

# RusHydro

## **Report on sustainable development of RusHydro Group for 2013**



# Responsibility. Sustainability. Development.

This non-financial report reflects the analysis of the RusHydro Group's companies (the RusHydro Group) strategy on corporate social responsibility and sustainable development, as well as essential facts and 2013 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:

Open Joint Stock Company Federal Hydro  
Generating Company (JSC RusHydro)

**Mailing address:**

7 Malaya Dmitrovka Street,  
Moscow, Russia, 127006

**Location of offices:**

7 Malaya Dmitrovka Street,  
Moscow, Russia, 127006

51 Arkhitektora Vlasov  
Street, Moscow, Russia,  
117393

**Telephone:**

8 (800) 333-80-00

**Fax:**

+7 (495) 225-37-37

**Corporate website:**

[www.RusHydro.ru](http://www.RusHydro.ru)

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# Message from the Chairman of the Management Board - General Director JSC RusHydro

## RusHydro – 10 years of sustainable development



### Dear Colleagues,

I am pleased to present the sixth non-financial report of RusHydro, one of Russia's largest energy holdings, which is a part of the group of global leaders in renewable energy.

Under current conditions, the social responsibility concept for a large public company is becoming comprehensive. Not so long ago, this responsibility was perceived as providing relatively comfortable working and living conditions for employees, reasonably active participation in charity and environmental protection.

In 2014, we celebrated our tenth anniversary. 2004 is a year of the Company's formation, and a starting point of the RusHydro Group's sustainable development.

Since 2004, our corporate social responsibility guarantees sustainable development and helps us look to the future with confidence. Today, our understanding of social responsibility covers all key areas of the RusHydro Group. This is dynamic innovative development, and construction of new electric energy facilities allowing us to increase electric energy supplies

to the consumers in distant regions of our country every year and to make a significant contribution into improved Russia's social and economic development and Russian people's quality of life. This is also a great representation of Russia's interests in recognized international organizations and inter-governmental energy projects.



The fact that in the reporting year we were elected the Chairman of the Global Sustainable Electricity Partnership (GSEP) for a one-year term shows the international recognition of RusHydro's responsible attitude to sustainable development.

The main focus of the partnership for this term stated by RusHydro is "Innovations, as a quick path to global

sustainable development". In the opinion of Russian power engineers, this topic reflects the main modern challenge, as addressing sustainable development is impossible without innovation.

Among events, 2013 will be marked by abnormal flooding in the Far East. Our hydro-power infrastructure has stood the test. Despite the fact that the Zeyskaya and Bureyskaya HPPs kept more than

65% of water inflow in their reservoirs and seriously reduced potential impacts on human settlements, the national economy and people of the region still suffered significant damage. Under these circumstances, the RusHydro Group launched a large-scale social support program for victims. In total, to eliminate flood consequences, the Company has channeled more than RUR 245 million to the neediest regions of the Far East.

The Far East will remain in the Company's focus: the priority power grid modernization task has been implemented here. It is not just business. We have assumed major social obligations, because seven out of ten kilowatt hours produced here are consumed by the population and social infrastructure.

The main asset of RusHydro, which allows us to confidently move forward, is our employees. The balanced scenario for the Company's development, which includes commissioning 22.2 GW of new capacity by 2020, requires constantly attracting new professional personnel. That was why in October 2013 the Company opened a Chair of the Hydro-power Industry and Renewable Energy Sources in the Moscow Power Engineering Institute.

For the first time in Russian higher education, the establishment of a new chair has been funded from the own funds of members of the Company's Management Board through the Charitable Fund "Involvement", which operates under the auspices of RusHydro.

Responsibility to the society and the shareholders guarantees the reliability and efficiency of our hydro-power facilities. In this case,

we consider a transparent information policy and regular reporting, to be a pre-condition for corporate social responsibility.

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

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



Yours sincerely,

**Evgeny Dod,**

Chairman of the Management Board -  
General Director

# About the Report

This Report on corporate social responsibility and the sustainable development of the RusHydro Group for 2013 (hereinafter – the Report) reflects essential facts about the activities of the RusHydro Group companies (from January 1 to December 31, inclusive).

JSC RusHydro has adopted an annual cycle for non-financial reporting. This Report is the sixth non-financial Report of the RusHydro Group.

The Report on corporate sustainability and social responsibility for the 2012 calendar year is available at [http://www.eng.RusHydro.ru/Sustainability/soc\\_responsibility](http://www.eng.RusHydro.ru/Sustainability/soc_responsibility).

The Report is prepared with regard to requirements and recommendations of the Sustainability Reporting Guidelines of the Global Reporting Initiative (GRI, version 3.1) and the GRI Electric Utilities Sector Supplement.

## The Following Terms are Used in this Report

### **JSC RusHydro, RusHydro or the Company:**

Relates to the holding company, includes executive apparatus of JSC RusHydro and branches of JSC RusHydro.

### **The RusHydro Group or the Group:**

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

### **The RusHydro Holding or the Holding:**

Relates to the group of companies including JSC RusHydro and subsidiary companies included in the Report scope. See full list below (the RusHydro Holding in the Report scope).

## Report Scope

The following subsidiary companies are included in the scope of this Report:

- the subsidiary companies included in the repair complex.

In 2013, the repair and construction complex was reorganized via the incorporation of ShGER JSC, REMIK JSC, Turboremont-VKK JSC and Electroremont VKK as Gidromont-VKK JSC; due to this, data collection and consolidation for the Report was complicated. Nevertheless, information about the repair complex and repair activities is presented in the Report. During the next reporting period, the Company plans to include the repair complex within the scope of the Report.

- the subsidiary companies of JSC RAO Energy Systems of the East Holding (hereinafter – RAO Energy Systems of the East) and subsidiary companies which are tied to RAO Energy Systems of the East by control and management relations.

As of December 31, 2013, JSC RusHydro owned 84.39% of the authorized capital of JSC RAO Energy Systems of the East. Despite the fact that JSC RAO Energy Systems of the East, regardless of the RusHydro Group, releases its own non-financial report, in accordance with recommendations by the experts of Russia's Union of Industrialists and Entrepreneurs (RUIE)

after public assurance of the RusHydro Group's non-financial report for 2012, this Report includes a section dedicated to RAO Energy Systems of the East (see Section 4.2 Development of the power industry in the Far East – the preservation of the region's natural resources – conserving natural resources of the Region).

- the subsidiary companies included in the scientific and research complex, design complex and IT complex.

It is planned to consider an issue of including the design, scientific and research institutions in the scope of the Report in the next reporting period.

## The RusHydro Holding within the Reporting Scope:

### **JSC RusHydro, including executive apparatus and branches:**

1. Branch – the Bureyskaya HPP
2. Branch – the Volzhskaya HPP
3. Branch – the Votkinskaya HPP
4. The Dagestan branch
5. Branch – the Zhigulevskaya HPP
6. Branch – the Zeyskaya HPP
7. The Kabardino-Balkaria branch
8. Branch – the Kamskaya HPP
9. The Karachay-Cherkessia branch
10. Branch – the Cascade of Verkhnevolzhskiy HPPs
11. Branch – the Cascade of Kuban HPPs
12. Branch – the Nizhegorodskaya HPP
13. Branch – the Novosibirskaya HPP
14. Branch – the Saratovskaya HPP
15. The North Ossetian branch
16. Branch – the Sayano-Shushenskaya HPP named after P.S. Neporozhniy
17. Branch – the Cheboksarskaya HPP
18. Branch – the Corporate Hydro-power University
19. Branch – the Zagorskaya PSPP

## Subsidiary companies

- |   |  |                                |
|---|--|--------------------------------|
| 20. JSC Geoterm                           | 26. JSC Pavlodolskaya HPP                      | 32. JSC ChirkeyGESstroy        |
| 21. JSC Kolymaenergo                      | 27. JSC Chuvash Energy Retail Company          | 33. JSC ESCO UES               |
| 22. JSC Verkhne-Mutnovskaya GeoPP         | 28. LLC Energy Supply Company of Bashkortostan | 34. JSC Sulak HydroCascade     |
| 23. CJSC International Energy Corporation | 29. JSC Ryazan Energy Retail Company           | 35. JSC Ust-Srednekanskaya HPP |
| 24. JSC KamGEK                            | 30. JSC Krasnoyarskenergosbyt                  | 36. JSC Ust-SrednekanGESstroy  |
| 25. JSC Pauzhetskaya GeoPP                | 31. JSC Power supply company RusHydro          | 37. JSC Zagorskaya PSPP-2      |
|   |  | 38. JSC Zaramagskie HPPs       |

## Company Profile

Since its inception in 2004, the Holding's companies' main economic activity has been the production of electricity by

hydro-power plants in accordance with the RCEA (the Russian Classification of Economic Activities).

## Selection Criteria for Inclusion the Issues to the Report

In preparing this Report, the Company sought to fully reflect the most current issues and topics, as well as to analyze their significance in terms of corporate social responsibility and sustainable development.

The analysis and selection of topics to be included in the Report is based on:

- interviews with JSC RusHydro management;
- meetings of the working group on Report preparation;
- monitoring thematic reports and issues of the world's largest hydro-power companies included in them, including those that JSC RusHydro has joint projects or partnerships with;
- analysis of mass media publications;
- results of a meeting-dialogue with stakeholders, which was organized during report preparation;
- reviewing recommendations which are received during the Public Assurance of the Report in the Council on Non-financial Reporting of the Russian Union of Industrialists and Entrepreneurs.

## Forward-Looking Statements

Data included in the RusHydro Group's Report for 2013 on sustainable development that relate to the future are based on forward-looking information. Such words as "believe", "anticipate", "expect", "estimate", "intend" or 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 2013 Report on the RusHydro Group's social responsibility and sustainable development. There is no guarantee that the anticipated results will be achieved, so they should not be regarded as the most likely or standard scenario.

## Approach Regarding External Confirmation

The RusHydro Group Sustainability Report for 2013 for the first time passed an independent audit in compliance with ISAE 3000 and received confir-

mation of its compliance with GRI B+. PricewaterhouseCoopers CJSC acted as the independent auditor\*.

The Global Reporting Initiative (Global Reporting Initiative, GRI) confirmed the compliance level of the Report with Sustainability Reporting Guidelines (version 3.1) at B+\*\*.

[\*] The independent auditor's report is available at page 103

[\*\*] The conclusion is given at the page 102

# Siberia

## Siberian Federal District

This is a quite unique region. Siberia is home to the world famous Lake Baikal, the area of which is about the same as that of the Netherlands. It is the deepest freshwater lake on the planet. Only one river flows from the lake - the Angara. The Baikal's waters are very clear, with visibility down to 50 m. About 20% of the world's freshwater (not including glaciers) is found in Lake Baikal. Every year more than 2,000 earthquakes are registered around Lake Baikal. The world's largest swamp, the Vasyugan Swamp, is also located in Siberia. It covers an area that is comparable to that of a number of European nations. The swamp contains the world's largest peat beds. Siberia is also famous for the phenomenon known as the Tunguska Meteorite, which it is assumed caused an explosion near the Podkamennaya Tunguska River more than 100 years ago. Siberia contains 85% of all Russia's reserves of lead and platinum.



The region's energy consumption

**215 billion kWh**



RusHydro facilities' generation in the region

**32 billion kWh**

15% of the energy consumption for all of Siberia



Population

**20,000,000 people**



Area

**5 mln km<sup>2</sup>**

About 30% of the area of Russia, or 15 times the area of France

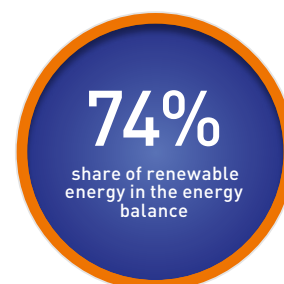
# Section 1. Energy of sustainable development

## The RusHydro Group in 2013

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

The RusHydro Group – 12% of Russia's electricity generation in 2013

The RusHydro Group companies are a core companies and a key State institution to develop the basic industry of the economy – the electric power industry. In 2012, in accordance with a Decree of the Russian President, JSC RusHydro was included in the list of strategic enterprises and strategic joint stock companies.



The 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 35.5 GW, which are located in seven

operating areas and are included in seven Unified Energy Systems (UES). One of these systems, the UES of the East, operates in isolation from the other six and is an operating area of JSC RAO ES of the East (a part of the RusHydro Group).

Electricity output, produced by the Group in 2013, amounted to 124.1 billion kWh, or 12% of total electricity output of UES of Russia power plants.

**The RusHydro Group: generating capacities and electricity output by energy source**

	Type of generation	Installed capacity, GW	Share, %
The RusHydro Holding	Hydro-generation and other renewable energy sources	26.4	74
RAO ES of the East	Thermal generation	9.1	26
<b>Total for the RusHydro Group</b>		<b>35.5</b>	<b>100</b>

**The RusHydro Group: 2013 key operating results (electricity production, billion kWh)**

	2012	2013	Change, %
The RusHydro Holding	81.0	94.1	16.2
RAO ES of the East	31.5	30.0	(4.8)
<b>Total for the RusHydro Group</b>	<b>112.5</b>	<b>124.1</b>	<b>10.3</b>

In total, Group production increased 10.4% during 2013 to a record 124.1 billion kWh. The RusHydro Holding's hydro-power generation at the same time

increased 16.3% compared with 2012, and amounted to 94.1 billion kWh. It has changed the structure of Group production in favor of renewable

energy sources; the share of which increased 4% compared with 2012 and amounted to 76%.

The share of electricity produced from renewable energy sources was 76%

## The RusHydro Holding: 2013 key financial indicators (RUR million)\*

Indicator	2011	2012	2013
Total assets	811,783	854,267	852,046
Total liabilities	286,387	313,862	255,339
Equity	497,685	515,086	579,530
Total revenue	362,599	298,805	313,632
Government subsidies (RAO ES of the East	9,097	10,796	13,246
Capitalization of JSC RusHydro	280,113	212,966	180,291

\*NOTE: the data on the consolidated financial statements of the RusHydro Group prepared in accordance with IFRS (\*) HEREINAFTER IN THE REP

In 2013, the MICEX Index, Russia's main stock index, demonstrated slight growth – 2%. The key deterrent for Russia's stock market growth was deceleration of the Russian economy and the outflow of foreign investors' funds from emerging markets. In general, 2013 was not the best year for the elec-

tric energy sector – the MICEX industry index dropped 40%. The Russian government's decisions related to limiting the growth rate of electric energy prices continue to put pressure on electric energy company shares. JSC RusHydro shares, which followed the MICEX Energy Index during the

first five months of 2013, demonstrated better dynamics against the industry indicator in H2 2013 and decreased 23% for the year. In H2 2013, JSC RusHydro share prices were supported by the Company's strong operational and financial results.

## 1.1 Clean energy – benefit of sustainable development

The RusHydro Holding's main economic activity is the production of electricity, and the method of production is hydro-generation. As a major energy resource, the Holding's companies use the hydro-re-

sources of the Russian Federation, as well as develops sea tides and wind energy-based generation, as well as geo-thermal energy.

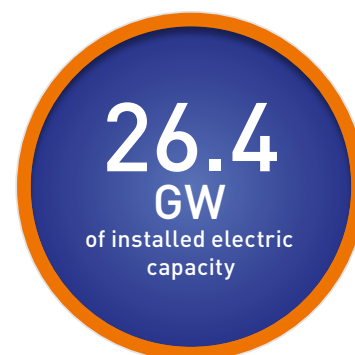
## The RusHydro Holding in 2013

The RusHydro Holding's companies' activity includes the following areas:

### Electricity Production

The installed capacity of generating assets is 26.4 GW. The Holding companies' generating assets are located in the Russian Federation, as well as in the Republic of Armenia, and include more than 70 hydro-generating facilities, including 32 SHPPs, three GeoPPs, and one

tidal power plant; these assets' aggregate installed capacity amounts to 26.4GW. In 2013, the aggregate share of electricity produced by the companies of the Holding amounted to 54% of the total electricity output of Russia's hydro-power plants.



## The RusHydro Holding: installed capacity, electricity output, Russian regions and regulatory regimes\*

Objects in the Russian Federation	Energy sources	Installed capacity, GW	Electricity output, billion kWh	Markets and regulatory regimes
JSC RusHydro, including branches:	Water	24.7	91.2	
The Far East and Siberia	Water	10.5	40.7	WMEP / regulated tariffs and free prices
The Center, Ural, and mid-Volga Regions	Water	11.5	42.4	
The South and the North Caucasus	Water	2.7	8.1	
SDCs of JSC RusHydro	Water and other RES	1.75	3.0	WMEP / regulated tariffs and free prices
The RusHydro Holding TOTAL		26.45	94.2	

### Sales

The structure of JSC RusHydro includes four electricity supply companies in four Russian regions, all these companies are guaranteeing suppliers, with their management centralized in JSC ESC RusHydro, a subsidiary company. The share of retail in the sales structure of JSC RusHydro is

insignificant; the total supply volume to the retail market was 37 million kWh (or 0.03% of total electricity sales in 2013). The task to improve service quality for customers of electricity supply companies is included in the list of 2014 corporate priorities.

### Construction

the Holding's assets include hydro-power facilities under construction and SDCs that construct and upgrade these facilities.

## Areas of activities and core assets

Generation	Sales	HPPs under construction and construction companies
19 BRANCHES OF THE COMPANY *	JSC CHUVASH ENERGY RETAIL COMPANY	JSC CHIRKEYGESSTROY
JSC GEOTHERM	LLC ENERGY RETAIL COMPANY OF BASHKORTOSTAN	JSC ESCO UES
JSC KOLYMAENERGO (WPS)	JSC RYAZAN ENERGY RETAIL COMPANY	JSC SULAK HYDROCASCADE
JSC VERKHNE MUTNOVSKAYA GEOPP	JSC KRASNOYARSKENERGOSBYT	JSC UST-SREDNERANSKAYA HPP
CJSC INTERNATIONAL ENERGY CORPORATION	JSC ENERGY RETAIL COMPANY RusHydro	JSC UST-SREDNEKANGESSTROY
JSC KAMGEK		JSC ZAGORSKAYA PSPP-2
JSC PAUZHETSKAYA GEOPP		JSC ZARAMAGSKY HPP

\* List of branches, as well as the full list of companies, included in the reporting scope of this Report, see CHAPTER ABOUT THE REPORT



# Key Features and Competencies of JSC RusHydro

The RusHydro Holding plays a backbone role in the Russian electric power industry.

## The companies of the Holding:

- support key infrastructure for Russia's vital activities and the key utility systems to ensure and guarantees their operation and safety;
- represent the instrument of State policy, which can resolve complex social and economic problems;
- ensure the growth of the business` value, both through the technical upgrading of existing facilities and by investing in new assets.

## The Company has unique advantages within Russia's power sector, being:

- A generator of the clean electric energy;
- Energy efficient enterprise;
- Base for the system reliability;
- Initiator of innovations in renewable energy;
- 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.

## Development and Use of Other RES

The Company conducts exploration and research into potential wind fields, geo-thermal fields and the dam locations of small hydro-power plants using both pilot projects and the organization of system works. This allows the Company to select the most promising design and construction technology.

In 2013, one of the deepest wells at the Mutnovsky geo-thermal field, with a depth of 2,200 meters, was commissioned and the available capacity of the Mutnovskaya GeoPP-1 was increased to 48 MW.

To date, the total share of the capacity based on alternative renewable energy sources in JSC RusHydro's energy balance was 0.3% (net of the small HPP share).

JSC RusHydro's development strategy set a target indicator of capacity of RES projects in the portfolio at various levels of implementation; that should reach 3% for 2015.

### RES projects portfolio

Program name	Project's capacity at the development stage, MW
Small HPPs development program	500
Wind-diesel complexes in the territory of the Far East	42
Solar electric plants in the territory of the Far East	44
Geothermal plants	65
Wind power plants	40

State support measures for implementing RES projects undertaken by the Russian Federation government should contribute to achieving JSC RusHydro's goal.



## Structure and share of renewable energy in the energy balance of JSC RusHydro (with an indication of energy sources)

Power plants	Energy sources	Installed capacity, MW	Share in energy mix, %
HPPs (including Small HPPs and PSPPs)*	Energy of rivers	26,344.8	99.71
Other RES (GeoPPs/TPPs):		75.7	0.29
The Verkhne-Mutnovskaya GeoPP*	Geothermal	12.0	0.05
The Mutnovskaya GeoPP	Geothermal	50.0	0.18
The Pauzhetskaya GeoPP	Geothermal	12.0	0.05
The Kislogubskaya TPP**	Tidal energy	1.70	0.01
<b>TOTAL, the RusHydro Holding (hydro-power industry and other, RES)</b>		<b>26,420.5</b>	<b>100.00</b>

## Geographic Footprint

The Company has a tax registration as a major taxpayer in the Inter-regional Office of Russia's Federal Tax service №4 that is responsible for major taxpayers in Russian Federation. Generating facilities of JSC RusHydro are located in 20 subjects of the Russian Federation, including six republics and 14 autonomous districts (inter alia territories and regions).

The RusHydro Holding's RES facilities development has implemented primar-

ily in the Murmansk Region (the North Western Federal District), where in the Kola Peninsula the Company has implemented a tidal energy development project, and Kamchatka (FEFD), where geo-thermal power plants are under construction and operating.

Hydro-power systems of the RusHydro Holding are located on the Volga, Kama, Cunha, Bureya, Zeya, Yenisei, Ob, Kolyma, Vilyui, Sulak, Kara Koisu,

Terek, Gizeldon, Aksaut, and Maruha Rivers, on the Great Stavropol Canal and the Nevinnomyssk Canal and at the Kuban Reservoir.

Water reservoirs of hydro-power plants are owned by the state. The issues of water structures management, their protection and environmental safety lay in the federal authorities' sphere.

## Foreign assets

In 2011, the assets of the RusHydro Holding merged the plants of the Sevan-Hrazdan Cascade of HPPs in the Republic of Armenia, which JSC RusHydro owns through its subsidiary

company, CJSC International Energy Corporation. In June 2013, JSC RusHydro launched construction of the Verkhne-Naryn Cascade of HPPs in Kyrgyzstan with a total capacity

of 237.7 MW. An increased presence on foreign markets is a long-term corporate strategic priority of JSC RusHydro.

## Contribution to the development of regional economies

JSC RusHydro implements large-scale investment projects in various Russian regions. The largest of them (the designed capacities of plants under construction are shown here):

- The Boguchanskaya HPP in conjunction with UC RUSAL on the Angara River in the Krasnoyarsk Region (2,997 MW);
- The Ust-Srednekanskaya HPP in the Magadan Region (570 MW);
- The Nizhne-Bureiskaya HPP in the Amur Region (320 MW);
- The Gotsatlinskaya HPP in the Republic of Dagestan (100 MW);
- The Zelenchukskaya HPP-PSPP in the Karachay-Cherkessia Republic (140 MW);
- The CHP plant in Sovetskaya Gavan in the Khabarovsk Territory (120 MW);
- The Sakhalinskaya SDPP-2 in the Sakhalin Region (110 MW) (Phase 1);
- The Yakutskaya SDPP-2 in the Republic of Sakha (Yakutia) (170 MW) (Phase 1);
- The Blagoveschenskaya CHP plant in the Amur Region (120 MW) (Phase 2).

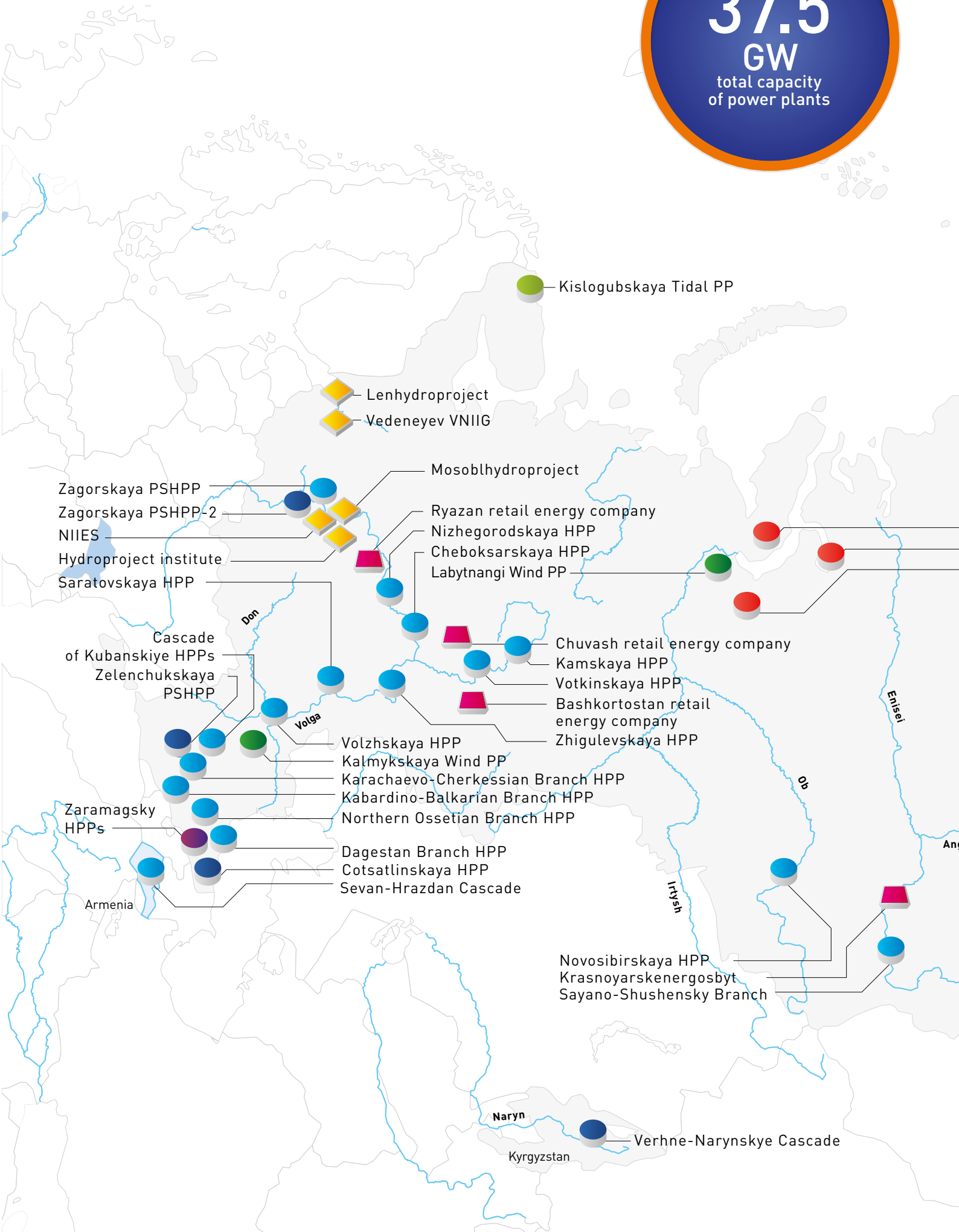
\* Small hydro-power (SHPP) hereinafter means hydro systems of installed capacity up to 30 MW

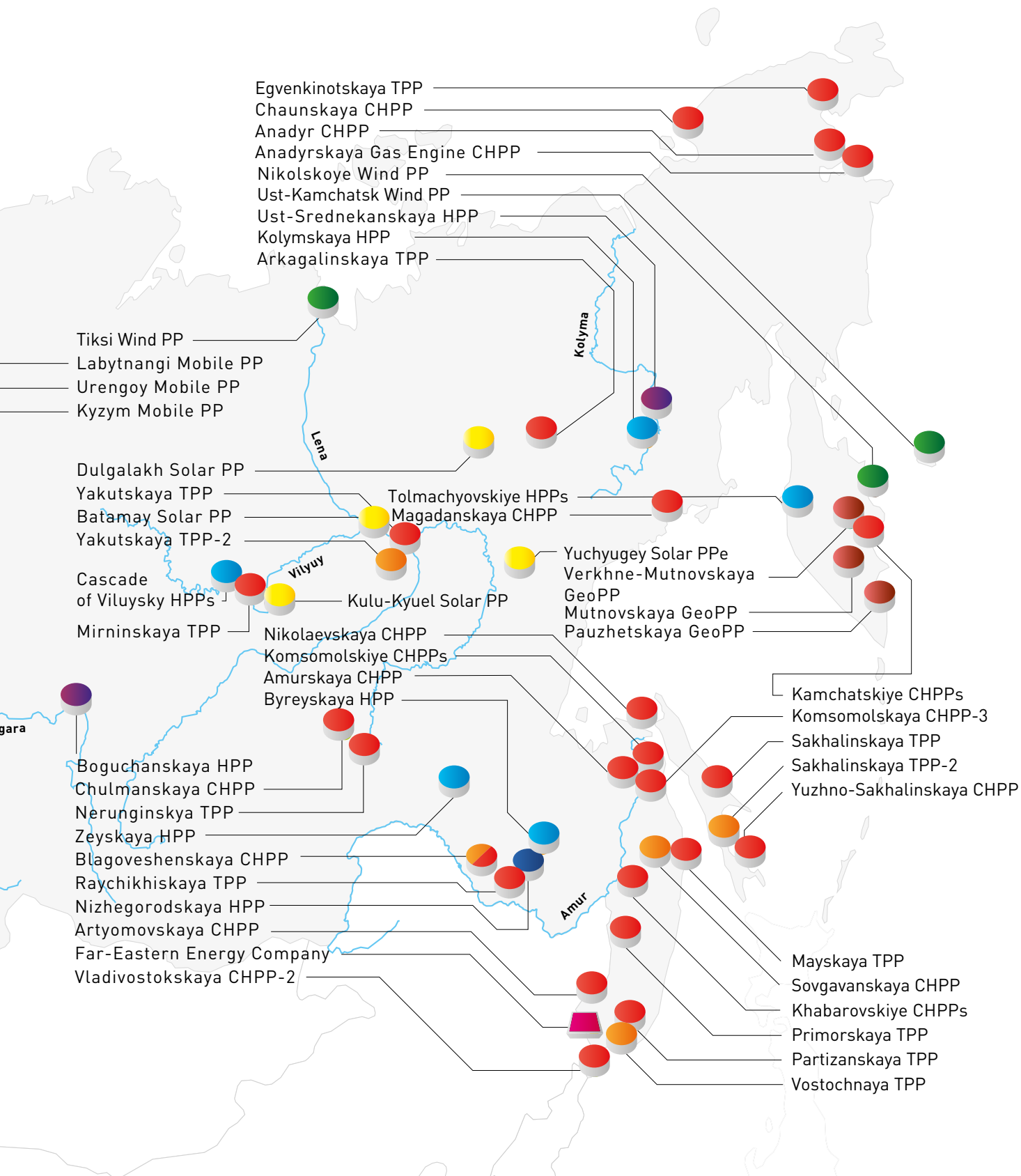
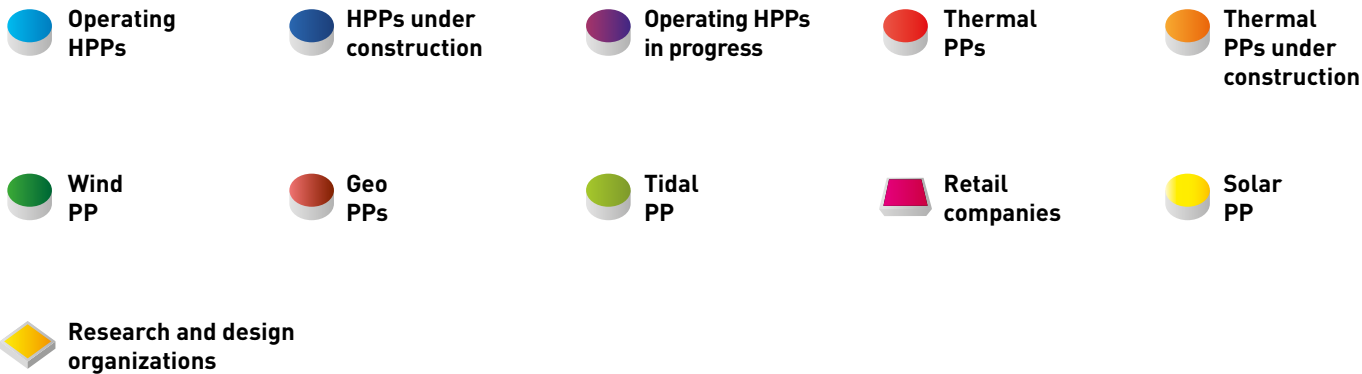
\*\* Acts as a pilot

## Geographical Footprint of the Company\*

\* Total installed capacity of 37.5 GW  
includes the installed capacity of JSC  
Boguchanskaya HPP (1,998 MW)

**37.5**  
**GW**  
total capacity  
of power plants





## Electricity and capacity markets

The companies of the RusHydro Holding conduct transactions with electric power and capacity in the wholesale electricity and capacity market and retail electricity markets.

Among the participants of the wholesale market are generating companies, energy sales organizations, (including guaranteed supply companies), electricity export/import operator, Federal Grid Company (in terms of purchasing electricity to cover transmission losses), and major consumers. The participants of the market may act as both buyers and sellers of the electricity and capacity.

Among the participants of retail markets are consumers, public utility services providers, energy sales (energy supply) organizations, electricity producers in retail markets, grid companies, operational-dispatching offices in electric energy sector.

The wholesale electricity and capacity market operates in regions that are incorporated into pricing zones. The first pricing zone covers the territory of European Russia and the Urals, whereas the second zone encompasses Siberia. In non-pricing zones (Arkhangelsk and the Kaliningrad Region, the Komi Republic and Far East Regions), where for technological reasons, the organization of

market relationships in the electric power industry is not yet possible, electricity and capacity sales on the wholesale market are regulated by tariffs.

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

In 2013, all electricity sold in the pricing zones of the wholesale market by the RusHydro Holding's companies was sold for non-regulated prices excluding electricity supplied to the population and similar categories of consumers, as well as to the consumers of the North Caucasus Region and the Republic of Tuva.

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 in the non-pricing zone of the wholesale electricity and capacity market of the Far East. These territories have peculiarities for organizing market relationships in electric power due to competition limitations among electricity suppliers and grid limitations relates to electricity exchange.

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

In retail electricity markets the companies of the Holding sell electricity purchased in the wholesale electricity and capacity market to end consumers in the territories of the constituent entities of the Russian Federation united in the pricing zones of the wholesale market electricity is sold for non-regulated prices except 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 in the sphere of state regulation of tariffs of the constituent entity of the Russian Federation.

In 2013, the companies of the RusHydro Holding acted as participants of retail markets in the territory of the Republic of Bashkortostan, the Krasnoyarsk Region, the Republic of Chuvashia, and the Ryazan Region.

