP

A program of social assistance and rehabilitation of the victims of the accident and the members of the families of the deceased with the approved budget amounting to RUR 185 million is implemented by the Company starting from the first days after the accident. The program is a complex of measures involving assistance to the victims of the accidents and to the members of those deceased in the result of the accident and the establishment of comfortable conditions for living and the bringing up of children.

PJSC RUSHYDRO'S PROJECT "LIQUIDATION OF SOCIAL CONSEQUENCES OF THE ACCIDENT AT SAYANO-SHUSHENSKAYA HPP" BECAME ONE OF THE TOP TWENTY SOCIAL PROJECTS IN RUSSIA IN 2013. <sup>G4-S01</sup>

From the date of the accident at Sayano-Shushenskaya HPP the Company spent some RUR 190 million to provide social support to the victims of the accident and to the members of the families of those who died in the accident. The assistance was provided through the following programs: paying monthly allowances to the families with children, paying grants and complementing pensions, paying for widows' training, purchasing accommodations for the families of the deceased having no housing of their own, discharging the debts of those deceased, etc.

#### Let's Help the Far East Together: Helping the Victims of the Flood

In 2014 the Company summed up the results of "Let's help the Far East Together" charity program. <sup>G4-S01</sup> The Chairman of the Management Board of the Company thanked all employees of the Company and all those outside the Company who participated in the program, which was a large-scale initiative to help the victims of the flood in the Far East in 2013. The help consisted in providing material assistance to the people and recovering the infrastructure in the region.

"SPENDING MONEY TO SUPPORT CHILDREN'S SPORT AND CREATIVE ACTIVITIES AND TO PROVIDE ASSISTANCE TO THE DISADVANTAGED PEOPLE WE MAKE TODAY'S SITUATION BETTER, THUS SETTING A HIGHER MARK FOR THE DEVELOPMENT OF THE REGION IN THE FUTURE. WE ARE GLAD TO DO GOOD AND TO SEE HOW OUR HELP REACHES THOSE WHO REALLY NEED IT."

ALEXANDER GOISENBAD, DIRECTOR OF THE NIZHEGORODSKAYA HPP

### 3.3.3 Charity and Volunteering

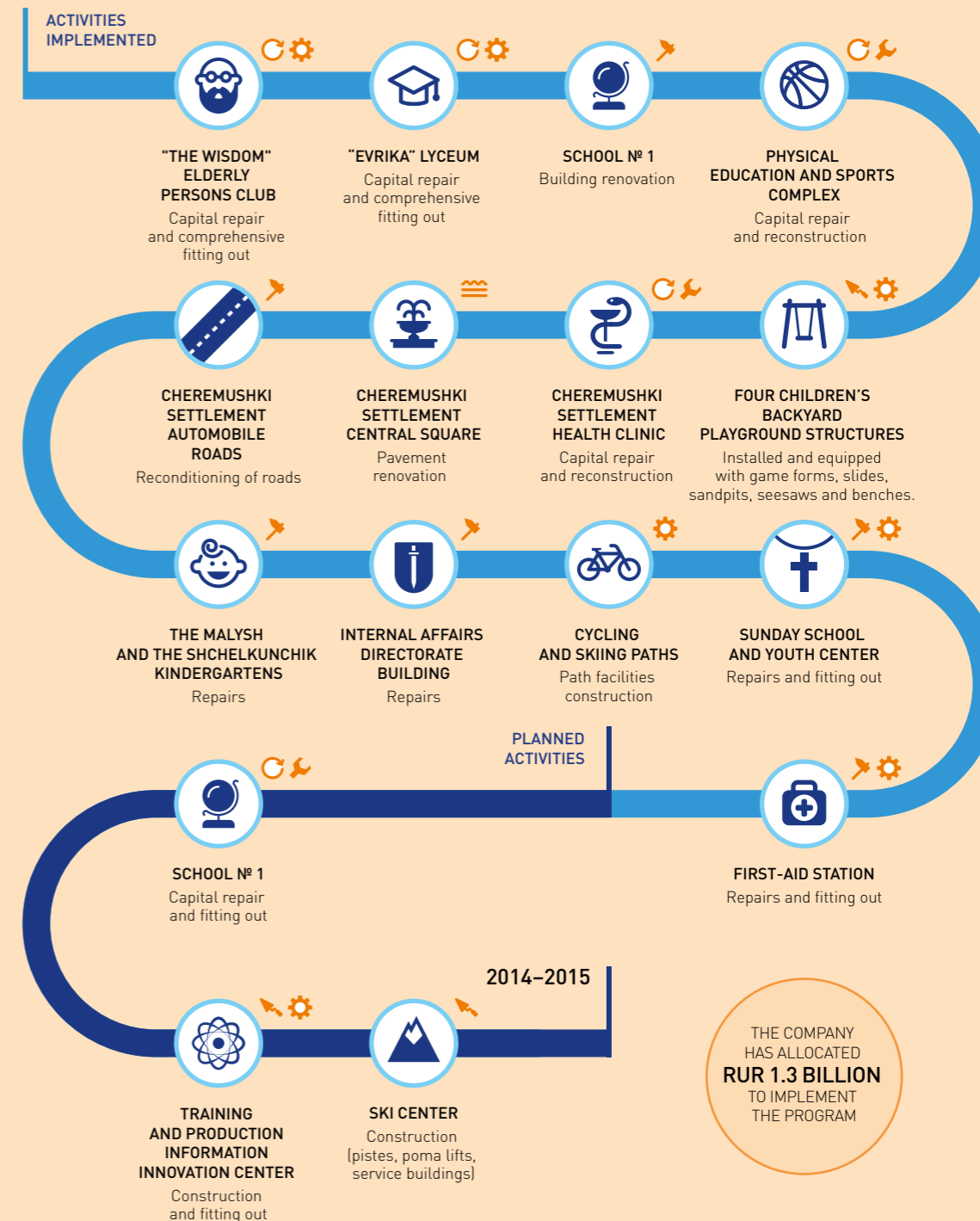
The Company's corporate strategy includes charity and sponsorship programs targeted to bring up new generations of power sector professionals and to create favorable social environment in the regions of the Company operation. The charity initiatives are performed in accordance with the internal regulations, the Concept of charity and sponsorship activities of the Company, its subsidiaries and dependent companies and the Regulations on charity and sponsorship adopted by the Company in 2012. <sup>G4-S01</sup>

#### Clean Energy

The Company's main charity initiatives are united into a common federal long-term program titled "Clean Energy", which

### CHERMUSHKI SETTLEMENT COMPLEX INFRASTRUCTURE DEVELOPMENT PROGRAM

In the course of implementing the program until 2014 we will completely renovate and upgrade the existing social amenities in Chermushki settlement, which will enable to create a good comfortable living environment for hydropower engineers and all settlement residents.



exists in the form of a network corporate project implemented by the Company subsidiaries and dependent companies on their own. The projects implemented as part of the Program many times received all-Russian and regional charitable programs awards.

In 2014, the Company continued to implement the program along the following lines:

- Support for children's homes and children's educational institutions;
- Charity environmental initiatives;
- Educational and grant programs;
- Support for children's sport.

In 2014, the Company assigned RUR 1,171.2 million for the Charity program.

### Support for Children's Homes and for Children's Educational Organizations

The Company's Clean Energy program serves to implement different charity projects, such as the purchase of equipment for social adaptation rooms in children's homes, the arrangement of children's playgrounds, the organization of different contests, charity New Year Tree festivities and the support of children's sports, etc. The projects are intended to develop local communities and improve social conditions primarily for children living in children's homes or children from disadvantaged families, as they are the most vulnerable members of the society. The Company supports the establishment of playrooms and social adaptation rooms in children's homes and orphanages.

### Charity Environmental Initiatives

The all-Russian environmental initiative known under the title of "oBEREGAI" takes place in April every year. The initiative, spearheaded and supported by the Company is meant to clean the banks of rivers and water reservoirs of solid household wastes. The initiative is implemented by all subsidiaries of PJSC RusHydro in all regions where the Company operates. The participants include all employees of the member-companies of the Holding, as well as the representatives of municipalities, environmental activists, children from children's homes and other school children, as well as higher and secondary education students and representatives of mass media. The organizers of the initiative provide the equipment and transport required to deliver the participants to the sites and to remove the waste. 2014 became the tenth year for the initiative to be conducted.

The result if the oBEREGAI environmental action for 2005-2014 is 1,590 tons of removed waste, improved beaches and embankments (the improvements include fresh sand, installation of beach equipment and painting and repair of benches). The number of participants over the period exceeds 30 thousand children and adults schooled in caring attitude to nature and civil responsibility.

### Environmental education projects

<sup>64-EN13</sup> The charity programs are used by the Company to support environmental initiatives from year to year. In 2014, the Company assigned over RUR 10 million for charity assistance to preserved territories and other environmental organizations.

The Company assists in implementing the programs of preserving biological diversity and natural habitat of endangered animals and plants, organizing environmental tours and improving rest areas in biospheric reserves and in specially protected natural areas. Last year was marked

by joint environmental projects implemented in Zeya, Khingan, Nechkino, Darvin, Kabardino-Balkarian, Teberda, Kerzhensky and North Ossetia natural reserves, in the Crane's Motherland natural reserve, in Volga-Akhtubinsk Bottom Land and Samara Luka national park, etc.

The initiatives implemented during the reporting year include the following:

- In July 2014, the Cheboksarskaya HPP and JSC Chuvash Power Supply Company organized an environmental event involving the release of some 15 thousand tiny starlets into Cheboksary water reservoir. The Kuban Cascade of HPPs and the Karachaevo-Cherkessky branch of the Company supported an environmental project of Teberda natural biospheric state reserve to restore the population of trout in the rivers of Karachaevo-Cherkessia. Some 220 kg of tiny trouts were released into an artificial water reservoir in Gonakhchir gorge.

The Gonakhchir gorge on Dombai is included into the International Network of Biosphere Reserves of UNESCO. Supported by the Company, the Teberda Reserve finished the construction of an artificial water reservoir to restore the population of brown trout on the territory of Gonakhchir forestry. Apart from cleaning the pond and installing a decorative fencing there were weirs and a wooden cover installed, equipped with external lights. The adjacent territory was improved.

- The Zeiskaya HPP (Amur Region) released 600 tiny kalugas into the river to maintain the population in the upper and middle Amur. Kaluga is rare and valuable specie of sturgeons.

The first ecological meeting of school students from the city of Zeya and the Zeya district took place, supported financially by the Zeiskaya HPP. The meeting titled Young Guardians of Nature was organized jointly with the Zeya Reserve and the city's department of education.

### Educational and Grant Programs

In 2014 the assigned some RUR 65 million for financial support of industry-specific higher educational institutions. The educational establishments which received financing from the Company include Amur State University, Moscow State Construction University, Moscow Energy Institute, St. Petersburg State Polytechnic University and the Sayano-Shushensky branch of Siberian Federal University.

### "Energy of Development" annual students' theses competition

The Energy of Development<sup>101</sup> annual students' theses competition is the main component of the Company's educational project as part of the Company's charity program. The selection of theses on hydropower and renewable energy sources was made in the beginning of 2015 followed by the announcement of the winners of the Energy of Development-2014. The competition was conducted for the sixth time in a row, becoming all-Russian with over 100 higher education establishments as participants and over 600 competing theses. Over 30 winners of the competition became hydropower professionals.

In 2014 the winners of the Energy of Development – 2013 undertook internship in Canada at the chair of engineering of McGill University and visited the R&D Center of Hydro-Quebec Company at Niagara Falls which gave birth to large-scale hydropower in the end of 19th century. This trip was the main award for the winners of the Fifth jubilee competition.

"CREATING FUTURE" – THE FIRST ALL-RUSSIAN COMPETITION OF THE BEST EMPLOYER PRACTICES IN HR RESERVE DEVELOPMENT ORGANIZED BY THE MINISTRY OF EDUCATION OF THE RUSSIAN FEDERATION:

"ENERGY OF DEVELOPMENT" STUDENTS' THESES PROJECT OF PJSC RUSHYDRO IMPLEMENTED PURSUANT TO THE COMPANY'S CHARITY PROGRAM BECAME THE BEST IN "RESPONSIBLE LEADER" NOMINATION

<sup>64-S01</sup> The main goal of the competition is to provide systemic long-term support for young hydropower engineers. The theses submitted are assessed by the managers of the Company facilities and the representatives of the hydropower research community. The jury of the competition is chaired by Evgeny Dod, the Chairman of the Management Board – CEO of the Company. A diploma of the laureate of the competition is taken into account when forming a HR pool for managerial positions and provides an opportunity of future employment with the Company.

### The second birth of "I WANT TO KNOW EVERYTHING" popular science almanac

In 2014, DETGIZ, a publishing house specializing on publishing books and periodicals for the young gave a second birth to "I Want to Know Everything" almanac. This became possible with the financial support from the Company. The almanac contains selected articles on the world around us taken from the older issues of the almanac and commented on by the scientists of today.

The first issue of the almanac was published in 1957. The almanac was published for 30 years in a row, serving to bring up many generations of young people. The presentation of re-born almanac took place in all regions of operation of the Company, with the major share of copies handed over to children's homes, schools and libraries.

Cooperating with DETGIZ Publishers in 2014 the Company also supported the Tenth All-Russian Literary Prize named after Samuil Marshak. The award ceremony took place in the Central Children's Library of St. Petersburg.

### The Water Room exhibit

In 2014, RusHydro assigned RUR 10 million to create a unique interactive Water Room exhibit displayed in the new building of Experimentanium, a museum of popular science. The exhibit consists of a number of devices demonstrating the action of the laws of hydraulics and hydro-dynamics. The visitors of the Water Room may learn about the mechanism of a whirlpool and sea waves and the principle of operation of a gate and a water mill.

### Support for Children's and Professional Sports

<sup>64-S01</sup> The RusHydro's Clean Energy program implemented in all regions of the operation serves to support different sporting projects, including those intended to develop water sports. The subsidiaries of the Company in the regions support sporting schools for children and young people, as well as underwater swimming, sailing, whitewater, table tennis, judo, football, hockey and other sports. Young athletes can participate in regional, federal and international competitions.

In 2014 the Company partnered with the Dynamo Moscow hockey club. The Company also provided financial support to the Russian Whitewater Federation, the Target Practice Federation, the Chess Federation, the Martial Arts Union and other sports organizations. To support and develop the professional and popular sports the Company spent over

RUR 560 million in 2014.

### Other charity initiatives

The Born by Energy federal charity initiative meant to equip maternity homes and delivery departments of hospitals in the regions of the Company operation with costly diagnostic and medical equipment received an impulse for further development. In 2014 the Company assigned over RUR 10 million for these purposes with corresponding initiatives implemented in 16 subsidiaries of the Company.

It became a tradition with the Company to pay much attention to the preservation of artifacts of historical and spiritual heritage. Charity funds were donated to Sretensky Monastery to finance Sretensky School of Theology and to decorate the church of Repose of the Virgin in Bogorodskoye settlement. The funds were also intended to finance the restoration of the church of the Saint Life-giving Trinity, the church of the Icon of the Holy Virgin and to decorate the interior of the Three Sanctifiers Cathedral in Spaso-Preobrazhensky Pronsky Monastery, etc.

The Russian Geographical Society has been one of the beneficiaries of RusHydro's charitable aid for several years. In the reporting year, the Company assigned RUR 60 million to finance grants, to develop educational and publishing activities and to organize expeditions.

Last year the Company together with "Illustrated Books for Little Blind Children" Charity Fund hosted the ninth annual event "Book Gifts". Starblind and blind children in 14 regions of Russia received 513 sets of illustrated raised letter books published at the cost of the Company.

More detailed information on charity and partnership projects implemented in 2014 is available at: [http://www.rushydro.ru/sustainable\\_development/socialotvetstvenost/alm/](http://www.rushydro.ru/sustainable_development/socialotvetstvenost/alm/).

Apart from providing charitable donations on a yearly basis, RusHydro's companies also encourage the voluntary individual participation of its employees in different social projects. In the reporting period, the Company several times held charity events to raise funds for those who urgently needed them, fairs with the participation of charitable foundations, donor days. In 2014, the amount of donations amounted to more than RUR 2.5 million.

### Plans for 2015

In 2015, PJSC RusHydro plans to continue the implementation of its key charity initiatives. The children living in children's homes, boarding schools and in disadvantaged families will get their share of financing to make their lives more comfortable. In addition, RusHydro will finance projects aimed at development of their creative abilities and at organizing their leisure.

In 2015 the Company will continue providing financial support to industry-specific higher education establishments and other educational institutions. The Company plans to proceed with "Energy of Development" competition for students and post-graduate students. The cooperation of the Company with DETGIZ Publishers will also continue in 2015. Environmental organizations and preserved territories will preserve their partnership with the Company, while "Born by energy" initiative will continue helping the hospitals in the regions of operation of RusHydro to equip their delivery departments and maternity homes with costly equipment.

The participation of the Company in the construction of a church in the name of Alexander Nevsky in Moscow will become a milestone in the Company's activities pertain-

<sup>101</sup> The Competition's official website is at: [www.konkurs-errushydro.ru](http://www.konkurs-errushydro.ru).

ing to the preservation of cultural heritage. In 2015, funds to finance the organization of festivities to commemorate the 70th anniversary of victory in the Great Patriotic War of 1941-1945 will be assigned.

The amount assigned by the Company to charity and sponsorship initiatives to be implemented in 2015 will decrease and will amount to RUR 571 million.

**Volunteering**

The goals of the corporate volunteering projects are closely associated with the Company's charity priorities. The volunteering movement is a key component of the Company's program on social and occupational adaptation of the orphaned children and the children left without parental care.

**The Program of Social and Occupational Adaptation of Children Living in Children's Homes**

The Company implements its adaptation program starting from May 2013 pursuant to the concept of priority development of HR potential titled "From New School to the Working Place". The Program integrates social adaptation of a child with training in spheres related to the power sector, which can probably result in professional engagement in hydropower.

The children who got enthusiastic about hydropower due to the Program will probably be employed at the Company facilities in future.

The project help the children who survived their parentlessness adapt to the life in the boarding schools and beyond, preparing to enter industry-specific institutes.