NOTE: Detailed description of the markets in which the Holding operates is available in the 2013 Annual Report and on the Company's website

## Sustainable Development: 2013 Key Events

- Standard & Poor's Agency improved its outlook on JSC RusHydro's ratings and confirmed its long-term credit rating at BB+, its short-term credit rating at B and the national scale rating at ruAA+, Stable outlook
- Moody's Investors Service Agency confirmed a Stable outlook on JSC RusHydro's ratings while confirming an international scale long-term credit rating in foreign currency at Ba1 and a national scale rating at Aa1.ru, Stable outlook\*
- Fitch Ratings confirmed JSC RusHydro's long-term foreign and local currency credit ratings at BB+ and national long-term credit rating at AA (rus), Stable outlook\*\*

\* On March 28, 2014, Standard & Poor's reviewed JSC RusHydro's outlook from Stable to Negative, confirming the Company's long-term credit rating at BB+, short-term credit rating at B and national rating at ruAA. The review of the Outlook is connected to Russia's outlook revised in spring 2014

\*\* On March 24, 2014, Fitch Ratings reviewed JSC RusHydro's outlook from Stable to Negative, confirming the Company's long-term credit rating at BB+ and national rating at AA(rus). The review of the outlook is connected to Russia's outlook revised in spring 2014

### Year of Russia in the GSEP

- JSC RusHydro is the Chairman of the Global Sustainable Electricity Partnership\* (GSEP) from June 2013 to June 2014;
- In May 2014, the GSEP Summit with participation of top global energy companies' managers was held by JSC RusHydro in Moscow.
- The topic of the year is "INNOVATIONS, AS A QUICK PATH TO GLOBAL SUSTAINABLE DEVELOPMENT";
- Meetings of the GSEP management, project and policy committees were held in St. Petersburg;
- The International Seminar "Large Hydro-power Engineering: On the Path towards Sustainable Development" was held in Tolyatti;
- Yakutsk hosted the International Conference on Hybrid Systems in Isolated Areas "Renewable Energy in Isolated Systems of the Russian Far East";

### Comprehensive modernization program for existing HPPs

- The Volzhskaya HPP - three turbines with a total capacity of 345 MW were replaced;
- The Zhigulevskaya HPP - two turbines and one hydro-power unit with a total capacity of 345 MW were replaced;
- The Kamskaya HPP - three turbines with a total capacity of 63 MW were replaced and two generators with a total capacity of 42 MW were upgraded;
- The Rybinskaya HPP - one hydro-power unit with a capacity of 55 MW was replaced;
- The Saratovskaya HPP - one horizontal capsule unit with a capacity of 45 MW and two generators with a total capacity of 120 MW were replaced;
- The Cheboksarskaya HPP - one turbine with a capacity of 78 MW was re-constructed.

### Abnormal flooding in the Far East

- The Company launched a large-scale social support program for flood-affected residents of the Far East;
  - The RusHydro Holding allocated more than RUR 245 million personal contributions of the Holding's employees to those hit by the flood;
  - Branches and SDCs of the RusHydro Holding donated more than RUR 23.4 million;
  - Organizations and enterprises of the electric power industry transferred more than RUR 8 million to the charitable fund "Awareness", which operates under the auspices of JSC RusHydro.
- The Company proposed a construction program for new hydro-power facilities on tributaries of the Amur River to regulate spillways in flood periods

135,000 people were affected by flooding in the Far East.



### Capital construction

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

### Commissioning new hydro-generating capacities

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

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

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

\* GSEP - an international organization that unites the largest power utility companies from 68 countries (other than the United Kingdom), <http://www.globalelectricity.org/>

## Social responsibility

- The Social Policy of JSC RusHydro was adopted;
- A new collective bargaining agreement for 2013–2016 was signed;
- JSC RusHydro signed the Social Charter of the RUIE;
- The Stakeholder Map of JSC RusHydro was developed;
- A Chair of the “Hydro-power and RES” of the MPEI was established;
- Social and economic cooperation agreements were signed in 14 regions in which the Company is present;
- Program for the social and professional adaptation of orphans was adopted;
- The photo project “People of Light”, dedicated to the tenth anniversary of the Company, was launched;
- 52 children of employees who are students at profile HEIs received corporate scholarships;
- Further development of corporate volunteering and charity initiatives.

## Corporate governance

- Record high dividends were paid by JSC RusHydro; for the first time in the Company’s history, 25% of 2012 net profit was spent for dividends;
- An effective monitoring system for the targeted use of budgetary funds with the participation of Russia’s Audit Chamber, the Ministry of Economic Development and Trade, the Ministry of Energy and Sberbank of Russia was developed;
- The authorized capital of JSC RusHydro was increased and control over a number of hydro-power assets was improved;
- The Company signed the Anti-Corruption Charter of the RUIE.

## Environmental impact mitigation measures

- Implementation of environmental management systems and the IMS continued;
- Research and Development to improve the environmental efficiency of HPPs;
- Financial support for environmental initiatives and the SPNA;
- Project for the irrigation of the Volga-Akhtuba flood plain;
- Construction Program for flood-protection sites on tributaries of the Amur River;
- Assessment of the project for the Kankunskaya HPP with usage of MAG/IHA techniques for compliance with sustainable development criteria;
- Translation and presentation of MAG techniques in Russia (with the WWF);
- 3,000 people took part in a charitable ecological action, the “oBEREGAi”;
- Participation in the development of a regulatory framework to promote the use of alternative RES continued;
- Further development of the Comprehensive Program of the RusHydro Group on the implementation of RES in the Far East;
- Implementation of the program of biological diversion preservation in the policy and programs of Russia’s energy sector (in the field of hydro-power energy industry) within the framework of UNDP/GEF.

## Sustainable Development Strategy

The RusHydro Holding’s mission and long-term strategy are aimed at providing society with mostly “clean” energy, which is obtained through the use of water flow energy, with due attention being paid to environmental protection.

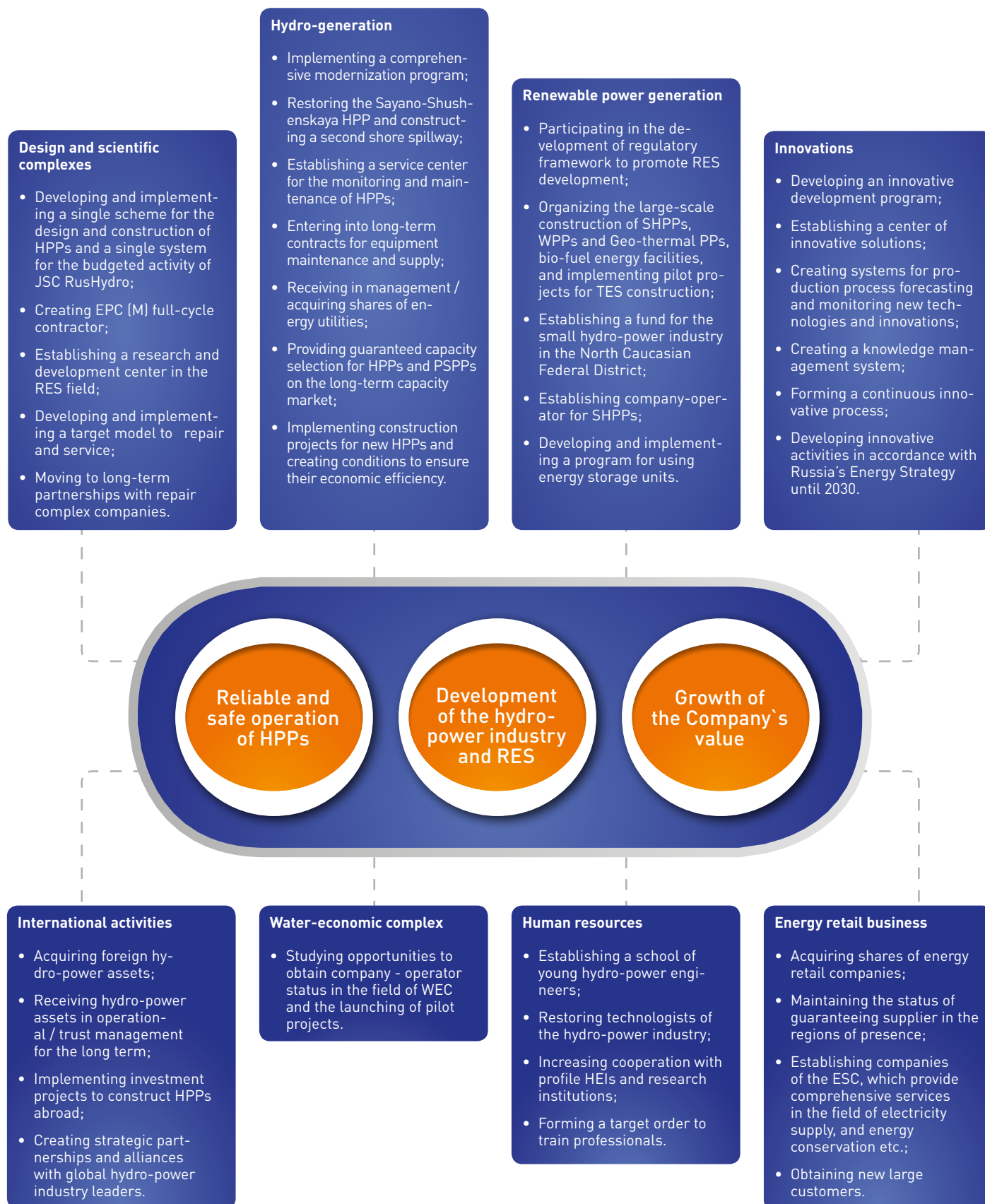
JSC RusHydro plans and implements its long-term development in terms of the concept of sector development in accordance with Russia’s Government’s plans and long-term forecasts.

Key documents that underpin the Holding’s companies’ sustainable development strategy include:

- 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;
- Sectoral strategies and long-term development plans for the oil and gas industries, non-ferrous metallurgy, and transport infrastructure, etc.;
- The general layout of electricity generation facilities’ locations until 2020 (project until 2030);
- Regional socio-economic development strategies and regional energy strategies.



# The Roadmap of Sustainable Development\*



(\*) JSC RusHydro's strategic plan for the period until 2015 with a view to 2020 was approved by the Board of Directors of JSC RusHydro (June16, 2010)

## Risk management system

### Long Term Strategic Initiatives

- Providing for the reliability of existing assets and their modernization;
- Increasing installed capacity via the implementation of investment projects;
- Creating an efficient system of innovations management and forming an uninterrupted innovative process;
- Human resource development;
- Expanding the Company's presence in foreign markets;
- Switching to a target capital structure and expanding sources for implementation of the Investment program;
- Increasing efficiency of repair and maintenance services in respect to the Company's assets: creating a repair and maintenance company;
- Increasing competitiveness of the engineering complex.

### Short Term Priorities Implemented in 2013

- Corporate consolidation of hydro-power energy assets: acquiring shares or taking for management the economically efficient hydro-power generating assets that are privately owned and located in the territory of the Russian Federation;
- Increasing profitability of energy sales companies;
- Developing activities in the field of the hydro-power resources utilization system.

### New Priorities Planned for 2013

- Providing hydro-power facilities' stable functioning in high water periods;
- Providing high quality services to the clients of energy sales companies;
- Updating the Company's development strategy;
- Structuring the Group's service activities.

[\*] JSC RusHydro's 2014 corporate development priorities were approved by the Board of Directors (Minutes № 190 dated November 29, 2013)

Detailed information on the RusHydro Group's strategy is given in the 2013 Annual Report at [www.RusHydro.ru/investors/reports/](http://www.RusHydro.ru/investors/reports/)



# Interconnection of Strategy and Sustainable Development Goals

JSC RusHydro considers corporate social responsibility as an integral part of the sustainable development. Meeting the challenges of sustainable development is based on the balanced management of economic, environmental and social aspects of corporate responsibility. In 2013, the following tasks were most important:



## (1) Effective corporate governance in the interests of all groups of shareholders

- JSC RusHydro invariably follows the standards of good corporate governance, continuously upgrades its organizational structure and improves the efficiency of its management system. Since the Company's inception, socially responsible behavior is integrated into corporate governance processes and its corporate culture. JSC RusHydro's shareholders and management proceed from the fact that the work of the management bodies should be carried out with an appropriate level of responsibility and accountability in the interests of the Company and its shareholders (including minority shareholders) and create conditions for sustainable growth in shareholder value.
- JSC RusHydro's risk management and internal control mechanisms are an integral part of the corporate governance system of JSC RusHydro and should encourage greater transparency of management, maximize shareholder value and long-term sustainable development of the Group's companies' business.
- To further strengthen the trust of shareholders, employees, investors and the public, JSC RusHydro seeks to upgrade information transparency over its activities and non-financial reporting (1.2 Growth of shareholder value – sustainable development strategy).



## (2) Ensuring the reliability and safety of hydro-power engineering structures and occupational safety

- JSC RusHydro implements a set of management and technological processes which ensure the reliable and safe operation of the industrial complex. The RusHydro Holding's system of monitoring the safety of HPPs is integrated into the production processes at all stages and ensures strict compliance with safety standards and rules for the safe operation of hydro-power facilities, as well as the effectiveness of measures to prevent accidents and eliminate consequences.
- JSC RusHydro has organized a control system for the technological and production complex that ensures the compliance of personnel's qualification with rules and norms, as well as working conditions under which the operation and maintenance of installations and the equipment of HPPs is safe for all employees and, foremost, for operations and production staff.
- The Holding has an effective risk management system, which provides a procedure for recording and investigating accidents and incidents, and develops measures to prevent and eliminate them and mitigate possible consequences (2.1 Reliability and safety – the basis of sustainable development).



### **(3) Improving energy efficiency through the development of electricity production based on renewable energy sources**

- Energy efficiency, resource saving and a reduction in the energy intensity of production activities are considered by the companies of the Holding to be an integral part of JSC RusHydro's social responsibility. The Company aims at ensuring electricity supply reliability and achieving sustainable development goals.
- The Company sees significant potential in reducing the energy intensity of the hydro-power industry in re-tooling and upgrading installed capacity. Today, this potential is realized as part of the corporate comprehensive modernization program. Developing promising resource-saving technologies for electricity generation is considered to be a way to improve future energy efficiency.
- Successfully addressing these challenges at the corporate level and developing the innovative capacity of the power-generating sector is a contribution of JSC RusHydro to reducing the energy intensity of the fuel and energy complex and upgrading the country's energy security **(2.2 Energy efficiency is clean energy potential)**.



### **(4) Integration of innovative activities as a basis for business processes**

Innovative development encompasses all corporate activities. The RusHydro Holding's goal in terms of innovative development is to build on the success and global leadership of the RusHydro Group, not only today, but into the future. Since 2011, the Company has been implementing an innovative development program. Technological trends within the program cover the entire spectrum of issues related to JSC RusHydro's production, environmental and social responsibility.

Developing RES, including small HPPs, geo-thermal and tidal plants, is an important component of the RusHydro Holding's innovative development. Some advanced hydro- and energy resource saving technologies used in operating activities are developed in the scientific institutes of the RusHydro Group.

- The Company is constantly upgrading the innovative development management system, selecting and implementing innovative projects that create the environment around JSC RusHydro, which allows the Company to develop the innovative potential of not only the Russian hydro-power industry, but also of allied industries **(2.3 Innovation – a fast track to sustainable development)**.



### **(5) Taking into account the interests and external stakeholders responsible engagement**

- JSC RusHydro's management and the State (its major shareholder) are proactive in corporate social responsibility, which aims to promote the socio-economic development of the regions in which the Company is present. The scope of social responsibility is comparable to the geographic scope of activities and the number of the Holding's companies' employees. In practice, this responsibility is implemented taking into account the interests of all stakeholders and via social partnership in the regions.
- The Company views its employees, shareholders and investors, consumers of corporate products and services, business partners, suppliers and contractors, governmental and public organizations, professional and local communities, the mass media, HEIs and other educational institutions as key stakeholders and seeks mutually responsible stakeholder engagement. In 2013, significant efforts were focused on analyzing interaction practices.
- In its policy, JSC RusHydro strives to follow international standards and best practices in the fields of human rights, labor, environment and anti-corruption, and stakeholder engagement. The Company shares and in practice implements the principle of regular dialogues with stakeholders, which are set out in the Social Charter of Russian Business, of which JSC RusHydro has been a member of since 2013 **(3.1 Responsible interaction – a condition of corporate social responsibility)**.



### **(6) Providing opportunities for the development of professional competencies and social protection for employees**

- JSC RusHydro's employees are a team of professionals who work at dozens of hydro-power plants in the Russian Federation and abroad; these employees are a primary resource of the Holding. JSC RusHydro's personnel policy is aimed at building long-term capacity and the sustainable development of human resources in the companies of the Holding and is based on goal-orientation, unity, continuity and association with the results of operating activity principles.
- Personnel management is carried out using the sector's best labor practices. Dynamic development of the personnel corporate structure provides effective processes for attracting and retaining qualified employees. Creating an effective employee incentive system, that includes wage, social benefits and guarantees to retain employees are among these processes.
- The foundation of the staff's professional development system is continuous training - "corporate elevators" designed to provide advanced human resources development for the RusHydro Holding. In recent years, there has been an influx of young specialists to the Company's facilities, which can be considered a positive result of human resources management programs **(3.2 HR Potential development – a guarantee of long-term growth)**.



### **(7) Reducing negative environmental impact**

- The technological complex of JSC RusHydro provides for production with complete environmental safety and industrial environmental control at all stages of operating activities. Consistent environmental policy designed to promote natural resource conservation in the regions in which the Company is present is implemented at all stages of operating activities and in all areas where corporate facilities are located, as well as when implementing infrastructure investment projects.
- JSC RusHydro implements its environmental responsibility by conducting technical measures to assess and mitigate environmental impact as part of the Company's Production and Investment Programs, as well as by voluntary initiatives in collaboration with local communities, research and development and public environmental organizations, and actively participates in national and international environmental initiatives.
- Development of RES-based generation is an effective way to reduce anthropogenic impact on the environment. Increasing the share of RES in the energy mix of the Group lays the foundation for long-term sustainable development. However, the RusHydro Group pays special attention to developing projects in the Far Eastern Federal District, where development has a significant potential to reduce the environmental burden **(4.1 Environmental safety as the criterion of sustainable development)**.



### **(8) Promoting socio-economic development in the regions of presence**

- Currently, JSC RusHydro's largest investment project is the construction of four power engineering facilities in the Far East. Implementation of these projects is the first phase of JSC RusHydro's Program of Energy Development for the Far East, aimed at replacing retired generation capacities and developing an infrastructure of decentralized electricity supply sector for the Far Eastern Federal District.
- When implementing infrastructure projects as part of the Investment Program of JSC RusHydro, the Company's management pursues a consistent policy which is designed to promote socio-economic development and contribute to natural resource conservation in the regions in which the Company is present.
- In 2013, the RusHydro Group companies continued to implementing joint projects as part of a comprehensive program to implement renewable energy sources in the Far East. Joint projects with JSC RAO ES of the East in the Far East are aimed at improving the environmental and energy efficiency of the region's fuel and energy sector **(4.2 Development of the power industry in the Far East – the preservation of the region's natural resources)**.

## 1.2 Growth of shareholder value – sustainable development strategy

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

- Russian legislation;
- requirements for companies listed on the MICEX;
- recommendations of the Russian Code of Corporate Conduct;
- requirements for companies listed on the London Stock Exchange.



### Shareholder structure

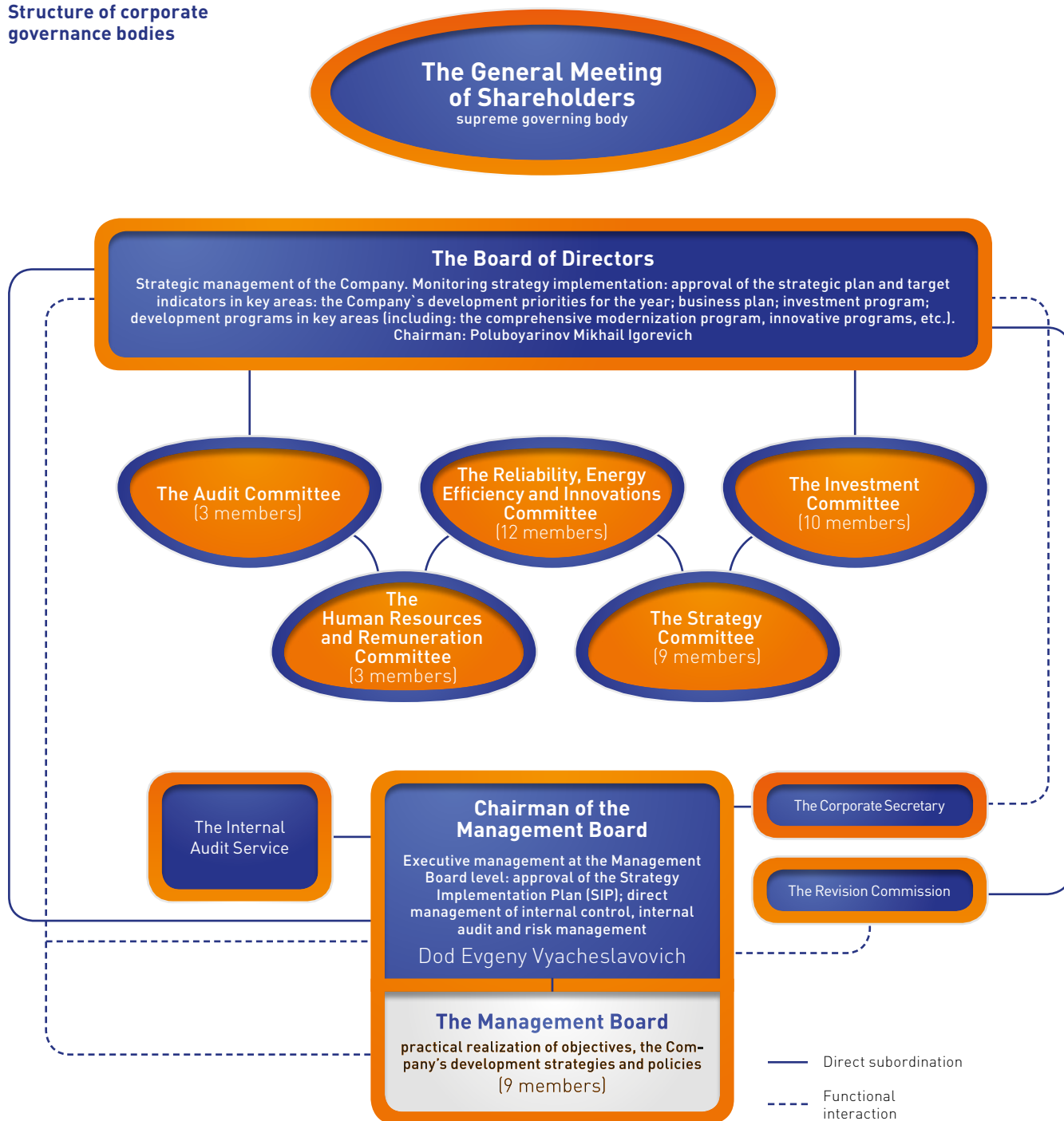
JSC RusHydro shareholders include more than 360,000 Russian and foreign investors. The Company's major shareholder is the Russian Federation represented by the Federal Agency for State Property Management. The State holds a controlling stake, which as of December

31, 2013 was 66.84% of the Company's authorized capital. The share of stocks traded outside the Russian Federation in the form of depository receipts\*, at the end of the reporting period, stood at 5.23% of the total number of shares.

Holders of JSC RusHydro securities include more than 360,000 Russian and foreign investors

[\*] Depository receipts certify the rights to 100 shares. More information about depository receipts is available on the Company's website - <http://www.RusHydro.ru/investors/stockmarket/drs/>

## Structure of corporate governance bodies



(\*) In 2013, Evgeny Dod was Chairman of the Management Board of JSC RusHydro; in accordance with the resolution by the Board of Directors (Minutes №201 dated June 27, 2014), starting July 1, 2014, Evgeny Dod performs duties of the Chairman of the Management Board - General Director of JSC RusHydro

## Shareholders' impact on decision-making

Participation in General Meetings of Shareholders is the main mechanism for shareholders to influence the decision-making process. To provide shareholders with the opportunity to make informed and balanced deci-

sion, the RusHydro Holding seeks to promptly and fully disclose information on all agenda issues in meeting materials. JSC RusHydro guarantees all shareholders the right to choose to participate in person or in absentia in

shareholder meetings and offers equal voting rights to in person and absentee participants. Shareholders who participate in meetings also have the opportunity to speak freely and ask questions during the meeting.

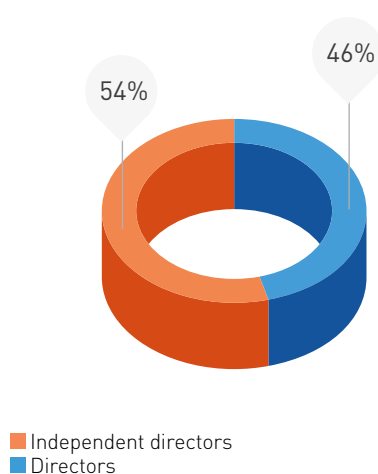
# Accountability: the Board of Directors

The Board of Directors is governed by internal regulations "On the procedure for convening and holding meetings of the Board of Directors of JSC RusHydro"\*. Remuneration for Board of Directors members shall be calculated

in accordance with the "Regulations for the payment of remuneration to members of the Board of Directors of JSC RusHydro"\*\* approved by the Annual General Meeting of Shareholders (June 30, 2010).

JSC RusHydro's Board of Directors consists of 13 directors (7 of them are independent) who are elected annually by the Annual Shareholders Meeting.

## Structure of the Board of Directors



Independent directors on the Board of Directors (elected June 28, 2013)

1. Dr. Christian Berndt Andreas
2. Andrey Evgenievich Bugrov
3. Viktor Ivanovich Danilov-Danilyan
4. Sergey Nikolaevich Ivanov
5. Denis Stanislavovich Morozov
6. Sergey Vladimirovich Shishin
7. Maxim Sergeevich Bystrov

New membership of the Company's Board of Directors was elected by the Annual General Meeting of Shareholders of JSC RusHydro (June 28, 2013, served as of December 31, 2013), which consisted of 13 members, six of whom were independent directors. Criteria for director independence (members of the Supervisory Board of Directors) are set out in JSC RusHydro's Corporate Governance Code\*\*\*, which was adopted in 2010.

The Chairman of the Board of Directors is not a member of the collegial executive body (the Management Board).

The Board of Directors has five committees:

- The Audit Committee;
- The Human Resources and Remuneration Committee;
- The Reliability, Energy Efficiency and Innovation Committee;
- The Investment Committee;
- The Strategy Committee.

# Due Diligence: the Management Board

## Managing Sustainable Development

Key issues of sustainable development, such as planning and construction the progress of hydro-power facilities, and the performance of target programs are reviewed at meetings of the Board of Directors and the Management Board of JSC RusHydro. Decisions taken in 2013 and performance results are reflected in this Report in the relevant topic sections.

"Under current conditions, the social responsibility concept for a large public company is becoming comprehensive. Today, our understanding of social responsibility includes all key areas of JSC RusHydro."

**Evgeny Dod,**  
Chairman of the Management Board -  
General Director

\* Regulations for the procedure on convening and holding meetings of the Board of Directors of JSC RusHydro (new version) see at website [http://www.RusHydro.ru/corporate/regulations\\_and\\_docs](http://www.RusHydro.ru/corporate/regulations_and_docs)

\*\* Regulations for remuneration paid to members of the Board of Directors of JSC RusHydro see at website [http://www.RusHydro.ru/corporate/regulations\\_and\\_docs](http://www.RusHydro.ru/corporate/regulations_and_docs)

\*\*\* CORPORATE GOVERNANCE CODE OF JSC RusHydro SEE AT WEBSITE <http://www.RusHydro.ru/corporate/>



Management processes of the social responsibility management system are integrated into corporate governance processes and the organizational development of the RusHydro Holding. Manufacturing processes ensure the reliability and safety of production and labor, and the compliance of HS operation processes with industry standards, technical and environmental standards. The results are analyzed and evaluated within the process of corporate business planning and the approval of annual business plans for operating units. The effectiveness of technological and management processes of SRMS is intended to serve the successful resolution of goals and objectives for corporate sustainable development. This is evidenced by numerous awards received by the Holding in the CSR field. The list of the awards is available in the Addendum 1 to this Report.

### Remuneration and the incentive system

To upgrade management effectiveness, the Holding has developed a system of key performance indicators (KPI) aimed at achieving strategic goals. The method for calculating and assessing key performance indicators (KPIs), as well as a list of them, is designed in accordance with recommendations of the Russian Ministry of Energy. In particular, reliability criterion, the EBITDA level, cost reduction due to the implementation of the cost management program, the execution of capacity commissioning schedules and a plan for financing and implementing the Investment Program were approved as annual KPI. Specifically, the reliability criterion, the current liquidity ratio, the performance of quarterly schedules for financing and the implementation of the Investment Program on an actual basis since the beginning of the year were also approved as quarterly KPI.

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 individual performance of KPIs.

### Corporate governance: branches and SDCs

JSC RusHydro participates in the authorized capital of companies engaged in the production and supply of electricity and the construction of power generating facilities.

- The Company manages SDCs through its representatives at General Meetings of Shareholders, the Boards of Directors and control bodies of 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);
- Decision-making on the management issues of SDCs is attributed to 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 JSC RusHydro's Board of Directors.

### New versions of internal documents

JSC RusHydro's principles and procedures for corporate governance are enshrined in the Company's Articles of Association and internal regulatory documents\*

\* The complete list of internal documents is available on the corporate website: [www.rushydro.ru/corporate/regulations\\_and\\_docs/](http://www.rushydro.ru/corporate/regulations_and_docs/)

The Company strives to constantly upgrade the quality of corporate governance, following best corporate practices in social responsibility and sustainable development. New versions of internal regulations which govern the work of the Board of Directors' Committees were adopted in 2013. Amendments to previously effective documents are aimed at structuring issues reviewed by the Committees in accordance with their expert belonging.

Another determining event in 2013 was the adoption of JSC RusHydro's Social Policy (approved by the Board of Directors as of April 1, 2013 No 177), which establishes main directions of corporate development in accordance with Russia's concept of long-term socio-economic development for the period until 2020.

#### New versions adopted in 2013

The Articles of Association, adopted in a new version (June 28, 2013)

The Regulations for the procedure on convening and holding the General Meeting of Shareholders, adopted in a new version June 28, 2013

Regulations for the Audit Committee of the Board of Directors, adopted in a new version October 15, 2013

Regulations for the Human Resources and Remuneration Committee of the Board of Directors, adopted in a new version October 15, 2013

Regulations for the Strategy Committee of the Board of Directors, adopted in a new version October 15, 2013

Regulations for the Investment Committee of the Board of Directors, adopted in a new version October 15, 2013

Regulations for the Reliability, Energy Efficiency and Innovation Committee of the Board of Directors, adopted in a new version October 15, 2013

## Authorized Capital Increase in 2012-2013

Moving to the target capital structure and expanding sources to implement the Investment Program are JSC RusHydro's main priorities for 2014.

In 2012, the Government of the Russian Federation agreed to the target funding of the Construction Program of new power capacities in the Far East (the Program for the power facilities development in the Far East) via budgetary means that

were invested as a contribution of the State to the authorized capital of JSC RusHydro. The relevant decision to increase authorized capital by RUR 110 billion was approved by the General Meeting of Shareholders in November 2012.

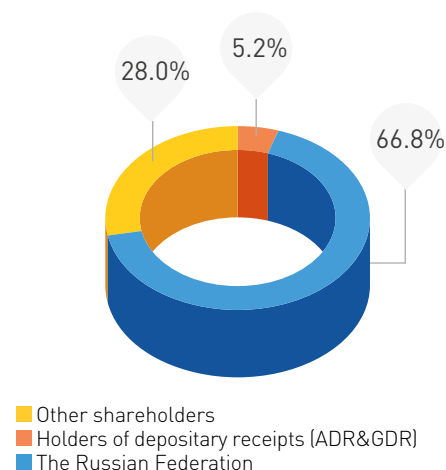
## Structure of authorized capital

In 2013, an additional securities issue was made, whereby share capital was increased 21.6 % and amounted to RUR 386,255,464,890. As payment for the shares to be placed in favor of the Russian Federation, RUR 50 billion has been allocated from the State budget. In addition, shares of JSC RAO Energy System of the East, JSC SEC, JSC Ust-Srednekanskaya HPP, JSC Irkutsk Grid Company and JSC Irkutskenergo were transferred as payment for the shares. The Report on the issue results was registered in December 2013 by the Bank of Russia. Relevant amendments to the Articles of Association were registered January 28, 2014.

As of December 31, 2013, the additional share placement was completed, but due to the fact that changes in the constituent documents were properly registered only in 2014, the Company's authorized capital increased after the reporting period\*.

\* The actual closing date of placement - November 26, 2013. Report on the additional share issue was registered by the Bank of Russia December 26, 2013 (i.e., during the reporting year). Relevant Changes in the Articles of Association were registered January 28, 2014 (i.e. after the reporting period). The detailed information on the authorized capital and shareholder structure is available on the website: [www.rushydro.ru/investors/stockmarket/capital](http://www.rushydro.ru/investors/stockmarket/capital)

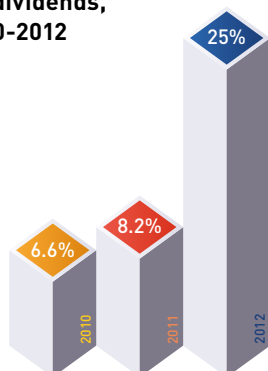
## Shareholder equity structure of JSC RusHydro



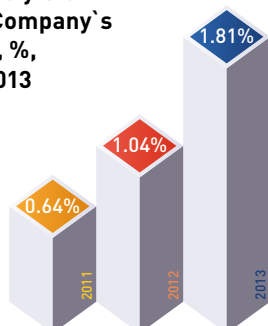
\* As of December 31, 2013

## Fairness: the Dividend Policy

### Share of net profit channeled to pay dividends, %, 2010-2012



### Dividend yield of the Company's shares, %, 2011-2013



The main objective of JSC RusHydro 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.

According to the 2013 Company's current dividend policy, a sum of guaranteed dividends was calculated on the basis of consolidated net profit of the RusHydro Group established by summation of net profits of the Company, its subsidiary and second-tier subsidiary companies minus intra-group turnovers on dividend income. At the end of 2012, JSC RusHydro paid record high dividends - total payment was RUR 3,675.5 million. For the first time it was channeled 25% of 2012 net profit to pay dividends. The relevant decision was made June 28, 2013 at the Annual Shareholders' Meeting (based on 2012 results).

In March 2014, a new version of Regulations on Dividend Policy was approved by the Board of Directors in March 2014. The approval of the new version of the

document was caused by change in Russian law in respect of dividend payment and taxation, and by trends in use of the International Financial Reporting Standards during determining the amount of dividend payment. A new version of Regulations was prepared with due account of mid-term development trends, strategic goals and was aimed at improved investment attractiveness of JSC RusHydro.