- During 2014 the Company actively supported 9 children's homes<sup>102</sup>;
- 5 students from children's homes entered the industry-specific institutes, namely the Divnogorsk Energy College and the Perm Industrial College.

The main results of the Company's charity and volunteer projects in 2014:

1. Liaising with experts on the development of methods;
2. Development of a program for psychological assessment of engineering abilities of orphaned children. The assessment was accomplished in all institutions included in the program;
3. Training of the personnel of the Company subsidiaries engaged in providing volunteer support to children's homes pursuant to the program of social and occupational adaptation of children living in children's homes. The duration of the training is 45 academic hours.
4. Thematic training seminars and practical sessions for the teachers working in children's homes. The seminars were conducted in seven regions;

**APPENDIX: Awards in the Field of Sustainable Development and Corporate Social Responsibility**

Top-1000 of the leading managers of Russia prepared by the Association of Russian Managers and Kommersant Publishing House, Energy and Fuel Complex Nomination:	Evgeny Dod, the Chairman of the Management Board – CEO, took the fifth position in the rating of top managers; Boris Zverev, the Communications Director, took the top position in the rating of PR and Corporate Relations directors.
Q3 2014 rating prepared by Political and Economic Communications Agency:	The Company is recognized as the most transparent organization in the industry in respect of information
Thomson Reuters Extel Europe:	Timur Akhmedzhanov named the best IR Manager of the power industry companies

5. The My Rights training business game for the children living in children's homes and participating in the program
6. Agreements on cooperation with children's homes and industry-specific colleges in seven regions
7. Implementing two charity events involving fund raising for the festivities to be conducted in children's homes.

The Books for Easter charity event deserves a special mention. In April 2014, the employees of the Company raised RUR 353,410. The event was conducted in Moscow offices of the Company in the Company branches, including the Upper Volga Cascade of HPPs, Zagorskaya PPS, NIIES and RAO Energy Systems of the East. The charity event was named after a collection of stories by Russian writers in three volumes, called "The Lent. The Works by Russian Writers," "The Easter Stories by Russian Writers," "The Easter Verses by Russian Poets" correspondingly.

**The Involvement Charity Fund**

A decision on the establishment of the Involvement Charity Fund was made by the Board of Directors of JSC MC GidroOGK on August 7, 2012. The Fund is a non-profit charity organization established on the basis of voluntary asset contributions to promote and accomplish charity initiatives in accordance with the laws of the Russian Federation and the Articles of Association of the Fund.

The activities of the Fund are targeted in particular to provide assistance to the employees of the Company and their family-members during hard times. The Fund also helps the veterans of the industry, as well as the veterans of culture and arts, science and education, sick and orphaned children, disabled persons and children from disadvantaged families. The Fund also supports socially significant projects and talented young scientists.

The Fund supported the establishment of a chair of hydropower and renewable energy sources on the basis of Moscow Energy Institute (Technical University) in 2013. The establishment and functioning of a new chair is financed by the Company through "Involvement" Fund. The cooperation with the chair will allow for the Company's participation in educating engineers for hydropower industry pursuant to the Company's personnel training program.

In 2014 the Company started financing the purchase of equipment for the testing and laboratory facility consisting of five stands which emulate the operation of a hydropower plant, a pump storage plant, a wind power plant and a solar power plant together with power transmission lines incorporated in Smart Grid. The Company handed over to the chair a HPP online switchboard simulator for the students to master during their practical training in 2015.

Research on corporate transparency of Russian companies of the Russian Regional Network in regard of the integrated reporting:	The Company took the 10th position in the resulting rating of corporate transparency, becoming the best among the companies of the industry
2014 All-Russian Prize in the field of HR management. Awarded by HR Director Journal:	"From New School to the Working Place", a program for priority development was recognized as the winner in "Talent Management: the Best Program for the Attraction of Young Specialists"
Rating of the Company's corporate governance prepared by the Russian Institute of Directors:	In 2014 the rating of the Company's corporate governance grew from 7+ to 8. This is the best result among the participating companies. The rating corresponds to advanced practices of corporate governance.
ENES 2014 International Forum on Energy Efficiency and Energy Saving	The Company was awarded a prize in the nomination "The Best Practices of Russian Companies and Organizations of the Fuel and Power Sector, pertaining to the Development and Implementation of Educational, Occupational and Motivational Projects for Schoolchildren, Students and Young Specialists"
PJSC RusHydro's employer attractiveness rating	The rating agency Expert RA confirmed RusHydro's employer attractiveness rating at A.hr, which means "High level of the employer attractiveness"

**Financing assigned for the Program in 2014 amounts to RUR 1 billion and 171 million**

<b>Children</b>	<b>Environment Protection and Sports</b>	<b>Education</b>	<b>Religion and Historical Monum</b>	<b>Healthcare and welfare funds</b>
Help was provided to 21 children's homes and boarding schools, 6 rehabilitation centers for children with disabilities, as well as sports schools and sports clubs, general academic schools and music schools, kindergartens and creative teams; Publishing of "I want to know everything" popular science almanac and the book "River, river, where is your home?" for little kids together with DETGIZ Publishers	Support for environmental protection programs for reserves and specially protected natural reservations in the regions where the Company operates. "oBEREGAi" all-Russian Charity Environmental Initiative Opening of the Water Room interactive exhibit at "Experimentanium", a museum of popular science Support for children and youth sports schools and clubs in 19 regions.	Financing for activities of Saint Petersburg State Polytechnic University, Moscow State University of Civil Engineering, Siberian Federal University's Sayano-Shushenskii branch, Moscow Power Engineering Institute, Amur State University; Annual Competition of Students' Theses "Energy of Development" is an important link in the system vocational personnel training to work for the hydropower industry. Over 5 years, more than 100 higher education institutions and more than 600 students have taken part in this competition.	Donations to Sretensky Monastery to finance Sretensky Theological Seminary's activities, the Temple of the Blessed Trinity in the Nizhny Novgorod region, the Temple of the Sign Icon of Mother of God behind the Peter's Gate, for interior decorations of the Three Hierarchs Cathedral in the Monastery of Saviour and Transfiguration in Pronsk settlement; The construction and decoration of the Church of the Dormition of the Mother of God in the Moscow region. The contribution to the creation of a grant fund of the Russian Geographical Society.	Collaboration with the Center for Humanitarian Programs, the "Creation" Foundation, and the D. Rogachev Federal Clinical Research Centre for Pediatric Hematology, Oncology and Immunology of the Ministry of Healthcare of the Russian Federation The development of palliative care with the "Belief" Foundation; The implementation of the "Born by the Energy" action to supply expensive medical diagnostic and recovery equipment to maternity homes, perinatal centres and birthing units.

<sup>102</sup> See the diagram "Charity Activities in 2014: the Key Priorities."

## ACTIONS TO STOCK RESERVOIRS AND RIVERS WITH FISH

For several years running PJSC RusHydro has been carrying out actions to stock reservoirs and rivers with fish in some regions of the Russian Federation as part of the charitable environmental program in order to compensate for the damage caused to fish resources during the construction and operation of HPPs.



### 1 7 actions – 1.8 million fingerlings THE DAGESTAN BRANCH

**THE GUNIBSKOYE RESERVOIR**  
The Gunib District



**CARP**  
Cyprinoid fishes  
More than 1 million in 2006

**THE CHIRYURTSKOYE RESERVOIR**  
The Kizilyurt District



**WHITE AMUR**  
Cyprinoid fishes  
80,000 in 2007  
74,000 in 2008

**THE MIATLINSKOYE RESERVOIR**  
The Kizilyurt District



**MYSIDS AND FRESHWATER HOPPERS**  
Feed grade invertebrata  
80,000 in 2008

**THE CHIRKEYSKOYE RESERVOIR**  
The Buynaksk District



**RAINBOW TROUT**  
Salmon family  
500,000 in 2008  
20,000 in 2012  
90,000 in 2014

### 2 3 actions – 160.3 thousand fingerlings THE KARACHAEVO-CHERKESSIA BRANCH

**THE MZYMTA RIVER**  
The Krasnodar Territory  
Adler town



**BLACK SEA SALMON**  
Salmon family  
28,300 in 2011

**THE TEBERDA RIVER**  
The Karachayev-Cherkessian Republic  
Teberda town



**BROOK TROUT**  
Salmon family  
30,000 in 2012  
102,000 in 2013

### 3 3 actions – 36.6 thousand fingerlings THE BUREYSKAYA HPP

**THE BUREYSKOE RESERVOIR**  
The Talakan settlement  
The Amur region



**EUROPEAN CARP**  
Cyprinoid fishes  
35,000 in 2003

**THE BUREYSKOE RESERVOIR**  
The Talakan settlement  
The Amur region



**STURGEON**  
Sturgeon family  
1000 in 2003

**THE ZEYA RIVER**  
The Beloyarovo village  
The Amur Region



**GREAT SIBERIAN STURGEON**  
Sturgeon family  
600 in 2014

### 4 1 action – 32 thousand fingerlings THE ZARAMAGSKIYE HPPS

**THE TEREK RIVER**  
The North Ossetia



**CASPIAN SALMON**  
Salmon family  
32,000 in 2010

### 5 1 action – 616 thousand fingerlings THE KABARDINO-BALKARIA BRANCH

**THE TEREK RIVER**  
The Republic of Dagestan  
Kizlyar town district



**CASPIAN SALMON**  
Sturgeon family  
616,000 in 2014

### 6 2 actions – 30 thousand fingerlings CHUVASHSKAYA POWER SUPPLY COMPANY

**THE VOLGA RIVER THE KUYBYSHEVSKOYE RESERVOIR**  
The Chuvash Republic  
Novocheboksarsk city



**STERLET**  
Sturgeon family  
15,000 in 2013

**THE VOLGA RIVER THE KUYBYSHEVSKOYE RESERVOIR**  
The Chuvash Republic

15,000 in 2014

### 7 1 action – 100 thousand fingerlings THE NOVOSIBIRSKAYA HPP

**THE NOVOSIBIRSKOYE RESERVOIR**  
The Novosibirsk Region  
Sovetskiy District  
Novosibirsk city



**SIBERIAN STERLET**  
Sturgeon family  
More than 100 in 2012

LOCATION

THE NUMBER OF FRY RELEASED AND THE YEAR OF THE ACTION

ESPECIALLY VALUABLE SPECIES / LISTED IN THE RED BOOK

## 4.

ENVIRONMENTAL  
RESPONSIBILITY

The goal of the Company's environmental policy consists in improving environmental safety and ensuring the growth of capitalization due to a reliable and environmentally safe generation of electricity, a complex approach to the use of energy resources and an increased social responsibility level.



## SECTION 4: ENVIRONMENTAL RESPONSIBILITY

### 4.1 Environmental Safety as a Criterion of Sustainable Development

#### Environmental Policy: Approaches and Principles <sup>G4-56</sup>

The Environmental Policy of JSC RusHydro is developed and approved; it is based on the following principles:

- the environmental safety priority as a component of national security;
- energy saving and rational use of natural and energy resources;
- decreasing possible negative impact on the environment throughout the entire life cycle of HPPs;
- preventive measures as the priority over the measures intended to liquidate negative consequences.

“THE GOAL OF THE COMPANY’S ENVIRONMENTAL POLICY CONSISTS IN IMPROVING ENVIRONMENTAL SAFETY AND ENSURING THE GROWTH OF CAPITALIZATION DUE TO RELIABLE AND ENVIRONMENTALLY SAFE GENERATION OF ELECTRICITY AND A COMPLEX APPROACH TO THE USE OF ENERGY RESOURCES”

ENVIRONMENTAL POLICY OF RUSHYDRO

The activities of the Company are based on the precautionary principle formulated in Article 15 of the Declaration on Environment and Development adopted by the UN Con-

ference on Environment and Development in June 1992 in Rio de Janeiro. This principle is implemented by the member-companies of the Group in managing environmental impact throughout the life cycle of the Company facilities. <sup>G4-14</sup> More detailed information on the above is available at: [www.rushydro.ru/sustainable\\_development/environmental](http://www.rushydro.ru/sustainable_development/environmental).

“TO PROTECT THE ENVIRONMENT THE COUNTRIES USE THE PRECAUTIONARY PRINCIPLE AS WIDELY AS THEY CAN. ANY SERIOUS OR IRREPARABLE THREAT OF ENVIRONMENTAL DAMAGE OR THE ABSENCE OF FULL SCIENTIFIC CERTAINTY DO NOT SERVE AS GROUNDS FOR DELAYING ECONOMICALLY EFFICIENT MEASURES TO PREVENT THE WORSENING OF THE ENVIRONMENT”

THE PRECAUTIONARY PRINCIPLE, THE DECLARATION ON ENVIRONMENT AND DEVELOPMENT ADOPTED BY THE UN CONFERENCE ON ENVIRONMENT AND DEVELOPMENT, RIO DE JANEIRO, JUNE 3-14, 1992

#### Environmental Impact Assessment and Impact Management Mechanisms

The Company ensures environmental safety of its operations throughout the life cycle of HPPs, including the periods during the development of Environmental Impact Assessment (EIA) projects. The Company also performs social and environmental monitoring and mitigates the potential or actual negative impact during construction and opera-

### ENVIRONMENTAL IMPACT ASSESSMENT AND IMPACT MANAGEMENT MECHANISMS <sup>G4-PR1</sup> THROUGHOUT THE LIFE CYCLE OF THE PROJECT

<b>PLANNING</b> (pre-design stage)	<ul style="list-style-type: none"> <li>▶ River energy use scheme</li> <li>▶ Declaration of intent</li> <li>▶ Generalized (magnified) assessment of impact of future activities on natural complexes</li> <li>▶ Natural and environmental assessment of the future location</li> </ul>
<b>DESIGN</b>	<ul style="list-style-type: none"> <li>▶ Development of design and work documents</li> <li>▶ Preliminary assessment based on stock exchange data (basis for EIA terms of reference)</li> <li>▶ Performance of EIA: assessment of environmental and economic damage for the environment and population at different dam sites</li> <li>▶ Development of the Section on Environmental Safety: planning of measures to mitigate the impact of construction of a hydraulic power system on environment</li> </ul>
<b>CONSTRUCTION</b>	<ul style="list-style-type: none"> <li>▶ Реализация и контроль исполнения мероприятий, направленных на охрану окружающей среды, запланированных в проекте</li> <li>▶ Соблюдение требований природоохранного законодательства при производстве строительно-монтажных работ</li> </ul>
<b>OPERATION</b> (impact management)	<ul style="list-style-type: none"> <li>▶ Environment Protection Management System</li> <li>▶ Technical re-tooling and reconstruction and modernization</li> <li>▶ Development and standardization of production processes</li> <li>▶ Environmental control of production</li> <li>▶ Voluntary initiatives on preservation of biological diversity and the increase of environmental awareness of the public and the Company employees</li> </ul>

tion. <sup>G4-PR1</sup> The assessment of the impact and its management are presented on the diagram below.

In 2014, environmental protection expenditures and investments were RUR 122,960, a 22% increase compared with 2013<sup>103</sup>. <sup>G4-EN31</sup>

#### Planning and Design: Environmental Impact Management Social, environmental and economic assessment of projects as a component of sustainable development

##### Social and economic issues

The water bodies in Russia are the federal property, including water reservoirs. According to the Water Code of the Russian Federation water reservoirs are granted to the Company for long-term use for the purposes of hydraulic generation based on water use agreements. The interests of the Russian Federation in water economy are represented by the Ministry of Natural Resources. At regional level the Ministry is represented by seven departments of natural resources in accordance with the federal districts, and by seventeen basin authorities.

Pursuant to the Russian law the making of decisions pertaining to the planning and sitting of power infrastructure facilities is also included into the frame of reference of the government authorities. Therefore all issues relative re-

lating to the people in connection with the sitting and development of power facilities are the responsibility of said government authorities. <sup>G4-EU20 and G4-EU22</sup>

##### Assessment of environmental impact of the projects

The assessment of the environmental impact of projects is a pre-condition for any decisions pertaining to the construction of hydropower facilities. Pursuant to the requirements of the Federal Law №7-FZ as of January 10, 2002, the responsibility for the preparation of the documents relative future actions in accordance with normative requirements set for the actions in question rests with the Customer. As customers, the member-companies of the Holding organize and participate in public hearing of the environmental impact assessment at the stage of initiation of projects. <sup>G4-26</sup> The Company has a corporate standard for assessing the environmental impact. <sup>G4-EU19</sup> The Company is active in interacting with all stakeholders during the discussion and approval of schemes on complex use and protection of water bodies in accordance with the requirements of the Russian Water Code. <sup>G4-EU19 and G4-26</sup>

More information on the approaches of the Company to making decisions contributing to mitigation of environmental risks is available at: (<http://www.rushydro.ru/file/main/global/company/safety/environmental/Podhody.pdf>).

#### DESIGN STAGE: EIA (Environmental Impact Assessment)

The process of assessment of environmental consequences and the development of measures to mitigate and prevent the environmental impact in order to make a managerial decision on the implementation of future economic activity by determining potential negative impacts, taking into account the public opinion.

EIA GOALS	EIA LEGAL FRAMEWORK
<ol style="list-style-type: none"> <li>1. Determining the parameters of the components of the environment covered by the impact generated by the economic activity</li> <li>2. Preliminary assessment of environmental factors and impact types generated by future economic activity</li> <li>3. Summing up the environmental consequences and resulting social, economic and other changes</li> <li>4. Taking into account possible consequences of future economic activity</li> </ol>	<ul style="list-style-type: none"> <li>• Federal Law №7-FZ “On Environment Protection”, dated 10.01.2002</li> <li>• Federal Law №96-FZ “On the Protection of Atmospheric Air”, dated 04.05.1999</li> <li>• Federal Law №174-FZ “On Environmental Expert Assessment”, dated 23.11.1995</li> <li>• Water Code of the Russian Federation №74-FZ, dated 03.06.2006</li> <li>• Federal law №33-FZ “On Specially Protected Natural Territories”, dated 14.03.1995</li> <li>• Land Code of the Russian Federation №136-FZ, dated 25.10.2001</li> <li>• Policy on the environmental assessment of impact of future economic and other activities in the Russian Federation (Order №372 of the State Environmental Committee, dated 16.05.2000)</li> </ul>

#### Public hearings on Environmental Impact Assessment

In 2014 the Company organized public hearing on the assessment of environmental impact of construction of the Upper Naryn Cascade of HPPs. The hearing resulted in a positive opinion on the construction, meaning that the construction of said cascade of HPPs will not impact the environment in a negative way. The environmental impact assessment was developed by Chuiskaya Ekologicheskaya Laboratoriya LLC.

The hearing took place in the city of Naryn (Kyrgyz Republic) and was attended by the representatives of PJSC RusHydro and CJSC Verkhne-Narynskie GES, the Naryn regional

administration, the public and the local authorities and the activists of non-government organizations.

The Naryn River which is the site for the cascade of HPPs in question plays a key role in the regions in terms of water supply for household and agricultural needs. The minimization of possible negative environmental impact is a fundamental principle of surveys and construction work to be performed in the region. The design of the cascade of HPPs in question envisages a continuous sanitation flow of water through the HPP dams, followed by a mandatory reclamation of lands after the completion of the construction. The rotation camp for the construction workers is equipped

<sup>103</sup> The scope of the indicator for 2014 does not include COFC MEK’s data. More information is available in the Appendix “Quantitative indicators.”

with advanced treatment facilities. The areas to be flooded are minimal and no relocation will be required. Besides, a continuous monitoring of the environmental impact will be accomplished during the construction, as well as during the operation of the facilities.

### Operation: Measures to Mitigate the Environmental Impact <sup>G4-EN33</sup>

<sup>G4-DMA</sup> The rational use of natural resources and the mitigation of the negative environmental impact constitute the fundamental principle of the Company's environmental policy. The environmental safety is achieved through the strict observance of the requirements of the law of the Russian Federation and of the Company's environment protection standards listed in the corporate Technical Policy. The mitigation of industrial impact on the environment depends on financing and on the implementation of measures listed in the Program of Technical Re-equipment and reconstruction of the Company facilities. The Company implements said measures every year in full.

<sup>G4-DMA</sup> The Company follows a comprehensive policy of implementing the systems of environmental management and the international standards of professional safety. The Company's own design and technological facility is engaged in development and implementation of advanced and environment-friendly technologies in hydropower industry, which improve the environmental safety of hydropower facilities and reducing the impact on the environment.

The Company supports industry-wide and international initiatives intended to reduce industrial impact on the environment and the population and to promote and implement the standards of environmental responsibility by actively interacting with the stakeholders. <sup>G4-EN33</sup>

In the regions of operation the Company implements all compensating measures to reduce the environmental impact, including the stocking of fish, improvement of natural territories and protected areas, etc. The Company also accomplishes voluntary (charity) environmental programs, intended to promote environmental awareness and a caring

attitude to nature in local communities.

Within the frameworks of its environmental activities the Company develops cooperation with preserved territories, national parks and other protected areas, as well as with educational establishments and environmental organizations<sup>104</sup>.

"RESPONSIBILITY FOR TECHNICALLY CORRECT AND ENVIRONMENTALLY SAFE AND EFFICIENT DECISIONS TO BE EFFECTED FOR THE SUPPLY OF POWER TO THE REGIONS WHERE THE COMPANY'S GENERATING FACILITIES ARE LOCATED IS ONE OF THE MOST IMPORTANT ELEMENTS OF THE COMPANY'S SOCIAL STRATEGY."

**RASIM KHASIAKHMETOV**, DEPUTY DIRECTOR OF THE DEPARTMENT FOR DEVELOPMENT AND STANDARDIZATION OF PRODUCTION PROCESSES, PJSC RUSHYDRO

### Environmental Management System <sup>G4-EN33</sup>

DURING 2014 THE SYSTEM OF ENVIRONMENTAL MANAGEMENT WAS FUNCTIONING IN TEN FACILITIES OF THE COMPANY.

### The RusHydro Holding: the functioning of the management systems in 2014

One of the tools to accomplish the Company's environmental policy consists in the implementation of the Environmental Management System (EMS) at its generating subsidiaries. A project to implement the EMS was launched by the Company in 2007. The first HPPs certified for compliance with ISO 14001:2004 included the Zhigulevskaya and the Volzhskaya HPPs. Certified HPPs undergo annual compliance audit and are re-certified every three years. In 2014, the Volzhskaya HPP was re-certified for the third time, while the Zagorskaya pump storage plant was re-certified for the second time.

- In 2014 the system of environmental management was implemented at ten facilities of the Holding, including certified ones implemented at the five RusHydro's branches (the Volzhskaya HPP, the Zagorskaya PSPP, the Nizhegorodskaya HPP, the Kuban Cascade of HPPs, the Cheboksarskaya HPP) and at a subsidiary (the Kolymskaya HPP);
- In February 2014, the quality management system at the Nizhegorodskaya HPP was re-certified in the course of re-certification audit (ISO 9001), whereas in May 2014 the HPP in question was certified for compliance with ISO 14001 and OHSAS 18001. The Nizhegorodskaya HPP was the first Company facility which confirmed a successful implementation of the Integrated Management System.

The performance of periodic supervisory audits is a common practice for confirming the reliability of certified Environmental Management System and a basis for its continuous improvement.

- In April 2014 the environmental management system implemented at Zagorskaya PSPP was re-certified;
- The occupational health and safety system at Upper Volga Cascade of HPPs underwent the re-certification audit in April 2014;
- In October 2014, the re-certified environmental management system at Cheboksarskaya HPP underwent the first compliance audit (ISO 14001:2004).

### Protection of Atmospheric Air

<sup>G4-DMA</sup> RusHydro's companies generate electricity from environmentally-friendly renewable sources, which results in the minimal environmental impact, rational use of natural resources and preservation and rehabilitation of ecological systems.

RUSHYDRO'S COMPANIES GENERATE ELECTRICITY FROM ENVIRONMENTALLY-FRIENDLY RENEWABLE SOURCES.

The emission of pollutants to the atmosphere are caused by transportation vehicles and the works performed to provide the operating condition of the equipment (regeneration of oil, operation of batteries, welding, mechanical treatment of metals, etc.). <sup>G4-EN16</sup> All member-companies of the Holding monitor the emissions to the atmosphere. According to the data of environmental control the volume of NOX, SOX and other polluting and ozone-depleting substances emitted to the atmosphere in 2014 was of no significance and did not exceed the maximum allowable quantities. <sup>G4-EN16, G4-EN20 and G4-EN21</sup>

The key activity of the member-companies of the Holding consists in the production of electricity by means of generation using HPPs. HPPs emit no greenhouse gas to the atmosphere. <sup>G4-EN15</sup>

During the use of water reservoirs in zones with moderate climate (as different from tropical climate zones) no significant emissions of carbon dioxide (in volumes contributing to the greenhouse effect) takes place. During the first years after the establishment of a water reservoir there is no increased emission of CO<sub>2</sub> due to the disintegration of flooded organic matter, including plants, organic residues, humus, etc. In later time the situation becomes more stable. The bottom sediments of water reservoirs preserve carbon, preventing it from getting into the atmosphere. Or-

ganic residues which enter a water reservoir with drainage water can decompose, but this makes a water reservoir no different from natural rivers and lakes. Scientific research does not confirm speculations on active emission of carbon dioxide from water reservoirs.

### Safe Disposal of Wastes <sup>G4-DMA</sup>

The production process of the Company facilities results in generation of production and consumption wastes. The major share of the wastes is made up of the fourth and fifth class of hazard, generated during reconstruction, repair and maintenance work performed at the facilities. All wastes are handed over to specialized organizations for disposal, detoxication or use, based on contractor agreements. <sup>G4-EN22</sup>

In 2014 the member-companies of the Holding executed the certificates for 1-4 hazards class wastes. The execution of certificates was caused by coming in force of a number of new normative acts.

### Water Use and Water Protection Activities <sup>G4-EN33</sup>

<sup>G4-DMA</sup> The issues of water management and protection, and environmental safety of water bodies fall within the framework of reference of the federal authorities. The rules and procedures of use of water bodies and the norms of maximum allowable impact on water bodies during the operation of hydraulic installations are set by the Ministry of Natural Resources of Russia and its regional branches and basin authorities.

All water bodies affected by the activities of the Company are operated in strict compliance with the requirements of the Russian law and the conditions of water use agreements and the decisions to grant the right to use water bodies. All permissions are executed on time and agreed with corresponding supervisory authorities. The water taken by RusHydro's facilities does not impact the sources of water. <sup>G4-EN9</sup>

### Equipment of Sources of Waste Water Discharged into Water Bodies with Water Treatment Facilities <sup>G4-EN33</sup>

The Company equips the sources of waste waters discharged in water bodies with water treatment facilities. During the reporting period, three subsidiaries of the Company performed the following works:

- Putting into operation the waste water purification system at the Dzauzhikauskaya, the Ezminskaya, and the Gizeldonskaya HPPs (North Ossetia branch);
- Reconstruction waste water treatment installations of the motor transport shop of the Chirkeyskaya HPP (Dagestan branch);
- Running repairs of the pumping equipment for the pumping out of oil drainage and of the mechanical equipment used to purify waste water at the Votkinskaya HPP.

A project of reconstruction of drainage water treatment system for the Cheboksarskaya HPP to purify water drained from HPP building and to purify rain and melt water drained from the territory of materials and equipment base. The project was positively assessed by the state expert authority, with the reconstruction planned for 2015.

### Technical measures to reduce environmental impact <sup>G4-EN33</sup>

The technical measures accomplished pursuant to the Program of complex modernization, reconstruction and repairs are intended for to improve environmental safety. The most

### The facilities of the Company equipped with environmental management system

The Environmental Management System has been Certified	The Environmental Management System has been implemented	The Occupational Health and Safety Management System has been certified
The Volzhskaya HPP	The Zhigulevskaya HPP	The Upper Volga Cascade of HPPs
The Zagorskaya PSPP	The Kamskaya HPP	The Kuban Cascade of HPPs**
The Kuban Cascade of HPPs	The Votkinskaya HPP	The Nizhegorodskaya HPP*
The Kolymskaya HPP	The Upper Volga Cascade of HPPs	
The Nizhegorodskaya HPP*		
The Cheboksarskaya HPP		
* The Nizhegorodskaya HPP: the HPP's integrated management system complies with three international standards, including ISO 14001; OHSAS 18001 and ISO 9001. The integrated management system is certified.		
** The Kuban Cascade of HPPs: the integrated management system is implemented.		
The Environmental Management System complies with ISO 14001 (the Environmental Management Systems)		
The Occupational Health and Safety Management System complies with OHSAS 18001 (the Occupational Health & Safety Management Systems)		
The Quality Management System complies with ISO 9001 (Quality Management Systems)		
The Integrated Management System complies with the Environmental Management System and the Occupational Health and Safety System (as Integrated Management System)		

NOTE: data only on RusHydro facilities are presented; they do not include research institutes data (see detailed data in Section 2.1.2 Quality control at the design and construction stage.

<sup>104</sup> More detailed information is available in Section 3.3.3 Charity and Sponsorship (charity environmental initiatives).

effective measures on the reduction of environmental impact performed in 2014 include the following:

1. Measures intended to prevent the pollution of the environment during the operation of hydraulic turbine equipment in the course of reconstruction, repair and modernization of said equipment;
2. Reconstruction and repair of hydropower installations in order to maintain water protection zones in proper conditions and bank stabilization;
3. Measures to preserve water biological resources, etc.
4. Replacement of oil-filled electric equipment with the equipment containing no oil (vacuum, or gas-insulated) or with the equipment containing less oil;
5. Installation of treatment equipment for the purification of water drained into water bodies.

### Preservation of Water Biological Resources

The hydropower facilities of the Company are not located in the protected natural areas or in adjoining zones. <sup>G4-EN11</sup>

<sup>G4-EN12</sup> Due to the nature of its activity the Company has always paid special attention to the preservation and restoration of fish stock in rivers. To protect fish the HPPs are equipped with fish ladders (the fish ladders have been constructed at the HPPs of the Kabardino-Balkarian and the Karachaevo-Cherkessky branches of the Company). The Company also constructs advanced fish-protection structures (the Boguchanskaya HPP, for example). The main standby unit of the Aushigerskaya HPP was equipped with fish-protection structures in 2014. The reporting period was also marked with design work to implement a fish pass and to modernize the fish-protection structure at the Marukha River near hydropower installations of the Zelenchukskaya HPP.

<sup>G4-EN13</sup> To restore the population of fish species within the Company's footprint RusHydro accomplishes yearly initiatives on the stocking of fish in rivers and HPP water reservoirs. The first initiatives on fish stocking were accomplished by the Company in 2003 in the Far East. The water reservoir of the Bureyskaya HPP (the Amur Region) was replenished with 36 thousand tiny sturgeons and carps. In the period of 2003 – 2014 the Company accomplished 17 charity environmental initiatives on fish stocking in seven regions. The total number of tiny fish species released to water amounts to 2.7 million, including valuable and rare species included into the Red List.

<sup>G4-EN13</sup> The initiatives on the preservation of water bio resources implemented in 2014 include the following:

- To restore the population of brook trout within the footprint of Zelenchukskaya HPP the Karachaevo-Cherkessky branch performed the fish stocking of the Marukha River. Some 70 thousand tiny fish trout were released into the river. Approximately the same number of tiny brook trout will be released into the river in 2015. Other initiatives include the designing of a fish pass and the modernization of the fish protection structure at Marukha River hydropower unit at Zelenchukskaya HPP.

Fish stock replenishment initiatives are performed by the Karachaevo-Cherkessky branch on yearly basis starting from 2011. The program on replenishment of bio resources of rivers in Karachaevo-Cherkessia will be effective for five years in order to compensate the damage done to fish resources during the construction and operation of Zelenchukskaya HPP. In five years period some 300 thousand tiny trouts will be released to the rivers, with compensation initiatives financed in the amount of five million rubles. The initiative is implemented in accordance with the requirements of the Russian law as agreed with the territorial department of fisheries of the Russian Federation.

- The standby main unit of Aushigerskaya HPP at the Cherek River the Kabardino-Balkarian branch has built a fish-protection structure intended to provide for safe movement of fish across the dam of the HPP. The fish protection structure was designed by JSC Institute Gidroproject (a part of the Company's research and technological complex).

- <sup>G4-EN33</sup> The Company's transportation division has cleaned the Sayano-Shushenskoye water reservoir from sunken and floating timber. During the next harvesting season 111 thousand cubic meters of sunken timber was removed from the water reservoir. The cleaning of Sayano-Shushenskaya HPP water reservoir project is implemented upon the order of the Federal Agency of Water Resources. The project was launched in 2010 and will last seven years. The capital works are performed annually from April to October in the bay of the water reservoir at the inflow of the Joiskaya Sosnovka River. During five years the volume of sunken timber in the water reservoir fell fourfold (from 730 to 175 thousand cubic meters).

## 4.2 ENVIRONMENTAL RESPONSIBILITY AND INTERACTION

### Environmental Impact Management: Corporate Experience

**The Company's corporate experience: environmental impact management exemplified by Bureyskaya HPP (at the stage of operation) and Nizhne-Bureyskaya HPP (at the stage of implementation)**

The Nizhne-Bureyskaya HPP is the first link in the cascade of counter-regulating plants capable of stopping the flood runoff at Amur River Region, where the ecological capacity of water basins is below technical and the need to preserve the stability of natural environment dictates the requirement to regulate the runoff of the rivers using hydraulic installations. <sup>G4-27</sup>

### Counter-regulating functions of the Nizhne-Bureyskaya HPP

Nizhne-Bureyskaya HPP	
Location	The Amur Region, the Bureysky District, the Novobureysky settlement
Installed capacity	320 MW (4x80MW)
Average annual output	1,650 million kWh
Construction period	2010-2016
Counter-regulating functions of the Nizhne-Bureyskaya HPP	

### Nizhne-Bureyskaya HPP

Increasing the protection of the Bureya River and the Amur River lower path in case of abnormally high run-offs at the Bureyskaya HPP

Prevention of winter floods of settlements located in the lower reach of the Bureyskaya HPP

Removal of limitations from the Bureyskaya HPP – up to 200 MW

### Design stage

A set of measures to protect greenery and land resources:

- Measures on preservation and protection of rare and Red List plants;
- Measures on organization of new integrated specially protected natural areas.

A set of measures to protect fauna:

- Joining the Zhelundinsky and the Irkun Hole preserved areas to form a united specially protected natural area within new boundaries;
- Construction of cordons;
- Firefighting equipment;
- Rare birds rehabilitation project.

### Construction stage

#### Using environment-friendly construction technologies

Preparation of a rock base for the water works using no explosives – this was a pioneering site to use rope cutting technology in the construction of the water works.

#### Using rope cutting technology

- No dynamic and vibration loads onto the foot of the dam;
- High capacity at low labor cost;
- Additional accessories enabling the cutting in any direction and any configuration;
- Environment-friendly technology compared with other methods of development of base rock during the preparation of bases for water works;
- The use of the remaining fragments to fix the slopes and to design the landscape.

The use of emulsion explosives in cartridges

- Decreasing the emission of pollutants in the form of trotyl dust which affects the environment;
- Decreasing noise and vibration which affects the environment.

Optimizing the construction site territory to minimize possible negative environmental impacts:

- Fencing the territory;
- Production and environmental control and monitoring;
- Increasing the environmental awareness of those involved in construction;
- Waste recycling;
- Purchasing equipment with minimal emission (concrete plants).

“THE BUILDERS CONSTRUCTING THE BUREYSKAYA HPP FACILITIES MAKE EXTENSIVE USE OF THE WORLD'S BEST PRACTICES IN ENVIRONMENT PROTECTION. THE CONSTRUCTION IS BASED ON ADVANCED TECHNOLOGIES, WHICH RESULTED IN REDUCING THE LAND AREA OCCUPIED BY THE HPP FACILITIES BY 40%. MANY AUXILIARY FACILITIES ARE BUILT ON THE LANDS TO BE FLOODED AT ANY RATE. THE PITS ARE RE-SIZED BY OPTIMAL USE OF EARTH REMOVED FROM THE HPP PIT. THE TIMBER OBTAINED DURING THE CLEANING OF THE TERRITORY IS PROCESSED INTO CHIPS TO BE USED AS FUEL FOR BOILERS. THE NIZHNE-BUREYSKAYA FOOTPRINT WILL BE MONITORED.”