The new Regulations calculate dividends on the basis of profits established in the RusHydro Group's IFRS consolidated financial statements. This will increase JSC RusHydro's investment attractiveness.

2013 dividend payments were 25% of 2012 net profit



# Transparency and Financial Discipline

## Effective monitoring of the targeted use of budgetary funds

In 2013, the Group launched the Program for the power facilities development in the Far East and implemented priority activities, including the formation of main schemes to implement construction of thermal power facilities in the Far East, and the establishment of an effective system for monitoring and supervising the financing of these facilities.

To implement investment projects as part of the Program for the power facilities development in the Far East, JSC RusHydro has established a special system that allows the State to monitor in real time the use of targeted budgetary funds received by JSC RusHydro as a part of additional share issue. State participants in the system are the Accounts Chamber, the Ministry of Economic Development and Trade, the Ministry of Energy and Sberbank of Russia.

As of April 1, 2014, RUR 6 billion were spent for development and approval of design and estimate documentation, for purchase of equipment and advance payments to head contractors, as well as for preparatory works; RUR 5.6 billion of this sum was the RusHydro Group's

own funds (including JSC RusHydro and RAO ES of the East). RUR 1 billion is funds from target budgetary funds that the Group could use after a full cycle of audit procedures and approvals required by the system of control over budgetary funds expenditure as it described below.

“JSC RusHydro is interested in ensuring the full transparency of the expenditures of budgetary funds allocated by the State to build 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 -  
General Director

## Financial monitoring system within the framework of the Power Industry Development of the Far East Program

In 2013, the Company implemented priority activities, including the formation of basic schemes to implement the construction of thermal power facilities in the Far East, and the establishment of an effective system for monitoring and supervising the financing of these facilities:

- In March 2013, a contract between JSC RusHydro and JSC Sberbank of Russia for the banking support of the facilities' construction was signed;
- a system of banking servicing which provides for the expenditure of targeted budgetary funds through a four-level system of special accounts OBS opened in JSC Sberbank of Russia. 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. Opening of funding is performed exclusively after receiving a positive opinion of Glavgosexpertiza for each project and an audit conducted by an independent engineering company.
- JSC Sberbank of Russia selected on a competitive basis independent engineering firms that conduct audits of projects and provide expert support for construction (a technology and pricing audit was conducted for the construction of the Yakutskaya SDPP-2 (Phase 1), and the Blagoveschenskaya CHP plant ( phase 2));
- to ensure the efficiency and transparency and reliability of settlements with contractors, a single standard package of banking servicing agreements has been prepared. Income received from the placement of temporarily disposable monetary resources is allocated solely to finance the project through separate accounts opened in JSC Sberbank of Russia;
- on December 28, 2012, the Company signed a cooperation agreement with the Accounts Chamber of the Russian Federation. JSC RusHydro on a quarterly basis and based on one-time requests sends information to the Russian State Duma for preparing reports to the Deputies;
- 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 formats stipulated by the agreement was developed.



## Pricing and technology audit of investment projects

In November 2013, JSC RusHydro's Board of Directors approved Regulations for conducting the mandatory technology and pricing audit of investment projects, according to which all investment projects of an estimated cost of RUR 1.5 billion and more are subject to a mandatory technology and pricing audit at all implementation stages.

In accordance with Regulations, from 2014 onwards, the Company is obliged each year prior to April 5, to report to the Russian Government on implementing plans of the facility commissioning of an investment program for

the previous year and on conducting technology and pricing audits for investment projects, including the auditor's opinion and findings that emerged from public and expert discussions.

The Regulations were developed in conjunction with the Expert Council of the Government of the Russian Federation and also set out the procedure for public and expert discussion of the course for the preparation, implementation and results of the technology and pricing audit.

Criteria in selecting organizations to conduct the technology and pricing

audit are that the candidates' experience in conducting technology and pricing audit is at least 7 years and that they have at least 5 investment projects worth RUR 1.5 billion or more each audited, as well as the mandatory participation of at least 5 professionals with vocational education and experience in providing services in the relevant field of activity for at least 5 years.

The public and expert discussion of the course of the preparation, implementation and results of the technology and pricing audit of investment projects

are carried out with the involvement of the Expert Council of the Government of the Russian Federation and by posting discussion results on the Company's Internet site.

In 2013, the investment projects for the construction of the Kankunskaya HPP; the Ussuriyskaya CHP plant and the Leningradskaya PSPP were audited. In 2014, the audit of investment projects of the Company and its SDCs is to be continued.

## Ratings and Awards

- The top 1,000 ranking of Russian managers included the following winners: Chairman of the Management Board of JSC RusHydro E.V. Dod (among the top managers), Deputy Chairman of the Management Board of JSC RusHydro S.P. Tsoi (among GR Directors), Member of the Management Board of JSC RusHydro K.V. Bessmertny (among Financial Directors), Corporate Governance Director of JSC RusHydro Y.E. Stanyulenaite (among Corporate Governance Directors), HR Director of JSC RusHydro V.V. Galka (among HR Directors) and Communications Director of JSC RusHydro B. V. Zverev (among PR Directors);
- The Russian Institute of Directors confirmed JSC RusHydro's rating at 7+ "Developed Corporate Governance Practice" in accordance with the National Corporate Governance Rating (NCGR) scale;
- The National Award "Director of the Year 2013" of the Association of Independent Directors was received by Andrey Bugrov, JSC RusHydro (award in the category of 2013 Best Independent Director);
- The rating agency "REPUTATION" confirmed the corporate social responsibility rating of JSC RusHydro at AA(s), noted in its opinion the development of interactions with society, appreciation for employee incentive programs;
- JSC RusHydro's risk management team was the winner of the international contest "The Best Risk Management 2013" in the category "The Best Comprehensive Risk Management Program";
- The Investor Relations Division (IR) of the Company was recognized as the best among electric power companies in Russia and the CIS by a vote of Thomson Reuters Extel Europe 2013.

For more details, see Appendix to Section 3: Development areas of social partnership: CSR AWARDS

A complete list of awards and ratings is available on the website: <http://www.rushydro.ru/company/ratings/>

## Fair Business Practices

RusHydro finds the risk management system to be a tool to improve the sustainability of business processes and guarantee the achievement of strategic

goals and priorities. Further enhancing reputational capital and the confidence of shareholders, employees, partners and the investment community, the

Company encourages the widespread introduction and continuous improvement of business practices

## Risk management system

The Holding's companies' activity is associated with numerous risks, which under certain circumstances could adversely affect its operating and financial results, and social and natural environment. Taking responsibility for the Holding's companies' sustainable development, the management team of JSC RusHydro, in practice, implements the precautionary principle by introducing and developing an effective comprehensive risk management system

which is based on ISO 31000 principles and includes procedures to identify, analyze and assess, respond to and monitor risks in all activity spheres.

The Holding has a comprehensive risk management system, reporting on the effectiveness of the system is regularly submitted to the Risk and Audit Committee, internal procedures and methods of risk assessment were approved and a circle of responsible employees

and risk owners at different levels of decision-making was designated. Within this framework, Holding's companies systematically monitor potential risk events, and key risk indicators when implementing current operations and investment projects and programs, as well as implementing plans to manage identified risks.

Detailed information on the risk management system of the RusHydro Group is available in the 2013 Annual Report (the Risk Management Policy): [www.rushydro.ru/investors/reports/](http://www.rushydro.ru/investors/reports/)

## Risk insurance

In addition to the complex of measures aimed at providing reliability of the equipment and structures, all key production facilities of the Holding are insured.

For instance, construction and installation work and property were insured, including those of the under-construction Zagorskaya PSPP-2 where in September 2013, the turbine hall and the station yard of were partially flooded through broken-driven joints and the intake ports of partially built culverts.

Restoration activity at the facility began immediately after the incident. The Company plans to complete construction of the Zagorskaya PSPP-2. In view of the complexity of the technical assessment of the effects of flooding, as of the date of this Report's issuance, the Company cannot give an accurate assessment of the damage and costs associated with responding to flood consequences. Recognition of the event at the under construction Zagorskaya PSPP-2 as an insured one and the subsequent payment of insurance compensation are possible only after an analysis of the causes of the event have been carried out by insurance companies that was not completed by the date of this Report's issuance.

## Preventing conflicts of interest

JSC RusHydro's\* Code of Corporate Conduct, adopted in a new version in 2012, 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 the precautionary principle at the level of the Management Board and the Board of Directors. Additional mechanisms to prevent the abuse of members of Management Bodies' official positions contained in provisions on the insider information of JSC RusHydro (adopted in a new version in 2012).

\* CODE OF CORPORATE CONDUCT of JSC RusHydro see on the website [rushydro.ru/corporate/regulations\\_and\\_docs/documents/board/](http://rushydro.ru/corporate/regulations_and_docs/documents/board/)

## Combating corruption and illegal actions

JSC RusHydro enshrines the principle of the rejection of corruption in all its forms and manifestations. The Company regularly monitors corruption risks as part of the Comprehensive Program for the Prevention of Employees From Committing Illegal Actions, approved by Order No. 659 of JSC RusHydro (as of July 26, 2012). Based on the results of risk analysis, the Company develops and implements anti-corruption procedures that meet international standards and monitors their execution. The Company's Director of Internal Control and Risk Management performs on-line monitoring of compliance with regulatory requirements. In 2013, there were no cases of non-renewal of contracts with business partners due to violations associated with corruption, and completed legal actions associated with corrupt practices against the companies of the Holding or their employees.

Starting in 2011, JSC RusHydro has had a "Helpline" – a specialized communication feedback channel with employees of the Holding and the Holding's companies' counter-party representatives to receive information from them concerning preventing illegal actions 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 JSC RusHydro's "Helpline." All applications received on the "Helpline" during 2013 were analyzed 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 heads of responsible structural divisions, branches and subsidiaries and the Company's SDCs/ADCs.

For more details, see BOOK OF APPENDICES Appendix 1 "Quantitative indicators to the Report"

## Anti-Corruption Charter of the RUE

In July 2013, JSC RusHydro signed the Anti-Corruption Charter of the Russian Union of Industrialists and Entrepreneurs, undertaking numerous voluntary commitments, including compliance with transparency and openness in procurement procedures, cooperation with the government, and the refusal to obtain illicit benefits.

The Anti-Corruption Charter of Russian Business, adopted by the business community in 2012, is the implementation of the National Anti-Corruption Plan.

"JSC 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 environment."

**Irina Posevina,**  
Director of Internal Control  
and Risk Management at JSC RusHydro

## Managing procurement activities

Procurement for the needs of the Holding's companies are conducted on the basis of annual comprehensive procurement programs approved by the Deputy Chairman of the Management Board of JSC RusHydro and its SDCs/ADCs.

A collegial permanent body – the Central Procurement Commission (CPC), headed up by the Deputy Chairman of the Board of JSC RusHydro, has been established for ongoing monitoring and coordination of JSC RusHydro's procurement activities. To implement a single procurement policy, CPCs are also established in the SDCs/VZOs. To directly organize and conduct procurement procedures, the CPC by its decision appoints a permanent procurement commission. To conduct large and complex procurement, the CPC by its decision attracts a third-party organizer – an independent organization which specializes in conducting procurement procedures.

Information about plans on the procurement of goods, work and services is posted on the official website of the Russian Federation [www.zakupki.gov.ru](http://www.zakupki.gov.ru), as well as on [www.rushydro.ru](http://www.rushydro.ru) and includes inter alia: the procurement notice, documentation on procurement, the draft contract, changes made to the notice and documentation, clarifications of documentation, and protocols drawn up during the procurement process, as well as other information in accordance with legislative requirements.

The priority procurement method for the Holding's companies is a transparent competitive procedure that is performed on a specialized electronic trading platform B2B-energo ([www.b2b-energo.ru](http://www.b2b-energo.ru)). Competitive procedures on the electronic trading platform provides the free access of suppliers to information on procurement, resulting in the almost complete elimination of geographic and bureaucratic barriers to procurement.

In addition, JSC RusHydro maintains a register of unscrupulous contractors (suppliers, executors, and contractors), including information on the cases of the evasion of a winner of the procurement procedure from signing a contract, and the termination of a contract due to the improper performance of obligations by a counter-party, as well as termination of a contract by a contractor and other recorded violations.

Detailed information about procurement activities is available on the Company's website: [zakupki.rushydro.ru/default.aspx](http://zakupki.rushydro.ru/default.aspx)

## Product liability (retail customers' service quality)

The companies of the Holding implements product liability and customer service quality, providing the market with accurate, complete and timely information about its services. In accordance with the approved JSC RusHydro's Standard of customer service, information necessary for both existing and potential customers is available on the Holding's companies' website and on information stands in customer-related offices. All information about services disclose on the website [www.esc.rushydro.ru](http://www.esc.rushydro.ru), on the websites of regional retail companies and in other public sources, in promotional materials, contracts, invoices, and all disclosure procedures fully meet all regulatory requirements.

For all consumers – the customers of the ESCs of JSC 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 the ESCs of JSC RusHydro and approaches to consumer interactions are based on all that in the regions. The Company uses the personal data of consumers only for core activities and does not use data in the promotion of other services and products, as well as for purposes which the client did not consent for. The Company has not received any claims and complaints

for violations of the requirements of applicable legislation on personal data protection. In 2013, 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.

Responsibility to consumers and the customers of the ESCs of JSC RusHydro also implies the presence of technical support services and feedback. The feedback is provided by customer service centers at local levels and work with consumer applications received by the Public reception on the website of the Company – a single twenty-four-hour "Helpline", which includes a variety of specialized communication channels, including the online channel on our website ([www.rushydro.ru/form](http://www.rushydro.ru/form)). "Helpline" work is provided by the internal control and risk management unit of JSC RusHydro, which organizes the review of received applications in strict confidentiality in accordance with JSC RusHydro's internal documents.

# Far East

## Far Eastern Federal District

The Russian Far East is situated in the most diverse climatic zones, from distinctly continental (all of Yakutia and the Kolyma districts of Magadan Region) to monsoon (the south-east). The southernmost point is in the latitude of Derbent and Dubrovnik, while the northernmost point is beyond the Arctic Circle, to the north of Barrow in Alaska. The entire Russian Far East, with an area larger than all of Europe, is home to 1.5 times fewer people than live in Moscow. The Far East covers three time zones, from +10 to +12 UTC. The region is classed as one of the richest regions of Russia and the world for its natural resources. It enables the region to play an important part in the national economy as regards a number of raw materials. For example, the Far East accounts for 98% of Russia's diamond production.



The region's energy consumption

**43 billion kWh**



RusHydro facilities generation in the region

**15 billion kWh**

36% of the energy consumption of the entire Far East



Population

**6,300,000 people**



Area

**6,215,900 km<sup>2</sup>,**  
36% of the area of Russia  
and about twice the area of India



# Section 2. Sustainable development of the technical system of hydro-generation

## 2.1 Reliability and safety – the basis of sustainable development

### Ensuring the safety and reliability of hydro-power structures

The concept of corporate “safety” is treated in accordance with Russian legislation, as the hydro-power structures’ ability to protect people’s life, health and legal

interests, as well as the environment and economic entities. The term “reliability” means the ability of equipment and hydro-power structures to operate during

the operational period, while maintaining pre-set parameters for the entire service period.

### The concept of reliability and safety management of hydro-power structures

The safety and reliability of objects directly depend on the effective management of the **technical system**, which is a set of industrial and technological complexes and is JSC RusHydro’s underlying

asset. An important component of the Holding’s companies management system is the **Management System of the Company’s Technical System** that is provided by several functional units through

inter-related technological and organizational processes, in accordance with standards and requirements for the system to ensure the safe operation of hydro-power facilities.

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

1. the Concept of Safety and Reliability Management System of Hydraulic Structures, or HSeS (the Concept) adopted in 2009, which highlights major risk groups and control mechanisms;
2. a new version of the Technical Policy of JSC RusHydro adopted in 2011, which sets a comprehensive approach to ensuring the reliability and safety of equipment and the power facility as a whole throughout its life-cycle.
3. the Production Program of the Company that is a main instrument to implement JSC RusHydro’s Technical Policy. The

Technical Policy provides for the development of measures for the Production Program of the Company in the mid-term (a six-year outlook) and the long-term (a 15-year time horizon).

- The Production Program includes numerous, inter alia; the Technical Rehabilitation and Reconstruction Program (TPiR) as part of the Comprehensive Modernization Program for the Holding’s companies’ 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 - they specify industry standard provisions taking into account specific features of the HSeS.

The effectiveness of the safety and reliability management system for the Holding’s companies’ generating facilities is achieved by a dual control system due to: (1) an internal audit of processes within the framework of the Technical System conducted by JSC RusHydro’s Chief Technical Inspector, and (2) external supervision, carried out by competent supervisory bodies, for compliance with the rules and requirements of applicable legislation, and industry and environmental standards.

# External Control System

The hydro-power industry is an industry that operates under strict regulation and supervision, because hydro-power structures are objects which provide critical support for the population. In accordance with legislative requirements, safety declarations for hydro-power structures are drafted for all of the Holding companies' HSEs, which pertain to the safety declaration. They are approved by the Federal Service for Ecological, Technological and Nuclear Supervision.

- **Safety declaration** The Safety Declaration is the main document that provides for HSEs safety, and their compliance with criteria of safety, design, and current technical regulations and rules, as well as determines the nature and extent of potential accidents and measures to ensure safe operation.

Drafting the declaration is preceded by a complete examination of 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 approved by the Federal Service for Ecological, Technological and Nuclear Supervision.

# Internal Control System

JSC RusHydro regularly carries out internal control measures at its facilities and equipment conditions, in accordance with approved procedures, including with the participation of third-party organizations.

## Establishing a System for Regular Data Collection, Processing, and Analyzing Information on the Condition of HSEs

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

- operative HSEs condition diagnostics that includes comparison of diagnostic HSEs condition indicators (qualitative and quantitative) with HSEs safety criteria;

- comprehensive HSEs condition assessment that includes comprehensive analysis of monitored HSEs condition indicators (qualitative and quantitative), actual loads, natural and anthropogenic impacts, data on the level of facilities' operation, HSEs safety and reliability level assessment and change forecasts.

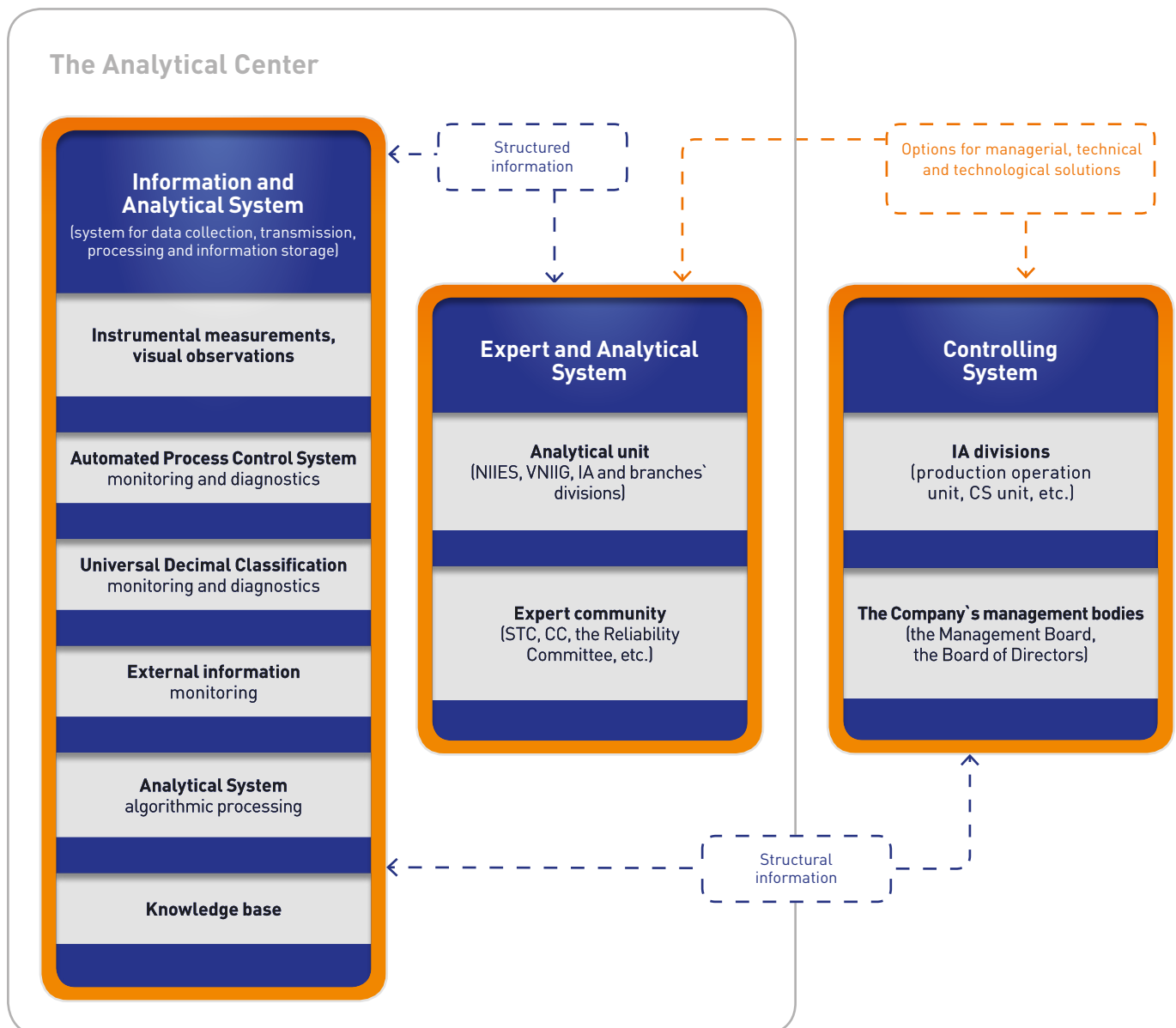
## JSC RusHydro's Analytical Center

The central element of HSEs safety and reliability management systems is JSC RusHydro's Analytical Center (AC). The Center improves the quality of technological decisions made by the Chief Engineer's Services, providing with 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 practices of technical solutions and analogues in the facilities during the solutions aimed at providing reliability and safety. Employees of the Center 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.



## Functional Structure of the Analytical Center



“Today, a multi-level information-analytical center operates in the Holding. It provides for comprehensive collection and analysis of data on the performance of each hydro-power facility. Residents of the regions in which hydro-power plants are present can rest assured that the Company makes every effort to ensure the reliable operation of its facilities and to minimize their environmental impact.”

**Boris Bogush,**  
a member of the Management Board - Chief Engineer of JSC RusHydro

## Quality control of work during design and construction

Design is conducted by its own design center – JSC RusHydro’s subsidiary companies (the Hydroproject Institute and the Scientific-Research Institute of Energy Structures), furthermore, each project documentation undergoes State examination.

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, is introduced at plants.

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

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

## 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 operational life of the main equipment and improving energy efficiency during its operation are provided for by a complex of annual work in technical rehabilitation, reconstruction, repair and maintenance at facilities and equipment. In 2013, JSC RusHydro’s TPIR Program funding was RUR 31,482.74 million including VAT, 46% of the Investment Program for the year (see 2.2 Energy efficiency is clean energy potential).

## Risk management

RusHydro operates in strict conformance with design documentation that includes a section of assessment of environmental impact which received a positive opinion of respective regulatory organizations.

Moreover, in the period of facilities operation the Company is mandated to develop projects for pollutant emissions and discharge, projects of waste production norms and limits for waste disposal that should be approved by respective authorities responsible for environmental monitoring.

Risks connected to providing reliability and safety:

- To mitigate the risks of seasonal floods and freshets the hydro-meteorological monitoring system operates within the framework of the Holding, JSC RusHydro manages water regimes, regulates reservoirs, and builds and manages spillways, etc.;
- 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 program providing safety and anti-terrorism protection;
- The man-made disaster risk is average. To mitigate this risk, the Company has implemented measures within the framework of the comprehensive modernization program for equipment and enhances the skills of the Holding’s companies’ staff involved in operating and maintaining equipment and construction facilities;
- The seismic hazard in territories in which the Holding’s facilities are located is not significant as a rule, excluding HSEs located in the North Caucasus territory. These HSEs are equipped with seismic monitoring systems.

# The Hydrological Situation and Operating Regimes of Hydro-Power Plants

The Company has always paid special attention to managing the operation regimes of hydro-power plants. However, abnormal floods in the Amur Region in 2013 forced the Company to take a look at old problems in new ways, and not only within the framework of the RusHydro Group, but

industry-wide. The RusHydro Holding’s hydro-power facilities have stood the test of strength. However, problems faced and lessons learned by the Company designated the national-scale of tasks to enhance flood protection and to create new flood protection for HSEs.

It is difficult to overestimate HSEs deterrent role during special periods like the one that happened during the 2013 Far East flood. At such times, the management of operational regimes of plants plays an important function.

## Managing Regimes

Each step of hydro-power engineers in operating hydro-power plants is very strictly regulated and controlled by the State: the regimes of filling and the drawdown of 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 (Basin Water Management Board), which define the operational regimes of HPPs.

The territorial BWMBs provide instructions for reservoirs' operational regimes, which are agreed upon at meetings of inter-departmental working groups on reg-

ulating the operational regimes of reservoirs, with territorial bodies of Russia's Emergency Ministry, the Ministry of Agriculture, Rosselkhozadzor, Rosmorrech-flot, Rosstroy, and JSC SO UES, and takes into account the interests of all water users and tasks that these departments faced. Rosvodresursy and its territorial bodies, when determining the operational regime of reservoirs and hydro-power systems, guided by the provisions of the water legislation of the Russian Federation and the Rules for the use of water resources of reservoirs (PIVR).

In 2013, during the abnormal flood (caused by excessive rain) in the Far East and the corresponding pressure increase on the hydro-power facilities

of the HPPs, an issue of operational regime management for the Zeyskaya HPP and the Bureyskaya HPP was considered at meetings of the Government Commission on Emergency Prevention, Response and Fire Safety. Evgeny Dod, Chairman of the Management Board - General Director of JSC RusHydro, the Head of Russia's Emergency Ministry Vladimir Puchkov, the Heads of Rosvodresursy, RosHydroMet, and Rostekhnadzor and representatives of the Russian Ministry of Energy participated in commission work. Decisions of the Government Commission are taken into account by the Amur BWMB in determining regimes for the Bureyskaya and Zeyskaya HPPs during abnormal rain flood discharge.

### 2013 FLOOD: facts and figures

- According to Russia's RosHydroMet, in one month, beginning July 1, above annual rainfall in some parts of the Amur Region and in other areas - 3-3.5 the monthly norm;
- Abnormal precipitation in the upper reaches of the Zeya and Bureya Rivers caused a sharp increase in inflow to Zeya and Bureyskaya HPP reservoirs;
- According to specialists, the hydro-power structures of the Bureyskaya HPP stored in their

reservoirs nearly two-thirds of the Zeya and Bureya River inflow caused by the abnormal flood;

- On average, 9.37 km<sup>3</sup> of water passes through the Zeya HPP dam in July and August. In 2013, the water was 2.6 times more during this less than two month period;
- The Bureyskaya HPP stored 4.9 km<sup>3</sup> of water, which is 61% of the total abnormal flood volume which arrived at the Bureysky Reservoir (8.01 km<sup>3</sup>);

- Thus, these two hydro-power plants seriously reduced massive flooding of Amur Region territories. In the absence of the HPPs on the Bureya and Zeya Rivers, the entire volume of extraordinary precipitation in the upper reaches of the Zeya and Bureya Rivers would have gone down the riverbeds of the Zeya and Bureya Rivers towards Blagoveshchensk and further along the Amur River towards Khabarovsk.

### Flood protection HSES projects in the Amur River basin

The most effective way to control floods is to construct regulating reservoirs. In 2013, the Company began to develop a construction program for flood control hydro-power systems in the Amur basin,

which are based on design studies for numerous hydro-power plants made in Soviet times. The Nizhne Bureyskaya HPP is the first link in a chain of such facilities that can control flood run-off.

For more details, see 4.1. ENVIRONMENTAL SAFETY (Climate change and improving safety of hydro-power systems)

# HPPs Disasters and Emergency Preparedness

JSC RusHydro has created a functional sub-system for preventing and responding to emergency situations, the links of which are maintained in constant readiness at the local level. Work in the field of protecting corporate personnel from natural and man-made accidents is performed in full compliance with legal regulatory requirements and bylaws for hydro-power facilities. Monitoring the protection status and organizing civil defense, and preventing and responding to emergency situations across the RusHydro Group companies are carried out by the Center for monitoring the protection status and operation of facilities.

## Planning and preparing measures for the rectifying the consequences of natural disasters and catastrophes, programs for training / conducting exercises in addressing consequences

All employees of the Holding's companies are provided with personal protective equipment for natural and man-made emergency situations. Each year, the Company's employees are tested with software "Automated training system and monitoring the level of knowledge of employees in the field of civil defense and emergency situation protection". In accordance with the action plan on civil defense, and preventing and responding to emergency situations, the Company regularly conducts training activities concerning emergency situations in branches at the local level.

In 2013, JSC RusHydro carried out the following activities within the framework of emergency response preparation:

- developing prevention and response plans for natural and man-made emergency situations and ensuring their approval by the Emergency Ministry;
- developing plans for the localization of and response to emergency situations;
- upgrading professional and accident-prevention training for operating personnel;
- creating required financial reserves, reserves of building materials, machinery, vehicles and other mechanisms;
- conducting drills on civil defense and preventing and responding to emergency situations: in total, 263 technical exercises, which involved about 60% of total employees, were conducted;
- insuring JSC RusHydro's HPP hazardous facilities in accordance with FZ-225 (dated July 27, 2010) "On obligatory civil liability insurance for the owner of dangerous facilities against injuries in an accident at a hazardous facility".

For more details, see. Appendix 1 "Quantitative indicators to the Report"

## Preventing and rectifying the consequences of emergency situations

Based on results of the abnormal flood in the Far Eastern Federal District, JSC RusHydro created a financial reserve

for emergency situations to urgently use it to localize and rectify emergency situations and the consequences of accidents, the Company also has concluded cooperation agreements concerning the threat of and emergency situations with the Federal State Autonomous Institution "Situational and Analytical Center (SAC) of the Russian Ministry of Energy" (an agreement for the implementation of information exchange in resolving tasks to prevent and respond to emergency situations) and with the Federal Government Institution "The National Center for Crisis Management of Emergency Ministry of Russia" (the Procedure for information exchange).

- the procedure for providing for the safe operation and coordination of operational regimes of the HPPs in emergency situations and in particular periods was improved;
- the membership of JSC RusHydro's Commission on preventing and responding to emergency situations and ensuring industrial safety was specified and its tasks were updated;
- a new warning procedure for emergency and accident situations (both natural and man-made in nature) and an internal emergency alert system were implemented;
- contracts with professional rescue units to respond to emergency situations and accidents at hazardous production facilities were concluded.

# Occupational Safety and Production Supervision

JSC RusHydro has a modern occupational safety management system, which is updated in response to changes in federal legislation in this field and structural corporate changes. Each year, the Company holds activities to prevent accidents, and sanitary-and-hygienic measures to prevent occupational diseases, measures to improve general working conditions, as well as to provide employees with personal protective equipment and the certification of employee workplaces.

JSC RusHydro's Technical Policy defines requirements for an integrated safety management system of production processes, which includes an occupational safety management sub-system. An information system JSC RusHydro Production Supervision harmonizes the

processes for the preparation and timely submission of data on industrial safety at JSC RusHydro's hazardous production facilities and is an integral part of the production supervision "Monitoring" system of Rostekhnadzor, has been introduced and is successfully functioning.

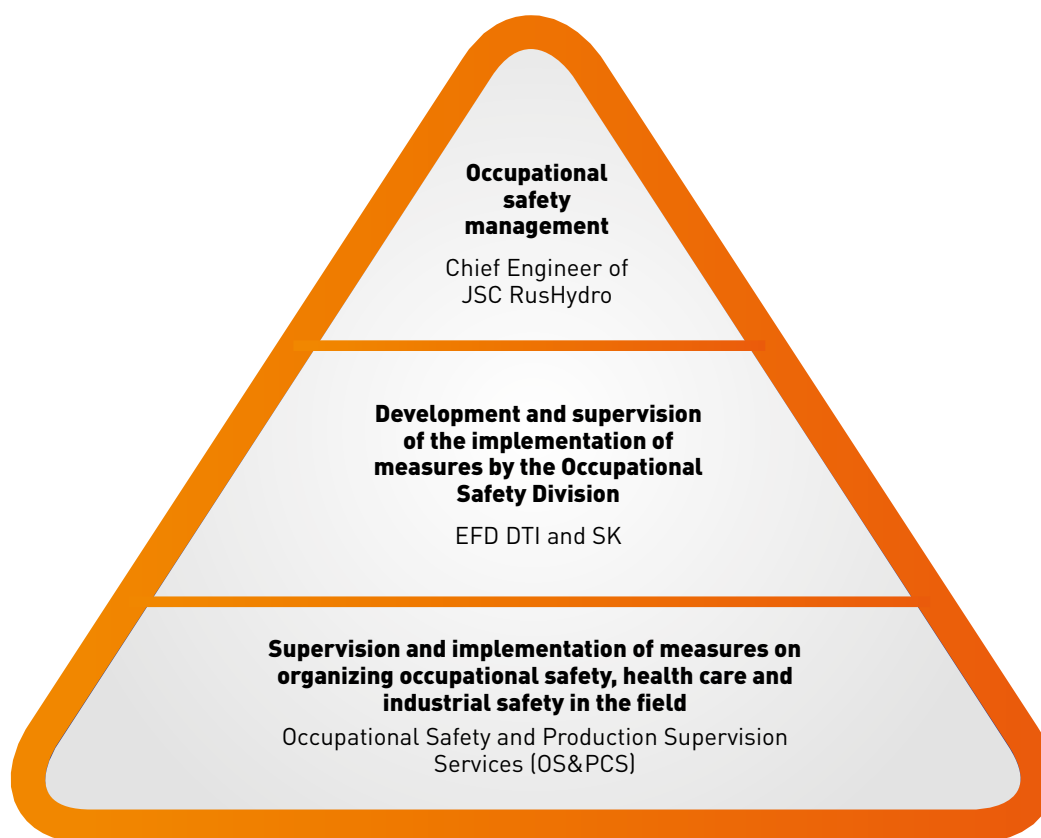
The Company's priority in labor organization, health care and industrial safety is to protect the life and health of employees during their employment.

### JSC RusHydro's goals in occupational health and safety:

- continuously upgrading occupational and fire safety, monitoring the implementation of these commitments;
- achieving a steady decline in accidents and industrial injuries;
- upgrading industrial safety at the Company's production facilities to a level which corresponds with global best practices in electric generating companies by providing timely technical rehabilitation and improving the reliability, safety and accident-free operation of process equipment;
- establishing and maintaining the Company's effective and efficient management system in occupational and industrial safety;
- reducing industrial risks from newly commissioned and reconstructed facilities by improving the preparation quality of pre-project and project documentation and conducting examinations.

### Occupational safety and production supervision: organization and management

- Management of activities on occupational safety at hydro-power facilities of the Company and its SDCs, as well as the organization and supervision of the implementation of occupational safety measures at the Company, including preventive measures to minimize production risks and to protect personnel is carried out by a member of the Management Board - Chief Engineer B.B. Bogush.
- Development and supervision of the implementation of measures on organizing occupational safety, health care and industrial safety are carried out by the Occupational Safety Division of the Equipment and Facilities Department (EFD), as well as by DTI and SK.
- Supervision and implementation of measures on organizing occupational safety, health care and industrial safety directly at hydro-power facilities of the Company and its SDCs are carried out by the Occupational Safety and Production Supervision Services (OS&PSS) of branches and the SDCs.



## Measures and results in labor organization, health care and industrial safety

### Main occupational health and safety directions

- measures to prevent occupational injuries;
- sanitary and hygienic measures to prevent occupational diseases;
- measures to upgrade general working conditions;
- providing employees with personal protective equipment.

In 2013, JSC RusHydro's occupational safety costs were RUR143 million, including RUR 72.9 million for providing employees with personal protective equipment

### Preventing occupational injuries

Technical audits of numerous JSC RusHydro facilities were conducted within the framework of the Operational Action Program for preventing occupational injuries at the RusHydro Holding's facilities (for details see 4.1 ENVIRONMENTAL RESPONSIBILITY (Environmental impact and measures to reduce pressure: the RusHydro Holding).

In implementing the Integrated accident base registrar processes for accounting, analyzing and scheduling for the fulfillment of instructions for the public, and departmental and corporate supervisory bodies, in terms of occupational and fire safety, processes were automated in corporate branches in 2013.

In 2013, to improve occupational and industrial safety, including the improvement of quality of introductory and initial briefings on occupational and industrial safety conducted among employees of contractors, industrial control and occupational safety department functions in the generation segment were revised, as well as the organizational control of their safety work at the Holding's facilities strengthened.

### Preventing occupational diseases

In 2013, to prevent occupational diseases, medical examinations of the Holding's companies' employees and rehabilitation measures based on the results of these examinations were conducted; employees were vaccinated; monthly days of occupational and fire safety were held; and working conditions at workplaces were certified.

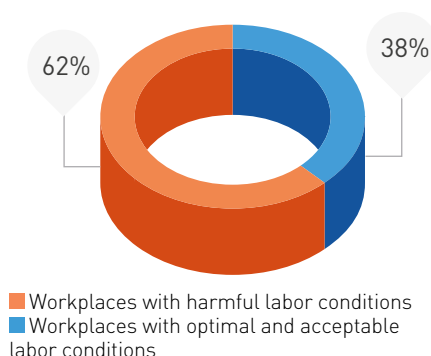
### Workplace certification

Due to operational specifics, the Company pays great attention to creating favorable labor conditions for its employees. In accordance with the Program for Labor Protection, and Industrial and Fire Safety in the Company's Facilities for 2014-2020 (approved by an Order of JSC RusHydro), the Company carries out organizational and technical events to upgrade labor conditions.

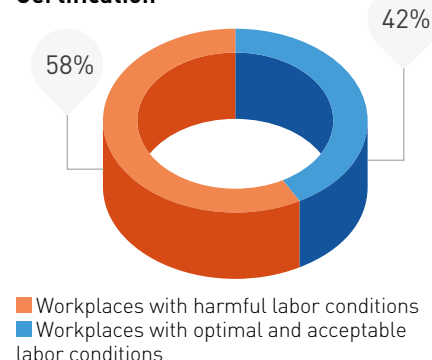
In 2013 were certified 3,779 workplaces were certified, or 100% out of workplaces subject to certification, of these 42% were recognized as compliant with occupational safety requirements, which is 4% higher than the previous year's level. The number of workplaces with harmful\* labor conditions dropped 4% compared with 2012.

As a result of measures undertaken in 2013, the number of workplaces with hazardous working conditions declined 4% (compared with 2012)

2012 Workplace Certification



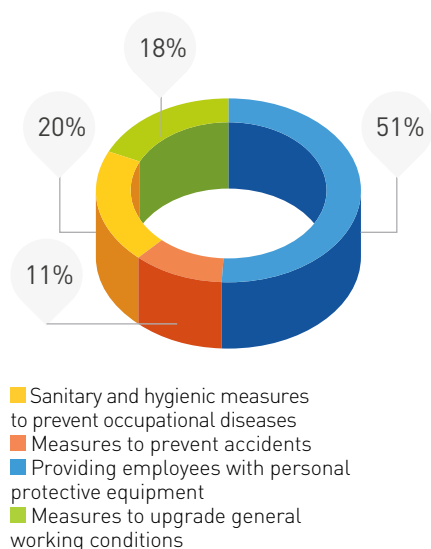
2013 Workplace Certification



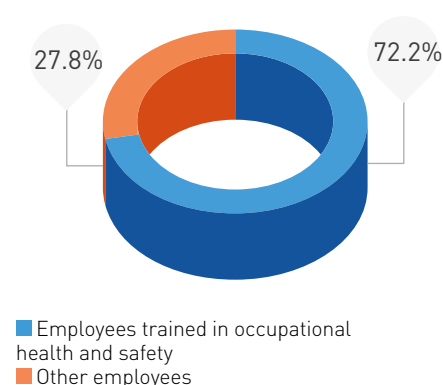
\* In accordance with Clause 14 of the Federal Law №426 "On Special Assessment of Labor Conditions" dated December 28, 2013, harmful labor conditions (3rd class) represent labor conditions in which the levels of harmful and (or) hazardous production factors exceed the levels established by norms (hygienic norms) of labor conditions.

### The occupational safety fund and training of production and industrial personnel RUR 143 million: the occupational safety fund in 2013

#### The occupational safety fund: structure



#### Training of JSC RusHydro employees, contractors and sub-contractors in occupational health and safety



In 2013, the Company's occupational safety costs were RUR 143 million. Of this, 51% (RUR 72.9 million) was aimed at providing employees with personal protective equipment. 9,047 people (72.2% of employees) were trained in occupational health and safety. Training was conducted among industrial production per-

sonnel from among Company employees and the employees of contractors and sub-contractors and included training employees in techniques to provide first aid to industrial accident victims, studying reviews of injuries in electric power organizations, and briefings and verification of employee knowledge.



## 2.2 Energy efficiency is clean energy potential

### Upgrading energy efficiency in the power generation system

- As a strategic federal company, JSC RusHydro plays an important role in solving comprehensive socio-economic problems raised by the Russian government in the Concept of 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 JSC 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 the country's power engineers.
- The 2013 total effect of implementing measures to upgrade energy efficiency and reduce indirect energy consumption has been evaluated by the Company as being equivalent to an increase in production of 2,070 million kWh/year, including the direct effect by 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 plants.

### Nationally important task

The Russian State Program "Energy Efficiency and Energy Industry Development" provides basic areas of activities to upgrade 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.

"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 is necessary to fundamentally upgrade the efficiency of utilizing all types of energy resources."

Russian State Program  
"Energy Efficiency and Energy Industry Development"

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. High energy intensity of electricity production is directly due to high depreciation of fixed assets. More than 90% of existing power plant facilities and 70% of processing equipment for electrical grids were built before 1990.

According to the Russian Ministry of Energy, the industry operates 15% of fully deteriorated fixed assets. As a whole, in RusHydro, the turbine condition index is 67.29%, which corresponds to "satisfactory" technical condition. However, in some branches, the deterioration index has reached 70%.

### The 2010-2015 Program on energy conservation and upgrading energy efficiency for RusHydro

The 2010-2015 Program on energy saving and upgrading energy efficiency for RusHydro (hereafter referred to as the Program) is the central link to the RusHydro Group's common approaches to energy efficiency.

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

- Upgrading energy efficiency at existing HPPs;

- Optimizing water resource usage;
- Reducing energy consumption for the Company's own needs.

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 for the implementation of the Strategic Plan on an annual horizon and which defines key tasks for each corporate activity.

# The Concept of the Energy Efficiency Improvement Program

Uniqueness of the RusHydro Holding's status (energy generation only from renewable energy sources) contributes to formation of the Program's objectives

Increased energy efficiency of Russia's economy

- Reduced use of organic fuel
- Increased energy efficiency of electric energy industry by means of constructing efficient HPPs
- Increased energy efficiency of major thermal and nuclear energy generating units by means of wider use of energy storage systems
- Motivating electric energy consumers to use energy saving technologies

Increased energy efficiency of the Holding's business

- Increased energy efficiency of operating HPPs
- Optimized use of water resources
- Decreased energy consumption for the Company's needs in all types of activities

JSC RusHydro's 2010-2015 Program on energy conservation and upgrading energy

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: energy saving, energy auditing, and energy metering. The technological aspect of energy saving is at the forefront of the Program, at first instance, the modernization of the Holding's companies' fixed assets.

To evaluate energy saving potential at its facilities, the Company conducts energy audits of power plants every three years. On the basis of energy performance certificates of the branches, a consolidated energy

performance certificate for JSC RusHydro was developed. In 2013, the Company carried out energy audits at the Bureyskaya HPP, the Zeyskaya HPP, the Nizhegorodskaya HPP, the Novosibirskaya HPP, the Sayano-Shushenskaya HPP and the Mainskaya HPP, the Cascade of the Verkhnevolzhskiy HPPs and the Cascade of the Kubanskiye HPPs. Based on the complex energy audit results, the Company formed technical programs to upgrade energy efficiency.

Large-scale implementation of retro-fitting and upgrading programs at RusHydro power facilities in 2013, along with the commissioning of new capacity, provided total electricity generation of 124.1 billion kWh, which is the highest value since the Company was founded.

## Comprehensive Modernization Program

The Company has set itself a serious and ambitious goal: all basic generating equipment that has exceeded its safety lifespan

Approved by JSC RusHydro in 2011, the Comprehensive Modernization Program for generating facilities provides for the replacement of all safety life-expired basic generating equipment by 2025. The Program's key requirement is the absence of safety life-expired basic generating equipment units by the end of CMP implementation.

The Program's defining feature is that it focuses not on spot replacement of individual components and assemblies, but on 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.

### Comprehensive Modernization Program

Based on the assessment of equipment and hydro-power structures' condition, the current wear and the target deterioration by the year of CPM completion were defined.

Turbines, generators, transformers and control wiring equipment are the most worn-out equipment.

#### Targets by 2025

- Reducing turbine wear from 69% in 2010 to 32%
- Reducing generator wear from 68% to 35%
- Reducing wear of transformers from 65% to 44%
- Reducing wear of high voltage switches from 56% to 50%
- Reducing wear of control wiring equipment from 65% to 40%
- Reducing wear of auxiliary equipment from 54% to 34%

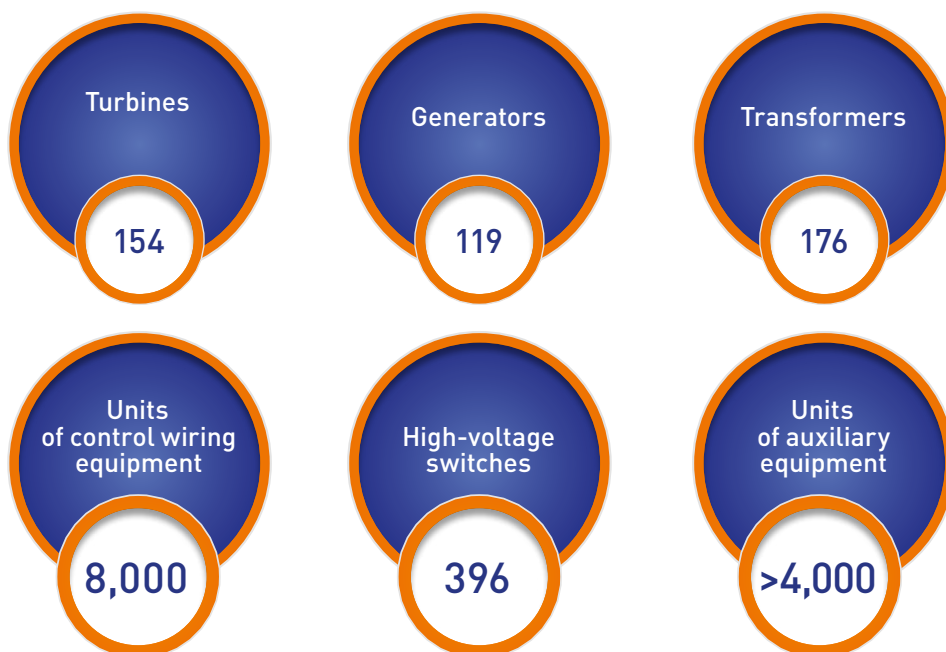
Within the framework of the Comprehensive Modernization Program, JSC RusHydro plans to reduce the deterioration rate of the total turbine fleet down to 32%, of generators down to 35% and of transformers down to 44% by late 2025.

### Upgrading energy efficiency at existing HPPs

During 2013, the total installed capacity of RusHydro's generating companies increased 896 MW, including 62 MW thanks to the comprehensive replacement and modernization of turbines and hydro-power units.

From 2012 to 2025, the Company plans to replace

Financing the Comprehensive Modernization Program, RUR bln



#### Construction

**The Nizhne-Bureyskaya HPP** (the Amur Region): the site has been unwatered, construction of basic structures has begun, and the equipment supply contract has been concluded.

**The Cascade of the Verkhne-Narynskie HPPs** (Kyrgyzstan): the preparatory stage has started, a hydro construction camp has been erected, the project feasibility study has been approved.

**The Gotsattinskaya HPP** (Dagestan): installation of hydro-power units is in progress, the dam is being built.

**The Zelenchukskaya HPP-PSPP** (Karachay-Cherkessia): erection of water conduits for the lower pond is in progress, the construction of the lower basin and the diversion is underway.

**Small HPPs:** the Zaragizhskaya SHPP (Kabardino-Balkaria) is 50% ready, the project of the Bolshoi Zelenchuk SHPP (Karachay-Cherkessia) has been approved.



#### Commissioning

**The Boguchanskaya HPP:** construction work on the planned eight hydro-power units with a capacity of **2,664 MW** has been fully completed. But, because of power output restrictions caused by the unavailability of a power distribution scheme, only four units have been put under load.

**The Sayano-Shushenskaya HPP:** hydro-power units №10, 6 and 5 have been commissioned. Plant power is **4,480 MW**.

**The Ust-Srednekanskaya HPP:** two units with a total capacity of **168 MW** have been put under load.



#### TPiR

**The Volzhskaya HPP** – three turbines with a total capacity of **345 MW** have been replaced.

**The Zhigulevskaya HPP** – two turbines and one hydro-power unit with a total capacity of **345 MW** have been replaced.

**The Kamskaya HPP** – three turbines with a total capacity of **63 MW** have been replaced, two generators with **42 MW** total capacity have been modernized.

**The Rybinskaya HPP** – one hydro-power unit with **55 MW** total capacity has been modernized.

**The Saratovskaya HPP** – one horizontal capsule unit with a capacity of **45 MW** and two generators with a total capacity of **120 MW** were replaced.

The Cheboksarskaya HPP – one turbine with a capacity of **78 MW** was reconstructed.

The greatest effect in resolving the problem of increasing energy efficiency at the Holding's companies' facilities in 2013 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.

Within the framework of the TPiR, apart from the replacement and modernization of hydro-power units, the Company has been conducting large-scale reconstruction of hydro-mechanical and electrical equipment of the HPPs, as well as hydro-power structures.

## Energy Efficiency Measures and Achieved Results

Comprehensive measures taken by RusHydro in 2013 to reduce energy consumption brought the Company a 2,070 million kWh growth in long-term average output\* per annum, which is equivalent to saving 712 thousand tons of equivalent fuel and reducing emissions 1,353 tons per year (in terms of CO<sub>2</sub>).

### Economic effect of energy saving measures in 2013

1. Output growth due to increasing capacity (technical re-equipment program):

In 2013, efforts to upgrade energy efficiency brought the Company a 220.2 million kWh growth in electricity production per annum, which is equivalent to fuel saving in the amount of 75 thousand tons of equivalent fuel per year.

2. Output growth due to optimizing water resource usage:

In 2013, measures to optimize water resource usage brought the Company an additional electricity output of 1,850 million kWh per annum, which is equivalent to fuel saving in the amount of 627 thousand tons of equivalent fuel per year.

[\*] 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). To re-calculate the index, expressed in tons of coal equivalent, to the index "Reduction CO<sub>2</sub> air emissions", the coefficient 1.9 is used (CO<sub>2</sub> emissions amount to 1,900-3,000kg/t, depending on the type of coal)

### Optimizing Water Resource Usage

- To upgrade the quality and timeliness of forecasts for inflow to HPPs sites, in 2010-2013, the Company carried out development projects for hydro-meteorological observation networks within the framework of the Program. The Company, together with RosHydroMet, is implementing a development project for a hydro-meteorological observation network in the SHHPP dam lake. In the Dagestan branch, a hydro-meteorological observation network was created on the Sulak and Samur Rivers. 22 hydro-meteorological stations and five meteorological stations were equipped.

- During the modernization of information-analytical system "Control Center of HPP Cascades", the Company implemented the medium-term planning system for the water-energy mode of the Volzhsko-Kamskiy Cascade HPPs. This system enables the Company to promptly make scenario calculations for the operational modes of a hydro-power plant cascade and select the best operational mode for the HPP, upgrading energy efficiency in water use.
- The Company began installation of hydrological station equipment for the

hydro-meteorological observation network in the SHHPP dam lake. Modules of medium-term planning for HPPs of the Far East and Siberia.

JSC RusHydro has a large and nationally important task of national significance – to develop the concept and effective management of Russia's water resources utilization system\*. In 2013, proposals for the Company's participation in its implementation were submitted to the Government for consideration.

[\*] As instructed by the President of the Russian Federation Vladimir Putin (Order № 2772 dated 15.10.2012)

## Decline in domestic electricity consumption

### Reducing the Company's own energy consumption in the process of economic activity and network losses

In 2013, there was a downward trend in the loss ratio in the near-station network, as a result of measures aimed at modernizing the stations' power equipment. Despite the slight increase in the absolute value of

actual losses, the loss ratio (specific indicator against the growth in electricity generation during the same period) decreased to 0.65% (compared with 0.74% in 2012). Actual losses were 606.1 million kWh.

## Formation of lean behavior among consumers

### Popularization and promotion of energy conservation and energy efficiency among different population groups in the regions

In 2010, the 2010-2015 Program on energy conservation and upgrading energy efficiency was approved by JSC RusHydro. As part of the Program, it was decided to establish at the premises of energy sales companies Regional Energy Efficiency and Energy Saving Centers (REEESCs). 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. For all listeners, sessions are free. The energy-saving work and projects of ESC RusHydro's energy sales companies have been repeatedly recognized by government, regional and industry-wide awards.

### Educational events in the field of energy saving and upgrading energy efficiency

In 2013, the educational project "Implementation of training programs within the framework of REEESCs" gained further momentum. In addition, the Company was interacting with stakeholders in the

all-Russian "Energy Efficient Russia" Forum to attract the attention of the general public and Russian citizens to the problem of saving energy.

Special programs have been designed both for those who are just learning to save energy, and for professionals in energy conservation. In addition, RusHydro conducts large-scale charity events in children's social institutions in the regions where it operates as part of promoting energy saving.

## Implementation of additional services in the field of commercial energy accounting

Energy supply companies are working within the framework of RusHydro's 2010-2015 Program on energy conservation and upgrading energy efficiency, actively providing energy auditing and thermal control services to organizations and enterprises in Russian regions, conducting express energy audits of houses and

working as management companies for the housing market and the utility sector in Krasnoyarsk and Chuvashia. To date, about 300 contracts for comprehensive energy efficiency assessments at various facilities have been executed. Within the framework of pilot projects, the Company carried out free energy audits at the

Shilovo Social Rehabilitation Center for Children and Adolescents and the Panino Secondary School in the Ryazan Region, and at Special (correctional) School № 2 in Cheboksary and Children's and Youth Sports School of the Olympic Reserve (Ice Hockey) № 4 in the Chuvash Republic.

## 2.3 Innovation – a fast track to sustainable development

### JSC RusHydro's Innovative Activities Concept

In 2013, 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 functioning in RusHydro since 2011 and is integrated into the system of the Company's strategic documents and programs (the Strategic

Plan, the Technical Policy, the Program for the Safe Operation of Power Facilities, the Energy Efficiency Program, and the annual production program, etc.).

#### The Company's innovative development priorities include





# Innovation and Sustainable Development

## Objectives and indicators of the Innovative Development Program

### Program Objectives

The 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 SDCs/auxiliary dependent companies;

Increasing labor productivity (not less than 15% within 5 years);

Significantly decreasing electricity generation costs, engineering costs and construction time (not less than 10% within 5 years);

Upgrading the environmental compatibility of generation, increasing reliability and safety of the RusHydro Holding's facilities

### Integrating innovative activities into business processes

The Program's projects provide for the sufficient reliability and operational safety of the RusHydro Holding's facilities;

Technologies and technical solutions being developed within the framework of the Program are also intended to upgrade energy efficiency and energy saving;

Technologies and technical solutions being developed within the framework of the Program will be included in a list of recommended- to-use technologies of the Database of the Company's Technical Policy, if innovative projects are successfully implemented.

### Integrating innovative activities into Corporate Social Responsibility processes and sustainable development

Energy efficiency: the total growth in electricity generation through implementing energy efficiency 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%;

Interaction with stakeholders: the share of financing for R&D projects implemented with the participation of scientific and educational institutions out of total R&D funds - up to 20% per year (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.

## Implementing Innovative Development Projects

JSC 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 of JSC RusHydro (hereinafter – STC) and the

Technology Platform “Advanced Technologies of Renewable Energy” (hereinafter – the Technology Platform) initiated and coordinated by JSC RusHydro play an important role in forming an innovative environment. STC includes about 200 leading Russian experts, academics and industry practitioners. The decision of STC launches the practical implementation of the RusHydro Group's innovative projects, providing for objective professional external evaluation.

From the implemented R&D and research activities, RusHydro selects only those projects that lay the foundation for future hydro-power sector development to be practically implemented. So, in 2013, the Company approved for implementation 14 new projects. 34 projects have been implemented (at different stages) in 2013 from previously approved research and development projects.

## Creating and integrating new equipment and technologies in 2013

Supporting research and development of innovative technologies and integrating them into production processes.

1. In 2013, the Company completed the development of standard equipment for low-head small HPPs with orthogonal hydro-power units.

2. In 2013, the Company obtained 17 patents for inventions and utility models, including:

Title	Patent holder	Subject
Multi-layer combined antifouling coatings, providing repellent and hemobiosebe protection (invention)	RusHydro	Development of efficient methods to protect the flow path of a HPP from zebra mussel formation
Low-head mini-HPP (utility model)	RusHydro	Development of standard equipment for low-head small HPPs with orthogonal hydro-power units
Pumped-storage power plant with an underground location of the lower reservoir and the combined passing method for the lower reservoir (invention)	RusHydro	Development of the concept and pilot project of the pumped-storage power plant with an underground location of the power house and the lower reservoir (PSPPUR)

## Creating an External Innovative Environment

In 2013, the Company 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, as part of the Innovative Development Program. Some projects are implemented by the Company with the involvement of industry-specific reference higher education establishments, including: the Far East Federal University,

the Moscow State Construction University and St. Petersburg State University. Also, in 2013, JSC RusHydro signed the following agreements:

1. For strategic partnership with the National Research University Moscow Power Engineering Institute's branch in Volzhskiy, and the Nevinnomyssk Technological Institute;
2. For scientific and technical cooperation with the Siberian Branch of the Russian Academy of Sciences to organize the introduction of innovative products and scientifically-intensive technologies developed by the Siberian Branch of the Russian Academy of Sciences using RusHydro's technological potential;
3. For interaction with the Russian Foundation for Basic Research to jointly implement innovative projects under construction.

### Cooperation within the framework of the GSEP

Since 2008, JSC RusHydro has been a member of the Global Sustainable Electricity Partnership (GSEP), an international energy organization founded in 1991 that brings together major energy companies from the "Group of Eight" (G8) countries.

The organization's main objectives are:

- Developing a common sustainable development policy for the electricity industry;
- Organizing large-scale debates on environmental protection, globalization and social policy;

- Exchanging experience in the production and use of electricity and the development of electricity markets;
- Providing assistance to developing countries.

- In June 2013, JSC RusHydro assumed chairmanship of the Global Sustainable Electricity Partnership (GSEP), an international energy organization. JSC RusHydro declared the theme of the year – "Innovations, a Fast Track to Sustainable Global Development". This theme reflects the Company's position that sustainable development problems cannot be resolved without innovative breakthroughs.

- As part of the international cooperation with the GSEP, RusHydro prepares the Company's position on all international issues relating to the development of the Russian electricity sector, and coordinates its position with the Russian Ministry of Energy. Within the framework of the GSEP Design Committee, the Company participates in determining and implementing joint pilot projects in terms renewable energy and small hydro-power plants in developing

countries. To date, JSC RusHydro has contributed USD 300,000 to the GSEP Patagonia project (Argentina).

- Russia's Chairmanship in the GSEP is a milestone event for RusHydro and Russian energy industry in general. The theme of the year – "Innovations, a Fast Track to Sustainable Global Development" – established a direction of discussions for 2013-2014 in the Partnership.

After the reporting period, in May 2014, the Company carried out the Annual Summit of the Partnership with participation of heads and representatives of major global energy companies-GSEP members. The Summit

took place in Moscow. This was a key event of Russia's chairmanship in the GSEP; the participants of the Summit summed up the result of the year and discussed plans for energy systems development.

## The Technology Platform "Advanced technologies of renewable energy"

In 2013, the Technology Platform "Advanced Technologies of Renewable Energy" (hereinafter – the Technology Platform) gained further momentum. The Technology Platform was created at the initiative of JSC RusHydro to form innovative development infrastructure and was approved by the Minutes of the

Government High Technology and Innovation Commission Meeting in April 2011. In 2013, the composition of the Technology Platform included 108 organizations. 18 projects totaling RUR 536 million were implemented within the framework of the Technology Platform.

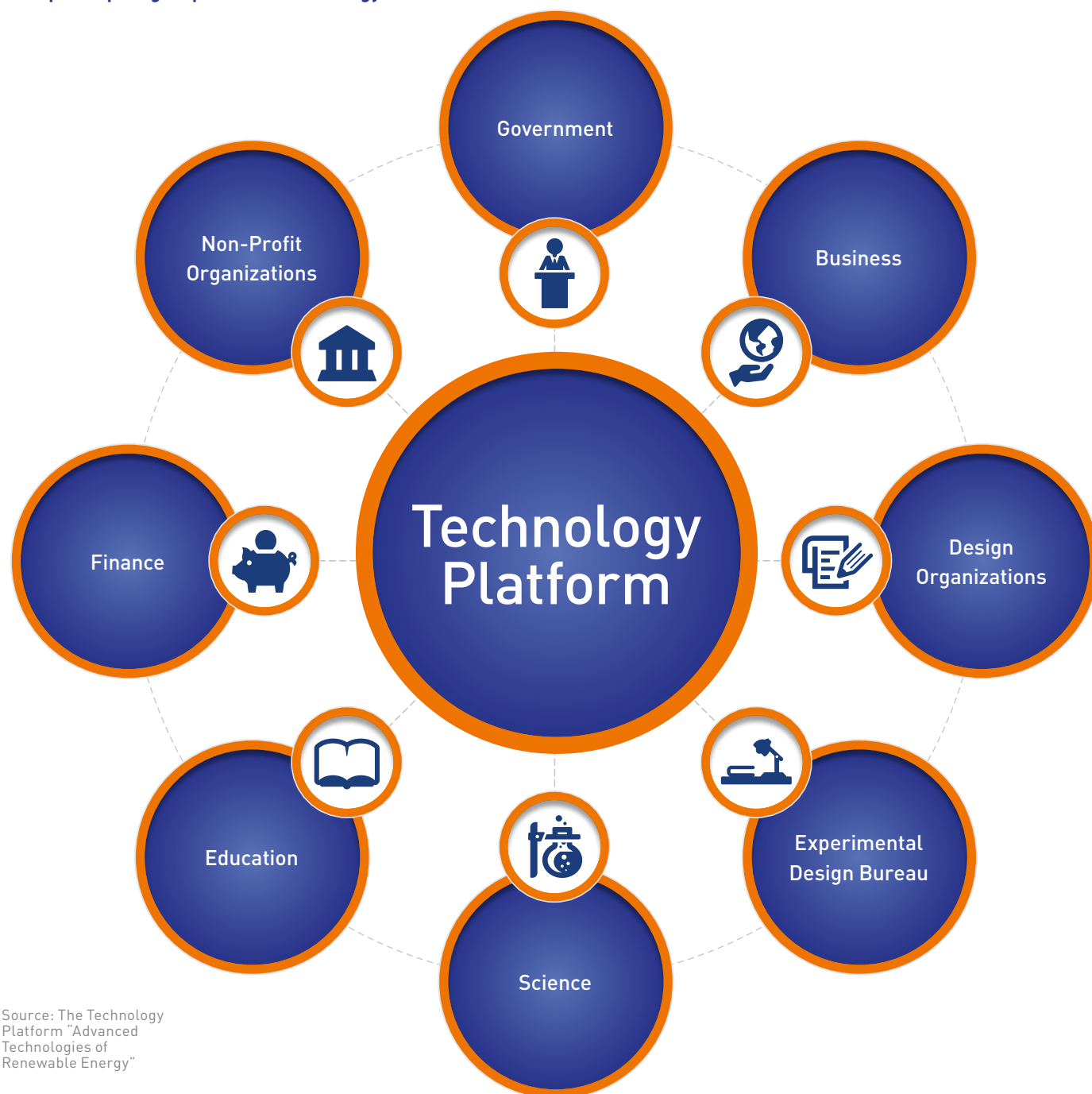
In October 2013, the First International Forum on Renewable Energy "Renewable Energy. Towards Raising Energy and Economic Efficiency" (REENFOR-2013) was held under the auspices of the Platform. JSC RusHydro sponsored the forum.

For more information about Technological Platform activities, please visit the Company's website: [http://www.rushydro.ru/activity/emerging\\_technologies/](http://www.rushydro.ru/activity/emerging_technologies/)

### Innovative development trends in the Technology Platform framework



Source: The Technology Platform "Advanced Technologies of Renewable Energy"



Source: The Technology Platform "Advanced Technologies of Renewable Energy"

## Development of Small-Scale Hydro-Generation

### Development of small-scale RES generation

In 2013, the Company's asset portfolio included 35 small-scale plants (no more than 30 MW) working via advanced renewable energy sources (the power of small rivers, geo-thermal and tidal power). The total installed capacity of small-scale RES projects was 320 MW,

including 244 MW - small hydro-power plants (SHPP) or 1.2% of the total installed capacity of JSC RusHydro's generating companies.

Developing advanced RES-based technologies and upgrading energy efficiency

through a wider use of the energy of small rivers, and geo-thermal power, etc. is one of the Company's strategic objectives.

For more information see 4.2 POWER DEVELOPMENT OF THE FAR EAST (the RusHydro Holding: RES pilot projects in the Far East

## Low-pressure small HPPs (power of the rivers)

The Company is implementing low pressure small HPP projects (power of no more than 30 MW) mainly in the North Caucasus, as this region has good hydro-generation potential;

- In 2013, the Company continued construction of the Zaragizhskaya HPP (28.8 MW) - the third stage of the Cascade of Nizhne-Cherekskiye HPPs. By year-end, construction readiness exceeded 50%. In 2014, the Company plans to complete construction of the head pond and develop power house construction and the 110 kV outdoor switchgear. Start-up is scheduled for late 2014;
- In 2013, the Bolshoy Zelenchuk small HPP project developed by JSC RusHydro subsidiaries - JSC Hydroproject Institute and JSC NIIES - received a positive opinion from the State expert review;
- The 2013-2017 Investment Program also includes five small HPP projects in the Stavropol Region: the Barsuchkovskaya HPP (4.8 MW), the Sengileyskaya HPP (10 MW), the Stavropolskaya HPP (1.9 MW), the Yegorlykskaya HPP-3 (3.5 MW) and the Bekeshevskaya HPP (1 MW), as well as the Ust-Dzhegutinskaya SHPP (4.74 MW) in Karachay-Cherkessia. The capacities of these SHPPs are scheduled to be commissioned before 2017;
- JSC RusHydro's proposals on the systematic development of small hydro-power engineering have been included in the projects of the State Program "Energy efficiency and the development of the power industry", the Federal Target Program "Development of the water utilization system of the Russian Federation in 2012-2020" and the Departmental Target Program "Development of small hydro-power on small- and medium-sized rivers, as well as for non-power waterworks of the Russian Federation in 2012-2020."

"I see the change in approaches of different countries and the leaders of these countries to the issues of green energy, green growth, and renewable energy. It is taking place in front of our very eyes. Russia is changing its attitude towards renewable energy sources. We think that they have a great future."

**Dmitry Medvedev,**  
Russian Prime Minister

## Development outlook

- Adopted by the Government in 2013, a package of measures of State support for renewable energy through the mechanisms of the wholesale electricity market gives new impetus to the development of power engineers' initiatives. The rules of establishing a price for capacity of generating facilities operating on the basis of RES, mechanisms and key parameters of support of the RES-based energy generation in Russia were adopted by the Decree of the Government of the Russian Federation №449 dated May 28, 2013 "On Mechanism of Stimulating Use of RES in the Wholesale Electricity and Capacity Market" and by the Order of the Government of the Russian Federation №861-r dated May 28, 2013.
- Adoption of the regulatory framework governing the sales of RES-generated electricity on the retail market and the wholesale electricity and capacity market and the 2014-2020 FTP R&D was a significant advance in this area. In September 2013, JSC ATS published results of the first competitive selection of projects for future construction of generating facilities operating on the basis of RES. Adoption by the Government of the Russian Federation of the regulatory base described above creates conditions providing economic efficiency of investments into RES-based generation projects. Currently, the RusHydro Group considers an opportunity to take part in competitive selection of projects for construction of generating facilities functioning on the basis of RES.

# Central Russia

## Central Federal District and the Volga region

For many centuries, this area was the center of the Russian state. This was a direct result of the region's geographical location: in the center of the European part of Russia. This was the land where the Russian nation was formed. The central part of Russia has the country's highest population density, at 59.70 people per km<sup>2</sup>. The district is Russia's largest in terms of population numbers. The main natural wealth of the federal district is the iron ores of the Kursk Magnetic Anomaly. In terms of its geological reserves, the Kursk Magnetic Anomaly tops the world list, while, in terms of book value, it is Russia's number one. Other mineral resources include major reserves of chalk, limestone, fire and brick clay, marl and building, glass and molding sands.