VLADIMIR GORSHENIN, THE DEPUTY DIRECTOR  
GENERAL OF JSC NIZHNE-BUREYSKAYA HPP

### The Testing of the Hydropower Sustainability Assessment Protocol, Exemplified by the Nizhne-Bureyskaya and the Nizhne-Zeiskaya HPPs

In August 2014, the UNDP/GEF Project “Preserving the biological diversity in policy and development programs of the Russian power sector”, PJSC RusHydro and WWF Russia tested the Hydropower Sustainability Assessment Protocol (hereinafter referred to as the Protocol) developed by the International Hydropower Association. The Protocol was tested at the Nizhne-Bureyskaya and the Nizhne-Zeiskaya HPPs. The tests were performed by a group of international experts in different fields. Based on the results of the tests at the Nizhne-Bureyskaya and the Nizhne-Zeiskaya HPP the commission has developed a number of recommendations to improve the internal processes of project management, such as the procedures of information exchange during the project implementation and the improvement of measures to reduce the negative impact on biodiversity, etc.

### The testing of the Protocol encouraged finding solutions for the following issues:

- The Ministry of Construction of Amur Region has prepared applications for getting funds to finance the preparation of the Nizhne-Bureyskaya HPP's water reservoir bed;
- The Nizhne-Bureyskaya HPP initiated the formation of a task force to develop solutions for environmental and social issues;
- An inter-departmental commission has been established for the preservation of biodiversity and specially protected territories in the Amur Region;
- The Nizhne-Bureyskaya HPP initiated the interaction with non-government and environmental organizations in respect of compensation measures;
- The implementation of environmental initiatives during the construction and operation of the HPP will be continued.

### Public Hearings

In January 2015, a discussion on the establishment of the Bureysky Natural Park took place in the Public Chamber of Amur Regions by uniting the state reserves and establishing specially protected natural areas within the new borders.

The park will be built in 2016-2017, simultaneously with the filling of the Nizhne-Bureyskaya HPP water reservoir. The integrated territory of the park will include the lands of Irkun Hole and the protected area of the Zhelundinsky



reserve, together with the Zhelundinsky reserve itself and the territories along the banks of the Bureya River and so-called Nizhne-Bureyskaya Sea, adjoining the zone to be flooded. The establishment of the park is an integral part of measures undertaken to compensate the negative environmental impact and to preserve biodiversity within the footprint of the Nizhne-Bureyskaya HPP.

The territory of the park will serve to accomplish the compensation measures intended to create favorable conditions for fauna and flora within the zone of the water reservoir and the lower reach.

The public hearings were attended by the representatives of the administrations of the Bureysky and the Arkharinsky districts, the specialists of JSC Nizhne-Bureyskaya HPP, the representatives of the Ministry of Natural Resources and the Fauna Protection Department of Amur Region, the members of local communities from the Arkhara, Novobureysky and Talakan settlements, and international experts.

The project was submitted for consideration to the Ministry of Nature of the Russian Federation. It is expected that by the time of publication of this report an order on the establishment of a new specially protected territory will be signed by the governor of Amur Region.

“SUCH AN ACCORD THAT EXISTS BETWEEN THE BUILDERS AND THE LOCAL COMMUNITIES ON THE BUREYA RIVER IS NOT EASY TO FIND IN LOCATIONS WHERE MAJOR INDUSTRIAL FACILITIES ARE TO BE BUILT. THE ACTIVITIES OF THE MANAGEMENT OF NIZHNE-BUREYSKAYA HPP ON ENVIRONMENT PROTECTION ARE UNIQUE AND SHOULD BE ENCOURAGED IN EVERY WAY”.

HARALD LUMMENS, AN INTERNATIONAL EXPERT

## The Anyisky Fish Breeding Facility

At the stage of reconciliation of a technical design to construct the Bureya Cascade of HPPs a compensation of damage due to fishing industry was agreed in the form of a participatory interest in the construction of Anyisky Fish Breeding Facility which includes salmon and sturgeon breeding areas.

Anyisky Fish Breeding Facility is one of the biggest fish breeding facilities in Russia. It is equipped with the most advanced plant and equipment to reproduce valuable fish species. The sturgeon breeding area was put into operation in 2010. The construction of the Siberian salmon caviar collection facility was completed in 2011.

## International Cooperation on Environment Protection <sup>G4-27</sup> and G4-DMA

The Company is active in supporting the efforts of UNDP/GEF – the Ministry of Natural Resources of the Russian Federation “Preserving the biological diversity in policy and development programs of the Russian power sector” to improve the mechanisms of environmental impact assessment in Russia, by increasing the importance of biodiversity as a component of the assessment, including the use of “Prevent-Reduce-Recover-Compensate” mechanism and to assess the cost of loss of biodiversity during the evaluation of the impact on biodiversity generated by power sector companies. Besides, the Company intends to proceed with the development of legislation drafts to include the biodiversity preservation criteria into the normative and legal requirements of the Russian law. <sup>G4-26 and G4-27</sup>

<sup>G4-DMA</sup> “THE COMPANY INTENDS TO MAINTAIN FRUITFUL COOPERATION WITH INTERNATIONAL GOVERNMENT AND NON-GOVERNMENT ORGANIZATIONS, AND RESEARCH AND EDUCATIONAL ESTABLISHMENTS EFFICIENT IN THE FIELD OF ENVIRONMENT PROTECTION AND SAFETY.”

THE ENVIRONMENTAL POLICY OF JSC RUSHYDRO

- The Company proceeded with its activities in UNDP task force “Preserving the biological diversity in policy and development programs of the Russian power sector” (UNDP/GEF/the Russian Ministry of Natural Resources). The project in question is an efficient means of cooperation with a wide circle of external stakeholders. The main topics of interaction (sections within the task force) identified in 2014 include the following: 1). Preservation of biodiversity; 2). Sustainable development of hydropower industry; 3). Development of a collection of innovative solutions for hydropower sector; 4). Solutions for Lower Volga region. <sup>G4-26</sup>
- The Company contributes much into the promotion in Russia of the world’s best practices in the field of assessment of compliance to the criteria of sustainable development of infrastructural projects of hydropower industry throughout their entire life cycle. The Hydropower Sustainability Assessment Protocol can serve as an example of such practice.

In 2014 the Company confirmed its membership in international industry associations, such as CEATI, IHA and ICOLD, interacting with the international community on issues of safe innovative and sustainable development of hydropower.

Below listed are the 2014 initiatives exemplifying the international interaction and cooperation in the field of environmental safety and protection: <sup>G4-27</sup>

- The “Collection of innovative solutions for the preservation of biodiversity for hydropower industry” has been developed as part of UNDP/GEF – the RF Ministry of Natural Resources project with the participation of the Company. The Collection presents some fifty examples of successful practices of biodiversity preservation at different stages of hydropower projects’ life cycle (design, construction and operation), as well as universal practices. The presentation of the Collection took place in October 2014 at the Eighth Scientific and Technical Conference titled “Hydropower – New Developments and Technologies” which was hosted by VNIIG named after B. E. Vedenev (all-Russian Hydraulic Engineering Research and Development Institute).

The Collection is a unique publication, generalizing and systematizing the global experience in the field of biodiversity preservation for hydropower sector. It is a practical handbook for making environmental-friendly decisions for designers and ecologists, as well as authorities and other interested parties. The cooperation of the Company with UNDP/GEF- RF Ministry of Natural Resources project in the preparation of the Collection is a positive example of the Company’s cooperation with stakeholders in regard of the development of the corporate policy, taking into account environmental factors, as well as the risks and interests of stakeholders.

- In July 2014 the Company became a party to the Agreement on the preservation of biodiversity in Amur Region. The quadruple Agreement was signed

with the assistance and participation of the Project by and between the Nizhne-Bureyskaya HPP, the Ministry of Natural Resources of Amur Region, and the Department of protection, control and regulation of use of wildlife and habitat of Amur Region.

The scope of the agreement includes cooperation on organizing compensation measures and the implementation of biodiversity condition monitoring during construction and the rise of water in Nizhne-Bureyskaya HPP water reservoir. The cooperation will also cover the optimization of the footprint of hydropower facilities and the performance of environmental impact assessments in the region.

- In October 2014 the Company became one of the participants of “Biodiversity and business: approaches and solutions” International Conference attended by the leadership of the Ministry of Natural Resources of the Russian Federation, the Federal Supervisory Authority on the use of natural resources, the representatives of the Russian Ministry of Energy, the WWF Russia, the Russian Union of Industrialists and Entrepreneurs, the research community and the leading power sector companies.

A Round Table on hydropower sector took place at the Conference, with the representatives of the Company communicating with environment activists and scientists on the issues of preserving biodiversity in hydropower industry. The Conference became a meeting place to widen the cooperation and interaction pertaining to the development of measures to recover biodiversity in water bodies. The development of such cooperation corresponds with the provisions of the Federal Targeted Program “Development of water economic complex of the Russian Federation in 2012-2020”<sup>105</sup>, which among other things is targeted at the “restoration and environmental rehabilitation of water bodies incapable of self-restoration.”

- In 2014, the Company participated in the industry-specific workshop called “Building a social dialogue between business and the aboriginal peoples: operational pattern”. The workshop was organized with the support of UNDP/GEF/the Russian Ministry of Natural Resources UNDP/GEF Project “Preserving the biological diversity in policy and development programs of the Russian power sector”, the UN Global Compact network in Russia and the Association of aboriginal peoples of North, Siberia and Far

East. The development of a socially responsible dialogue with local communities in the regions of operation is an important aspect of the Company’s social policy, as the Company has its major generating facilities in Siberia and Far East.

## Sustainable Development of Hydropower Sector and Cooperation with IHA

### The Hydropower Sustainability Assessment Protocol <sup>G4-PR1</sup> and G4-15

The Hydropower Sustainability Assessment Protocol developed by the International Hydropower Association (IHA), was ratified by the International Council of Sustainable Development of Hydropower and recommended for application to many international organizations, including WWF. The Council controls the practical use of the Protocol.

The IHA Protocol was first tested in Russia by RusHydro during the assessment of the Kankunskaya HPP design in 2013. An assessment of two other RusHydro’s projects – the Nizhne-Bureyskaya HPP (under construction) and the Nizhne-Zeiskaya HPP (planned for construction) – performed in 2014 involved the use of independent experts.

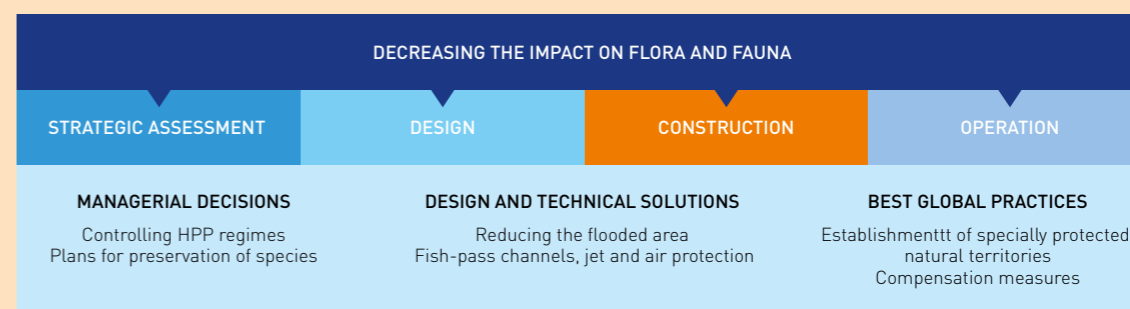
The projects were assessed by the experts based on the IHA Protocol using all factors listed in the Protocol. Based on the results of IHA Protocol testing the Expert Commission concluded that the IHA Protocol needs further development, taking into account the specific regulatory features of Russian hydropower. The Commission also recommended implementing the IHA Protocol on all facilities in the Russian Federation.

In December 2014, UNPD/GEF/Russia’s Ministry of Natural Resources, PJSC RusHydro and WWF Russia prepared an open letter addressed to the federal authorities, which contains the Protocol testing results, accompanied by further advice and recommendations on the use of the IHA Protocol in the Russian Federation.

## Global Climate Change and Environmental Responsibility

Key HPPs’ facilities which are a part of the RusHydro Holding do not produce emissions of greenhouse gas to atmosphere; however, to prove this information, they monitor the total emission of greenhouse gas on a periodic basis at their production facilities and participate in joint projects pertaining to the reduction of greenhouse gas emissions. Moreover, to measure an amount of greenhouse emissions from the surface of water reservoirs and to compare Russian HPPs’ data with international results, in 2014, the St. Petersburg

## PRESERVATION OF BIODIVERSITY DURING ALL STAGES OF LIFE CYCLE OF HYDROPOWER PROJECTS



<sup>105</sup> Approved by Order №350 of the Government of the Russian Federation dated April 20, 2012.

Polytechnic University upon PJSC RusHydro's order conducted a research "Justification of parameters of operating reservoirs and reservoirs under construction of JSC RusHydro's HPPs on the basis of greenhouse emissions." Reservoirs of the Sayano-Shushenskaya HPP and the Mainskaya HPP were selected as pilot facilities for greenhouse gas emission research. The methods of the emission evaluation were based on the International Hydropower Association's Guide; data on greenhouse gas emission from the surfaces of the Canadian HPPs' reservoirs of the same age were used for comparison.

The results of the research revealed that the flows of methane at the average are significantly lower than in most reservoirs of Canada. The average volume of carbon dioxide was similar to the volume of carbon dioxide flows from the Canadian HPPs' reservoirs of the same age. A comparison of the carbon intensity of greenhouse gas from the surface of reservoirs of the Sayano-Shushenskaya HPP and the Mainskaya HPP with the emissions from the surface of natural lakes of the same trophic level demonstrated that they have close indicators. Measures on energy efficiency contribute to the solution of this issue. They are intended to decrease the internal consumption of energy and to develop power supply services which allow for the implementation of energy saving technologies and to decrease the intensity of power consumption. <sup>G4-EC2 and G4-DMA (former EU6)</sup>

To identify risks and to minimize their impact on decision-making the Company takes into consideration climatic and hydrological forecasts to adapt to potential climate change. <sup>G4-EC2</sup> The development of hydrometeorologic forecasting network within the footprint of HPPs contributes to minimization of risks and the improvement of the quality of forecasts. The network is developed in joint effort with the Federal Water Resources Agency.

Starting from 2013, the Company publishes data on hydrologic conditions at the RusHydro Holding's HPPs on the special website – The Informer on Water Levels in RusHydro's Water Reservoirs ([www.rushydro.ru/hydrology/informer/](http://www.rushydro.ru/hydrology/informer/)).

## Climate Change and Waterworks Safety Improvement

A flood, the most intensive throughout the history of observations in the Far East that occurred in summer 2013 makes us cast a new look at the issue of global climate change, tasking RusHydro with improving flood protection initiatives not only for the RusHydro Group, but for the industry on the whole. Together with the government the Group considers an opportunity to construct new flood control HPPs and of the regulating water reservoirs capable to control the peak runoff. <sup>G4-EC2</sup>

### Flood control modular HPPs in the Amur Region

The Company starts the implementation of joint projects with China

In November 2014, the RusHydro Group signed an agreement with China Three Gorges Corporation for joint implementation of hydropower projects in the Far East. A joint venture with the Company interest amounting to 51% will construct a number of HPPs in Amur and Khabarovsk regions with total capacity reaching 2000 MW. The approximate cost of the project is RUR 230 billion.

"I HOPE THAT THIS AGREEMENT WILL CONTRIBUTE TO IMPROVED LEVEL OF COOPERATION IN POWER GENERATION, BENEFITTING THE POPULATION OF THE RUSSIAN FAR EAST, AS WELL AS THE PEOPLE LIVING ALONG THE HEILONGJIANG RIVER IN CHINA."

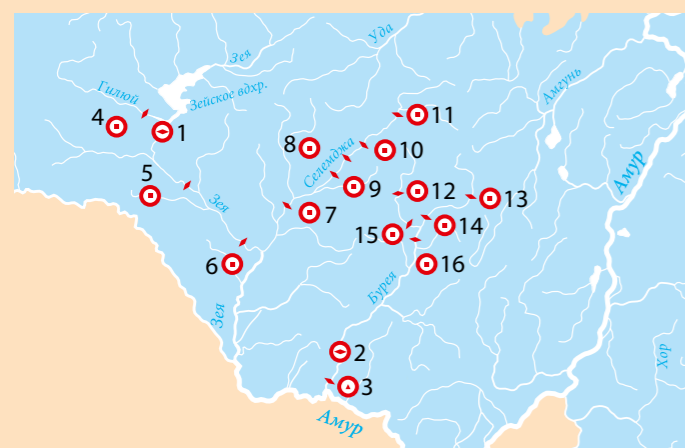
LU CHUNG, THE CHAIRMAN OF CHINA THREE GORGES CORPORATION

The Agreement implies the preparation of a feasibility study and the construction of four HPPs, meaning Nizhne-Zeiskaya (400 MW), Selemdzinskaya (300 MW), Gilyiskaya (462 MW) and Nizhne-Nimanskaya (600 MW). The implementation of these projects will not only provide flood control on Russian and Chinese territories along Amur Region, but also give momentum to the development of new electricity markets for RusHydro.

The Agreement on Cooperation between JSC RAO Energy Systems of the East and Dongfang Electric International Corporation was also signed in 2014 to implement joint projects in the Far East.

## DEVELOPING THE DESIGNS OF FLOOD PREVENTION HPPS <sup>G4-27 AND G4-DMA (FORMER EU6)</sup>

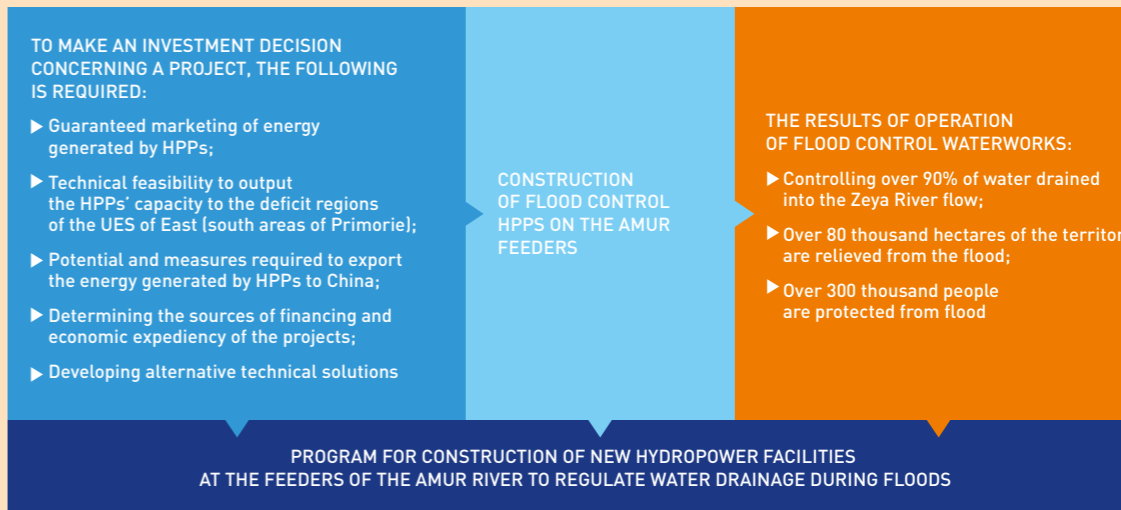
### LOCATION OF HPPS, EXISTING, UNDER CONSTRUCTION, AND UNDER DEVELOPMENT (FLOOD-CONTROL HPPS)



- EXISTING HPPS**
  - ▶ 1 – The Zeyskaya HPP
  - ▶ 2 – The Bureyskaya HPP
- HPPS UNDER CONSTRUCTION**
  - ▶ 3 – The Nizhne-Bureyskaya HPP
- HPPS UNDER DEVELOPMENT**
  - ▶ 4 – The Gilyuiskaya HPP
  - ▶ 5 – The Nizhne-Zeyskaya HPP
  - ▶ 6 – The Nizhne-Zeyskaya HPP
  - ▶ 11 – The Ekimchanskaya HPP
  - ▶ 11 – The Verkhne-Nimanskaya HPP
  - ▶ 15 – The Urgalskaya HPP

<sup>106</sup> The Russian translation of the Protocol prepared by the Company in cooperation with WWF and approved by the IHA Council is available at: [www.hydrosustainability.org](http://www.hydrosustainability.org).

## DESIGNING FLOOD CONTROL HPPS <sup>G4-27 / G4-DMA (FORMER EU6)</sup>



"THE IMPLEMENTATION OF THE PROJECTS WILL NOT ONLY PROTECT THE REGIONS FROM CATASTROPHIC FLOODS ON BOTH BANKS OF AMUR, RUSSIAN, AS WELL AS CHINESE, BUT ALSO CONTRIBUTE TO THE DEVELOPMENT OF POWER INFRASTRUCTURE ENABLING ECONOMIC DEVELOPMENT OF THE REGION AND THE GENERATION OF NEW JOB OPPORTUNITIES,"

EVGENY DOD, THE CHAIRMAN OF THE MANAGEMENT BOARD, THE CHIEF EXECUTIVE OFFICER OF PJSC RUSHYDRO

## 4.3 RESEARCH AND ADVANCED DEVELOPMENT: DECREASING INDUSTRIAL LOAD ON THE ENVIRONMENT

### Research and Development Facility of RusHydro: Environmental Safety and Sustainable Development <sup>G4-DMA (former EU8)</sup>

No standard construction designs are applicable to the construction of hydropower facilities. Due to this, RusHydro conducts the proactive research activities. The designs and developments accomplished by the specialists of industry-specific research facilities are implemented on all stages of life cycle of hydropower projects, including survey, design, construction and operation.

RusHydro's R&D complex develops and implements environment-friendly technologies in hydropower construction, intended to decrease the industrial load and to preserve biodiversity within the footprint of the Holding's HPPs.

The mission of RusHydro's R&D complex is to ensure sustainable development of hydropower and efficient use of water resources, establishing conditions for UES reliability and extended use of renewable sources of energy for the benefit of the shareholders and the public.

RusHydro's R&D complex includes the following research and development institutes:

- JSC Institute Gidroproject and its branches;
- JSC Lengidroproject;
- JSC Mosoblgidroproject;
- JSC VNIIG named after B.E. Vedeneev and its branches;
- JSC NIIES and its branches.

The designs and technologies developed by the institutes are currently used to construct more than ten major and smaller-scale HPPs. The institutes perform complex engineering surveys to develop feasibility studies for different hydropower, technical and economic facilities and participate in designing HPPs in Russia and abroad.

## JSC Institute Hidroproject

<p>The activities of JSC Hidroproject Institute concerning innovative technologies and decrease of industrial impact on the environment include the following:</p> <ul style="list-style-type: none"> <li>• Design of innovative and highly efficient fish protection structures for HPPs, PSPPs and tidal power plants;</li> <li>• Use of innovative laser scan technologies as part of waterworks surveying;</li> <li>• Development of a plan for complex use and protection of water bodies;</li> <li>• Development of advanced concrete dam structures and dam installation methods, including the use of different concrete mixtures.</li> </ul> <p>The key activities of the Institute include:</p> <ul style="list-style-type: none"> <li>• Development of design and work documents and designer supervision over the construction of main and auxiliary waterworks;</li> <li>• Performing design and survey works and constructing facilities on "turnkey" basis;</li> <li>• Design of large-scale, complex and unique hydropower facilities;</li> <li>• Performing engineering surveys for the construction of major facilities in regions with severe climatic conditions;</li> <li>• Performing knowledge-intensive calculations of functioning of hydropower and hydraulic engineering facilities;</li> <li>• Application of advanced mining and tunneling works, etc.</li> </ul>	<p>The Hidroproject Design, Scientific and Research Institute named after S.Y. Zhuk is one of the world's leading hydropower design organizations.</p> <p>The Institute was founded in 1930. The Institute designs all hydropower facilities in USSR and abroad, which were built with the participation of Russia.</p> <p>The Institute is a unique authority in designing large-scale hydropower and non-standard facilities, as well as in the implementation of intricate technical solutions.</p> <p>The Institute is the general designer of the Boguchanskaya HPP, the Zagorskaya PSPP and a number of MHPPs in Northern Caucasus, including the Zaragizhskaya and the Verkhnebalkarskaya HPPs. The Institute is also engaged in developing projects for modernization and reconstruction of the Volga-Kama and the Upper Volga Cascades of HPPs. It has been addressing the issues related to conservation of aquatic biological resources during construction and operation of HPPs for many years.</p> <p>The Institute's head office is in Moscow</p> <p>The Institute is a part of RusHydro's R&amp;D complex.</p>
--	--

## Lengidroproject

<p>The activities of JSC Lengidroproject in the field of environmental safety and industrial impact decrease include the following:</p> <ul style="list-style-type: none"> <li>• Development of environmental initiatives within the environmental impact assessment for hydropower facilities;</li> <li>• Design of water reservoirs and of flood control technologies;</li> <li>• Innovative development in the field of renewable sources of energy and feasibility studies, including orthogonal turbines for tidal power plants;</li> <li>• Implemented Integrated Management System to improve the quality of environment protection of facilities designed, to implement complex approach to the use of natural and power resources and to minimize environmental risks.</li> </ul> <p>The key activities include:</p> <ul style="list-style-type: none"> <li>• Complex design of hydraulic units in severe climatic and geological conditions in regions with high seismic activity;</li> <li>• Design of waterworks of all levels of responsibility and of all kinds of process systems for HPPs;</li> <li>• Design of underground installations in any geological conditions;</li> <li>• Design of projects of reconstruction and technical modernization of hydropower facilities;</li> <li>• Performance of all kinds of geodetic, geological and hydrological surveys;</li> <li>• Development of projects of construction of hydraulic units and infrastructure construction facilities, etc.</li> </ul>	<p>Lengidroproject is one of the leading design and survey institutes of the country, established in 1917.</p> <p>The Institute authored the designs for construction, renovation and reconstruction of over 90 HPPs in Russia and abroad, including large-scale Krasnoyarskaya and Sayano-Shushenskaya HPPs. The dam of the Kolymskaya HPP is the highest dam in the world built in conditions of permafrost. The dam of the Chirkeyskaaya HPP has the most slender arc structure.</p> <p>During the last five years the specialists of the Institute have prepared design documents for a number of promising projects, including the Nizhne-Bureyskaya HPP. The current projects supervised by the Institute include the Ust-Srednekanskaya HPP, the Nizhne-Bureyskaya HPP, and the Gotsatlinskaya HPP. The design and work documents under development include the Zeiskaya, the Votkinskaya and the Novosibirskaya HPPs, etc.</p> <p>The head office of Lengidroproject is in St. Petersburg.</p> <p>Lengidroproject is a part of RusHydro's R&amp;D complex.</p>
---	--

- In 2014, the President of the Russian Federation awarded the Order for the Services to the Country to 22 employees of the Institute for their great contribution to the liquidation of consequences at the Sayano-Shushenskaya HPP and to the development of fuel and power complex of Siberia.

The specialists of the Institute have developed working documents for the reconstruction of the Sayano-Shushenskaya HPP in the shortest time after the accident of 2009. The documents were developed using advanced equipment and the systems of safety, management and monitoring. The specialists accomplished 24 hours design supervision over the progress and quality of the

reconstruction works. All works were performed in accordance with the schedule approved by the decision of the Russian government in 2009.

"THE AWARDS CONFIRM HIGH PROFESSIONALISM OF THE SPECIALISTS OF THE INSTITUTE AND THEIR ABILITY TO ACT EFFICIENTLY IN EMERGENCY SITUATIONS AND THROUGHOUT ALL STAGES OF RECONSTRUCTION OF THE HPP."

**VLADIMIR PEKHTIN**, GENERAL DIRECTOR,  
 JSC INSTITUTE GIDROPROJECT AND JSC  
 LENGIDROPROJECT

## Mosoblgidroproject

<p>The activities of JSC Mosoblgidroproject in the field of environmental safety and industrial impact decrease include the following:</p> <ul style="list-style-type: none"> <li>• Development of feasibility studies of environmental safety of existing and potential facilities;</li> <li>• Complex assessment of environmental impact of the facilities designed;</li> <li>• Diagnostics of development forecasts current/future environmental conditions within the footprint of a facility designed;</li> <li>• Development of environment protection initiatives, including feasibility studies and implementation project;</li> <li>• Development of a system of monitoring of a complex monitoring of criteria of environmental-friendly functioning of a facility and development of solutions on prevention, minimization or localization of unwanted processes;</li> <li>• Design of hydrotechnical installations, fish passes and fish protection structures;</li> <li>• Assessment of damage done to water bioresources during the construction (reconstruction) and operation of a facility;</li> <li>• Development of compensation measures.</li> </ul> <p>The key activities include:</p> <ul style="list-style-type: none"> <li>• Design of hydrotechnical installations and complexes, pump storage plants and nuclear power plants, solutions for complex water economy issues;</li> <li>• Works related to design of industrial and civil facilities and engineering systems, preparing feasibility studies of environmental safety of facilities, etc.</li> </ul>	<p>JSC Mosoblgidroproject was established in 1950 as a division of Hidroproject Institute. In 1991 the division was transformed into a proper organization on its own.</p> <p>The organization has a unique experience in designing pump stations, water supply systems and water reservoirs.</p> <p>The organization designed a number of water facilities in Moscow Region, Central Region, and Upper Volga, such as the Pakhrinskoye, the Upinskoye, and the Kurskoye water reservoirs. Other facilities designed by the organization include the channel named after Moscow, the Zelenchuk Cascade of HPPs, the Kuban Cascade of HPPs, etc.</p> <p>The Institute is a leading authority in the field of environmental expert assessment of water and hydropower facilities. The activities of the Institute are related to the Kurskaya NPP, Zelenchukskaya HPP/PSPP and Skhodnenskaya HPP, and Mozhaiskoye and Ruzskoye water reservoirs.</p> <p>The Institute has a broad experience in international cooperation.</p> <p>The head office is in Dedovsk.</p> <p>The institute is a part of RusHydro's R&amp;D complex.</p>
--	--

## All-Russian Research and Development Institute of Water Engineering named after B. E. Vedeneev (VNIIG)

<p>VNIIG named after B.E. Vedeneev</p> <p>The activities of JSC VNIIG named after B.E. Vedeneev in the field of environmental safety and industrial impact decrease include the following:</p> <ul style="list-style-type: none"> <li>Development of methods and technologies for the application of remote monitoring system and geographical and information systems for surveying the footprints of hydrotechnical installations;</li> <li>Development of advanced geographical and information systems for modeling to minimize the impact on biodiversity;</li> <li>Dealing with natural and anthropogenic research issues associated with construction of hydro facilities, based on geographical and information systems.</li> </ul> <p>The key activities include:</p> <ul style="list-style-type: none"> <li>Scientific grounds of reliability and safety of hydrotechnical installations;</li> <li>Declaration of safety and assessment of potential harm incurred by flooding the territories in case of accidents on hydrotechnical installations or in case rare flood is missed;</li> <li>Development of industry-specific safety control system to control the waterworks and development of accident liquidation measures;</li> <li>Development of methods of application of geographic and information systems and web-based technologies in developing schemes for hydropower use of rivers, etc.</li> </ul>	<p>All-Russian Research and Development Institute of Water Engineering named after B.E. Vedeneev (VNIIG) is one of the major R&amp;D centers in Russia, performing full cycle of advanced research and development in the field of hydro technical, hydropower, industrial and civil construction and water economy.</p> <p>In 2014 the Institute celebrated its 93rd anniversary. It is the developer of governmental, departmental, legal and regulatory documents on hydro technical installations.</p> <p>VNIIG named after B.E. Vedeneev is one of the key R&amp;D facilities participating in the implementation of the Company's program of innovative development.</p> <p>The head office is in St. Petersburg</p> <p>The Institute is a part of RusHydro's R&amp;D complex.</p>
--	--

## JSC Research and Development Institute for Energy Structures

<p>The activities of JSC NIIES in the field of environmental safety and industrial impact decrease include the following:</p> <ul style="list-style-type: none"> <li>Environmental assessment of power facilities and environment conditions and analysis of parameters of chemical and hydrochemical contamination;</li> <li>Development of environment protection measures within water bodies and on adjacent territories, based on the data on hydrologic, hydrochemical, and hydrobiological regimes and economic activities;</li> <li>Development of environment revival and territory improvements measures, including water bodies, based on complex on-site surveys, and assessment of environmental assets and the levels of contamination and degradation of sites.</li> </ul> <p>The key activities include:</p> <ul style="list-style-type: none"> <li>Development of scientific grounds for the construction and operation of power facilities;</li> <li>Research and testing of basic equipment of HPPs to provide for its reliability and service life extension;</li> <li>Development of technical solutions for repairs and reconstruction of concrete and iron-concrete erections and structures of HPPs;</li> <li>Development and manufacture of engineering equipment and diagnostics of structures, including complex automated systems;</li> <li>Hydraulic research.</li> </ul>	<p>In 2014, JSC Research and Development Institute for Energy Structures celebrated its 65th anniversary.</p> <p>The Institute performs a wide range of advanced research and development, including design and monitoring in the following spheres:</p> <p>Waterworks and hydropower equipment, construction structures, materials and process safety;</p> <p>Innovative technologies, renewable sources of energy, energy efficiency and energy saving, environment and water medium protection;</p> <p>Hydraulic research, diagnostic equipment, standardization and certification;</p> <p>The Institute is a unique authority in scientific research and design in the sphere of renewable sources of energy, including tidal power plants, low pressure mini HPPs, wave power plants, and wind power generation equipment.</p> <p>The head office is in Moscow.</p> <p>The Institute is a part of RusHydro's R&amp;D complex</p>
--	---

## Initiatives on Mitigation of Environmental Impact of Products and Services

**The implementation of advanced research and development projects in 2014**

**The optimization of operating regimes of HPPs within the water body area, taking into account future climate change.** <sup>G4-EU6 and G4-DMA</sup>

**The Project has been completed in 2014.**

The Project involved research and assessment of potential economic, environmental and social-environmental risks of reduction of the volumes of power generated by HPPs in case of future climate change in different scenarios. The Project resulted in the preparation of source data to adjust the operation of PJSC RusHydro's HPPs.

Global change of climate and hydrologic parameters of river basins directly impact the volumes of power generated by PJSC RusHydro's HPPs, increasing potential environmental risks. The number of abnormal floods and dry periods grew considerably in recent years. The increase of standby capacity of water reservoirs becomes critically important under these conditions, together with improving the accuracy and timeliness of hydrometeorologic forecasts and the efficiency of water reservoirs' operation management.

The urgency of the issue of the global climate change and the management of water resources in extreme environmental conditions formed the agenda for Hydro Vision Russia 2015 – Solutions and Innovations for Power Sector – an annual international conference held in March 2015 and attended by the Company representatives. The conference served as a meeting place for experts and mass media representatives to discuss the role of water reservoirs in fighting floods and dry periods, as well as the experience of managing water resources in 2013-2014, a period characterized by many natural catastrophes.

**Development of a system for instrumental and process control and accounting of water resources on HPPs** <sup>G4-EN7</sup>

**The Project authored by JSC NIIES has been completed in 2014.**

The Project involved the development of value-added use and non-production losses of water at HPPs. Other developments include a measurement system for data collection and accounting of water passing through the HPP flow duct during power generation, and the testing of the system. The pilot system was put to operation at the Uglichskaya HPP.

The system is unique and unprecedented. The commissioning of the system at the Uglichskaya HPP is a result of two projects of advanced research and development implemented by JSC NIIES starting from 2011. The projects were targeted at obtaining true and accurate data on water passing through the hydraulic turbines of the HPP, as the availability of such data makes it possible to operate the hydraulic units at their optimal capacity. The projects were implemented pursuant to the Company's program on improving energy efficiency and energy saving.