The region's energy consumption

**339 billion kWh**



RusHydro facilities' generation in the region

**40 billion kWh**

12% of the energy consumption of the entire Central part of Russia



Population

**68,000,000 people**



Area

**1.7 mln km<sup>2</sup>,**  
10 % of the area of Russia,  
or approximately five times the size of Italy



# Section 3. Social responsibility

## 3.1 Responsible interaction – a condition of corporate social responsibility

### CSR Approaches

JSC RusHydro, in its social policy, aims to comply with international standards and best practices in the field of human rights, labor relations, environmental protection and anti-corruption, interactions with stakeholders, while focusing on the Guidance on Social Responsibility (the ISO 26000 International Standard) and

general principles of the United Nations Global Compact (UNGC Corporate Sustainability) in the field of human rights, labor relations, environmental protection and anti-corruption).

JSC RusHydro shares and implements in practice the principle of "Systematic

dialogue based on mutual respect of interests, values, attitudes and differences of key stakeholders", outlined in the Social Charter of Russian Business. The Company has been a member since 2013.

The responsibility of the organization for the impact of its decisions and activities (including: products, services and processes) on society and the environment through transparent and ethical behavior that:

- promotes sustainable development, including the health and welfare of society;
- takes into account stakeholder expectations;
- complies with applicable law and is consistent with international norms of behavior;
- is integrated into activities throughout the organization and applied in its relationships with stakeholders within its sphere of its influence.

International Standard ISO/FDIS 26000

# Analysis and Improvement of Social Responsibility Practices

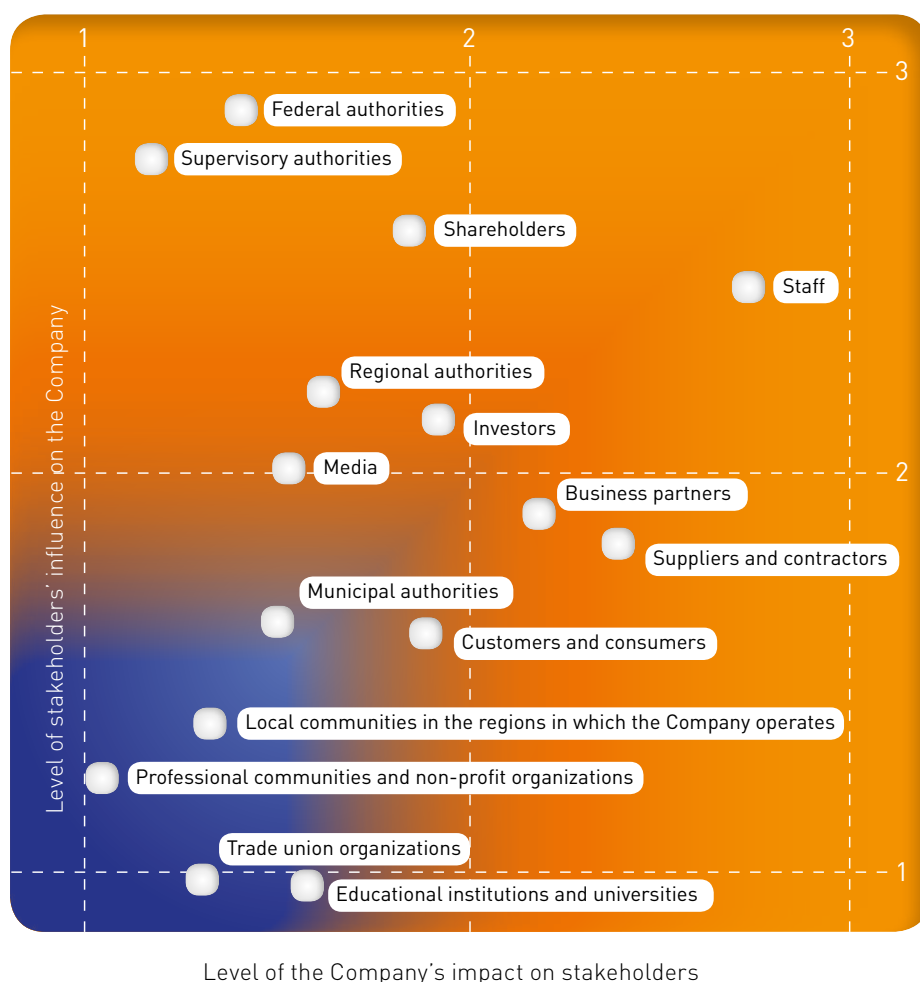
In 2013, JSC RusHydro conducted an analysis of stakeholders. The analysis was carried out by questioning managers of the Company's executive office and assessed the main stakeholder groups, and mechanisms of interaction and influence. Based on the survey's results, the Map of RusHydro's major stakeholder groups, indicating the degree of their mutual influence in

the process of interaction, was upgraded. Stakeholder identification was undertaken by the Company to clarify the formats and target groups to expand this interaction.

JSC RusHydro regards its employees, shareholders and investors, consumers of the Company's products and services, business partners, suppliers and con-

tractors, State and public organizations, professional and local communities, the mass media, universities and other educational institutions as key stakeholders.

**Stakeholders' Map, indicating the degree of their influence on JSC RusHydro activities and JSC RusHydro's influence on them**



- JSC RusHydro's corporate social responsibility is realized in the process of interactions with society and local communities in the regions in which the Company interacts, and aims to create a favorable social environment.
- The intracorporate social policy is implemented in the field of personnel management and is designed to ensure rapid development of the talent pool as the Holding's companies' main resource and the fulfillment of JSC RusHydro's large-scale production tasks in the interests of the State, shareholders and the workforce.

\* Professional communities include energy, environmental, charitable and other organizations and expert communities

# Interaction with Stakeholders

The Company seeks to develop effective systematic dialogue with stakeholders. To this end, in 2013, in the process of report preparation the Company organized a round table with the participation of stakeholders on the reliability and safety of the RusHydro Holding's industrial activities. This topic and the issues discussed at this round table are reflected in this Report in section 2.1 RELIABILITY AND SAFETY – the founda-

tion for sustainable development. In the future, the Company plans to hold such meetings on a regular basis (at least 2-3 times per year).

The discussion was attended by representatives of government agencies (in particular, the Russian Federal Agency for Water Resources), educational institutions, public organizations, the media, industry-specific organizations,

the expert community and business. All speakers unanimously expressed a high opinion of the efforts made by JSC RusHydro's management to improve the reliability and safety of hydro-power structures. Numerous issues discussed during the meeting will be further developed in 2014. The next discussion with stakeholders the Company plans to devote to the corporate social policy issues.

More detailed information on the key themes of interaction with major stakeholder groups in 2013 is presented in the Table BASIC FORMS AND THEMES OF INTERACTION WITH KEY STAKEHOLDER GROUPS IN 2013, page 11

## Shareholders and investors

### Transparency

JSC RusHydro provides full and timely disclosure of all aspects of its activities (except in cases where information is a trade secret). The main channel of information disclosure is the corporate website (<http://www.rushydro.ru/> in Russian and <http://www.eng.rushydro.ru/> in English), which contains information about material facts, events, management structure, and results of financial and economic activities. The website presents the Charter and other internal documents, annual reports, quarterly financial statements under Russian Accounting Standards (RAS), quarterly financial statements under IFRS, press releases, presentations, the corporate newspaper, data on affiliates and other

information that may affect the prices of RusHydro securities. Corporate website content is updated regularly. At the request of shareholders, the Company provides copies of internal documents, documents and materials related to the General Meeting of Shareholders, lists of affiliates and other documents in accordance with the Russian Federal Law On Joint Stock Companies.

### Investor Relations

JSC RusHydro is open to contacts with the investment community. In 2013, there were more than 200 individual and group meetings with managers of major foreign and Russian funds investing in shares. Quarterly conference calls with the participation of the management

team for analysts, investors and rating agencies were continued.

The capital market is assigned no small part in assessing the performance of RusHydro. Today, the Company is covered by 15 industry analysts from largest investment companies.

RusHydro strives to promptly respond to all information requests from investors and analysts and is an active participant in industry conferences and investment forums, both Russian and foreign. In information disclosure to investors, the Company seeks to go beyond formal requirements of the stock exchanges and market regulators, focusing on best corporate practices. Great attention is paid to non-financial disclosure.

#### 2013:

1<sup>st</sup> place in investor relations (IR-Service) among electric power companies – Thomson Reuters Extel Europe

2<sup>nd</sup> place in the category “Best IR-Manager” among mid-cap companies – Thomson Reuters Extel Europe

3<sup>rd</sup> place in investor relations (IR-Service) among mid-cap companies – Thomson Reuters Extel Europe

JSC RusHydro is recognized as the best company in the field of investor relations (IR) among electric power companies (Russia and CIS), according to voting results of Thomson Reuters Extel Europe 2013

## Employees

### HR Policy: conditions of employment and workplace safety

JSC RusHydro seeks to shape an attractive for employees work environment focused on achieving results, professional development and career growth. Fundamental objectives, principles of and approaches to Human Resources Management are fixed in the Company's Social Policy (which was adopted in 2013).

Relationships between the Company and the workforce are governed by law and the Russian Labor Code. In 2013, a new standard collective bargaining agreement was signed, which will be valid until 2016. Provisions of collective agreements apply to all employees (100%). The Work Safety section is compulsorily present in all standard collective bargaining agreements and individual employment contracts.

The Company does not utilize child and/or forced labor (for further information

please refer to 2.1 "Work Safety and Production Control").

The HR policy being implemented within the RusHydro Group helps create a coherent staffing system for all levels of management based on professional education, training and the re-training of managerial, engineering and technical personnel and skilled workers for research and development, construction, maintenance and operational complexes (see 3.2 "Human Resource Development").

## Regulatory and supervisory authorities

RusHydro operates in strict accordance with the law - regulatory requirements, industry and environmental standards, and seeks to develop effective cooperation with national and regional authorities. Regulatory authorities have always paid greater attention to the energy sector in general and hydro-power in particular due to their specific features, in particular, high technological components and socio-economic responsibility.

As a federal-scale power company, JSC RusHydro is both:

- an infrastructure supporting utility system, important for the country's activities, and ensuring their performance and safety;
- a State policy instrument which resolves complex social and economic problems.

JSC RusHydro does not finance any political parties. However, it pays significant attention to the development of a dialogue with public authorities and the discussion of industry situations. The Company believes that the current situation and future development of the national fuel and energy complex depend in no small measure on the active stand.

### Interaction with public authorities

- In 2013, JSC RusHydro representatives took part in Parliamentary hearings and roundtables on regional development. They were organized by the Federation Council and the State Duma of the Federal Assembly of the Russian Federation.
- The Company's representatives participated in the meetings of the Working Group on the preparation of the final decision on the practicality of Cheboksarskaya HPP completion. The Working Group is part of the Government Commission on the fuel and energy complex, the reproduction of the mineral resource base and the upgrading of economic energy efficiency;
- The Chairman of the Management Board of JSC RusHydro, Evgeny Dod, is a member of the Government Commission on rectifying the consequences of large-scale flooding in the Republic of Sakha (Yakutia), the Primorsk, the Khabarovsk, the Magadan and the Amur Regions and the Jewish Autonomous Region, as well as of the Government Commission on the socio-economic development of the Far East. Within the framework of Government Commissions, the Company proposed the Program for the construction of new hydro-power facilities on tributaries of the Amur River to regulate the spillway in flood periods, and the Program for engineering protection of residential areas;

- The Company organized effective interactions with government commissions created to solve the problems of the Far East. To implement the investment projects "Construction of the Blagoveschenskaya CHP", "Construction of the Sakhalinskaya SDPP-2", "Construction of the CHP in Sovetskaya Gavan" and "Construction of the Yakutskaya SDPP-2", the Company formed working groups with the participation of regional authority representatives;
- As part of executing the government task to participate in the management of the water utilization system, in 2013, the Company worked out the concept of modernization and the effective management of the Russian water utilization system. This concept and the proposals for the Company's participation in its implementation have been submitted to the involved ministries of the Russian Federation for consideration. At the time this Report was being prepared, the Government was discussing the final scheme for water utilization system modernization;
- Participation in the development of the regulatory framework to promote the use of renewable energy is one of the key measures ensuring the effective development of renewable energy in Russia. Taking into consideration the adoption in 2013 of the package of State support for the development of renewable energy generation, in 2014, the Company plans to develop interaction with legislative and executive powers in this direction.

## Interaction with regional and municipal authorities

JSC RusHydro is making constant efforts to provide strategic cooperation with re-

gional authorities in the regions in which it operates and is creating a favorable social environment for efficient development of the companies of the Holding, including through the development of

social partnerships in regions in which they operates. Making social and economic cooperation agreements is one of the forms to develop social partnership.

### Mechanisms of interactions with authorities



### As of 31.12.2013, 16 cooperation agreements were entered into with the following regions:

1. The Republic of Altai
2. The Republic of Bashkortostan
3. The Republic of Dagestan
4. The Kabardino-Balkarian Republic
5. The Republic of North Ossetia-Alania
6. The Republic of Khakassia
7. The Krasnoyarsk Region
8. The Stavropol Region (two agreements)
9. The Amur Region (two agreements)
10. The Astrakhan Region
11. The Moscow Region
12. The Saratov Region
13. St. Petersburg
14. The Magadan Region

#### RusHydro's obligations under social and economic cooperation agreements:

- participation in developing the region's hydro-power resources and potential;
- location of production and cost-effective HPPs in the regions, which enables the creation of new jobs, develops labor markets and broadens the tax base for consolidated budgets of Russian constituent entities;
- development of scientific potential, systems for staff training and upgrading employee skills within the hydro-power sector;
- involvement of SMEs, professionals and regional employees to implement joint investment projects and construct HPPs in the region;
- participation in the construction and modernization of social infrastructure facilities (education, health care, culture, and sports, etc.);
- carrying out charitable and sponsorship activities, participating in measures to preserve cultural and historical heritage;
- implementation of other agreed upon social programs in the field of health care, culture, and sports, etc.

## Professional associations and non-profit organizations

### Social Charter of Russian Business

In 2013, RusHydro joined the Social Charter of Russian Business. The Charter in the new version was adopted by the Russian Union of Industrialists and Entrepreneurs (RSPP) in 2008. The Charter is a set of fundamental principles of responsible business practices, which defines the relationship between employee and employer, civil society institutions, authorities, local communities, and specifies principles related to environmental security. As of 2013, the Social Charter has been signed by 248 organizations that unite more than six million workers.

The Social Charter is recognized by business organizations and complies with documents adopted at the international level. The RSPP is a member of the Russian network of the UN Global Compact and permanently serves on the steering committee.

### Membership in associations

Industry, professional and public associations in which JSC RusHydro was a member in 2013:

1. NP Market Council;
2. All-Russian Industry Association of Employers in the Power Industry (RaEI);
3. NP Power Industry Veterans Council;
4. NP Corporate Educational and Scientific Center of the Unified Energy System;
5. NP Russian Hydro-power;
6. NP Innovations in the Electric Power Industry;
7. NP Scientific and Technical Council of the UES;

8. NP Energostroyalyans;
9. NGO Siberian Energy Association (SEA);
10. The all-Russian Association of Employers "Russian Union of Industrialists and Entrepreneurs" (RUIE);
11. NP Association of Land and Property Owners and Investors;
12. NP Innovation and R&D Directors Club.

Membership in these associations plays an important role in business co-operation and helps RusHydro develop interactions with stakeholders in the following areas:

- Coordinating efforts across the industry to achieve the following tasks facing the country's energy sector, within the framework of the State program for sector development: (1) energy-saving and energy efficiency; (2) development and modernization of electric power industry; (3) development of renewable energy utilization;
- Contributing to the sustainable development of Russia's Unified Energy System and the electric power industry;
- Coordinating the efforts of the expert community and creating industry and inter-industry technology platforms and scientifically-intensive hydro-power development projects;
- Contributing to the innovative development of electric power sector and advanced technologies in the field of renewable energy generation;
- Contributing to the development of global anthropogenic impact mitigation initiatives.

### International cooperation

In 2013, the RusHydro Holding's companies:

- were members of the following international organizations:

1. The Global Sustainable Electricity Partnership, GSEP, former E8)\*;
2. The World Economic Forum, WEF;
3. The International Hydro-power Association, IHA;
4. The International Commission on Large Dams, ICOLD;
5. The International Association for Hydro-Environment Engineering and Research, IAHR;
6. The Russian National Committee of the World Energy Council, WEC;
7. The Technology Association of Canada (The Center for Energy Advancement through Technological Innovation, CEATI);

\* For more information on the Company's participation in GSEP activities, please refer to 2.3 INNOVATION, a Fast Track to Sustainable Development (Creating an External Environment) and the Company's website (<http://www.rushydro.ru/activity/gsep/>)

For more information on membership in professional associations, please see the 2013 RusHydro Annual Report, Interaction with non-profit partnerships and international organizations



- Participated in / provided expert support to the work of the intergovernmental working groups within:

8. The Electric Power Council of the CIS (EPC of CIS);
9. The Eurasian Economic Community (EurAsEC);
10. The International Energy Agency (IEA);
11. The Asia-Pacific Economic Cooperation (APEC);
12. The Baltic Sea Region Energy Cooperation (BASREC);
13. The United Nations Economic Commission for Europe (UNECE);

- Developing cooperation with international professional industry-specific organizations through joint research, participated in expert working groups, professional seminars and conferences:

14. The European Small Hydro Association, ESHA;
15. The International Council on Large Electric Systems Voltage (Conseil International des Grands Réseaux Électriques – CIGRE);
16. The International Network of Basin Organizations (Réseau International des Organismes de Bassin", RIOB);
17. The Union of the Electricity Industry, Eurelectric.

### The International Commission on Large Dams (ICOLD)

In 2012, JSC RusHydro signed ICOLD's World Declaration on Reservoirs for Sustainable Development. The Declaration is an appeal to unite the efforts of the international community in the field of water infrastructure, including large dams and reservoirs, and emphasizes the increasing role of dams and reservoirs in socio-economic development. The document was developed and agreed upon by a number of leading global organizations in the area of water management, with the active participation

of the Company's representatives.

The text of the Declaration can be found at: [www.rushydro.ru/press/material/18031.html](http://www.rushydro.ru/press/material/18031.html)

The International Commission on Large Dams (ICOLD) is a non-governmental international organization established to coordinate the efforts of the professional community in the field of environmentally safe and efficient hydro-power engineering. In 2013, the Russian youth division of ICOLD was created with the support of JSC RusHydro.

### Higher Education Establishments and other educational institutions

As a part of the corporate lift "The company – Higher Education Institution/College" RusHydro is consistently creating sustainable infrastructure for the development of basic and extended vocational education at the premises of the Corporate Hydro-power University and the Company's Produc-

tion-and-Training and Information Centers, constantly expanding the interaction with a network of industry-specific universities and technical schools of the federal and regional levels. In 2013, the volume of funding for the development of interaction with universities totaled RUR 61.5 million.

The Corporate Lifts model is aimed at attracting and supporting of future specialists from school to the companies of the RusHydro Holding, as well as at increasing the profession's prestige and retaining the hydro-power professionals' dynasties.

In 2013, the Company continued to expand cooperation with universities in the field of advanced scientific research and innovative technologies. Some of these projects are being implemented with the assistance of industry-specific universities, including: the Moscow State Construction University and St. Petersburg State University.

#### Implementation of strategic partnership agreements with partner universities

In 2013, to create a higher and extended vocational education system in accordance with corporate requirements, the Company signed strategic partnership agreements with the Moscow Power Engineering Institute's branch in Volzhskiy, and with Amur State University and the Nevinnomyssk Technological Institute.

The Company concluded agreements with the following profile colleges:

- the Divnogorsk Hydro-Power College (Siberian Federal District);
- the Perm Industrial and Commercial College (Volga federal District);
- the Saratov College for Bridge and Hydro-Power Structures Construction (Volga Federal District);
- the Nevinnomyssk Technological College (North Caucasian Federal District).

At the Moscow Power Engineering Institute (MEI), the Hydro-power and Renewable Energy Department was opened. At the MEI's branch in Volzhskiy, the Company organized training for undergraduates with a specialization in Hydro-power Plants and developed a curriculum for Hydro-power

Plants specialization. Informational support for admissions was organized. For first-year students, the Company held an open lecture on the topic "The History of the Volzhskaya HPP and the Future of Renewable Energy" and arranged for introductory practical training.

The following scientific-and-practical conferences were held:

- "The safety and reliability of hydro-power plants in modern conditions" for students and post-graduates;
- "Engineering in the service of society" for upper-form pupils, participants of Hydro-power Classes and students.

Long-term successful cooperation between the the Sayano-Shushensky branch of JSC RusHydro and the Sayano-Shushenskaya branch of the Siberian Federal University (the Company's basic university) is underway. In 2013, 35 graduates of the Sayano-Shushenskaya branch of the Siberian Federal University were given employment at the Holding's companies' facilities; 313 students completed practical training at JSC RusHydro's branches.

While studying at the university, students have the opportunity to get acquainted with hydro-power structures of the the Sayano-Shushenskaya HPP's division and the operating experience of the Laboratory of Hydro-power Structures (LHS) –

a structural unit of the SSHPP. The Laboratory's task is to ensure the hydro-power structures' reliability. The idea of creating a higher education institution on the basis of the existing energy company belongs to Valentin I. Bryzgalov, Doctor of Engineering Science, who was the first General Director of the Sayano-Shushenskaya HPP named after P.S. Neporozhniy.

The role of educational institutions in vocational training and the development of the human resources potential of the electric power sector, as well as our interaction with them, will evolve in 2014.

For details, please see 3.2 Development of Human Resources Potential (Processes aimed at attracting skilled labor resources)

"The hydro-power industry should be a workplace for talented young people who not only have received quality vocational education but who have also completed practical training."

**E. Shchegolkov,**

Chief Engineer of the Cheboksarskaya HPP,  
a former graduate of MEI

## Mass Media

One of the principles of JSC RusHydro's CSR is information transparency: the full and prompt disclosure of material facts about the Company's activities, including via effective interaction with the media. The Company's information policy aims at satisfying stakeholders' interests, and their right to timely and complete information. The JSC RusHydro's Press Office traditionally for several years running has won the Ministry of Energy's KonTEKst Contest, which is held among PR-departments of companies in the fuel and energy complex. In 2013, this award was received for the third year in a row.

The all-Russian "Energy of water" Contest for the best media coverage about the development of renewable energy sources in Russia as the most promising

and environmentally friendly is the annual information project. The purpose of the Contest is to promote in society ideas of hydro-power industry development, the need for modernization and the benefits of upgrading energy efficiency.

In 2013, "The People of Light" photo project got underway. It is dedicated to the tenth anniversary of the Company. In the jubilee year, the project tells us about the most interesting events, stories, and most importantly - the people of the Holding's companies, who by their work bring the LIGHT. The best local photojournalists will travel to different parts of Russia, to cover the everyday work of hydro-power engineers. Every week throughout 2014, one story about the life of PEOPLE OF THE LIGHT will be released.

The "Hydro-power Engineer's School" information and education project is aimed at popularizing the hydro-power industry and increasing the media and blogosphere representatives' knowledge about the structure, objectives and role of hydro-power plants in the energy system, as well as discussing other topics and issues related to the development of the power industry and Russian renewable energy sources. The School's visiting session, which was held in 2013 in Irkutsk, confirmed the media and blogosphere representatives' desire to obtain basic knowledge in the field of the most important economic sectors and the study of practical aspects of energy industry development, as well as great interest in the activities of the RusHydro holding.

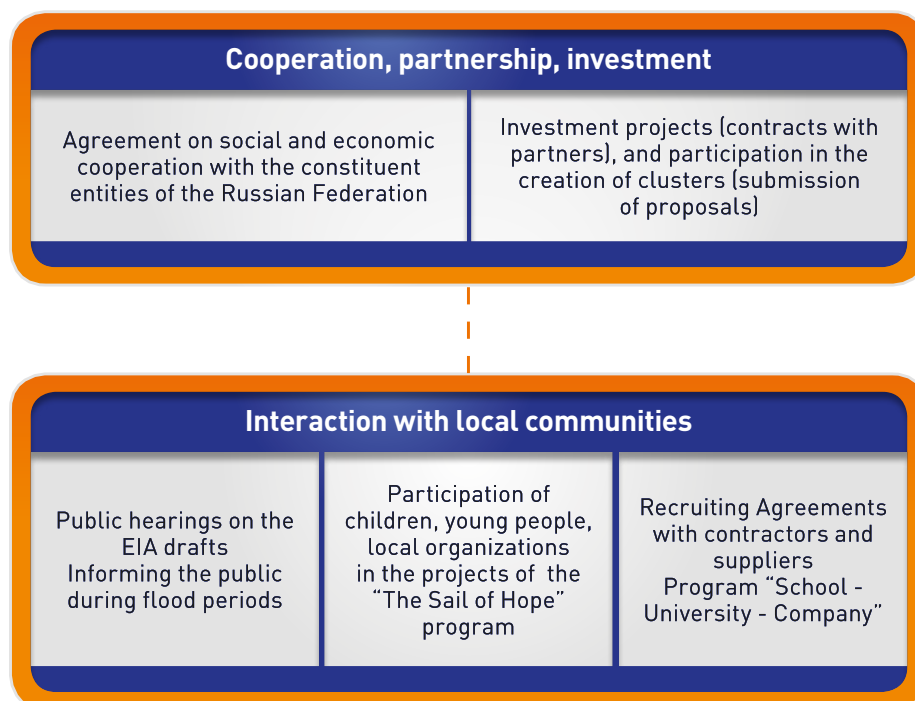
## Local communities in the regions in which the Company operates

JSC RusHydro's participation in the life of communities is integral element of the Company's corporate social responsibility. As per corporate understanding, such participation is improving the quality of life in the regions in which the RusHydro Holding's hydro-power facilities operate. The Company's participation in the life of communities in these regions covers such areas as

1. the economic development of the regions in which the Company is present;
2. social programs and projects;
3. public hearings and consultations;
4. giving notices to the local population is carried out both in cooperation with regional and local authorities, and in interaction with the public.

All projects for the development of social partnership in the regions in which the RusHydro Holding operates are intended to create a favorable social environment for efficient corporate development, maintain the reputation of JSC RusHydro as a socially responsible company.

### Mechanisms of social partnership development in the regions of presence



In 2013, considerable efforts and resources were directed to help victims of flooding in the Far East. The program for the Rectification of social consequences of the accident at the Sayano-Shushenskaya HPP and the social partnership program in Khakassia gained further momentum..

For more information about the Company's contribution to the economic development in the regions of presence, please see 4.2 DEVELOPMENT OF THE ENERGY INDUSTRY IN THE FAR EASTERN FEDERAL DISTRICT (Promotion of socio-economic development in the regions of presence)

More information about how we implement social partnerships in practice in the regions and what measures were taken in key areas in 2013 is available in 3.3 SOCIAL PARTNERSHIP (Charity and corporate volunteering)

## Suppliers and contractors

During 2013, the companies of the Holding were working with 15 major counter-parties. The volume of work performed under contracts with suppliers and contractors amounted to RUR 31.5 billion (incl. VAT), with more than 40% of the total volume of payments made in 2013 being to the five largest of them among the Russian companies.

The largest suppliers and contractors under retro-fitting and modernization, repair and operation programs:

1. JSC Hydroremont VKK;
2. JSC Power Machines;
3. CJSC TH Privod-AZTPA;
4. LLC Energy Standard;
5. CJSC VNIIR Gidroelectroavtomatika.

Note. The list includes local suppliers and contractors (according to the GRI EC6), international companies are not included

### Transparent Procurement System

The RusHydro Group of companies has introduced a unified procurement system regulated by the Regulations on the purchase of products for JSC RusHydro's needs, which were approved by the Board of Directors in 2011, taking into account amendments as required by law, and standard procurement provisions developed for SDCs/auxiliary dependent companies.

For details, please see 1.2 INCREASE OF SHAREHOLDER VALUE (Fair business practices; Procurement management)

"We intend to further improve corporate procurement management mechanisms, while developing our own experience and using practical operating results of other State-owned companies."

Sergei Janson, Purchasing Director of JSC RusHydro

## Customers and Consumers

### Interaction with retail electricity market entities

Building a developed retail energy sales business providing quality service and uninterrupted power supply to consumers is one of the areas of RusHydro's strategic development, within the framework of which the Company interacts with retail electricity market entities.

RusHydro carries out energy sales activities in the retail electricity and capacity market through a unified energy sales structure, ESK RusHydro, which sells electricity through regional sales companies in four regions:

- JSC Krasnoyarskenergosbyt (the Krasnoyarsk Region);
- JSC RESK (the Ryazan Region);
- JSC Chuvashskaya Energosbytovaya Kompania (the Chuvash Republic);
- ESKB – in the Republic of Bashkortostan.

All energy sales activities in the regions are carried out in accordance with a unified corporate standard for providing services to retail customers. All regional sales companies have the status of a guaranteed energy supply company that must sign contracts for electric

power supply with all final consumers in their regions on the basis of their applications.

### Optimizing retail management

In 2013, JSC RusHydro was working to centralize the management system of power supply companies and to upgrade their operating profitability to improve the quality of services to retail customers. The Company managed to achieve significant cost reductions in the Company's retail business, as a result of implementing measures to centralize the management system and improve the operational efficiency of power supply companies.

JSC RusHydro retail customers comprise more than 1.65 million domestic customers and more than 69 thousand legal entities.

In 2014-2015, plans call for further upgrading the management system of the power supply holding JSC ESK RusHydro, within the framework of

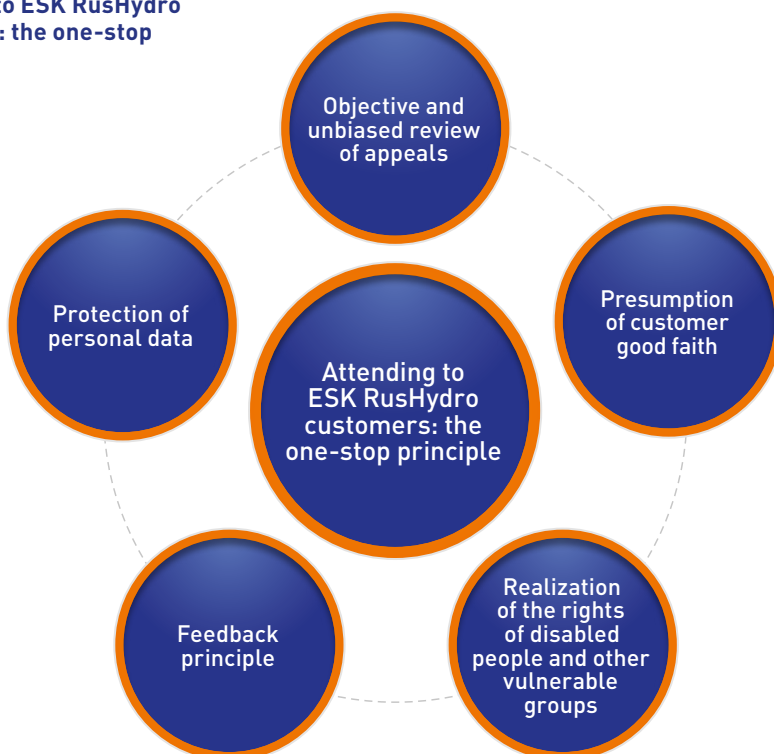
the function of a sole executive body and via optimizing the load on branches. For this purpose, it is proposed to develop interactive services channels,

such as the personal account of a corporate customer, the personal account of a private customer, and email, etc.

In accordance with JSC RusHydro's Strategic Plan for the period till 2015 (with a view till 2020), providing quality service to power supply company customers is a new priority for 2014.

At the beginning of 2013, a Unified Corporate Customer Service Standard was approved in all regional power supply companies. During 2013, in client offices of inter-district divisions in all regional power supply companies, service quality evaluations of conformity to the Standard were carried out.

### Attending to ESK RusHydro customers: the one-stop principle



Source: The Customer Service Standard. Requirements for process organization and implementation and technical facilities, ESK RusHydro

## ESK RusHydro corporate customer service standard



Source: The Customer Service Standard. Requirements for process organization and implementation and technical facilities, ESK RusHydro

### Awareness raising

The main subjects of discussions with consumers in 2013 included:

- Change in municipal housing economy legislation, which abolished the obligation (but left the right) of the population to autonomously submit readings of individual metering devices. Strict time limits for metering were also canceled;
- Issues of increasing payment discipline and timely informing different groups of consumers on the change in current legislation and the regulatory framework, including during the preparation for the introduction of the social electricity consumption norms;
- Introduction of social electricity consumption norms in numerous Russian citizens and entering the Krasnoyarsk Region into the list of pilot regions for the project;

- Promoting in the regions, in which ESK RusHydro operates, energy efficiency upgrade initiatives: educational projects among the resident population and services related to identifying and implementing energy-saving potential among enterprises and organizations;
- Other issues: receivables control, settling nonpayment problem, the development of additional services, as well as JSC RusHydro's social and charitable projects.

In 2013, at the end of the second and the third quarter, JSC RESK made the top five in the Russian Federation in the rating "Power Supply Companies: Efficiency on the market", published by the NP Market Council.

### Monitoring the quality of customer service

"The control and quality of customer service allow us not only to improve our work, but to optimize it. However, the evaluation of progress is often made by the Company, while consumer opinion should play the main role in this process."

**Evgeniy Gladunchik,**  
Executive Director of JSC RESK

In 2013, in inter-district customer service centers, ballot boxes were installed, and each customer can evaluate the quality of service by a particular employee. Last year, JSC RusHydro implemented the virtual reception project at the corporate website. Through this reception, any consumer can ask a question or leave a detailed opinion on corporate performance. In December 2013, the Unified Information Center for servicing ESK RusHydro customers was opened at JSC RESK. Any consumer can use the center's services by calling on the multi-channel telephone number.

In 2013, JSC Krasnoyarskenergosbyt for the second time was the winner of "The Best Power Supply Company of Russia" contest in the category "Socially Responsible Power Supply Company." The contest was held by the industry portal "EnergyNews."

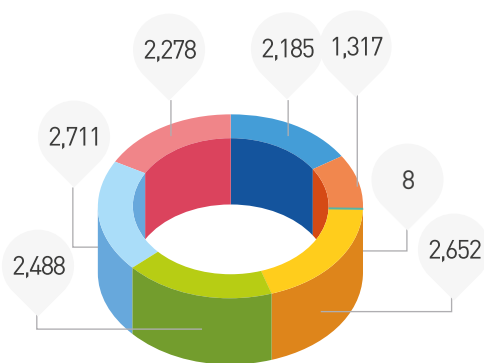


## 3.2 HR potential development – a guarantee of long-term growth

The RusHydro Holding's employees are a team of professionals working at tens of hydro-power plants in Russia and beyond. The Company considers its workforce to be its major asset. Recently, there has been a distinct inflow of young specialists to the Holding's companies' facilities. This is a positive result of the Company's HR management programs.