Accurate data on water flowing through the HPP power site enables the increase in power generation through the optimization of operating specifications of hydraulic units, thus improving the energy efficiency of the HPP.

## Feasibility study on a pump storage plant with underground basin in the Central Federal District of the Russian Federation

<sup>G4-EN7</sup>

**The Project authored by JSC Lengidroproject is to be completed in 2015.**

The pump storage plant in question is of a unique design which has a number of advantages, such as:

1. Improving the efficiency of the pump storage plant by way of widening the range of pressure at hydro turbines from 100 to 1,100m.
2. Decreasing the environmental impact resulting from the construction of the plant due to filling the lower underground basin, the reduction of volumes of circulating water and the volumes and the area of the upper basin.
3. Cutting the cost of construction and installation due to the use of used mine workings as the lower basin.
4. Improving the efficiency of land use by reducing the area of lands used for construction and siting of underground installations;

This technology was used during the design of the Leningradskaya PSPP, the Zagorskaya PSPP-1 and the Zagorskaya PSPP-2.

**Development of a method to optimize water-power regime of the Volga-Kama Cascade of HPPs** <sup>G4-EN7</sup>

**The Project authored by Hidroproject Institute is to be completed by 2015.**

Development of additional design solutions in the lower reach is intended to increase the volume of power generated by the Volga-Kama Cascade of HPPs due to reducing the idle discharge of Cheboksarskaya HPP, while maintaining the required level of water within the footprint of the HPP. The Project is of great practical importance as it supplies water and preserves biota of the Volga-Akhtubinsk bottom land<sup>107</sup>.

The project involves the development of a complex mathematical model to efficiently manage the water regimes and hydraulic units across the entire Cascade of HPPs. In case the model proves the possibility to reduce the idle discharge of the Volzhskaya HPP, similar discharges of the Zhigulevskaya and the Saratovskaya HPPs can also be reduced, increasing power generation in the result.

Calculations have been performed within the Project to substantiate the investments required to complete the construction of Cheboksarsky waterworks and to increase the water level of Cheboksarsky water reservoir to the level of 68m. After discussions the Project was positively assessed by the experts and is presently handed over to the Institute of Aquatic Issues of the Russian Academy of Sciences as one of the engineering solution options of the issue in question. <sup>G4-EN13</sup>

**Development and testing of a trial model of HPP/PSP with variable rotation frequency** <sup>G4-EN7</sup>

**The Project authored by JSC NIIES is to be completed in 2015.**

The goal at the first stage is to adapt the design of existing and potential pump storage plants (PSP) owned by PJSC

<sup>107</sup> More information on Volga-Akhtubinsk bottom land and the materials on environmental impact assessment is available at [www.otmetka68.ru](http://www.otmetka68.ru).

RusHydro for the implementation of asynchronous motor-generators (AMG) technology to increase their pumping storage factor and to optimize regime management in charge-discharge cycle.

The expected effects include the increase of the energy efficiency of PSP, including the performance of plants in pumping and turbine regimes, and the increase of systemic reliability of PSP based on secondary adjustment of frequency and capacity. Other effects include the reduction of the cost of PSP construction. The Project is based on advanced technologies and fully complies with the criteria of sustainable development and saving of resources.

The results will be achieved due to the following:

- Increasing the pumping storage factor (up to 10%) and decreasing the volumes of the basins or increasing the plant's time of operation in generating mode and decreasing energy costs when operating in pumping mode;
- Possibilities for smooth adjustment of the active (consumed) capacity in pumping mode;
- More effective dynamic stability of the hydraulic unit;
- Wider range of operation in turbine mode (decreasing vibration loads).

Research and advanced development initiatives performed in 2014 also included the measures on decreasing the industrial impact on the environment and increasing the environmental safety of the Company facilities listed below:

- The specialists of Hidroproject Institute have developed a project dedicated to the development and testing of hydraulic-dynamical complex for the protection of bio resources. The project will be implemented practically at Uglichskaya HPP in 2015. There exists also a program for the construction of fish protection structures and a plan of design and construction works and a feasibility study for the project to be implemented at Uglichskaya HPP.
- An advanced fish protection complex has been put into operation at Aushigerskaya HPP in Kabardino-Balkaria. The complex was designed by JSC Institute Hidroproject. The complex is intended for the fish and tiny fish to safely pass through the dam of the HPP, located at the Cherek River. The complex consists of a ladder-type fish pass and a mobile fish protection structure. This is a second fish pass at the Lower Cherek Cascade of HPPs. In 2010 the fish passed to the upper reach of the Cherek River through Kashkhatau HPP. These structures will facilitate the migration of fish and replenish the fish stock in the Cherek River. The 162 meters long ladder-type fish pass helps the fish to overcome 12 meters high dam and enter the lower reach of the waterworks to spawning sites.
- New efficient methods to protect the blading section of the HPP from zebra mussel were tested at the Rybinskaya and the Uglichskaya HPP. The Project involved the development of two new types of antifouling coating and the identification of the elements of equipment and HPP structures that need to be protected from zebra mussel. A number of suggestions were put forward concerning the development of measures, which formed a basis for the development of a program on additional research to create new or modernize the existing environmentally-friendly methods of fighting zebra mussel. The project has been developed by JSC NIIES.

- An innovative fish protection complex has been designed for the Boguchanskaya HPP. The complex corrects the environmental and landscape parameters of the water reservoir with a network of local highly productive biotopes with conditions favorable for breeding and fish migration created at the key points of the water reservoir, far from the source of hazard. Today we have efficient solutions not only for water intakes of comparatively small heat power plants and smaller HPPs, but for larger hydropower facilities as well. The project was developed by JSC Institute Hidroproject, the general designer.
- The specialists of Mosoblgidroproject Institute assessed the damage done to biological resources for the following facilities: the Svistukhinskaya HPP, the Sengileyskaya HPP, a part of the Kuban Cascade of HPPs, and the Zelenchukskaya HPP/PSPP. The damage was assessed in natural terms. The assessment resulted in the development of compensation measures approved by the Federal Fishery Agency.
- Mosoblgidroproject Institute performed comprehensive hydro-biological and hydraulic research of the impact on fish in the Marukha River (the Zelenchukskaya HPP). The research resulted in the assessment of the condition of fish in the Marukha River in upper and lower reaches. Also assessed was environmental and economic damage done to fishing industry in the result of operation of the waterworks. The specialists of Mosoblgidroproject also made suggestions on the expediency of constructing a fish pass at the Marukha River waterworks or the implementation of compensation measures in case of refusal from construction.



GRI Content Index Service for the Key Version of the Report Prepared "In Accordance" with the Sustainability Reporting Guidelines of the Global Reporting Initiative

## 1. STANDARD DISCLOSURES

Standard disclosures	Page	External assurance
<b>Strategy and Analysis</b>		
G4-1	6	✓ page 137
G4-2	28, 52	✓ page 137
<b>Organizational Profile</b>		
G4-3	4	✓ page 137
G4-4	7, 12, 13	✓ page 137
G4-5	4	✓ page 137
G4-6	16	✓ page 137
G4-7	4	✓ page 137
G4-8	20	✓ page 137
G4-9	12, 16, 92	✓ page 137
G4-10	92, 154 (Appendix 1)	✓ page 137
G4-11	95	✓ page 137
G4-12	107	✓ page 137
G4-13	7	✓ page 137
G4-14	122	✓ page 137
G4-15	72, 109, 129	✓ page 137
G4-16	108	✓ page 137
<b>Identified Material Aspects and Boundaries</b>		
G4-17	14	✓ page 137
G4-18	8	✓ page 137
G4-19	9	✓ page 137
G4-20	7, 8	✓ page 137
G4-21	7, 8	✓ page 137
G4-22	7	✓ page 137
G4-23	7	✓ page 137
<b>Stakeholder Engagement</b>		
G4-24	104	✓ page 137
G4-25	103	✓ page 137
G4-26	29, 68, 72, 123, 128	✓ page 137
G4-27	104, 106, 107, 126, 128, 130, 131	✓ page 137
<b>Report Profile</b>		
G4-28	7	✓ page 137
G4-29	7	✓ page 137
G4-30	7	✓ page 137
G4-31	4	✓ page 137
G4-32	7	✓ page 137
G4-33	8	✓ page 137
<b>Corporate Governance</b>		

Standard disclosures	Page	External assurance
G4-34	26	✓ page 137
G4-37	110, 111	✓ page 137
G4-38	27	✓ page 137
G4-39	27, 28	✓ page 137
G4-41	40	✓ page 137
G4-44	28	✓ page 137
G4-51	28	✓ page 137
G4-52	28	✓ page 137
<b>Ethics and Integrity</b>		
G4-56	26, 27, 72, 122	✓ page 137
G4-57	35, 40	✓ page 137
G4-58	35, 40	✓ page 137

## 2. PERFORMANCE INDICATORS

DMA and indicators	Page	Excluded information	External assurance
<b>SPECIFIC STANDARD DISCLOSURES</b>			
G4-EU1	12, 15, 151 (Appendix 1)		✓ page 137
G4-EU2	12, 151 (Appendix 1)		✓ page 137
G4-DMA (former EU6)	60, 62, 68, 130, 131, 135		✓ page 137
G4-EU7	66		✓ page 137
G4-DMA (former EU8)	67, 68, 69, 70, 138		✓ page 137
G4-EU12	66		✓ page 137
G4-DMA (former EU14)	95		✓ page 137
G4-DMA (former EU16)	100, 102		✓ page 137
G4-EU18	102, 103, 151 (Appendix 1)	The share of employees who received training in the field of health and labor safety is provided for the organization only. This indicator is not applicable in respect of employees of contractors and subcontractors, as, according to Russian law, an employer is responsible for labor safety training.	✓ page 137
G4-EU19	123		✓ page 137
G4-EU20	123		✓ page 137
G4-EU22	123		✓ page 137
G4-DMA (former EU23)	87		✓ page 137

### Category: ECONOMIC

<b>Aspect: Economic efficiency</b>			
G4-DMA	DMA		✓ page 137
G4-EC1	13, 150 (Appendix 1)		✓ page 137
G4-EC2	130		✓ page 137
G4-EC3	96		✓ page 137
G4-EC4	87, 91		✓ page 137

Aspect: Indirect economic impacts			
G4-DMA	29, 73		✓ page 137
G4-EC7	81, 82, 90, 112		✓ page 137
G4-EC8	17, 66, 95		✓ page 137

Aspect: Procurement practice			
G4-DMA	38		✓ page 137
G4-EC9	107	Data are provided only on the companies included in the scope of the Report. Currently, the Group's consolidated data are not available. A decision on data consolidation will be made after additional consultations in the next report.	✓ page 137

Category: ENVIRONMENTAL

Aspect: Energy			
G4-DMA	21, 61		✓ page 137
G4-EN5	60, 63, 66		✓ page 137
G4-EN6	60, 61, 63, 64		✓ page 137
G4-EN7	63, 135	Data are provided only on the companies included in the scope of the Report. Currently, the Group's consolidated data are not available. A decision on data consolidation will be made after additional consultations in the next report.	✓ page 137

Aspect: Water			
G4-DMA	21, 125		✓ page 137
G4-EN8	152 (Appendix 1)		✓ page 137
G4-EN9	125		✓ page 137

Aspect: Biodiversity			
G4-DMA	131		✓ page 137
G4-EN11	126		✓ page 137
G4-EN12	126		✓ page 137
G4-EN13	114, 126, 135		✓ page 137

Aspect: Emissions			
G4-DMA	125		✓ page 137
G4-EN15	125		✓ page 137
G4-EN16	125		✓ page 137
G4-EN20	125	Data are provided only on the companies included in the scope of the Report. Currently, the Group's consolidated data are not available. A decision on data consolidation will be made after additional consultations in the next report.	✓ page 137
G4-EN21	125		✓ page 137

Aspect: Discharge and waste			
G4-DMA	125		✓ page 137

G4-EN22	125, 152 (Appendix 1)	Data are provided only on the companies included in the scope of the Report. Currently, the Group's consolidated data are not available. A decision on data consolidation will be made after additional consultations in the next report.	✓ page 137
---------	-----------------------	---	------------

Aspect: General information			
G4-DMA	124, 128, 130		✓ page 137
G4-EN31	123, 153 (Appendix 1)		✓ page 137

Aspect: Environmental assessment of suppliers			
G4-DMA	124		✓ page 137
G4-EN33	124, 125, 126		✓ page 137

Category: SOCIAL

Sub-category: LABOR PRACTICES AND DECENT WORK

Aspect: Employment			
G4-DMA	93		✓ page 137
G4-LA2	96		✓ page 137

Aspect: Employees and management relations			
G4-DMA	97		✓ page 137
G4-LA4	95		✓ page 137

Aspect: Health and safety at work			
G4-DMA	100		✓ page 137
G4-LA6	102, 155 (Appendix 1)		✓ page 137
G4-LA7	103		✓ page 137
G4-LA8	100		✓ page 137

Aspect: Training and education			
G4-DMA	93		✓ page 137
G4-LA9	100	Only PJSC RusHydro's data are provided. A decision on inclusion of subsidiary and dependent companies' data in the scope of the Report will be made after additional consultations in the next reporting period.	✓ page 137
G4-LA10	98		✓ page 137
G4-LA11	94	Only PJSC RusHydro's data are provided. A decision on inclusion of subsidiary and dependent companies' data in the scope of the Report will be made after additional consultations in the next reporting period.	✓ page 137

Aspect: Diversity and equal opportunities			
G4-DMA	95		✓ page 137
G4-LA12	95, 156 (Appendix 1)	Only PJSC RusHydro's data are provided. A decision on inclusion of subsidiary and dependent companies' data in the scope of the Report will be made after additional consultations in the next reporting period.	✓ page 137

Category: SOCIAL  
Sub-category: HUMAN RIGHTS

Aspect: Investment			
G4-DMA	73		✓ page 137
G4-HR1	97	Data in terms of percentage points on significant investment agreements and contracts that include provisions on guaranteeing human rights are currently unavailable, because regulatory requirements do not provide for special account of this indicator. A decision on inclusion of subsidiary and dependent companies' data in the scope of the Report will be made after additional consultations in the next reporting period.	✓ page 137
Aspect: Freedom of association and conducting collective negotiations			
G4-DMA	95		✓ page 137
G4-HR4	97	Data are provided only on divisions included in the scope of the Report. Data related to suppliers are currently unavailable, because regulatory requirements do not provide for special account of this indicator by suppliers.	✓ page 137

Category: SOCIAL  
Sub-category: SOCIETY

Aspect: Local communities			
G4-DMA	72		✓ page 137
G4-S01	112, 114, 115	Data in terms of percentage points are currently unavailable, because regulatory requirements do not provide for special account of this indicator. A decision on inclusion of data will be made after additional consultations in the next reporting period.	✓ page 137
Aspect: Countering corruption			
G4-DMA	40		✓ page 137
G4-S04	40		✓ page 137
G4-S05	40		✓ page 137

Category: SOCIAL  
Sub-category: PRODUCT RESPONSIBILITY

Aspect: Consumer health and safety			
G4-DMA	44		✓ page 137
G4-PR1	122, 123, 129	Data in terms of percentage points are currently unavailable, because regulatory requirements do not provide for special account of this indicator. A decision on inclusion of data will be made after additional consultations in the next reporting period.	✓ page 137
G4-PR2	40		✓ page 137
Aspect: Products and services labelling			
G4-DMA	47		✓ page 137

G4-PR5	104, 105	The organization does not publish detailed data on the research results, because this information is partially subject to the Russia Law (Federal Law №152-FZ "On Personal Data" dated July 27, 2006) and is used only to improve quality of services provided to ESK RusHydro's clients.	✓ page 137
--------	----------	---	------------

Aspect: Consumer privacy			
G4-DMA	40		✓ page 137
G4-PR8	40		✓ page 137

Aspect: Meeting requirements			
G4-DMA	38		✓ page 137
G4-PR9	40		✓ page 137

INFORMATION ON DISCLOSURES ON THE MANAGEMENT APPROACHES (G4-DMA) material themes and aspects identified within the process of defining the Report's content (in descending order with regard to significance assessment)

Significance degree	Page	External assurance	Key material themes and aspects
1	13	✓ page 137	Areas of activity
2	12, 20	✓ page 137	Financial and economic performance of the Group
3	21	✓ page 137	The Company's mission, strategic aims and values
4	22	✓ page 137	The Company's development priorities and their implementation
5	95	✓ page 137	Implementation of the Social Policy
6	80	✓ page 137	Implementation results for investment projects
7	60	✓ page 137	Implementation of the 2014 Comprehensive Facilities Modernization Program
8	87	✓ page 137	Construction program for new thermal generation facilities in the Far East
9	81	✓ page 137	Restoration and comprehensive modernization of the Sayano-Shushenskaya HPP (the fifth anniversary of restoration work)
10	33	✓ page 137	Ensuring creditworthiness in the medium- and long-term
11	66	✓ page 137	Priority areas of the Company's innovative development
12	46	✓ page 137	Production supervision over compliance with industrial safety requirements at hazardous production facilities
13	122	✓ page 137	Implementation of the Environmental Policy, including international environmental cooperation
14	33	✓ page 137	Control over the targeted use of funds
15	28	✓ page 137	Key opportunities and risks (including the risk management system)
16	38	✓ page 137	Compliance of the Group's activities with legislative regulations
17	56	✓ page 137	Quality control during design and construction
18	82	✓ page 137	Constructing and commissioning facilities (including RES) in Russia and abroad
19	44	✓ page 137	Reliability and safety of hydro-power structures, including the disaster and emergency prevention and relief system
20	103	✓ page 137	Occupational health and safety of personnel
21	74	✓ page 137	The Group's role in developing the presence regions
22	97	✓ page 137	Maintaining a high employee skill level and human resource development (creation of a talent pool and training programs)
23	64	✓ page 137	Energy consumption and energy efficiency





## Independent Limited Assurance Report to the Directors of Open Joint Stock Company Federal Hydro Generating Company (OJSC RusHydro)

### Introduction

We have been engaged by the directors of OJSC RusHydro to provide limited assurance on the selected information described below and included in the Report on Sustainable Development and Corporate Social Responsibility of OJSC RusHydro and its selected subsidiaries (RusHydro Group<sup>2</sup>) for the year ended 31 December 2014.