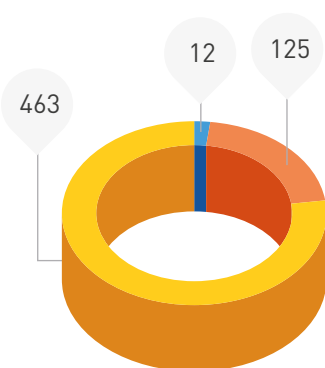
In 2013, RusHydro's head count stood at 14,239 employees

**The number of employees within the Russian Federation broken down by RF subjects (as of 31.12.2013)**



■ The Central Federal District  
 ■ The Southern Federal District  
 ■ The North-Western Federal District  
 ■ The Far East Federal District  
 ■ The Siberian Federal District  
 ■ The Volga Federal District  
 ■ The North Caucasus Federal District

**The number of employees outside of the Russian Federation broken down by regions (as of 31.12.2013)**



■ The Republic of Armenia  
 ■ The Republic of Tajikistan  
 ■ The Kyrgyz Republic

## RusHydro's Social Policy

In 2013 the Company's Board of Directors adopted JSC RusHydro's Social Policy which formulates "equal conditions for all employees in respect to intra-corporate labor flow" and defines three priorities in HR management and development, namely the following:

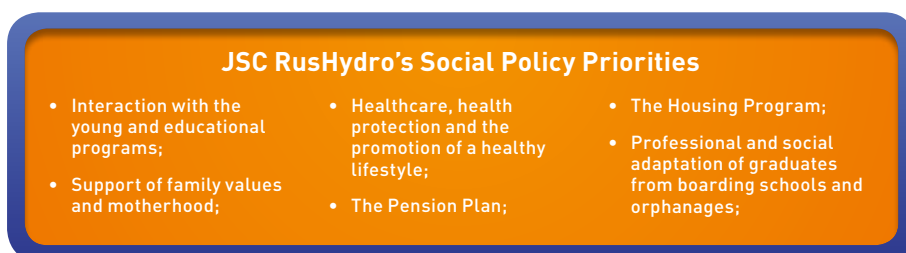
1. The creation of an institutional environment to attract and retain young specialists;
2. The formation of employee commitment to JSC RusHydro's goals and principles;
3. The improvement of labor relationships with regard to the interests of the employer, the employees, the shareholders and the State.

Implementing the above-mentioned priorities should contribute to the realization of JSC RusHydro's social responsibility position and will also enhance the Company's attractiveness as an employer to attract and retain the best employees.

### Social policy goals

- The development of national State projects and the implementation of the Company's socially responsible position;
- The development of mutual responsibility and social partnership practices;
- Upgrading JSC RusHydro's attractiveness as an employer to attract and retain the best employees.

### Social policy of JSC RusHydro





# HR Management – Processes Aimed at Employees Attracting and Retaining

The Standard Collective Bargaining Agreement (BA) is the main document regulating social and labor relationships in the companies of the Holding and to implement and plan JSC RusHydro's HR policy. The document sets forth numerous guarantees and benefits for organization employees.

In 2013, the Company's branches re-concluded standard BAs with employees due to the development of the new BA for 2014-2016. The new version of JSC RusHydro's BA was re-worked in compliance with the Power Industry Tariff Agreement (for the 2013-2015).

The standard collective bargaining agreement is developed during collective negotiations with the participation of trade union and employee representatives. The content, structure and the procedure of concluding the Collective Bargaining Agreement is determined by Article 41 of the Russian Labor Code (LC), thus empowering the parties to define the content and structure of the collective bargaining agreement via negotiations. The BA does not include a provision on the minimum period for notifying employees regarding essential BA changes. This provision is regulated by the Russian LC.

The standard minimum period for notifying employees on forthcoming essential changes in corporate activities that may impact the interests of every employee is at least two months (Article 180 of the Russian LC). These changes include (but are not limited to): a dismissal in case of organizational liquidation, or workforce reduction. The Labor Code stipulates that the negotiations are to start within seven days from the corresponding request of the initiating party.

For more information refer to Appendix 1 "Quantitative Indices"

## Personnel Recruitment and Rating

Personnel recruitment for all vacant positions in the RusHydro Holding, including corporate managerial positions, is performed on a competitive basis. All candidates irrespective of their gender or nationality have equal opportunities to fill any vacancies, depending on the candidate's qualifications. JSC RusHydro employs no special local personnel recruitment procedures, but in the major regions of presence, a considerable number of employees, including mid-level executives, are actually local.

## Personnel Rating

The RusHydro Holding's employees are subjected to periodic certification to check their adequacy for the positions that they hold. Checking involves rating the professional, business and personal attributes of the employees, as well as results of their occupational activities. The certification procedures, performed once every three years, cover managers, specialists and the Holding's companies' service personnel regardless of gender. Some employees were certified in 2013.

For more information refer to Appendix 1 "Quantitative Indicators"

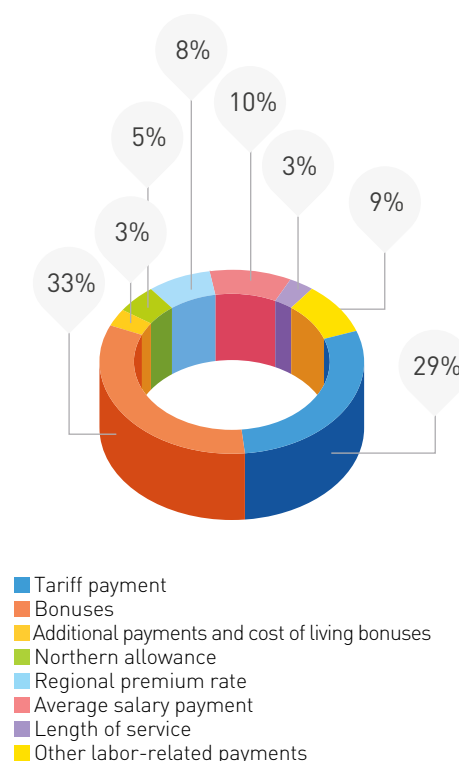
## Processes used to attract and retain labor resources

The creation of an efficient and flexible system to attract and retain employees forms the foundation for HR management. Significant attention is paid to personnel motivation and material and non-material stimuli, as well as to social security.

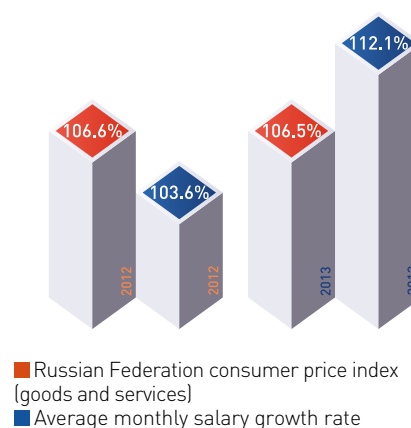
## Developing a personnel motivation system

In 2013, the total salary budget grew 13.5%. The average salary growth rate registered during the year was ahead of the Consumer Price Index (CPI). Indexing of the minimal tariff rate is accomplished quarterly, in accordance with p.3.3. of the Power Industry Tariff Agreement.

## Personnel Salary Structure (core business)



## CPI growth rate vs the core business personnel average monthly salary growth rate



## Insurance Programs

The corporate employee insurance programs are efficient for motivating and retaining personnel. The Company implements numerous such programs, including compulsory pension and medical insurance. The Company also offers its employees an opportunity to participate in non-governmental pension (NGP) and voluntary medical insurance (VMI) programs. In 2013, the percentage of JSC RusHydro employees participating in NGP programs amounted to almost 50%. The percentage for the RusHydro Group is slightly lower, as NGP programs are not implemented in some of the Company's SDCs, since the implementation of NGP programs is dependent on the long-term financial results of the SDCs. The structure of pension provisions consists of pension plans with pre-set/fixed installments. Actuarial settlements are held on a regular basis; thus the Company prevents the risks of incomplete coverage of pension liabilities by the Company.

The companies of the Holding annually select companies for employees' voluntary medical insurance competitively. An open tender is used to select insurance companies capable of providing reliable and fully-fledged personal insurance coverage for the RusHydro Holding's employees. In 2013, SK Alliance was selected to be JSC RusHydro's official insurer in 2014.

## Social guarantees and benefits for employees

The new version of JSC RusHydro's BA contains all existing guarantees and benefits for employees, providing personnel with the following:

- Non-governmental pension plans and voluntary medical insurance;
- Additional paid compassionate leave;
- Material support for employees, retired employees and their families;
- One-time payments to employees;
- Care for the employees' children.

New social programs adopted in 2013:

- Support for families and mothers;
- Healthcare, health support and the promotion of a healthy lifestyle;

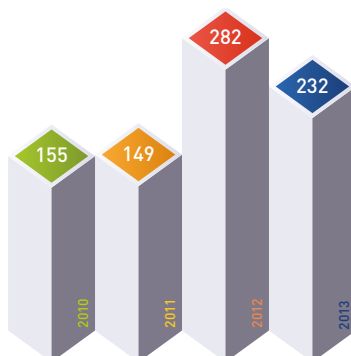
- Professional and social adaptation for graduates of boarding schools and orphanages.

All BA guarantees and benefits cover all full-time employees. The new version of the BA was complemented with new provisions pertaining to the Social Policy and the Program for the professional and social adaptation of graduates of boarding schools and orphanages, adopted by JSC RusHydro in 2013. The new BA also includes a section dedicated to benefits and payments due to foster parents and guardians. Besides, the new BA also specifies new benefits for employees with family duties – the BA stipulates material benefits for the parents of first-graders and graduates, and an additional paid leave for parents of first-graders.

## Housing program for the employees

The priority right to take part in the housing program is provided to the young specialists under 30 years of age who have no housing of their own, as well as at specialists who moved from other regions, and key and highly-qualified employees. JSC RusHydro compensates mortgage rates and housing rental expenses to the employees with diplomas with the profile specialization and employed in the Company within three months after graduating from Russia's higher education institutions with which the Company concluded the strategic cooperation agreements. In addition, the Company assists all employees in upgrading their housing conditions, functioning as a middle man between employees and credit, real estate and insurance organizations, to provide discounted rates and preferential terms.

**The number of employees participating in the 2012-2013 Housing Program**



## Human Rights

JSC RusHydro's approach to observing human rights is based on adhering to all Russian legal requirements. The Company conducts no business and concludes no investment agreements in regions with a high risk of human rights violations. The Company guarantees its employees that their rights for labor, rest, and old age and disability pension will be implemented in accordance with Russian Labor Law Code requirements. The Company also guarantees that it uses no forced or mandatory labor in any form.

The employees of the companies of the Holding are free to exercise their freedom of association, as the majority of the RusHydro Holding's companies have established and operating trade unions.

## Types of feedback and the effects of the collective bargaining agreement on management

Communications between the Chairman of the Management Board - General Director and representatives of the staff working in the Company's branches and SDCs was first initiated in 2012. The communications are carried out via video-conferencing. JSC RusHydro intends to further develop the practice in question.

To upgrade the efficiency of staff and management interactions, as well as the efficiency of communications among employees from different SDCs, an intra-corporate portal and a forum are accessible at <http://blog.rushydro.ru>. The portal is used to publish news, normative and administrative documents of the Company and reference information, as well as information on Group operations and the operations scale. "The Messenger of RusHydro," an intra-corporate monthly journal, is traditionally recognized as the leader among corporate publications (including in competitions).

To facilitate communication between management and the workforce and to inform employees and consult with them, as well as to exercise employee

feedback with corporate management, the companies of the Holding have established Public Reception Rooms. There are also workforce conferenc-

es conducted for the same purpose. Meetings and discussions involving JSC RusHydro's management and trade unions are conducted during

the collective negotiations, signing of collective bargaining agreements and upon the request of any party of the social partnership.

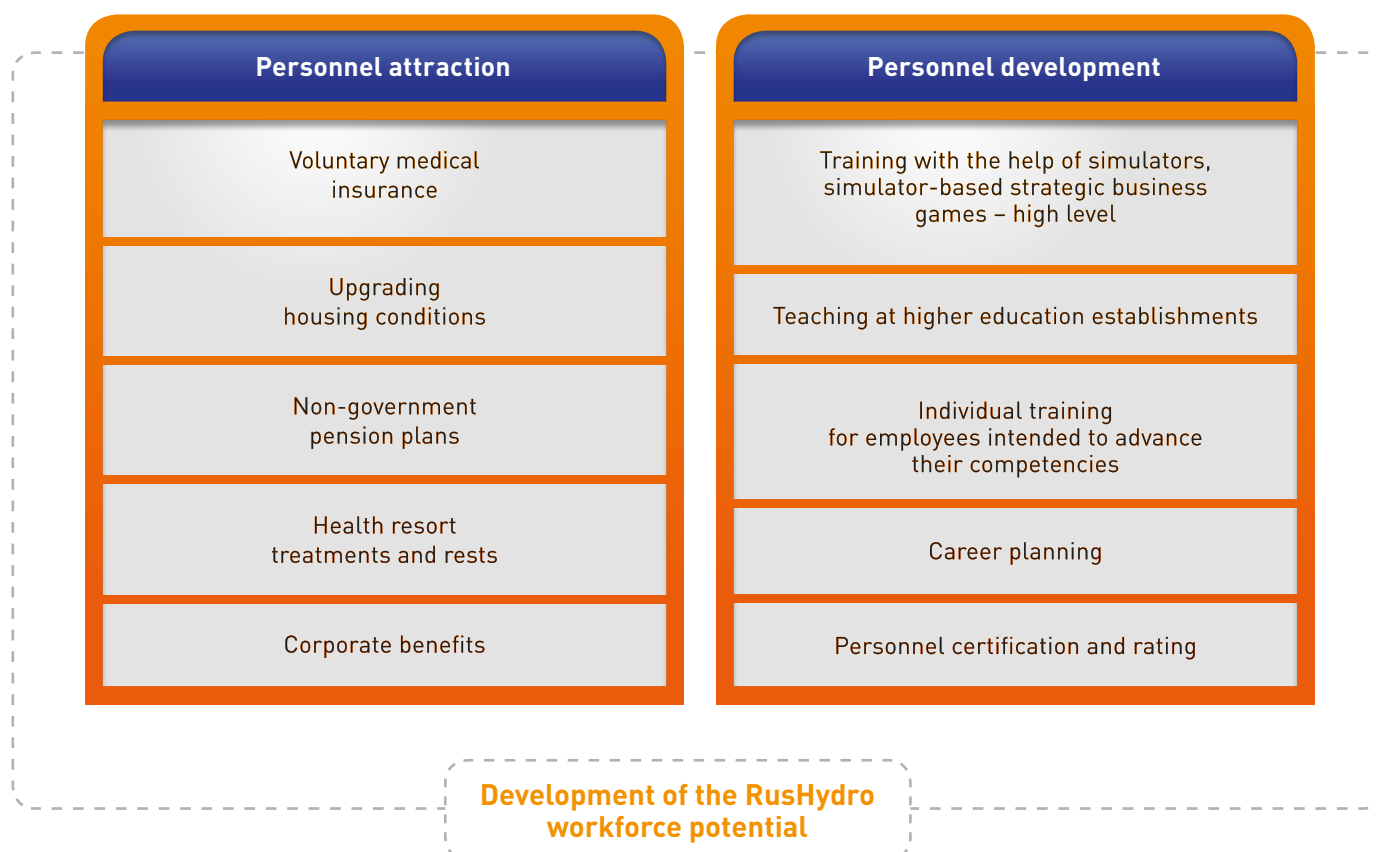
## Training and Development

The development of HR potential is an ongoing corporate strategic priority, which has been included in the list of JSC RusHydro's 2013 priorities. HR develop-

ment costs are considered by the Company to be a major component of human capital investments.

### HR Potential Development

The availability of highly skilled and responsible managers, specialists and workers is the Company's main strategic priority in HR management



## Processes used to attract qualified human resources

The lack of key personnel is assessed by JSC RusHydro as an essential risk. The Company implements the Priority of HR Development Program and forms an HR reserve and a motivation and social support system in accordance with the Strategic Risks Management Plan. These measures are intended to establish a long-term competitive advantage for the Company, allowing it to attract and retain qualified personnel.

The Priority of HR Development Concept of JSC RusHydro "From the new school to the workplace" determines the HR Policy of the RusHydro Holding, taking into account the forecast availability of required qualified personnel. The Concept, together with the corporate lifts system, is used to implement a project of targeted development for key competencies of future hydro-power industry specialists beginning from their early years, realizing measures for the early occupational orientation of junior and senior high school pupils and the training of students in hydro-power occupations in accordance with the Holding's companies' needs, and establishing conditions required for the efficient activity of young specialists.

JSC RusHydro strives to establish an institutional environment consisting of an internal on the job mentorship system, a Corporate Hydro-power University, the Sayano-Shushenskaya branch of the Siberian Federal University, which is located in the direct vicinity of the major hydro-power station, and a network of federal and regional occupational colleges.

In 2013, the following educational projects were implemented as a part of the stage "Corporate Lift – New School":

### Centers of Technological Creativity and Hydro-Power Classes for Pupils

The Company organizes and supports the Centers of Technological Creativity and Hydro-Power Classes organized in the secondary schools in the regions of presence. The biggest one was organized in the Cheremushki locality; approximately 300 pupils took part in it, and 11 hobby groups functioned in it. In 2013, the fiaep Hydro-Power Class was opened in Uglich on the basis of RusHydro Educational and Industrial Information Center; 20 pupils undergo trainings there.

### Summer Energy School 2013

From July 21 to August 3, 2013, the third Summer Energy School (SES) was arranged by the Corporate Hydro-Power University in the Rybinsk district, the Yaroslavl region. This project is implemented as a part of the HR Development Concept of JSC RusHydro "From the new school to the workplace." This year, the School was held all over the country. 40 pupils from 12 regions took part in it. A lecture by Professor Jean-Jacques Fry, a member of the International Commission on Large Dams, a well-known hydro-power specialist, was a real gift for the members of SES.

### Energy of Education-2013

In 2013, over 100 pupils from 34 Russian regions and the CIS countries took part in the corporate academic competition in physics for senior students "Energy of Education." Four participants of the "Energy of Education" won the Hope of Energy Industry All-Russian Academic Competition for pupils. The corporate academic competition is held every year in cooperation with the Moscow Energy Institute and will be held in 2014.

### Studying Hydro-Power Industry Basics

As a part of the career guidance program "Energy of Education" the Company provided educational and methodological materials (Very Important Water, Hydro-quiz, Electrical Quiz and Video Library of Hydro-Power Sector) to the teachers and students of secondary schools, arranged career guidance lectures for 300 senior students and methodological seminars for 205 teachers from 128 schools.

The Company arranged and carried out the first stage of the Hydro-Power School Internet portal.

1,000 copies of the book "The History of Engineering in the USSR" were published.

### As a part of the stage "Corporate Lift-the Company" was conducted:

#### Classroom and distance training of corporate personnel

The system of occupational development and personnel training that exists in the RusHydro Holding allows for ongoing on-the-job advancement of qualification for corporate employees, improving their knowledge and skills and providing for a sustainable HR reserve and for the growth of the Holding's companies' workforce potential.

The Corporate Water Power University, abbreviated as KorUnG, is a research, informational, educational, methodology and consultancy center of JSC RusHydro. The main University tasks include: the provision of systemic reliability and corporate sustainable development by developing workforce competencies and preparing HR potential for the power industry.

The key components in managing the system in question are JSC RusHydro's HR Management Department and the Corporate Water Power University (KorUnG). The University is a multi-level personnel training establishment consisting of training centers with classroom and distance training facilities. The Sayano-Shushenskaya Training Center located in Sayansk is one of these centers.

### Formation of the HR reserve

2013 marked the second year in a row in which JSC RusHydro hosted a competition for specialists under 30 years of age entitled "The Internal Source of Energy". The competition is intended to form a reserve of promising specialists to become managers of the RusHydro Holding's companies' structural divisions and to initiate the promotion of young employees to managerial positions, as well as to facilitate sustainable professional growth and to foster corporate culture within the Holding.

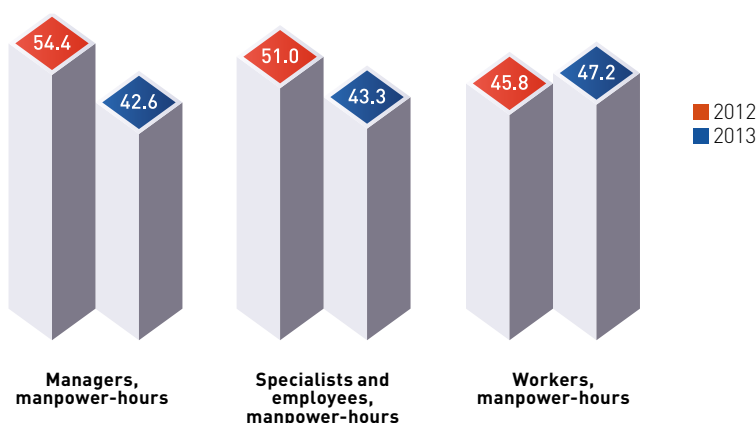
### Supporting the dynasties of hydro-power specialists and upgrading occupational prestige

In 2013, corporate scholarships were granted to 52 children of the Company's employees who study with good and excellent marks at the industry's higher educational institutions. The RusHydro Holding's scholarships are used to support the dynasties of hydro-power specialists and to upgrade occupational prestige.

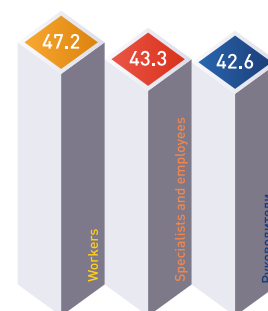
The personnel training costs in 2013 amounted to RUR 128.4 million

Detailed information on JSC RusHydro's Priority Development Concept and the Corporate Lifts system can be found in 2013 Annual Report (HR Policy and Development of HR Potential) at <http://www.rushydro.ru/investors/reports/>

### Dynamic representation of employee training, 2012/2013



### Training of employees broken down by categories, man-hours in 2013



[\*] The diagrams display an average value – an average number of manpower-hours determined by summing the amount of time actually spent on training (undergoing special training programs to advance qualifications) for each category of employees in regard to the number of employees in each category during on, as well as off, time

## 3.3 Social partnership in operating regions

JSC RusHydro shares and implements the principle of systematic dialog with stakeholders including local communities. As a matter of practice, this dialog respect the interests of all stakeholders and is conducted through social partnership in regions by means

of job creation, budget contributions, conducting technical events aimed at assessment and mitigation of environmental impact and voluntary initiatives of interactions with local communities that include charitable programs and corporate volunteering.

The Charity and Sponsorship Program was approved by JSC RusHydro's Board of Directors in the beginning of 2013. The initial RUR 970 million invested in the Program (including RUR 880.3 million for the Executive Board) was adjusted during 2013 to total RUR 1,220 million, according to the Board of Directors decision.

# Support for the Victims of the Far East Flood

To implement a large-scale sponsorship program intended to provide assistance to flood victims in the Far East, involving, among other things, the financial assistance and the reconstruction of regional infrastructure, the Company spent RUR 257 million in 2013, of which RUR 100 million were sent to the Amur Region, with two transfers amounting to RUR 50 million each handed over to the Khabarovsk Region and the Jewish Autonomous Republic.

Within the framework of the "All Together" Charity Initiative organized by the TV Chan-

nel One, JSC RusHydro donated RUR 20 million to help people affected by the flood in Far East regions.

The "Involvement" Charity Foundation: personal donations made by employees of the RusHydro Group of Companies and transferred to the "Involvement" Charity Foundation to help Amur Region victims exceeded RUR 37 million. The corporate initiative was supported by the Power Industry Employers Association, the all-Russian Power Industry Trade Union and numerous other industry organizations. The donated amount was spent to provide financial as-

sistance to 309 families and to reconstruct several infrastructure facilities in the Amur region, including the boarding school for children from flooded areas.

From August 15 to November 2013 for fast processing of data about people who suffered from flood and providing them targeted aid, RusHydro's community liaison office functioned in Zeya, the Amur Region. RusHydro's employees purchased and passed to the Ministry of Emergency Situations special protective means and equipment to conduct evacuation of people in the Amur regions suffered from flood.

# The Social Partnership Program in Khakassia and Liquidating the Social Consequences of the Sayano-Shushenskaya HPP Accident

A program for the complex development of the Cheremushki Settlement social infrastructure, developed in a joint effort with the government of the Republic of Khakassia and the administration of Sayansk, can set an example for social partnership and for fruitful cooperation with regional authorities. The fifth year of Program implementation resulted in the reconstruction of social facilities in the Cheremushki Settlement, which is inhab-

ited by power industry and hydro-power engineering specialists. The amount invested by JSC RusHydro to develop settlement infrastructure for the 2009 to 2014 period exceeded RUR 600 million.

In the beginning of 2014, a delegation of representatives from the Presidential Council for the Development of Civil Society and Human Rights visited the JSC RusHydro's industrial and social fa-

cilities in Khakassia. Delegates approved the results of the Company's investments into regional social and economic development, including the complete renovation and re-equipment of the "Eureka" Lyceum and the out-patient hospital established by the Company within the frameworks of the Program for complex settlement development.

"Firstly, we were very impressed by the people, who love their HPP and their work. They feel very involved in everything that goes on, being very active contributors to the reconstruction process."

**Mikhail Fedotov,**

an Advisor to the President of the Russian Federation, the Chairman of the Council for the Development of Civil Society and Human Rights, speaking to Sayano-Shushenskaya HPP employees

Reconstruction and the Sayano-Shushenskaya HPP will be completed in 2014. The social support program for family members of victims of the Sayano-Shushenskaya accident will continue for at least 10 more years. JSC RusHydro's Board of Directors decided to allocate some RUR 1,300 million to the above-mentioned support program.

Approved by the Board of Directors of the Company, a program for the liqui-

dation of social consequences of the Sayano-Shushenskaya HPP with the budget of RUR 185 million was launched during the first days after the occurrence of the accident. The Company's project is of a comprehensive nature, as it is intended to provide assistance and support to the victims and the family members of those who died in the result of the accident, including the provision of comfortable housing and subsistence and

the establishment of conditions for the upbringing of children.

The organizations which provided employment to 61 members of the families of those who died in the result of the accident include the following: the Sayano-Shushensky branch of JSC RusHydro, JSC SShGER, JSC EC RusHydro and Sayano-Shushenskiy branch of the Armed Security Guards of the Russian Ministry of



Energy, as well as Krasnoyarskenergosbyt JSC and IDGC of Siberia JSC.

Since the accident the Company spent some RUR 184.7 million to provide social support for the victims and their family members of those who died in the result of the accident (the data valid on 31.03.2014). The support was conducted via the following social programs: payment of monthly allowances to the families with children, scholarship and pension support, purchase of apartments for the victims' families who don't own house, victims' loans redemption etc.

- The support of the retired parents and spouses of those who died in the accident is implemented on ongoing basis.

- RUR 28 million were spent to purchase 24 apartments for the families of the victims of the accident with no apartments of their own.

- The Company pays monthly scholarships to the children of the accident victims receiving their first primary, secondary and higher professional education. The scholarships will be paid till the last child from every victim's family graduates from a higher educational establishment.

- The Company paid RUR 18 million in the form of monthly allowances to 32 families with children under 18. This support will be granted to families till their junior children come of age.

- The Program of the health resort treatment for the victims' families and injured persons is continued.

Liquidation of Social Consequences of the Accident at the Sayano-Shushenskaya HPP project implemented by RusHydro HPP became one of the Top-20 of "The Best Social Projects of Russia 2013" National Program.

## Charity and Sponsorship

### The "Involvement" Charity Foundation

On August 7, 2012, the Board of Directors of JSC HydroOGK Management Company decided to establish "Involvement", a non-commercial charity foundation. The foundation is a non-commercial charity organization established based on voluntary property contributions made to assist charitable activities carried out in accordance with Russian Federation laws and the Foundation's Charter.

2013 on the basis of the Moscow Energy Institute, the National Research University was founded due to the Foundation support. The Chair in question will be a center for the corporate program of educating specialists to meet JSC RusHydro's needs. Cooperation with the chair will enable the Company to participate in

preparing engineers for all stages of the production life-cycle, including: design, research, construction and operation.

The establishment of the above-mentioned Chair and its further functioning will be financed by JSC RusHydro through the "Involvement" Foundation.

In 2013, projects implemented by the "Involvement" Charity Foundation amounted to more than RUR 48 million

The Foundation's activities are targeted at the provision of financial support to employees of RusHydro and their family members who are in trouble. The Foundation is also there to help industry veterans, and retired figures of Russian culture and art, as well as scientists and teachers. Other patronized categories include: ill children, orphans, children with disabilities or those who come from disadvantaged families. The Foundation also supports socially significant projects and young talented researchers.

The Chair of Hydro-power and Renewable Energy Sources established in

The projects implemented by the "Involvement" Foundation in 2013 amounted to more than RUR 48 million, including the following:

1. Provision of support to the Company employees and other physical persons in trouble.

2. Targeted charity programs for religious organizations and to the Chair of Hydro-power at the Moscow Energy Institute.

3. The program of support to the victims of the flood in the Far East.

### Effects produced by the establishment of the "Involvement" Charity Foundation

1. The emergence of obvious addressees for the donors (physical persons and companies of the RusHydro Group of Companies) to provide targeted charity support;
2. The development of a universal simple and easy to use charitable mechanism (provides the function of accepting funds, and the execution of documents, including tax deductions);

3. Savings resulting from beneficial taxation of charitable support (decreasing the taxable base and tax deductions);

4. Increased transparency in the use of donated funds (online visualization of operations for all charity programs);

5. The development of a mechanism for systemic control over the efficiency of donations already received.

## Sail of Hope

The Company's corporate strategy includes charitable programs are intended to educate a new generation of energy sector professionals and to improve the social atmosphere in the regions in which the Company's HPPS operate. Under the "Sail of Hope" Federal Long Term Program JSC RusHydro, its branches and subsidiaries across the country have implemented key charity projects. The Program is meant to support children from disadvantaged families and children with disabilities. The projects implemented as a part of the Program received all-Russian and regional charitable programs awards.

### Support for children's boarding homes and pre-school facilities

As a part of the Sail of Hope Program JSC RusHydro and its branches all over the country implement charitable projects such as the purchase of equipment for social adaptation rooms in children's boarding homes, the construction of children's playgrounds, the organization of various contests and competitions, children's New Year parties, and the provision of support for children's sporting facilities, etc. these projects are aimed at local communities development and improvement of the social climate in the regions of the RusHydro Holding's companies' presence, they are to support the most unprotected population - children from disadvantaged families and boarding homes. JSC RusHydro contributes to the organization of playrooms to socially adapt children in boarding homes and orphanages. The "Sail of Hope" integrates the social adaptation and education of such children in spheres associated with the hydro-power industry making it possible, among other things, for them to learn some trade. The children who go into the hydro-power industry thanks to the project will probably form the Company's future HR potential.

One of the most significant projects implemented in 2013 is the construction of a new nursery school called "Islet" in the city of Volsk, the Saratov Region. The nursery school for 280 children is equipped with the most advanced facilities.

JSC RusHydro provided financial support to facilitate the publication of a book called "Water – the unusual in the usual." The book for children and teenagers was published by DETGIZ Publishing House and is available in all regions in which the Company operates. The major part of book copies is provided to children's homes, schools and libraries.

### Support of children's and grassroots sports

The "Sail of Hope" Program implements different water sports projects in the 19 regions in which the Company operates. Corporate branches provide financial support to children's and youth sports schools practicing underwater swimming, sailing, whitewater rafting, table tennis, judo, football and hockey. The Company facilitates the participation of young sportsmen in regional, federal and international competitions and tournaments.

### Educational programs and grants

The key educational project implemented within the framework of JSC RusHydro's charity program is the contest for student papers on hydro-power and renewable energy sources. The contest called "The Energy of Development" celebrates its fifth year in 2013. The history of the contest includes the participation of some 100 higher education institutions with more than 500 students and post-graduates who have submitted papers to the contest. More than 30 contest winners have decided to pursue careers in the hydro-power industry

#### "Energy of Development" students' annual projects contest

"Energy of Development" students' projects contest is organized by the Company for the students and post-graduates of the leading Russian technical universities since 2009. The competition is five years old now and in 2013 the number of its participants exceeded 80 students and post-graduates from 25 higher educational institutions. The contest jury was chaired by Evgeny Dod, the Chairman of the Management Board - General Director of RusHydro JSC. Other members of the jury included the members of the Management Board and the managers of the RusHydro Holding's enterprises, as well as the members of the power engineering research community. The seven winners of the contest will be sent to Europe to proceed with their training. The contest's diploma is taken into account when developing a database of specialist positions with an opportunity of subsequent employment with the hydro-power companies (you can visit the official website of the contest at [www.konkurs-er.rushydro.ru](http://www.konkurs-er.rushydro.ru)).

### Environmental initiatives

#### "oBEREGAi" Environmental Initiative

An all-Russian Charity Environmental Initiative known as "oBEREGAi" initiated and

supported by JSC RusHydro takes place annually since 2005. The initiative involves the cleaning of shores of rivers and water bodies from anthropogenic solid household wastes. The Initiative is implemented by all branches of the Company in regions of operation. The participants include the RusHydro Holding's employees, representatives of municipalities, environmental activists, schoolchildren, students of secondary and higher education establishments and the representatives of mass media. The collection of wastes takes place in the form of a sporting competition with the winners being awarded in the end. The organizers of the Initiative provide all necessary tools and transport for the participants, as well as for the removal of wastes. In 2013 the Initiative was implemented in all regions of Russia, with the number of participants exceeding 3,000.

The Initiative implemented in the period from 2005 to 2013 resulted 500 tons of wastes removed, including the beautification and improvement of beaches and embankments (with the supply of sand, installation of beach equipment, repair and painting of benches). The number of the Initiative participants exceeded 12 thousand children, teenagers and adults, who provided for clean shores, beaches and embankments and learned the lessons of environmental care and civil responsibility.

#### Environmental and educational projects

The President of the Russian Federation declared the year 2013 to be the year of environment protection. Pursuant with the declaration, the Company increased the volume of its charity contributions to support environmental organizations and ecological reserves. The total amount of money invested in such contributions in 2013 comprised some RUR 8 million.

JSC RusHydro supports local ecologists in their efforts to implement the biodiversity and natural environment preservation programs in biosphere reserves and on protected natural territories. Other supported activities include environmental tourism routes and the arrangement of rest areas. The environmental projects implemented last year include the joint initiatives with a number of reserves, including Zeisk and Khingan, Nechkinsky and Darvinsky reserves, Kabardino-Balkarsky mountain natural reserve, Teberdinsky, Kerzhensky and North Osetia natural protected territories, "Cranes' Motherland" nature reserve, Volga-Akhtubinsk flood plain natural part and "Samarskaya Luka" national park, etc.

## Preservation of cultural and historical heritage

The amount spent by JSC RusHydro on the financial support of different religious organizations in 2013 exceeded RUR 50 million. The Company participated in the construction of a new cathedral dedicated to the Annunciation of the Holy Mother on the territory of the Saint Trinity Seraphim Monastery in Diveevo.