The selected subsidiaries are listed in the reporting scope of the Report on Sustainable Development and Corporate Social Responsibility of RusHydro Group.

### Selected Information

We assessed the qualitative and quantitative information that is disclosed in the Report on Sustainable Development and Corporate Social Responsibility of RusHydro Group and included in the Tables of the Global Reporting Initiative (GRI Tables 2014) for standard disclosures in environmental, workforce, safety and socio-economic areas in the reporting scope of the Report on Sustainable Development and Corporate Social Responsibility (the "selected information"). The scope of our assurance procedures was limited to selected information for the year ended 31 December 2014.

### Reporting Criteria

We assessed the selected information using the Global Reporting Initiative (GRI) Sustainability Reporting Framework, including version G4 of the Sustainability Reporting Guidelines and GRI Electric Utilities Sector Supplement (collectively, GRI G4). We believe that these criteria are appropriate given the purpose of our limited assurance engagement.

### Responsibilities of OJSC RusHydro

The directors of OJSC RusHydro are responsible for:

- designing, implementing and maintaining internal systems, processes and controls over information relevant to the preparation of the Report on Sustainable Development and Corporate Social Responsibility that is free from material misstatement, whether due to fraud or error;
- establishing objective reporting criteria for preparing the selected information;
- measuring RusHydro Group's performance based on the reporting criteria; and
- accuracy, completeness and fair presentation of the information in the Report on Sustainable Development and Corporate Social Responsibility and selected information.

### Our Responsibilities

Our responsibility is to form an independent conclusion, based on our limited assurance procedures, on whether anything has come to our attention to indicate that the selected information is not stated, in all material respects, in accordance with the reporting criteria.

We conducted our engagement in accordance with the International Standard on Assurance Engagements (ISAE) 3000, *Assurance engagements other than audits or reviews of historical financial information*. This standard requires that we comply with ethical requirements and plan and perform the assurance engagement to obtain limited assurance on the selected information.

This report, including our conclusions, has been prepared solely for the directors of OJSC RusHydro to assist the directors in reporting on RusHydro Group sustainability performance and activities. We permit this report to be disclosed in the Report on Sustainable Development and Corporate Social Responsibility of RusHydro Group for the year ended 31 December 2014, to enable the directors to show that as part of their governance responsibilities they have obtained an independent assurance report in connection with the selected information. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the directors of OJSC RusHydro for our work or this report except where terms are expressly agreed and our prior consent in writing is obtained.

### Work Done

Our procedures included:

- enquiries of RusHydro Group management;
- interviews of personnel responsible for sustainability reporting and data collection (interviews were held in Moscow);
- analysis of the relevant policies and basic reporting principles and gaining an understanding of the design of the key structures, systems, processes and controls for managing, recording and reporting the selected information;
- limited substantive testing of the selected information on a selective basis to verify that data had been appropriately measured, recorded, collated and reported; and
- reviewing the selected information for compliance of the disclosures with the requirements of GRI G4.

### Reporting and Measurement Methodologies

There are no globally recognised and established practices for evaluating and measuring the selected

information. The range of different, but acceptable, techniques can result in materially different reporting outcomes that may affect comparability with other organisations. The reporting criteria used as a basis of RusHydro Group sustainability reporting should therefore be read in conjunction with the selected information and associated statements reported on OJSC RusHydro's website<sup>3</sup>.

### Limited Assurance Conclusion

As a result of our procedures:

- nothing has come to our attention that causes us to believe that the selected information for the year ended 31 December 2014 has not been prepared, in all material respects, in accordance with the requirements of GRI G4; and
- nothing has come to our attention that causes us to believe that the selected information does not meet the "Core" requirements of GRI G4.

ZAO "PricewaterhouseCoopers Audit",  
Moscow, Russia  
23 June 2015

<sup>1</sup> Assurance, defined by the International Auditing and Assurance Standards Board (IAASB), gives the user confidence about the subject matter assessed against the reporting criteria. Reasonable assurance gives more confidence than limited assurance, as a limited assurance engagement is substantially less in scope in relation to both the assessment of risks of material misstatement and the procedures performed in response to the assessed risks. The term "assurance" hereafter is not used as defined in the Federal Law N7907-FZ of 30.12.2008 "On Auditing Activities" (edition of 28.12.2010).

<sup>2</sup> The term "RusHydro Group" in this Report relates only to OJSC RusHydro and its selected subsidiaries included in the Report on Sustainable Development and Corporate Social Responsibility and is not equivalent to the similar term used in the Consolidated IFRS financial statements because it does not include OJSC RAO ES of East and its subsidiaries.

<sup>3</sup> The maintenance and integrity of the OJSC RusHydro website is the responsibility of the directors; the work carried out by us does not involve consideration of those matters and, accordingly, we accept no responsibility for any differences between the selected information on which the assurance report was issued or the assurance report that was issued and the information presented on the OJSC RusHydro website.

## THE OPINION OF THE COUNCIL OF THE RUSSIAN UNION OF INDUSTRIALISTS AND ENTREPRENEURS CONCERNING NON-FINANCIAL REPORTS ON THE RESULTS OF REVIEWING OF RUSHYDRO GROUP'S 2014 SUSTAINABLE DEVELOPMENT REPORT

The Non-Financial Reporting Council of the Russian Union of Industrialists and Entrepreneurs (RSPP) (hereinafter referred to as the Council), established in accordance with a decision of the Bureau of the Management Board (Resolution dated 28.06.2007), upon an initiative of PJSC RusHydro (hereinafter the Company, the Holding, the Group, RusHydro), has considered the 2014 Report on RusHydro Group Corporate Social Responsibility and Sustainable Development (hereinafter the Report).

The Company requested that RSPP organize public assurance by the Council, which forms an opinion about the significance and completeness of information disclosed in the non-financial report, on the Company's performance from the perspective of the Social Charter of Russian Business, containing responsible business practice principles.

During the period from July 5 to July 27, 2015, Council members examined the contents of the Report presented by RusHydro and made this Opinion in accordance with the Rules of Public Assurance of Corporate Non-Financial Reports, which are approved by the Council.

The members of the Council have the necessary competence in the fields of corporate responsibility, sustainable development and non-financial reporting, comply with the ethical requirements of assessment independence and objectivity and express their personal opinions as experts, rather than the opinion(s) of organizations that they represent.

The Report was evaluated based on the following criteria for completeness and the significance of the information contained therein:

The information is considered significant because it reflects the RusHydro Group's activities on implementing the responsible business practice principles disclosed in the Social Charter of Russian Business ([www.rspp.ru](http://www.rspp.ru)).

Completeness suggests that the Company, in an integrated manner, reflects its activities – the values and strategic guidelines which form their basis, management structures and systems, achievements and key operating results, the stakeholder interaction system.

The Company's application of the international reporting system is taken into account as part of the public assurance of the Report. However, confirmation of the Report's level of compliance with international reporting systems is beyond the scope of this Opinion.

Responsibility for the information and statements contained in the Report is borne by RusHydro. The reliability of the actual data contained in the Report is not the subject of the public assurance.

The present Opinion has been prepared for PJSC RusHydro. The Company may use this Opinion, both for internal purposes and for purposes of communication with its stakeholders by publishing it without any changes.

### CONCLUSIONS

Based on the analysis of the Report, as well as public information posted on the Company's official corporate website, and the collective discussion of the results of the Company's independent evaluation carried out by members of the Non-Financial Reporting Council of the RSPP, the Council confirms the following:

The RusHydro Group Corporate Social Responsibility and Sustainable Development Report for 2014 contains significant information, covers key areas of responsible business practices in accordance with the principles of the Social Charter of Russian Business, and with sufficient completeness discloses information on economic and social aspects of sustained development.

Recommendations of the RSPP's Council following the public assurance of the Company's Report in 2013 have found their way into the 2014 Report in terms of elaborating the reporting boundaries and including in the Report's scope repair, research-and-development and design SDCs, expanding information about procurement activities and social project implementation mechanisms.

The Company's Report for 2014 contains significant information on the following aspects of responsible business practices:

**Economic freedom and responsibility.** The Report contains information on the Company's ten-year operating results. Provides data on the basic lines of activity, geographical reach and core assets, shows the role in the industry and the national economy as well as the main economic impacts of the Company's performance on the regions where the Company operates. The Report covers 2014 key operating results, describes the implementation of corporate programs, including the Comprehensive Modernization Program for Generating Facilities. It reports on the Group's strategy, specifies the Company's mission, goals and values. The Report gives special attention to the long-term development program for 2015-2019, which was adopted in 2014, shows the immediate future and long term priorities. Particular emphasis is placed on sustainable development of the hydropower generation sector's engineering system, and ensuring reliability and safety. The Report includes information on major investment projects being implemented in the country and their value for the region. It reports on the work of research and development complex, quality management and control during design and construction. The Report contains information on corporate governance, risk management and organization of internal control, as well as measures to monitor the targeted use of funds. It reports on the Company's social responsibility principles and approaches which are based, as stated in the Report, on the relevant international standards.

ZAO PricewaterhouseCoopers Audit  
White Square Office Center 10 Butyrsky Val Moscow, Russia, 125047  
T: +7 (495) 967-6000, F: +7 (495) 967-6001, [www.pwc.ru](http://www.pwc.ru)

TRANSLATION NOTE: This version of our report is a translation from the original, which was prepared in Russian. All possible care has been taken to ensure that the translation is an accurate representation of the original. However, in all matters the original language version takes absolute precedence.

**Partnership in business.** The Report states that stakeholder engagement is built on the responsibility principles, taking into account the Social Charter of Russian Business and the Anti-Corruption Charter of Russian Business. It presents detailed information on the partnership in business, defines key stakeholder groups and the main topics of cooperation with them. The Report provides information on respecting the interests of shareholders, the dividend policy, covers investor and financial community engagement. Much attention is paid to human resources development, labor and safety management, social partnership, corporate social policy, including information on support for family members of employees affected by the accident at the Sayano-Shushenskaya HPP. The Report contains information on activities in the interests of energy consumers on the basis of a single corporate customer service standard applied by regional power supply companies of the Group. The Report covers the Company's interaction with the state and municipal authorities in the framework of agreements on social and economic cooperation in the regions where the Company operates, and participation in the activities of the working bodies of industry-specific ministries. It reports on the implementation of joint projects with international partners, including the activities within the Global Partnership for Sustainable Energy. The Report contains information on cooperation with higher education institutions for innovative development and personnel training. It provides data on the procurement system and supplier and contractor performance control management, on assistance programs for small and medium-sized businesses. The Report covers cooperation with various organizations in the implementation of social projects in the regions.

**Human rights.** The Report states that the Company's primary approach to respect for human rights is to comply with Russian regulations. It reports that the Company does not carry out activities in the countries where the risk of human rights violation is high. The Report declares that the Company seeks to follow international standards and best practices in the field of human rights, labor relations, environmental protection, anti-corruption and stakeholder engagement. It states that the employees' labor rights are fixed in the Industry Agreement and the Collective Agreement.

**Environmental conservation.** The Report contains information on the issues of ensuring environmental safety and reducing the negative environmental impact of the Company's activities. It presents data on the implementation of PJSC RusHydro's Environmental Policy, on the introduction of an environmental management system. The Report gives data on expenditures for nature conservation activities and their results, including related to water resources conservation and conservation of biodiversity. It contains information on the Energy Conservation and Energy Efficiency Program for 2010-2015. It is stated that the Comprehensive Modernization Program for Generating Facilities for the period until 2025 is the most important instrument for its implementation. The Report shows progress in energy efficiency, provides information on energy audits performed at the Company's four branches' facilities. It also reports on the support that the Company provides to environmental organizations, on the financing of researches in the field of environmental safety.

**Participation in the development of local communities.** The Report shows the Group's role in the development of the presence regions. Information is presented in the context of six federal districts. Attention is paid to the recovery from accidents and natural disasters. The Report deals with local authority interaction mechanisms which are based on cooperation agreements. The Company's initiatives in the charitable activity are reported to be implemented with the participation of representatives of local communities, with which the Company seeks to build relations on the principles of partnership. The Report covers some interaction mechanisms, shows the activities of the Charitable Foundation "Involvement" which carries out projects in accordance with the Company's priorities. The Report presents information on the implementation of the comprehensive long-term "Clean Energy" charity program", a network corporate project carried out by branches and SPCs on their own in each region. The Report gives data on the Company's overall expenses for social projects and programs being implemented in the interests of the various categories of the population, and the support for the social sphere of the regions where the Company operates.

### Final Provisions

In general, the RusHydro Group's 2014 Report reflects the values, strategic objectives, organizing the activities to achieve them, represents the Company's management system, discloses information on the priorities in corporate social responsibility and sustainable development, covers achievements made in 2014, as well as the stakeholder engagement practice. In accordance with the disclosure approach chosen, the primary focus is on the priority topics, their list and selection methods are presented in the Report.

The Report contains economic, social and environmental performance data. Presented specific quantitative indicators mainly reflect the economic and social results. The Report has been prepared using the Global Reporting Initiative Sustainability Reporting Guidelines (GRI G4) and the GRI Electric Utilities Sector Supplement, which ensures the continuity of information and comparability with other companies, both in the country and abroad.

The Report on the Sustainable Development of the RusHydro Group for 2014 is the seventh corporate non-financial report, which reflects continuity in the development of public reporting process, and Company's progress on the way to increasing transparency.

The Company's commitment to the principles of responsible business practice, which relies on recognized domestic and international documents such as the Social Charter of Russian Business, the UN Global Compact, the ISO 26000 international standard, is an important element of the Report.

### RECOMMENDATIONS

Noting the merits of the RusHydro Group's 2014 Report on Corporate Social Responsibility and Sustainable Development, the Council draws the Company's attention to a number of significance and disclosure completeness issues, which are material to stakeholders, and recommends they be implemented in the next reporting cycle.

The Council notes that the recommendations made following the analysis of the previous RusHydro's 2012 and 2013 Reports remain relevant and may be used in the further reporting practice of the Company.

It is recommended that in the next reporting cycle the Company should give more detailed information on its approaches to corporate responsibility and sustainable development management within the large holding structure including a significant number of facilities with a wide geographical coverage. Information on the regulations and the organizational structure of management in this area is considered material to stakeholders, allowing for a better understanding of the corporate culture.

It should be mentioned that the Company's reporting experience enables to make a more complete and convincing presentation of its efficiency, to wider use a comparative analysis, include indicators on the main results of activity over a longer than 1-2 years period, and accompany quantitative data by comments explaining the trend data. It is also recommended that plans for the coming period be reported and measurable targets included in the future.

It is important to note that in the future, the Company should more fully reflect in its reports industry-specific hydropower impacts on the environment. In addition, it is recommended to take into account international approaches and best practices, including impacts on the head water and tail water, expansion of the composition of ecological indices to be disclosed.

We should welcome the Company's commitment to improve the reporting process, including conducting surveys of stakeholders to determine priority topics as part of the preparation of this Report, in accordance with the new version of the Global Reporting Initiative Guidelines (GRI G4), which involves a new approach to defining the report content. In the future, it is recommended to extend the use of these tools to identify material topics, submit more detailed information about the participants and survey procedures and other forms of engagement, which will enable to evaluate the objectivity and equilibrium of material topic selection, taking into account opinions of different stakeholders, including environmental organizations and local communities.

The Report presents information on innovative activities, the volumes of investment in research activities and new technologies, which is the driver for sustainable development of the Company. The significance of such information will increase if in the future reports include information not only on the number of projects selected and the amounts of their funding, but also on the measured results of this activity, the economic, social and environmental values for the Company's internal and external stakeholders and the regions where the Company operates.

The Report provides information about the Company's large investment charitable programs and activities in the regions where it operates. In the next reporting cycle, the Company is recommended to disclose the project selection principles and efficiency evaluation criteria and results of activities being implemented, their social or environmental benefits.

Focusing on the new version of the G4 Guidelines in the preparation of the Report corresponds with the modern trends in non-financial reporting. Consistently advancing in mastering this new tool, the Company is recommended to pay special attention to requirements imposed on information disclosure, description of report preparation procedures and identification of material topics and reporting boundaries.

Taking a favorable view of the Report, supporting the Company's commitment to the principles of responsible business practices, and noting the continuity in reporting process development, the RSPP's Non-Financial Reporting Council confirms that the 2014 Report on RusHydro Group Corporate Social Responsibility and Sustainable Development has passed a public assurance.