The Company provided financial assistance for the reconstruction of the Church of the Icon of Holy Mother of Tikhvin and for the renovation of the Holy Thursday David's Hermitage, as well as for the restoration of

the Cathedral of Assumption of the Joseph Volotsky Monastery.

## Other social projects and charity initiatives

- The "Born by the Energy" project was implemented to supply expensive medical diagnostic equipment to maternity homes and birthing units in regions in which the Company operates. The amount spent by the Company for the above-mentioned purposes comprised RUR 6 million;
- The formation of a grant fund for the Russian Geographic Society;
- Support for the "Creation", "Give a Life"

and "The Center for Humanitarian Programs" charity foundations;

- Charity donations to the Research and Practical Center for Medical Assistance to the Children with Cranio-facial Anomalies and Congenital Diseases of the Nervous System.
- Financial assistance for the "Alania" Football Club includes financing the Club's ongoing activities, development of the children's football school in the Northern Caucasus and Southern Region of Russia.

To learn more about the Company's charity initiatives and partner projects implemented in 2013 visit: [http://www.rushydro.ru/sustainable\\_development/socialotvetstvenost/almos/](http://www.rushydro.ru/sustainable_development/socialotvetstvenost/almos/)

# Corporate Volunteering

Apart from providing charitable donations on a yearly basis, the companies of the Holding also encourage the voluntary individual participation of its employees in different social projects.

The corporate volunteer-based projects are closely associated with the main addressees of corporate charity initiatives.

JSC RusHydro is of the opinion that corporate volunteering contributes to the development of corporate culture, helps to resolve the most urgent problems in regions of its operation and enables the Holding's companies' employees to actively interact with local communities.

## A program for the social and occupational adaptation of boarding school graduates

The program was launched in May 2013 within the framework of the "From New School to the Workplace" Concept of the priority development of the Company's HR potential. The program helps children who have lost their parents adapt to their new lives in boarding schools and beyond, preparing them to enter industry-dedicated educational institutions and to be employed by the Holding's hydro-power companies after graduation. The children learn about different occupations within the industry and visit the Holding's facilities, guided by volunteers who are employees of the Holding's companies.

## During 2013, the Company actively implemented the program in six children's homes:

- The "Volzhsky" Children's Home in the city of Rybinsk, the Yaroslavl Region;
- The "Volzhsky Children's Home" in the city of Volzhsky;
- Secondary Boarding School No 37 in the city of Volzhsky;
- The "Swallow" Children's Home in the city of Sayanogorsk;
- "Children's Home No 3" in the city of Perm;
- The "Hope" Children's Home in the village of Balakhonovskoye, the Kochubeevo District.

In 2013, the Program's implementation priorities included:

- The social, occupational and spiritual development of orphans and parentless children;
- Equipping children's homes with learning facilities, and games, etc.;
- Social support of the Program, meaning the implementation of a list of benefits and encouraging payments for curators, mentors and other target groups participating in the Program;
- Organization of JSC RusHydro's volunteer movement to participate in the lives of children living in children's homes in the regions in which the Company operates;
- Consultancy, organizational and psychological support for target groups participating in the Program;
- Interactions with industry-oriented educational institutions;
- Interactions with ministries, departments and other State authorities responsible for orphans and parentless children.

In 2013, corporate volunteers hosted thirty events for children living in 270 children's homes in the Yaroslavl and Volgograd Regions, the Republic of Khakassia, the Perm and Stavropol Regions.

The Company also arranged for training workshops and practical courses to be conducted for teachers and volunteers participating in the Program. Children from children's homes in five regions participated in the "My Rights" role-playing game.

In December 2013, JSC RusHydro hosted a pre-New Year charity event to collect money for children living in children's homes. The amounts collected were transferred to volunteers so that they could organize New Year parties for children participating in the Program.

# Caucasus

## North-Caucasus Federal District

The Caucasus is a historical transport artery for the Old World and also the source of many natural resources, including oil and gas. The Caucasus has some of the world's most diverse topography. The region is home to the humid and the arid, subtropics and glaciers, valleys and mountains. On just 0.5% of the land area, there are 40% of the different types of the world's landscapes represented. The Caucasus is even known as the world's topographical laboratory. Here, almost one tenth of its area remains untouched by humans. The Caucasus is home to as many as 50 peoples and 40 languages, not counting the multitude of dialects and sub-dialects. They include Abkhazian, which has only two vowel sounds, but 60 consonants. One of the rare languages of the Caucasus, Abaza, is acknowledged to be one of the most difficult languages in the world. The Abaza people, listed in the Red Book of the Peoples of the Russian Empire, numbers a population of just 30,000, of whom only a third speak the Abaza language. Nevertheless books are still published, newspapers printed and online forums maintained in the language. In terms of the number of fauna and flora residing here, the Caucasus comes first among other regions in the same latitudes and is topped only by tropical countries.



The region's energy consumption

**23 billion kWh**



RusHydro facilities' generation in the region

**8 billion kWh**

35% of the energy consumption of all the entire Caucasus Region



Population

**9,500,000 people**



Area

**170,700 km<sup>2</sup>**

1% of the area of Russia, or about five times the size of Belgium

# Section 4. Environmental responsibility

## 4.1 Environmental safety as the criterion of sustainable development

### Environmental policy: approaches and principles

**JSC RusHydro has developed and approved an Environmental Policy, which is based on the following principles:**

- Taking into account environmental safety as a priority component of national security;
- Conserving energy and rationally using energy resources;
- Decreasing the probability of a negative environmental impact throughout all stages of the life-cycle of hydro-power facilities;
- Prioritizing preventive measures.

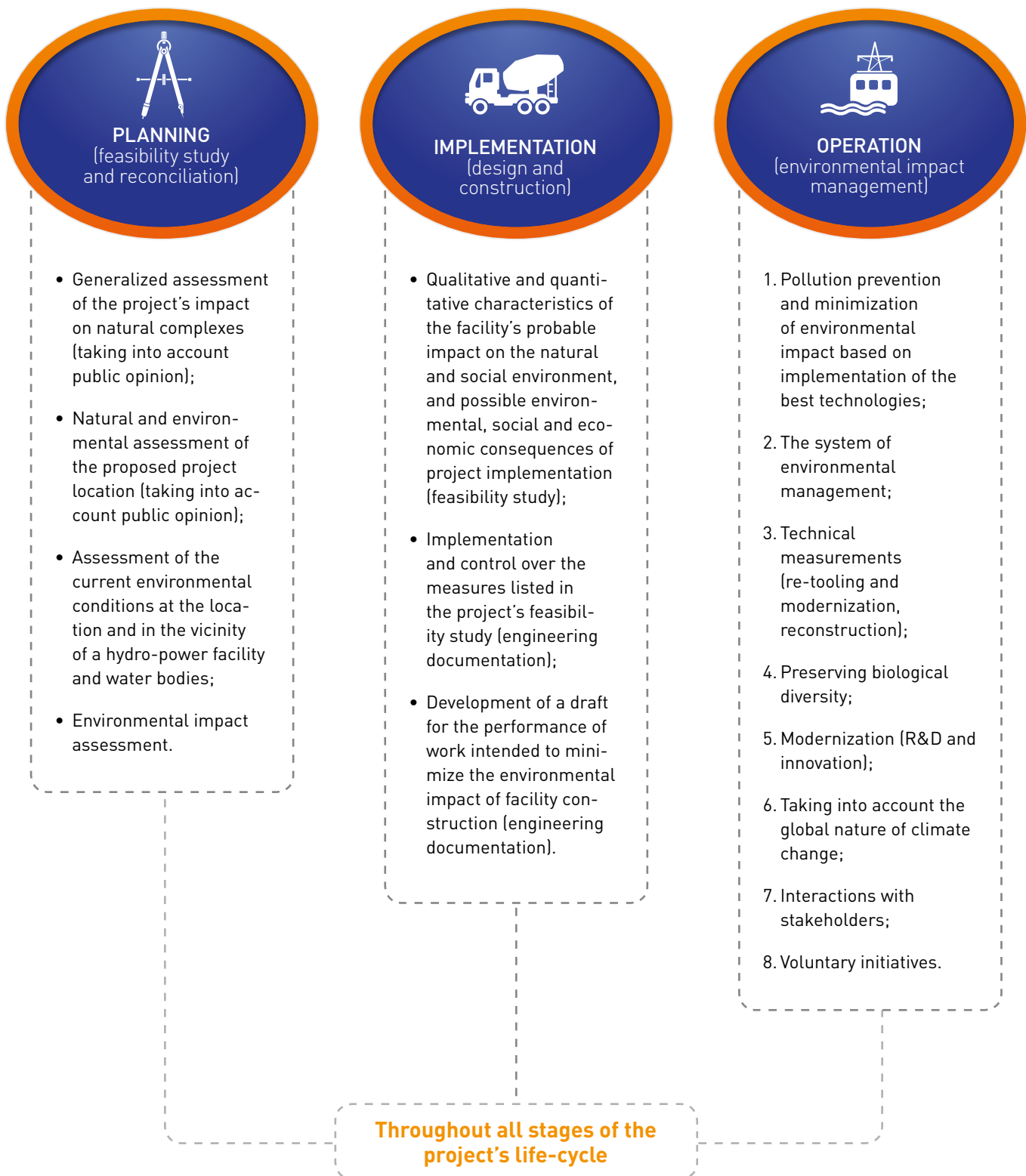
The Goal of the Company's Environmental Policy: The goal is to upgrade environmental safety and to increase capitalization by ensuring the reliable and safe production of electric energy, exercising a consistent approach to natural energy resource usage and increasing social responsibility.

JSC RusHydro has developed corporate standards in the environmental safety of operating activities. A number of other documents regulating procedures in the sphere of environmental control and environmental footprint management during operations performed by RusHydro are in the process of development and upgrading.

JSC RusHydro carries its responsibility for the environmental safety of the Company's production activity throughout the life-cycle of hydro-power facilities, during the pre-design and design stage, as well as during the construction and operation of these facilities. Responsibility also includes: assessing the environmental impact, engaging in the ongoing monitoring of social and environmental impacts and

softening the potential or real negative impacts on local communities. The Company conducts regular monitoring of environmental aspects during its HSEs' operations; these data are taken into consideration in the course of the Company's equipment operations in both normal and abnormal modes and during annual update of the Company's environmental policy implementation program.

## Environmental impact assessment and management mechanisms





# Assessment of the Projects' Environmental Impact

## Social and economic aspects of planning

In Russia, water bodies, including water reservoirs, are owned by the federal state. According to the Russian Water Code, water bodies are provided to JSC RusHydro for long term use for hydro-power energy generation on the basis of water use agreements. Issues of managing water bodies as well as their protection and environmental safety fall within the framework of the federal government. The environmental assessment of projects is performed at the

request of the water basin authorities (WBA). The schemes for the comprehensive use and safety of water bodies are approved by the Federal Agency for Water Resources.

Making decisions on the planning and deployment of energy infrastructure facilities also falls within the framework of governmental authority. In accordance with this, all issues related to relocating inhabitants in connection with the deployment and development of energy facilities fall within the powers of authorities.

But, the companies of the Holding participate in public discussions in regards to the environmental impact of future hydro-power stations at the planning stages.

For more detailed information on JSC RusHydro's decision-making approaches to minimize environmental risks, refer to the Company's web site at: ([www.rushydro.ru/file/main/global/company/safety/environmental/Podhody.pdf](http://www.rushydro.ru/file/main/global/company/safety/environmental/Podhody.pdf))

## Environmental Impact and Environmental Load Decrease Initiatives: the RusHydro Holding

### Environmental Management System

#### The Company's Facilities with the Environmental Management System

The Volzhskaya HPP
The Zhigulevskaya HPP
The Kamskaya HPP
The Zagorskaya PSPP
The Upper Volga HPP Cascade+*
The Votkinskaya HPP+
The Cheboksarskaya HPP
The Kubanskiye HPPs Cascade**
The Kolymskaya HPP
The Nizhegorodskaya HPP+**

\* OHSAS 18001

\*\* ISO 14001, OHSAS 18001 and ISO 9001

+ The environmental management system is implemented but not certified yet

The implementation of the Environmental Management System (EMS) at the Company's branches and generating subsidiaries is one of the tools to realize JSC RusHydro's Environmental Policy. The project involving EMS implementation was launched by the Company in 2007. The first Russian HPPs certified in accordance with EMS and ISO 14001:2004 requirements included the Zhigulevskaya and the Volzhskaya HPPs. The certified HPPs undergo a compliance audit on a yearly basis, and are re-certified every three years.

• On December 31, 2013, six branches of JSC RusHydro (the Volzhskaya HPP, the Zhigulevskaya HPP, the Kamskaya HPP, the Cheboksarskaya HPP, the Zagorskaya PSPP and the Kubanskiye HPPs Cascade) were certified for compliance with EMS and ISO 14001 requirements;

• EMS was implemented but not certified at the branches the Votkinskaya HPP, the Upper Volga HPP Cascade and the Nizhegorodskaya HPP;

- 2013 was marked by the implementation of the Integrated Management Systems (IMS) at the Kubanskiye HPPs Cascade;
- The Nizhegorodskaya HPP, certified for Quality Management System (QMS) compliance, has EMS and OHSAS functionality, which are almost ready for certification and integration with EMS in 2014;
- Two branches, including the Kubanskiye HPP Cascade and the Cheboksarskaya HPP, were re-certified for compliance with ESM, with an audit performed by the largest international companies specialized in this sphere.

## Atmospheric air protection

The companies of the RusHydro Holding produce electricity using green energy sources with minimal environmental impact, promoting rational natural resource use, as well as preserving and recovering ecosystems.

The companies of the RusHydro Holding produce all electricity using only eco-friendly renewable energy sources

No considerable amounts of carbon dioxide are emitted during the operation of water bodies (meaning amounts that

contribute to strengthening the greenhouse effect). During the initial period, after the establishment of a water body, increased CO<sub>2</sub> emission takes place due to the decomposition of flooded organic matter, including: plants, organic deposits and earth humus. The situation becomes more stable in later periods, as the bottom deposits conserve carbon, preventing atmospheric emissions. Organic matter borne by discharge waters can decompose in such water bodies, but this situation is no different from what is observed in usual rivers and lakes. Scientific research does not confirm hypothetic active carbon dioxide emissions from such water bodies.

The RusHydro Holding's companies' major operations concerned with HPP electricity production generate no atmospheric emissions (CO<sub>2</sub> or other greenhouse gases). The pollutants are emitted into the atmosphere by motor vehicles and due to activities performed to provide for the normal condition of equipment (oil regeneration, use of storage batteries, welding, and metals processing, etc.). The Holding's companies control atmospheric emissions periodically. According to the monitoring data, in 2013, the volume of pollutants were insignificant and did not exceed permissible limits.

For more information refer to Appendix 1 "Quantitative Indicators to the Report"

## Safe disposal of waste

The Holding's companies' operations generate production and consumption waste. The largest share is made up of waste from hazard class 4 and 5 gener-

ated during reconstruction, repair and facility service work. All waste is handed over to dedicated contractors for further burial, deactivation or use. JSC RusHy-

dro's branches and SDCs generate no radioactive waste, use no PCB-containing materials and generate no waste.

For more information refer to Appendix 1 "Quantitative Indicators to the Report"

## Water use and water protection

All water bodies affected by the Company's operations are used in strict compliance with Russian legal requirements and terms of water use agreements. All permits are arranged timely and approved by the respective regulatory organizations. There were no facts of environmental laws violation in 2013 by the Company.

The Company pays great attention to the water purification. In 2013, the North-Ossetian branch concluded a contract to establish waste water purification systems at the Dzaujikan-skaya, Ezminskaya and Gizeldonskaya hydro-power plants in 2014.

The Cheboksarskaya HPP has developed a project for the reconstruction of purification plants for drainage water coming out of the HPP building and for melt and rain water coming from

the territory of the support base. The projects have been approved by government experts. Implementation is planned for 2015.

### Engineering initiatives to decrease the environmental load

The engineering initiatives implemented at the RusHydro Holding's facilities pursuant to the Program for the comprehensive modernization, reconstruction and repair of hydro-turbine equipment have proven to be the most efficient in decreasing environmental load, as they minimize or completely eliminate oil products in water bodies during the operation of hydro-turbine equipment. In 2013, such initiatives were implemented at the Volzhskaya, Zhigulevskaya, Kam-skaya, Novosibirskaya, Saratovskaya HPP and at the Verkhnevolzhskiy HPPs Cascade.

In 2013, the Company has carried out reconstruction, repair of water control structures and shore protection work at nine HPPs to properly maintain water protection areas. Five more HPPs underwent the planned replacement of oil-filled electric equipment with equipment containing no oil (vacuum and gas-insulated), or equipment containing lesser amounts of oil.

## Preserving biological diversity

- In 2013, the Company's Karachaevo-Cherkessky branch performed the annual stocking of fish in the Teberda River. The five-year program for replenishing rivers' bio-resources calls for the annual stocking of Karachaevo-Cherkessia rivers with 50-100 thousand baby brook trout. The stocking locations were selected and approved by an order of the Russian Ministry of the Fishing Industry based on research data pertaining to the recovery of the brook trout population, which is close to extinction. During the Program's five years, stocking locations will change to enable the natural reproduction of fish in these rivers.
- In May 2013, an environmental charitable campaign focused on stocking of fish in the Kuibyshev water reservoir in the Chuvash Republic was organized by JSC RusHydro and JSC Chuvashskaya Energosbytovaya Kompania. 15 thousand baby starlets were released in the Volga River in the lower water of the Cheboksarskaya HPP.
- Development by the Company's Dagestan branch of fish protection initiatives and the assessment of the impact of HPPs activities on water resources. The assessment was performed in coordination with the territorial office of the Russian Ministry of Fish Industry. The results of the assessment made the design and construction of fish protection facilities inappropriate.

Below is the list of other initiatives for preserving the bio-resources of rivers and the related environment, implemented by the Company in 2013:

- Field studies and inspections of river areas adjacent to HPP locations in Karachaevo-Cherkessia performed to assess the efficiency of fish protection and fish-passing facilities at the Asaut, Marukha and Bolshoi Zelenchuk Rivers, and to check the impact on river bio-resources;

The Rushydro Holding's hydroengineering facilities are not located in the protected natural territories or in adjacent zones.

## Initiatives to mitigate the environmental impact of products and services

During implementation of R&D projects aimed at biological resources protection, the following measures were taken in 2013:

- A draft of a preliminary national standard entitled "Environmental Protection: Norms for the loss of oil products during the operation of hydro-turbine equipment. Calculation of turbine oil losses during the operation of hydro-turbine equipment" was developed by JSC RusHydro in a joint effort with NIIES – a R&D Institute of Power Facilities. Once corrections have been introduced into the documents, it will be approved by the Technical Committee of the Russian Standards Authority.
- The implementation of a research project entitled "The Development and Testing of a Hydro-dynamic Bio Resources Protection Complex" is planned for 2015. The project implies the construction of such a complex at the Uglichskaya HPP.
- At present, the NIIES Institute developed an orthogonal turbine runner for low pressure small HPPs adapted for the safe passage of fish. A low pressure small HPP equipped with such a runner will be tested in Q2 2014 at the Khorobrovskaya HPP.

Orthogonal hydraulic turbines are the unique development that does not have analogue in the world. The turbines' advantage is an ability to retain the direction of spinning in the turbine when the direction of water flow is changing. This feature is used in tidal power plants that are now being developed by the Company. Moreover, the turbines may be efficiently used in the low pressure small HPPs. After certification the orthogonal turbines can compete with Aldena turbines (that are being developed by Voith Siemens) due to their low cost, increased efficiency and wide range of HPP water head.

# Global Climate Change and Environmental Responsibility

“An exponential increase in abnormal natural and climatic phenomena is an indisputable indication of the necessity of making every human activity green, be it management, production or social activity. This is also true for the hydro-power industry. It is not by chance that environmental safety became one of the long-term strategic priorities of Russia’s energy policy, along with energy security and budget efficiency.”

**Marina Seliverstova,**

Head of the Russian Federal Agency of Water Resources

In 2013, JSC RusHydro performed no quantitative assessment of consequences for the Company associated with climate change, although the Company is aware of the probable impact of climate change on performance results for the hydro-power industry as a whole and on Company performance in particular.

To identify risks and to include risk

minimization methods in the decision-making process, the Company takes into account climate and hydrological forecasts to adapt to possible climate change. In a joint effort with the Russian Water Supervision Authority, the Company develops a hydro-meteorological forecasting method in areas adjacent to the operating HPP to minimize said risks and to upgrade forecasting quality.

The RusHydro Group’s companies undertake regular energy-saving measures. They are aimed at reducing internal energy consumption, developing and promoting energy services ultimately targeted at implementing energy-saving technologies and decrease consumer power consumption.

## Climate change and upgrading the safety of waterworks facilities

The Company’s medium-term priorities include: analyzing climate change risks during strategic development planning and developing corresponding approaches. Taking into account the scale of the problem, JSC RusHydro deals with it on its own, as well as in cooperation with stakeholders, such as the “Hydro-power Industry of Russia” Non-Commercial

Partnership. The development of the hydro-power industry in climate change conditions became major issues on the agenda of the 5th All-Russian Conference of Hydro-power Engineers. Specialists emphasized the high probability of future increases in flood run-offs on Far East rivers, which necessitates recalculating flood run-offs to improve the safety of

waterworks facilities. Conference participants recognized the necessity of implementing new schemes for hydro-power use to focus on the flood protection of territories by constructing self-regulated waterworks facilities at feeders.

The analysis of field studies at meteorology stations within the limits of the receiving basins of the water bodies of the HPPs operated by the RusHydro Holding shows considerable temperature changes in the region.

- According to different estimates, the change in the average yearly air temperature in the Bureya and Zeya River basins within the limits of the HPP's receiving basins was positive judging by data obtained from all meteorology stations. The increase in the average yearly temperature amounted to 2 degrees Celsius over the last 50 years;

- Data analysis from meteorology stations located in the Yenisei River basin, within the limits of the receiving basin of the Sayano-Shushenskaya HPP water body, showed an average yearly air temperature increase of 1-3°C during the considered period.

## Flood-2013: lessons learned and conclusions

The 2013 Far East flood, caused by abnormal summer rainstorms, which were the strongest in recorded history, made the Company take a fresh look at climate change issues, encouraging it to further upgrade flood protection systems. Together with the government, JSC RusHydro is considering the possibilities of constructing new anti-flood HPPs and regulated water bodies capable of preventing flood run-offs.

“The floods have become deeper and more serious and the time span has decreased. I think we should systematically modify the assessment model for water economy use. We should also change the forecasting model and construct flood protection facilities.”

**Evgeny Dod,**

Chairman of the Management Board -  
General Director

Starting from 2013, JSC RusHydro has published on its web site data on the hydrological situation at the Company's HPPs. The data is published using a special iconographic model (refer to [www.rushydro.ru/press/polovode\\_2013/infografics/](http://www.rushydro.ru/press/polovode_2013/infografics/)). Information on the HPP's operating regimes is updated daily and can be freely accessed.

### The development of structural and engineering solutions for watering of the Volga-Akhtubinsk flood plain

Taking into account global changes in the climate and the hydrological situation, rapid and considerable fluctuations in the Caspian Sea level and their consequences have become very urgent, as these consequences are likely to decrease the Volga's water content and contribute to the drying of the Volga-Akhtubinsk flood plain. This in turn can result in numerous negative consequences, including environmental and economic ones. Water discharge at the Cheboksarskaya HPP contributes to preserving the unique biota of the Volga-Akhtubinsk flood plain. Suspension of the watering may lead to critical consequences for unique ecosys-

tem in the zone of the estuary and delta fronts and reduce biological diversity and fish and birds species composition in the local fauna.

To provide for the adequate watering of the Volga-Akhtubinsk flood plain and to optimize operation of the Cheboksarskaya HPP, the Company has developed a draft of a technical design specification calling for the use of an additional distribution plant in the lower pool to provide direct inflow of water into the Akhtuba riverbed. The project has been approved by the expert community. At present, it is being considered by the Water Problems Institute of the Russian Academy of Sciences as one option to address engineering solutions.

# Responsible Interactions with Stakeholders in Respect to Environmental Issues

“The Company intends to maintain fruitful cooperation with international governmental and non-governmental organizations, R&D and educational institutions working in the field of environmental protection and ecological safety.”

RusHydro's Environmental Policy

The 2013 initiatives below are examples of efficient interaction and international cooperation:

## Public hearings

The interaction concerning the public environmental assessment of design documents concerning the construction of the Cheboksarskaya HPP on the Volga

River, pertaining to an increase in the water level in the Cheboksarskoye water-body to the mark of the normal impounded water level of 68m involved the Dront

Environmental Center (Nizhny Novgorod), the Industrial Ecology Research Institute (Moscow) and the Russian Academy of Natural Sciences.

## UN projects related to biological diversity conservation

Activities performed within the working groups of the UN Development Program (UNDP) working on the projects “Preservation of biodiversity of water and swamp lands of the Lower Volga” (UNDP/GEF) and “Biodiversity preservation issues in the policies and development programs of the energy sector of Russia” (UNDP/GEF/Ministry

of Nature RF) are underway. A concept for collecting innovative solutions pertaining to biodiversity preservation for the hydro-power industry has been prepared by the Company in cooperation with the UNDP, taking into account advanced international practices. A training workshop has been conducted on preserving biodiversity.

The Company plans to perform an environmental assessment of facilities designed in the Far East, the Nizhne-Bureiskaya HPP and the Nizhne-Zeyskaya HPP, taking into account environmental factors. The Company also plans to develop numerous legislative proposals on the inclusion of criteria for preserving biodiversity into normative requirements.

## Assessment of the compliance of hydro-power projects with sustainable development criteria

RusHydro is a major contributor to the promotion (in Russia) of best international practices of assessing the compliance of infrastructural hydro-power industry projects with sustainable development criteria throughout the life-cycle of said projects. The Hydro-power Sustainability Assessment Protocol developed by the International Hydro-power Association (IHA) and approved by the Council for the Sustainable Development of Hydro-power

in 2010 can serve as an example of such practices. The Council supervises the practical implementation of the Protocol in question.

Protocol use allows hydro-power sector representatives to maintain a regulated dialogue with all stakeholders, including: local communities, local authorities and members of non-profit organizations and environmental organizations.

As of today, the Hydro-power Sustainability Assessment Protocol has been recognized, ratified and recommended for use by many international organizations, including the WWF. Assessment results obtained using the Protocol (as shown in the diagram) are convenient to use when choosing consensus options and suggestions on a particular hydro-power facility, as well as for upgrading management processes and business procedures used in the industry on the basis of daily operations.



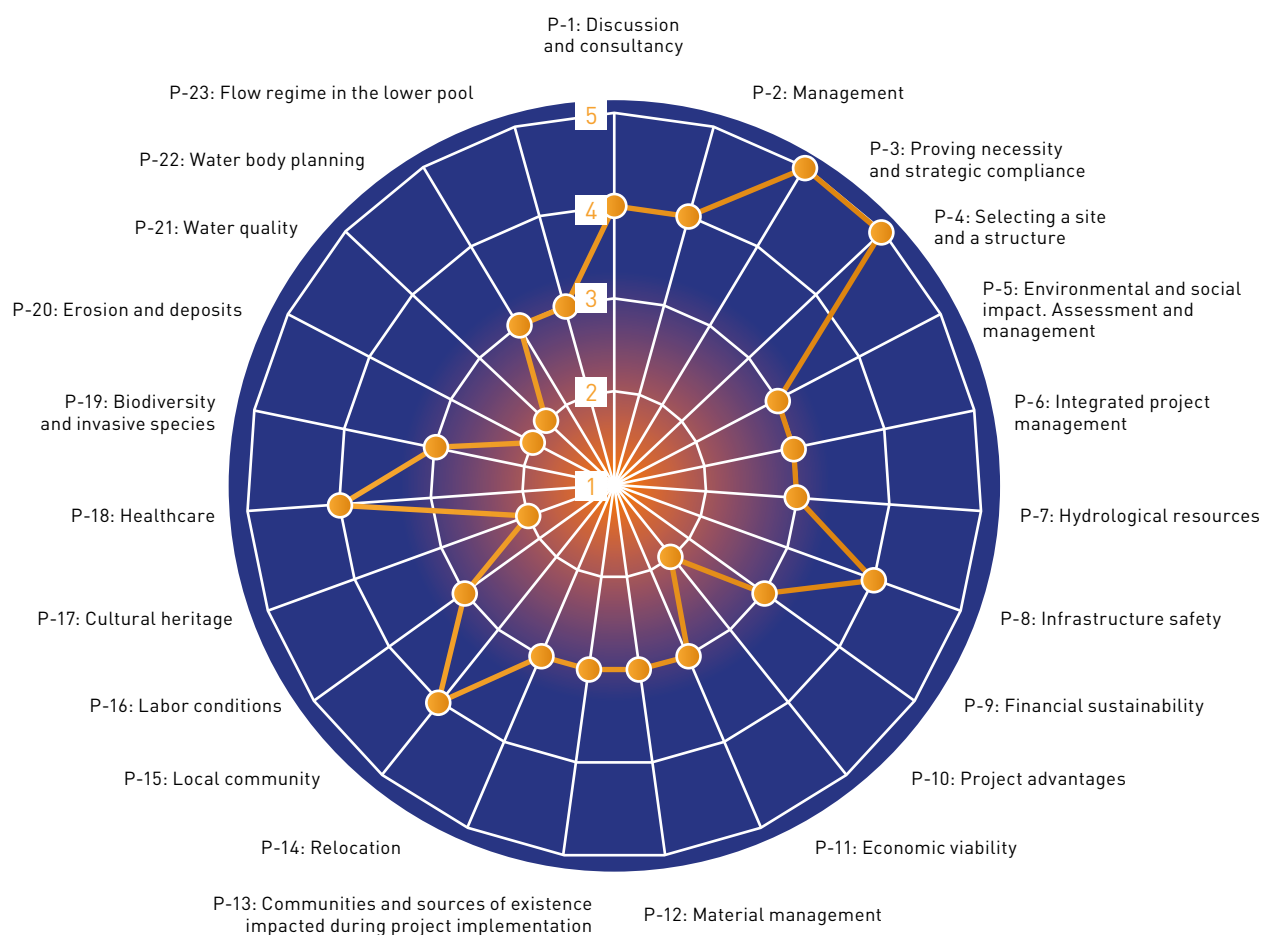
In 2013, RusHydro became the FIRST COMPANY in RUSSIA to assess the Kankunskaya HPP project using the Hydro-power Sustainability Assessment Protocol. In 2014, the Company plans to assess one of its facilities with the assistance of IHA experts.

The translation of the Protocol into Russian was accomplished by RusHydro (in a joint effort with the WWF in April 2013). It was approved by the IHA Board, received the official status and published at <http://www.hydrosustainability.org>. In June 2013, the WWF Russia host-

ed a training workshop in Nizhny Novgorod for public organizations. The workshop, which was attended by RusHydro representatives, included Protocol presentation, followed by a discussion on the prospects of its application in Russia.

### An example of the visual presentation of results of hydro-power projects' compliance with sustainable development criteria

#### Hydro-power Sustainability Assessment Protocol



Source: [www.hydrosustainability.org](http://www.hydrosustainability.org)

## 4.2 Development of the power industry in the Far East – the preservation of the region's natural resources

### Assisting the Social and Economic Development of the Regions of Operation

“The analysis of the actual economic situation shows that the inequality of tariffs creates inequality in economic activity conditions and in people’s living standards as well. Therefore, we should start regional development with power industry development. This will be just the first step in the development of Eastern Siberia and the Far East.”

**Vladimir Putin** at a meeting with Viktor Ishaev and Evgeny Dod, the Kremlin, November 22, 2012

#### Current and future projects implemented in the Far East Federal District

The management of the RusHydro Group exercises a comprehensive approach to implementing infrastructural and investment projects, pursuing the policy intended to ensure the economic potential of the regions on one hand, and to preserve their natural wealth on the other. This is also true for the Far East where the Group launched numerous large-scale new construction projects in 2013, implementing the Federal Targeted Program of power industry development in the Far East region (hereinafter referred to as the Far East Power Industry Development Program).

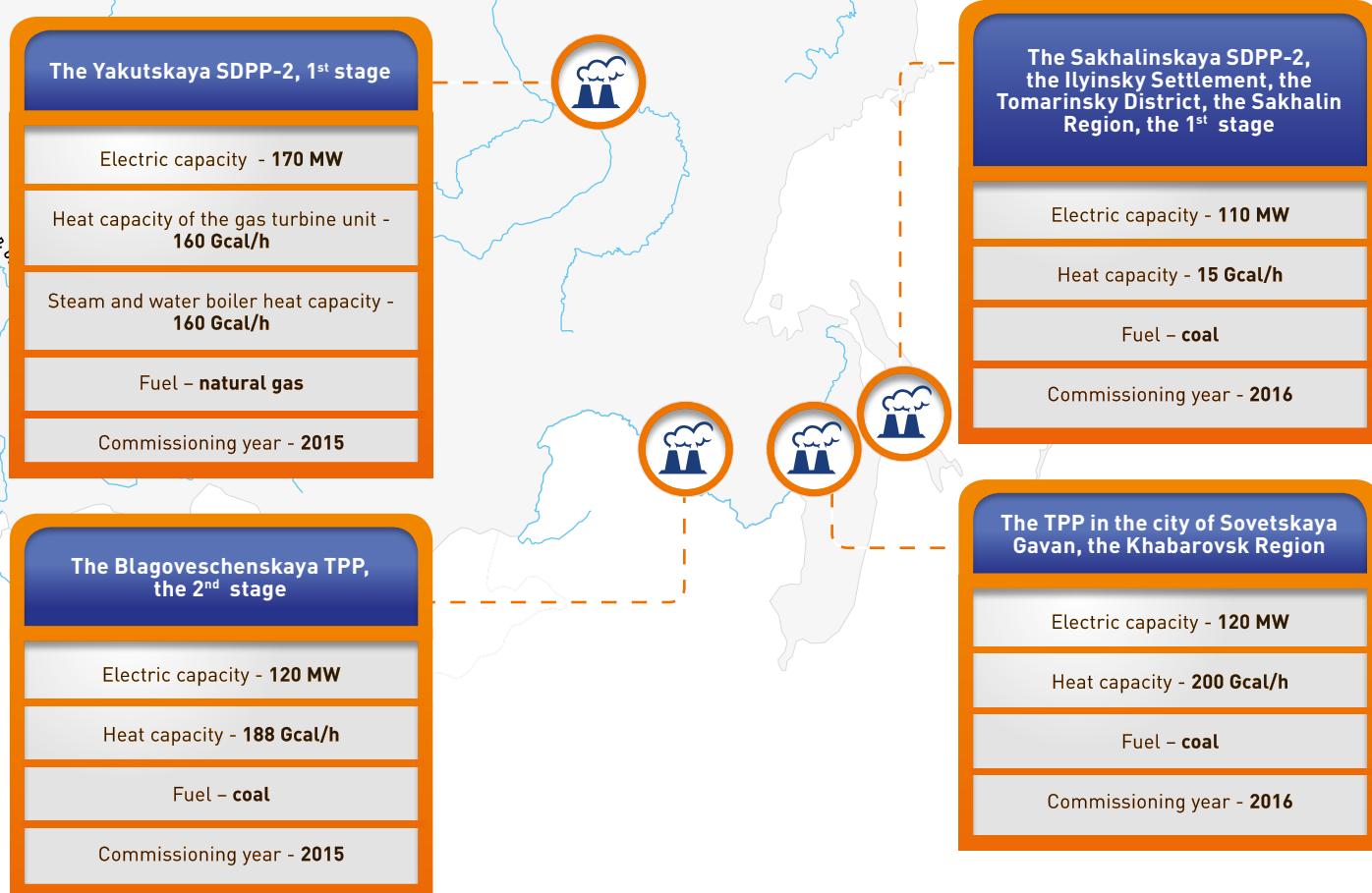
The Company faces the difficult and responsible task of constructing and commissioning electric power facilities with total electric power amounting to 520 MW and heat power of 563Gcal/h in a very short time. The facilities are to be constructed within a very limited period, resulting in a dramatic increase in generating facilities in the Far East; thus establishing the basis for further economic development of the entire region.