RSPP's Non-Financial Reporting Council Chairman

F.T. Prokopov

RSPP's Non-Financial Reporting Council Deputy Chairman

E.N. Feoktistova

## A LIST OF TERMS AND ABBREVIATIONS USED IN THE REPORT

### A List of Terms and Abbreviations Used in the Report

RusHydro Holding or RusHydro	A group, consisting of PJSC RusHydro and its subsidiaries included in the Report (a full list of subsidiaries is available in Chapter ABOUT THE REPORT);
RusHydro Group or the Group	A group of companies consisting of PJSC RusHydro and its subsidiaries controlled by PJSC RusHydro (a full list of companies is available at: <a href="http://www.rushydro.ru/company/structure">www.rushydro.ru/company/structure</a> );
PJSC RusHydro or the Company	A holding company consisting of the Administration of PJSC RusHydro and the subsidiaries of PJSC RusHydro;
BA	Basin Authority;
SDC	Subsidiaries and dependent companies of PJSC RusHydro;
Restoration and reconstruction of Sayano-Shushenskaya HPP	A list of measures included into the program of restoration of Sayano-Shushenskaya HPP, developed in accordance with the design documents pertaining to Sayano-Shushenskaya HPP Restoration Project. The list of measures does not contain issues on technical re-tooling and reconstruction of the property complex of Sayano-Shushenskaya HPP and Mainskaya HPP, which are included into "Retooling and Modernization" line of the Company's Investment Program.
RES	Renewable Energy Sources based on existing or periodically emerging natural processes and on life cycle of flora, fauna and human society not based on the use of fossil fuels (oil, gas, coal, uranium) resources of which are limited, namely: solar energy, water energy (including waste water energy) excluding cases of use of this energy at PSPs), tidal energy, energy of wave of water bodies (including reservoirs, rivers, seas and oceans), geothermal energy with the use of natural subterranean heat carriers, low potential geothermal energy, thermal energy of water and air with the use of special heat carriers, biomass that includes plants especially cultivated for energy production, including trees, and production and consumer waste (excluding waste received in the process of use of crude hydrocarbons and hydrocarbon fuels, biogas, gas emitted by production and consumer waste at dump sites, and gas derived at coal mines).
WEC	Water Economic Complex
Hydropower facilities	All facilities, including existing, under construction or under design, referred to the facilities generating power from renewable hydraulic sources – HPP, pump storage plants, tidal power plants;
WW	Waterworks;
PSP	Pump storage plant
HPP	Hydropower plant is a power plant as a complex of production and technical facilities, including waterworks and equipment transforming mechanical energy of water in electricity. HPPs in this Report includes modular HPPs and pump storage plants, unless specified otherwise.
SDC	Subsidiaries and dependent companies of PJSC RusHydro
LLGG	Long-living Greenhouse Gases generated in the result of anthropogenic activities, including carbon dioxide, methane, nitrous oxide, CFC-12 and CFC-11. These five gases generate some 96% radiation impact on the atmosphere
FEFD	Far East Federal District
UES	The Unified Energy System of Russia (UES of Russia) consists of 69 regional energy systems, which form 7 unified energy systems (UES) of East, Siberia, Ural, Middle Volga, South, Center and North-West. All energy systems operate synchronously (in parallel).
Life cycle of HPP/PSP production complex	A sequence of phases for the life cycle of HPP/PSP production complex, including "Initiation", "Design", "Construction", "Operation" and "Liquidation".
JSC RusHydro Investment Program	A sum of investment projects in the form of capital investments into the chartered capital, their basic characteristics and financing, developed for a year or for a certain period of time formed on the basis of local normative documents of JSC RusHydro;
Executive administration	Permanent executive bodies and officials (employees) and structural divisions of PJSC RusHydro, not associated with the subsidiaries (representative offices) of the Company;
KPI	Key Performance Indicators;
Large and small hydropower facilities	Hydrogenerating assets having installed capacity over 30MW;
MHPP	Smaller HPPs, meaning hydraulic generating facilities with installed capacity less than 30MW;
AR&D	Advanced Research and Development;
R&D	Research and Development;

NGO	Non-Governmental Organizations
RES facilities	Facilities generating energy from renewable sources, including hydropower facilities with installed capacity less than 25MW, wind, tidal, geo-thermal and solar power;
EIA	Environmental Impact Assessment
WECM	Wholesale Electricity and Capacity Market;
UES	Unified Energy System as a sum of a number of energy systems united by shared operation regime and a common control center.
DSW	Design and Survey Work;
CMP	Complex Modernization Program
BEMO Project	Boguchansk Energy and Metallurgy Corporation, abbreviated in Russian as BEMO is a joint investment project implemented by PJSC RusHydro and UC RUSAL to establish Boguchansk Energy and Metallurgy Corporation, including the completion of construction of Boguchanskaya HPP and the construction of alumina plant;
Production complex	A sum of generating assets of the Company grouped by production process type.
REM	Retail Energy Market
Company Management	Deputies of the Chairman of the Management Board, the members of the Management Board and the directors of subsidiaries;
MM	Mass media;
SSHHP	Sayano-Shushenskaya HPP named after P.S. Neporozhniy;
Technological complex	A sum of subsidiaries and dependent companies of PJSC RusHydro united by the type of activities, auxiliary relative the production complex. Technological complex includes R&D complex, design complex, construction and mounting complex, repair complex and information and technological complex;
TRR	Technical Re-tooling and Reconstruction;
FEC	Fuel and Energy Complex
Installed Capacity	Total nominal active capacity of generators of power plants owned by the Company.
ES	Emergency Situation
Electricity and power complex	The electricity and power complex of the UES of Russia consists of some 700 power plants (with the total capacity over 5 MW).
Units of Measurement	
GW	Giga watt is a unit of measurement of electric capacity (1 GW equals 1000 Mega watt)
Gcal	Giga calorie is a unit of measurement of thermal energy
Gcalh	Giga calories per hour is a unit of measurement of thermal capacity
kWh	Kilowatt per hour is a unit of measurement of generated electric power.
MW	Mega watt is a unit of measurement of electric capacity.

BOOK OF APPENDICES

Appendix 1. Qualitative indicators of efficiency assessment

CATEGORY: ECONOMIC

64-EC1. Generated and distributed direct economic value, including revenues, operating costs, employee benefits, donations and other community investments, remaining economic value, and payments to providers of capital and government in the reporting year (the RusHydro Group).

Indicator [RUR million, unless otherwise stated]	2013	2014	Change
<b>Revenues</b>	<b>313,632</b>	<b>329,560</b>	<b>5%</b>
State subsidies	13,246	12,428	-6%
Operating costs (excluding impairment losses), including:			
staff remuneration (including pension provision taxes and costs)	-56,907	-65,114	14%
<b>Profit from operating activities</b>	<b>22,844</b>	<b>33,882</b>	<b>48%</b>
Financial income	9,328	9,319	0%
Financial expenses	-9,542	-10,668	12%
including interest expenses	-7,259	-4,879	-33%
Profit/loss related to associated companies and joint ventures	2,555	-342	-113%
Profit before tax	25,185	32,191	28%
<b>Income tax expense</b>	<b>-4,192</b>	<b>-8,060</b>	<b>92%</b>
<b>Profit for the year</b>	<b>20,993</b>	<b>24,131</b>	<b>15%</b>
Dividends paid to PJSC RusHydro shareholders	-3,586	-5,127	43%
Dividends paid by SDCs to non-controlling shareholders	-160	-80	-50%
<b>EBITDA</b>	<b>79,171</b>	<b>73,249</b>	<b>-7%</b>
<b>EBITDA margin</b>	<b>24.2%</b>	<b>21.4%</b>	<b>-3%</b>

NOTE: Presented are some key indicators in accordance with 2014 consolidated financial statements prepared according to IFRS for the year that ended on December 31, 2014, and as of this date.

Hereinafter: EBITDA - earnings before interest, taxation and amortization. EBITDA margin is the percentage of profit before tax, interest and amortization from the revenue for the reporting period; calculated as the ratio of earnings before interest, taxes, and amortization to the company's sales revenue (corporate turnover).

D/E Ratio (the RusHydro Group)

Indicator	Period		
	December 31, 2012	December 31, 2013	December 31, 2014
Total short-term debt	178,972	80,419	121,850
Total long-term debt	120,986	174,920	166,273
PJSC RusHydro's shareholder capital (excluding non-controlling interest)	514,650	579,530	578,921
D/E Ratio	0.58	0.44	0.50

NOTE: The indicator of D/E Ratio has been calculated on the basis of the RusHydro Group's 2014 and 2013 financial statements according to IFRS.

64-EU18. Information on the number of employees of PJSC RusHydro and SDCs, their contractors and sub-contractors, who have completed training on operational health and safety.

Type of work	Number of employees performing a certain type of work *	Number of employees who perform a certain type of work and who have completed training on occupational health and safety	The percentage of employees who have completed training on occupational health and safety, %
The RusHydro Holding			
Capital construction; reconstruction of facilities; repair work on hydro-power structures, electrical and hydro turbine equipment; equipment operation; work on a personal computer.	21,941	21,280	100
Including PJSC RusHydro			
Repair work on hydro-power structures, electrical and hydro turbine equipment; equipment operation; work on a personal computer.	5,720	5,720	100
SDCs			
Capital construction; reconstruction of facilities; repair work on hydro-power structures, electrical and hydro turbine equipment; equipment operation; work on a personal computer.	16,221	16,221	100

\* Presented are the data on the introductory and initial briefings on occupational safety.

NOTE: Operations and production staff, who perform a certain kind of work, are subject to periodic briefings monthly; office workers - every three years, thus the percentage of employees who have completed training on occupational health and safety at hydroelectric power plants is 100%.

64-EU1 and 64-EU2. The RusHydro Holding: Installed capacity and net power generation (net supply), by energy sources and regulatory regime

Regulatory regime / Geographic region	Energy source	Markets and Regulatory regime	Installed capacity, GW	Net electricity supply, GW/h
PJSC RusHydro, including branches:	Water		24.7	78.4
The Far East and Siberia	Water	Wholesale Market for Electricity and Power / regulated tariffs and free prices	10.5	34.5
The Center, Ural and the mid-Volga Region	Water		11.5	37.7
The South and Northern Caucasia	Water		2.7	6.2
SDCs of RusHydro Holding	Water and other RES		4.7	11.1
<b>TOTAL RusHydro Holding *</b>			<b>29.4</b>	<b>89.5</b>

\* The RusHydro Holding comprises the data of the Boguchanskaya HPP and does not include the data of JSC RAO Energy Systems of the East and its controlled companies.

JSC KamGEC comprises the data of HPP-1 and HPP-3, which have been in the trust management of JSC KamGEC since 01.01.2002

NOTE: JSC Boguchanskaya HPP is an associate company of the RusHydro Group. In contrast to this Report, the performance results of JSC Boguchanskaya HPP are recognized in the RusHydro Group's consolidated financial statements according to IFRS by the equity method.

All indicators included in the tables "Standard Disclosures" and "Performance Indicators" have been externally assured by an independent auditor (see Independent Auditor's Report, p. 227).

**CATEGORY: ENVIRONMENTAL**

64-EN8. The total amount of water withdrawal, by sources, thousands of cubic meters per year

№	Indicator	Unit of measurement	Total for the Holding			Including PJSC RusHydro		
			2012	2013	2014	2012	2013	2014
<b>1</b>	<b>The total amount of water withdrawn from sources including:</b>	<b>ths of cubic meters</b>	<b>63 118</b>	<b>65 865</b>	<b>64 530</b>	<b>29 825</b>	<b>28 545</b>	<b>27 640</b>
1.1	- surface water, including water from wetlands, rivers, lakes and so on	ths of cubic meters	61 618	64 371	62 977	29 425	28 126	27 213
1.2	- ground water	ths of cubic meters	488	525	610	31	49	95
1.3	- rainwater collected directly and stored by the organization	ths of cubic meters	0	6	6	0	6	6
1.4	- waste water from another organization	ths of cubic meters	0	0	0	0	0	0
1.5	- from municipal water supplies	ths of cubic meters	1012	364	313	369	364	311
1.6	- from another water supplies (indicate which)	ths of cubic meters	0	599	621	0	0	21
<b>2.0</b>	<b>The total amount of withdrawn water used, including:</b>	<b>ths of cubic meters</b>	<b>61 523</b>	<b>65 092</b>	<b>64 143</b>	<b>28 872</b>	<b>27 772</b>	<b>26 905</b>
2.1	- for drinking needs	ths of cubic meters	459	436	500	420	395	418
2.2	- for production needs	ths of cubic meters	60 901	64 531	63 495	28 289	27 252	26 351
2.3	- for other needs	ths of cubic meters	163	125	148	163	125	136

64-EN22. Total water discharge by quality and destination, thousands of cubic meters per year

№	Name of Destination	Total for RusHydro			Including PJSC RusHydro		
		2012	2013	2014	2012	2013	2014
<b>Total wastewater discharge by destination</b>							
1	In the water body	54,325	66,448	76,995	21,199	29,323	38,015
2	On the terrain relief	201	163	63	201	163	63
3	On the filtration fields	0	0	0	0	0	0
4	Aquifers	0	0	0	0	0	0
<b>Total wastewater discharge by treatment method*</b>							
5	Polluted water without treatment	1,267	118	3,171	1,267	69	856
6	Insufficiently treated polluted water	67	1,265	669	66	983	333
7	Standard quality clean water (no treatment)	52,523	64,539	71,752	19,414	27,760	35,448
8	Water treated to standard quality at biological purification plants	0	0	0	0	0	0
9	Water treated to standard quality at physical/chemical treatment plants	109	79	45	93	64,28	28
10	Water treated to standard quality at the mechanical treatment plant	358	446	13,467	358	446	1,347

№	Name of Destination	Total for RusHydro			Including PJSC RusHydro		
		2012	2013	2014	2012	2013	2014
	<b>Total volume of reused wastewater by another organization (m3 per year) **</b>	<b>315</b>	<b>349</b>	<b>374</b>	<b>315</b>	<b>344</b>	<b>363</b>
	<b>Transferred to other organizations without use</b>	<b>952</b>	<b>767</b>	<b>1,380</b>	<b>952</b>	<b>767</b>	<b>749</b>

\* The data are given in accordance with the statistical reporting form 2-TP (Water management)

64-EN31. Total environmental protection expenditures and investments by type

№	Name*	Total for RusHydro			Including PJSC RusHydro		
		2012	2013	2014	2012	2013	2014
1.	Total current environmental expenses	105,151.02	100,605.03	122,959.63	102,509.07	96,235.75	91,431.90
	including for:						
1.1.	Air protection and climatic change prevention	2,231.82	3,512.07	2,792.57	1,903.84	3,396.07	646.84
1.2.	Wastewater collection and treatment	63,208.73	6,797.28	28,168.55	61,550.92	3,624.28	3,763.55
1.3.	Waste handling	8,598.25	17,295.63	4,513.04	8,183.49	17,179.15	3,204.52
1.4.	Protection and rehabilitation of land, surface water and groundwater	31,112.22	64,250.34	56,630.85	30,870.82	64,106.54	56,413.61
1.5.	Environmental protection from noise, vibration and other types of physical effects	0.00	342.47	267.33	0.00	342.47	267.33
1.6.	Biodiversity conservation and protection of natural areas	0.00	950.00	1,684.40	0.00	950.00	1,684.40
1.7.	Research and development activities to reduce the negative anthropogenic impacts on the environment	0.00	2,678.14	11,067.81	0.00	2,678.14	10,186.96
1.8.	Other activities in the field of environmental protection	0.00	4,779.10	17,835.08	0.00	3,959.10	15,264.69
2.	Payment for environmental protection services	12,375.62	84,751.78	217,282.02	12,032.86	81,552.18	211,669.65
3.	Expenditures for capital repair of environmental protection assets	366,646.40	348,756.80	254,211.00	366,646.40	346,902.80	254,211.00
4.	Charges for allowable and excess emissions, discharges of pollutants, and waste disposal, including:	10,514.01	7,359.57	9,795.54	9,819.69	6,393.087	6,399.62
4.1.	for discharging to water bodies	3,764.14	3,349.47	4,518.13	3,631.78	3,248.073	3,035.38
4.2.	for venting to atmosphere	551.85	609.66	835.85	73.56	76.485	80.97
4.3.	for waste disposal	6,198.02	3,400.44	4,172.78	6,144.35	3,068.53	3,014.9
4.4.	for discharging to aquifers	0	0	267.38	0	0	267.38

\* The boundaries of the 2014 figure do not include data on CJSC MEK. The information is given in accordance with the statistical reporting form 4-OS.

CATEGORY: SOCIAL

64-10. Total workforce, by employee category and gender

Category	Men		Women		Total for the category
	Head count, persons	Percentage, %	Head count, persons	Percentage, %	Head count, persons
Management	2,934	74%	1,050	26%	3,984
Professionals and officers	3,498	41%	5,024	59%	8,522
Workers	6,838	79%	1,869	21%	8,707
<b>Total</b>	<b>13,270</b>	<b>63%</b>	<b>7,943</b>	<b>37%</b>	<b>21,213</b>

64-10. Total workforce, by employment type, employment contract, region and gender

	Region*	Gender	Headcount of employees as of December 31, 2014, persons			
			Management	Professionals and officers	Workers	Total
<b>In the territory of the Russian Federation, including:</b>						<b>20 567</b>
1	CFD	m	577	916	461	1,954
	CFD	w	264	1,343	60	1,667
2	Southern FD	m	78	106	287	471
	Southern FD	w	13	106	61	180
3	NWFD	m	184	284	53	521
	NWFD	w	157	428	41	626
4	FEFD	m	456	326	1,147	1,929
	FEFD	w	189	527	424	1,140
5	SFD	m	372	473	1,387	2,232
	SFD	w	158	884	738	1,780
6	UFD	m	0	0	0	0
	UFD	w	0	0	0	0
7	VFD	m	551	774	1,616	2,941
	VFD	w	168	1,227	291	1,686
8	NCFD	m	630	516	1,533	2,679
	NCFD	w	89	458	214	761
<b>Outside of the Russian Federation, including:</b>						<b>646</b>
	The Republic of Armenia	m	65	67	239	371
	The Republic of Armenia	w	8	35	40	83
	Republic of Kirghizia	m	13	22	0	35
	Republic of Kirghizia	w	3	12	0	15
	The Republic of Tajikistan	m	8	14	115	137
	The Republic of Tajikistan	w	1	4	0	5

\* Here and hereinafter, the region means the Federal Districts (facilities in the territory of the Russian Federation) and the Republics (foreign assets).

Labor practices and decent work  
Training and Education

64-LA6. Injury rate and number of work-related fatalities, as well as occupational disease rate

	The total number of incidents (including fatalities)	General injures frequency rate
PJSC RusHydro (executive office and branches)	2	0.333
The Group's companies engaged in electricity generation	2	0.763
Repair and construction companies	4	0.641
<b>Total the RusHydro Group</b>	<b>8</b>	<b>0.376</b>

Note: The rate has been calculated as a ratio of the number of injured persons multiplied by 1000 to the average number of listed employees. The calculations include data on all employees, including temporary staff, and only on those subsidiaries and dependent companies in which a fatality occurred during in the reporting period.

\* Working days of vocational disablement of persons, who lost their ability to work, are indicated as lost days, and the count begins from the first working day.

64-LA12. The total number of RusHydro Holding's employees as of December 31, 2014, by gender and employee category, persons

	Management	Professionals and Officers	Workers
Men	2,934	3,498	6,838
Women	1,050	5,024	1,869





The energy comes from here!