The Far East Power Industry Development Program stipulates construction of four electric power facilities in the Far East,

namely a TPP in the city of Sovetskaya Gavan, the Sakhalinskaya SDPP-2 (the first stage), the Yakutskaya SDPP-2 in (the first stage) and the Blagoveschenskaya TPP (the second stage). Capitalization support provided for RusHydro by the State government comprises RUR 50 billion. Implementation of these projects is the first stage in the Company’s program to develop the power industry of the Far East to replace outdated power capacities and to develop the infrastructure of the decentralized energy supply sector of the Far East Federal District.

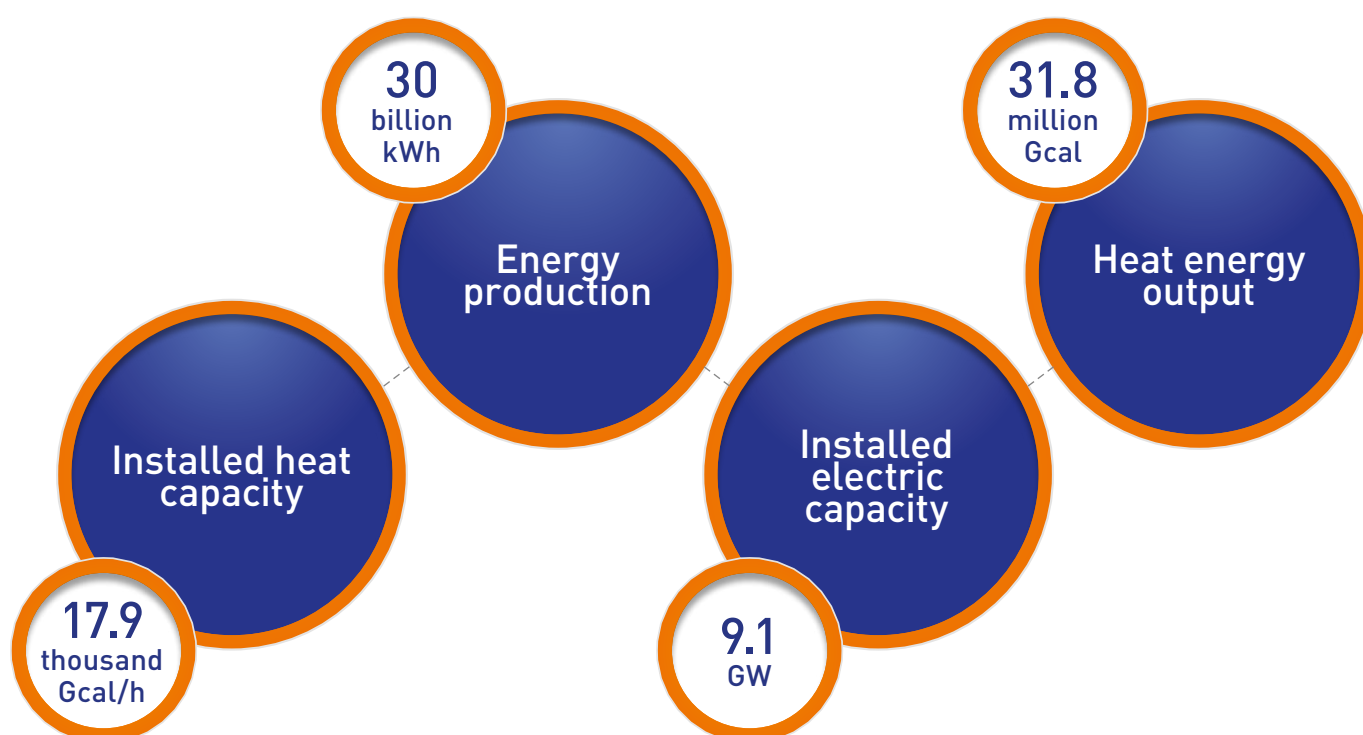
The key investment project implemented by the Company involves the construction of four priority projects on the territory of the Far East to execute Order No 1564 (dated 22.11.2012) “On Further Development of the Federal Hydro-power Generating Company RusHydro JSC.”

## The Far East Power Industry Development Program



The project is operated by the Group RAO Energy Systems of the East (a member of the RusHydro Group).

## RAO Energy Systems of the East



RAO Energy Systems of the East JSC (hereinafter referred to as RAO ES of the East) is the biggest energy holding that supplies electric and heat energy in the Far East. RAO ES of the East became a member of the RusHydro Group in 2011 and is the sixth largest producer of heat

energy globally. The total installed heat capacity of the RAO ES of the East's power facilities (as measured on December 31, 2013) amounts to 17.9 thousand Gcal. Coal represents 58% of all burned fuel, gas represents 39% and fuel oil takes 3%. RAO ES of the East operates

in the second non-price zone of the Unified Energy System of the East and in six isolated energy systems. The share owned by JSC RusHydro in the authorized capital of RAO ES of the East amounted to 84.39% as of December 31, 2013.

#### RAO ES of the East, core assets: the number of facilities with specified primary sources

	Number of facilities	Type of energy resources
TPP	19	Coal, gas
SDPP	10	Coal, gas
DPP	244	Heating oil
HPP	3	Hydro-power
WPP	3	Wind energy
SPP	4	Sun energy

The Chapter contains SELECTED DATA on the environmental impact caused by the production activities of RAO ES of the East, as the Holding's data is beyond the scope of this Report

Fully disclosed non-financial reports complying with GRI standards are available in the RAO ES of the East Report on Corporate Social Responsibility and Sustainable Development at <http://www.rao-esv.ru/shareholders-and-investors/disclosure-of-information/>

JSC RusHydro owns 84.39% of the authorized capital of RAO ES of the East

## Development of the Power Industry in the Far East and Environmental Responsibility

Recognizing the fact that the production activity of member-companies of the RusHydro Group can present a potential climate change risk in the regions of the Far East Federal District, RusHydro and RAO ES of the East implement planned and comprehensive measures to reduce atmospheric pollutants emitted by regional heat power plants and to gradually rebuild

inefficient HPPs within the framework of the Far East Power Industry Development and comprehensive program on the implementation of renewable sources of energy in the Far East Federal District.

The projects implemented by RusHydro, in conjunction with RAO ES of the East, in the Far East are intended to upgrade

the energy and environmental efficiency of the region's power industry.

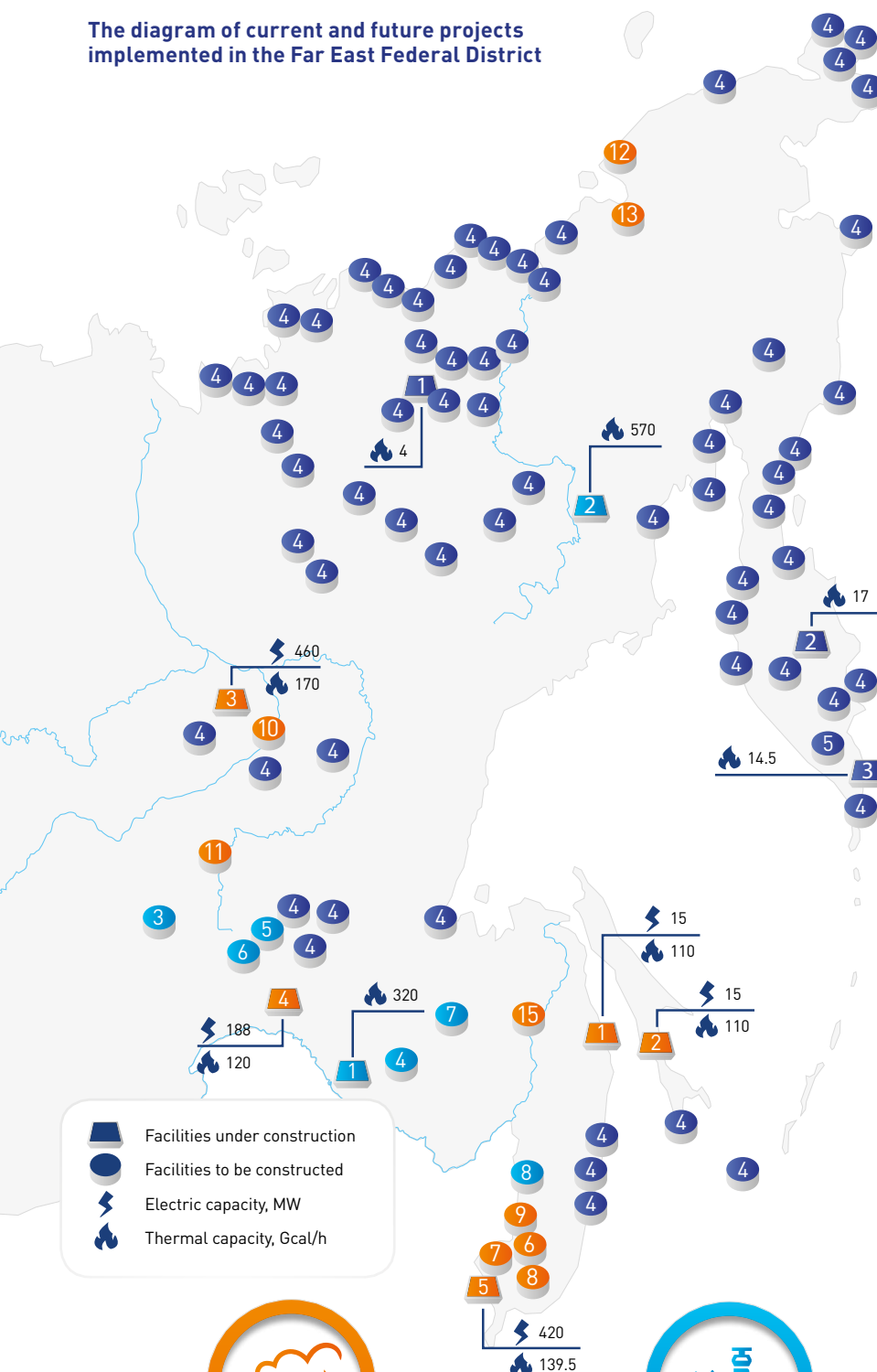
The complex program aimed at RES implementation within the framework of the Group contributes to reduced specific greenhouse gases emission equivalent per kWh. The program is being continued in 2013.

The RusHydro Group implements a comprehensive environmental policy intended to preserve the region's natural wealth. The Company's policy is based on the following:

- Environmental impact management;
- A reduction in harmful and greenhouse gas emissions;

- Safe waste disposal;
- Water use and water protection initiatives;
- Bio-diversity preservation.

## The diagram of current and future projects implemented in the Far East Federal District



- 1 The Nizhny-Bureiskaya HPP
- 2 The Ust-Srednekanskaya HPP
- 3 The Shilkinskaya HPP
- 4 The HPP cascade at the Selendzha River
- 5 The Gilyyskaya HPP
- 6 The Nizhny-Zeyskaya HPP
- 7 The Nizhny-Nimanskaya HPP
- 8 The Dalnerechensk HPPs cascade
- 1 The TPP in the city of Sovetskaya Gavan
- 2 The Sakhalinskaya SDPP-2, the first stage
- 3 The Yakutskaya SDPP-2, the first stage
- 4 The Blagoveschenskaya TPP, the second stage
- 5 The Vostochnaya TPP
- 6 The Ussuriyskaya TPP
- 7 The Gas Turbine Unit at the Vladivostokskaya TPP-2
- 8 The Steam and gas unit at the Vladivostokskaya TPP-2
- 9 The Antonovskaya TPP
- 10 The Yakutskaya SDPP-2, the second stage
- 11 Unit No 3 of the Neryngrinskaya SDPP
- 12 The TPP in the city of Pevek
- 13 The TPP in the Bilibino settlement
- 14 The Khabarovskaya TPP-4
- 15 The Steam and gas unit at the Komsomolskaya TPP-5
- 1 The SPP in the Batagai settlement (the Republic of Sakha-Yakutia)
- 2 The Complex project for the development of wind power generation in the Kamchatka region
- 3 Commissioning of the power unit at the Pauhetskaya geo-thermal PP
- 4 The Program for the development of solar and wind power generation in isolated power districts of the Far East
- 5 The Increase in the Mutnovsky geo-thermal PP's capacity due to the installation of a turbine operating on the secondary steam



### The Future TPP and SDPP projects

- Total electric capacity – 5.3 GW
- Total thermal capacity – 3.095 Gcal/h



### Future HPP projects

- Water bodies will decrease the level of the Amur River during catastrophic floods by 680 cm



- JSC RusHydro's projects
- JSC RusHydro's and JSC RAO ES of the East's joint projects
- JSC RAO ES of the East's projects



### Development of renewable sources of energy

- total capacity amounting to 60 MW by 2016
- by 2020 – 120 MW



\* The project is implemented within the agreement on the development of renewable energy sources concluded by and between the government of the Republic of Sakha (Yakutia) and JSC RAO ES of the East

\*\* The project is implemented within the agreement on the development of renewable energy sources concluded by and between the government of the Kamchatka Region and JSC RAO ES of the East

# Environmental Impact and Measures to Decrease the Load of RAO ES of the East

## Reduction in harmful atmospheric emissions

RAO ES of the East on a quarterly basis records the emissions of long-living greenhouse gases and other industrial emissions into the atmosphere. The quarterly records are based on the fuel balance of RAO divisions. RAO ES of the East's SDCs use gas analyzers (including DAG-510-MW

and DAG-16) to monitor levels of emissions to follow industrial indicators comply with environmental norms. Methods of determining annual gross CO<sub>2</sub> emissions with flue gases by thermal power plants' boilers and boiler houses are established by industrial environmental standards.

Greenhouse gases emissions by the Holding's branches and SDCs are consequences of the generation of electric energy, heat or steam as well as of transportation of materials and personnel. In 2013, harmful atmospheric emissions continued to decrease.

### The Order of the President of the Russian Federation "On the Reduction of Greenhouse Gas Emissions"

To implement the Climatic Doctrine of the Russian Federation approved by Decree No 861-rp of the President of the Russian Federation (December 17, 2009), it is hereby ordered:

1. For the Government of the Russian Federation:

- a) To ensure the reduction of greenhouse gas emissions by 2020 to a level not exceeding 75 percent of the same in 1990;
- b) Within 6 months, to approve a plan of action to ensure greenhouse gas emissions do not exceed the above-mentioned limits. The plan

should contain greenhouse gas emission reduction norms for different economic sectors.

2. This Order is to become effective from the day it is officially published.

**V. Putin**, the President of the Russian Federation  
Moscow, the Kremlin  
September 30, 2013, No 752

In 2013, negative environmental impact showed signs of decreasing compared with 2012. The total volume of fuel consumed by generating facilities of

RAO ES of the East fell by 741 thousand tons of reference fuel, resulting in a reduction in atmospheric emissions by 2,075 thousand tons. The total reduction

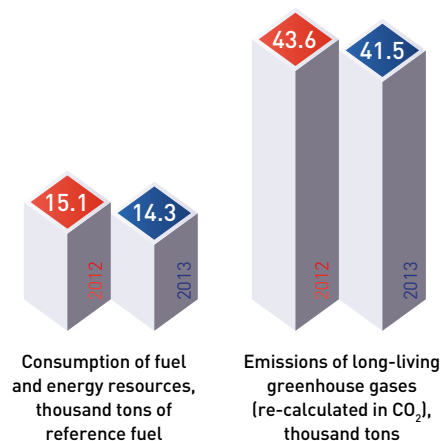
of emissions of long-living greenhouse gases by RAO ES of the East was 5% (compared with 2012).

### Total direct and indirect volumes of long-living greenhouse gases emitted by all facilities of RAO ES of the East with specified mass

Indicator	2012	2013	Change, %
Consumption of fuel and energy, thousand tons of reference fuel	15,077.8	14,336.5	(5)
Emissions of long-living greenhouse gases (re-calculated in CO <sub>2</sub> ), thousand tons	43,572.1	41,475.3	(5)

The table above contains aggregate data for all facilities of the RAO ES of the East, including carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O) and excluding CFC-12 and CFC-11 (and other solid suspended harmful substances). The data on CH<sub>4</sub> and N<sub>2</sub>O are re-calculated in CO<sub>2</sub>. To re-calculate a value expressed in tons of coal equivalent to a value of emissions of CO<sub>2</sub> equivalent to the atmosphere a ratio of 1.9 is used (with CO<sub>2</sub> emissions amounting to 1,900-3,000 kg/t, depending on coal grade)

### 2012/2013: the consumption of fuel and energy resources and emissions of long-living greenhouse gases fell 5% (RAO ES of the East)

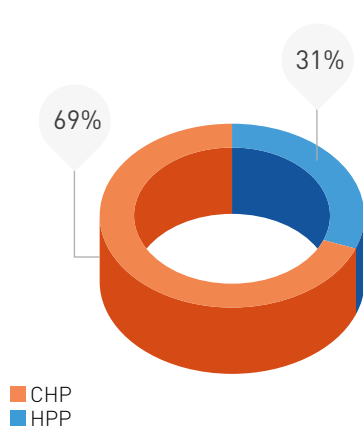




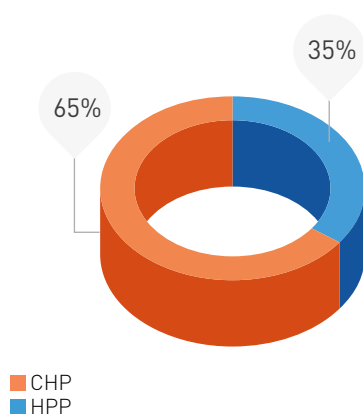
The reduction in the volumes of consumed fuel and greenhouse emissions in 2013 was caused, among other things, by hydrologic conditions and increased water content in the Far East during the summer and autumn periods. Also of significance during the period was the efficient coordination of the RusHydro Group's production activities, leading to a decrease in energy output by the RAO ES of the East's thermal power plants and a redistribution of load for the generating facilities in favor of the RusHydro Holding's HPPs, mainly the Bureyskaya HPP and the Zeyskaya HPP. During the year, the output of the last two HPPs grew 12% and 18%, respectively.

This resulted in changing the energy balance in the Far East Federal District in favor of "clean" energy: during the year, the share of energy produced using renewable sources grew 4% compared with 2012, to amount to 35% in 2013.

**2012 RusHydro Group: the share of "clean" energy in the energy balance of the Far East Federal District was 31%**



**2013 RusHydro Group: the share of "clean" energy in the energy balance of the Far East Federal District was 35%**



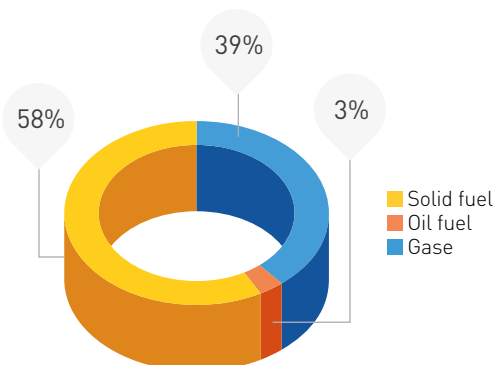
"Carbon dioxide (CO<sub>2</sub>) is the only and the most significant anthropogenic greenhouse gas in the atmosphere with its share in the total impact of greenhouse gases on the climate amounting to 64%. From the start of the industrial age in 1750, the carbon dioxide content in the atmosphere grew 39%. This growth was primarily caused by emissions resulting from the combustion of mineral fuels, as well as depersonalization and changes in land use practices."

The Bulletin of the World Meteorological Organization

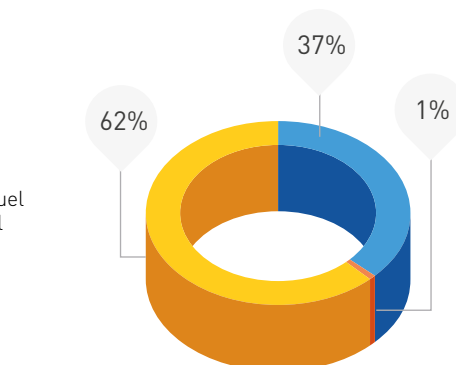
Long-living greenhouse gases are the result of anthropogenic activities. The emissions of these gases by RAO ES of the East's branches and SDCs result from production activities, as well as from the transportation of

materials and personnel. Coal power plants generated the major share of pollutants emitted to the atmosphere in 2013 (some 62%). The share of in RAO ES of the East's fuel balance amounted to 58%.

**The structure of the fuel basket of all power facilities (RAO ES of the East)**



**The structure of the emissions of long-living greenhouse gases broken down by fuel types (RAO ES of the East)**



**Re-building and gasifying thermal power plants**

To minimize the negative environmental impact, construction and rebuilding investment projects have been implemented, which are intended to operate on natural gas using environmentally efficient gas turbine equipment, low waste, and minimum impact and innovative technologies for preparing and supplying fuel. A decrease in the use of coal and fuel oil as fuels to fire existing TPPs and the gradual transfer of generating facilities of RAO ES of the East to natural gas (where practical and economically and environmentally efficient) will contribute to improving environmental conditions.

In 2013, RAO ES of the East proceeded with the replacement of outdated capacities and the transfer of its power plants (the TPPs in the Sakhalin, Primorie, Kamchatka and Khabarovsk Regions), to the use of natural gas. The natural gas-fired gas-engine Anadyrskaya TPP operated by JSC Chukotenergo increased its power output. According to preliminary estimates, after the completion of the second stage of gasification, the annual reduction of emissions from the Vladivostokskaya TPP-2 will comprise some 55-60% (compared with 2010). In 2013, the share of gas in the fuel balance of RAO ES of the East comprised some 37%.

The repairs of the ash collection systems of boilers and other measures implemented pursuant to the TPIR Program contribute to a reduction in the atmospheric emissions of long-living greenhouse gases and the easing of the industrial load on the environment. In 2013, repairs of the ash collection systems were performed at JSC Magadanenergo and JSC Chukotenergo. The implementation by RAO ES of the East's companies of the environmental policy also involved reconstructing power facilities of the Vladivostokskaya TPP-2 and the Khabarovskaya TPP-3 respectively and the construction of an ash dump for the Partizanskaya SDPP. The ash dump, known as Zelenaya Balka, was constructed using synthetic materials, such as geo-membranes and geo-textile.

### Financing load decrease initiatives

In 2013, RAO ES of the East's total capital expenditures amounted to RUR 17.3 billion, including RUR 9.5 billion for financing the TPIR Program, and RUR 446.3 million spent on environment protection measures.

The implementation of the 2013 principal investment projects resulted in an 11.2% reduction in atmospheric emissions (including long-living greenhouse gases and harmful solids generated by coal fuel, such as: soot, coal and wood dust, and boiler ash). The volume of ash waste fell 8.2%, while energy consumption decreased 4.3%. The use of enhanced cooling systems resulted in a reduction in water intake from surface sources, thus decreasing wastewater discharge into water bodies by 4.8%. 11 hectares of ash dumps were remediated.

### Sale of ERUs pursuant to the Kyoto Protocol

An opportunity to act as a seller of Emission Reduction Units (ERU)\* on the international market of carbons (in accordance with the Russian procedure for implementing the mechanisms of the Kyoto Protocol) can provide an additional incentive to make environmental policy more transparent.

\* The ERU is the emission reduction unit or the unit of absorption of greenhouse gases, which is calculated based on the basic level of emissions. The ERU is equivalent to 1 ton of CO<sub>2</sub>. The unified ERU is 1 ton of CO<sub>2</sub> equivalent. The unified ERU of 1 ton of CO<sub>2</sub> equals to 1. To calculate ERU for other greenhouse gases, the volume of ERU is multiplied by GWP. For example, the methane GWP equals 21, and for NO<sub>2</sub> it equals 320, where GWP is the Global Warming Potential

Pursuant to a Decree of the Russian Government on the implementation of the Kyoto Protocol, only JSC DGK has two valid agreements for the sale of CO<sub>2</sub> ERUs. All other SDCs of RAO ES of the East do not participate in selling CO<sub>2</sub> emission quotas.

\* Decree No 780 of the Russian Government "On Measures to Implement Article 6 of the Kyoto Protocol to the UN Framework Convention on Climate Change [dated 15.09.2011]

### Cooperation with the EBRD and the approval of the Environmental and Social Initiatives Plan

In 2013 the Holding launched the implementation of an Integrated Management System (IMS) consisting of quality management, environmental management and occupational safety systems complying with ISO 9001, ISO 14001 and OHSAS 18001 international standards. The integrated systems are implemented in all subsidiaries and dependent companies of RAO ES of the East. The implementation is carried out in accordance with Agreement No 44222 (dated 05.12.2012), which concluded by and between RAO ES of the East and the EBRD pursuant to the Environmental and Social Initiatives Plan (ESIP) adopted to upgrade environmental efficiency of the RAO ES of the East's operations for the 2013-2016 period and for the subsequent credit period.

JSC Yakutskenergo became the first dependent company of the Holding to implement the IMS and to undergo certification in 2013. The implementation of international standards in all other SDCs is planned for 2014-2016.

ESIP initiatives in 2013 included the following:

- A tender conducted to develop, implement and prepare for certifying the Integrated Management System (IMS) consisting of quality management, environmental management and occupational safety systems complying with ISO 14001:2004 and OHSAS 18001:2007 international standards. The tender was won by EKOSERTICA LLC Research and Production Center (Moscow);
- A number of SDCs and 43 employees of RAO ES of the East were trained on requirements of the international standards (ISO 9001, ISO 14001 and OHSAS 18001), and on directives of

the European Union set for environmental protection initiatives and the handling of industrial waste classified as hazardous.

Refer to the RAO ES of the East Corporate and Social Responsibility Report at <http://www.rao-esv.ru/activities/innovation/index.php> and <http://www.rao-esv.ru/social-responsibility/environment-protection/> for more detail on environment protection

## Environmental impact and measures to decrease the load listed in the far east power industry development program

The technical designs of power facilities built within the framework of the Program are developed in accordance with environmental safety principles and the use of the most advanced technologies for natural resource use. The Program stipulates the construction of two SDPPs and two TPPs. One of the four power facilities under construction will be gas-fired (the Yakutskaya SDPP-2), whereas the other three will be coal-fired.

Construction and mounting work are preceded by due diligence on the environmental impact in regions of construction in accordance with all normative requirements and environmental standards. All three power units of the TPP in the city of Sovetskaya Gavan will be equipped with highly efficient electric filters, which collect ash from beyond the boiler. The equipment will be supplied by Stavan, an environmental protection division of Alstom Power machine tool concern, the market leader in manufacturing emission-cleaning equipment.

A recycling process water supply system, envisaged by the design of the Sakhalinskaya SDPP-2, will allow for a considerable decrease in waste water volume, thus significantly reducing negative environmental impact.

To minimize the potential negative environmental impact generated by all facilities under construction, these facilities will be equipped with wastewater treatment systems and other equipment facilitating the rational use of natural resources.

Refer to [http://www.rushydro.ru/activity/razvitienergetiki\\_dalnego\\_vostoka/](http://www.rushydro.ru/activity/razvitienergetiki_dalnego_vostoka/) for greater detail on the Far East Power Industry Development Program

# Development by the RusHydro Group of Renewable Energy Sources in the Far East

## The development of the power industry using tidal, wind, solar and geo-thermal energy

In 2013, member-companies of the RusHydro Group proceeded with the implementation of joint projects and the integration of management systems of innovative development for RAO ES of the East and RusHydro. The generation of energy from renewable sources is one of the priorities of RusHydro concerning innovations and promising technologies, as such generation is environmentally friendly.

In addition, the development of renewable energy sources contributes considerably to the following:

- The development of domestic manufacturing of high technology equipment for renewable power generation (localization), based on best international practices;
- The creation of new employment opportunities;

- The transfer of the industry onto a new technological base, including carbon-free processes, SMART grids and distributed generation;
- The diversification of energy balance and energy security;
- The establishment of conditions for the development of national research and the technology base;
- The establishment of distributed generation to upgrade power supply reliability and quality.

### The key priorities of renewable generation are the following

Business Segment	Future Markets
<b>The RusHydro Holding</b>	
Tidal power generation	North-West: the Murmansk Region, the Far East: the Khabarovsk Region
Minor hydro-power generation (low pressure small HPPs)	Republics of the Northern Caucasus
Geo-thermal power generation	The Far East: the Kamchatka Region, Sakhalin, the Kuril Islands, the Krasnodar Region
Wind power generation	Lower Volga
<b>RAO ES of the East</b>	
Distributed renewable power generation	The Far East
Solar power plants	Yakutia, the polar regions

## The RusHydro Holding: pilot renewable power generation projects in the Far East

Promising projects are implemented by the RusHydro Holding's companies on the basis of three geo-thermal power plants in Kamchatka and one tidal energy generation plant on the shores of the Barents Sea, the only such facility in Russia.

### Geo-thermal power plants in Kamchatka

	The Pauzhetskaya GTPP	The Mutnovskaya GTPP	The Verkhne-Mutnovskaya GTPP
Installed power	12 MW	50 MW	12 MW
Average annual output	43 million kWh	360.7 million kWh	63 million kWh

### Activity areas include the following:

- The construction of the binary power plant on the site of the Pauzhetskaya GTPP. The project, which is unique for Russia, has been implemented by RusHydro and its subsidiary, the Inzhenerny Centr Vozobnovlyаемoi Energetiki (the Engineering Center of Renewable Power Generation) since 2009. Almost all equipment for the binary unit has been manufactured domestically. The general designer of the project is NIIES – the Power Facilities Research Institute.
- The construction of a secondary steam power plant at the Mutnovskaya GTPP and the development of engineering solutions for the manufacture of serial equipment for geo-thermal power plants using the potential heat of the intake pit

## RAO ES of the East: pilot renewable generation projects in the Far East Federal District

In 2012, a program was launched to replace diesel power generation in the decentralized sector of the Far East Federal District and to implement renewable power generation.

The successful implementation of pilot projects has formed the basis to start the development of a long-term Renewable Generation Development Program for the

RAO ES of the East for the period till 2016 with a view till 2020 (hereinafter referred

to as the Program). Program development will be completed in 2014.

13% of diesel-fired power plants in the Far East Federal District can be considered as potential facilities for generation replacement, or for modernization using alternative generation, such as solar or wind power generation.

### Pilot projects implemented by RAO ES of the East in the Far East Federal District: solar and wind power plants

Settlement	Installed power, kW	Diesel fuel savings in tons of reference fuel per annum	Diesel fuel savings in RUR thousand per annum	Price of the project, RUR million excl. VAT
<b>Solar Power Plants (SPP)</b>				
The Batamai settlement	30	16.2	497	3.1
The Yuchugei settlement	20	9.3	284	1.7
The Dulgalakh settlement	20	14.3	330	2.0
The Kudu-Kyel settlement	20	10,2	290	2,0
<b>Wind Power Plants (WPP)</b>				
The wind and diesel power plant in the Nikolskoye settlement	550	538.2	11 145	118.6
The WPP in the Ust-Kamchatsk settlement	275	275.4	4 874	52.2
The WPP in the Bykov Mys settlement	40	50	1 284	5.3

The Holding's renewable power generation development program is the basis for a systemic approach to implementing renewable power generation projects on the territory of the Far East Federal District. The target values for Program implementation: 60 MW till 2016 and 120 MW till 2020.

## The complex program for the implementation of renewable power generation in the Far East

### The systemic approach to the development of renewable power generation in the Far East will allow for the following:

- To determine optimal locations for facilities;
- To determine typical engineering solutions;
- To attract necessary investments;
- To implement the projects in the shortest possible time

### The effects expected from the implementation of renewable power generation projects in the Far East Federal District::

- Improved power supply reliability and quality;
- The partial solution of the problem of cross-subsidizing diesel power generation, slowing down the tariff growth rate;
- A reduction in atmospheric pollutant emissions.

According to estimates of RAO ES of the East, the potential total capacity of renewable generation facilities to replace diesel power generation in decentralized power districts where the companies of RAO ES of the East operate can range from 150 to 200 MW\*, thus resulting in considerable environmental potential in the form of fuel savings and a decrease in the atmospheric impact of long-living greenhouse gases. Project implementation will potentially result in the reduction of CO<sub>2</sub> emissions to the atmosphere of from 120 to 160 tons per annum\*.

\* The value is calculated as follows: the value of the "average long-term generation" is converted into tons of coal equivalent (applying the ratio of 0.341). To re-calculate the value expressed in tons of coal equivalent into the value of "reduced atmospheric emissions re-calculated in CO<sub>2</sub>" a ratio of 1.9 is used (CO<sub>2</sub> emissions amount to 1,900-3,000kg/t, depending on coal grade)

### Wind power generation and wind power plants (WPP)

At present, the RusHydro Holding is considering the possibility of implementing 10 WPP projects with a total capacity of 16MW. These projects are intended to be implemented jointly with RAO ES of the East. Implemented in isolated power districts of the Far East, the wind and diesel plants will allow for savings of up to 40% of fuel. The efficient use of wind power plants in generation systems operated by municipal companies on the territory of the Far East Federal District also has great potential. There are two existing projects in Kamchatka, including a 550 kW wind-diesel power plant on Bering Island in the settlement of Nikolskoye and a 275 kW wind power generation plant in Ust-Kamchatsk. In the nearest future, the Company is considering a pilot project involving the construction of a wind power farm in the Ust-Kamchatsky settlement (3 MW) and in the Tilichiki settlement (3 MW).

### Commissioning of the wind-diesel power plant on Bering Island

In 2013, RAO ES of the East launched operation of the wind-diesel power plant on Bering Island in the Nikolskoye settlement, the Kamchatka Region. The power plant consists of two up-to-date Vergnet GEV-MP wind power units with a total installed power of 550 kW.

#### Expected effects include the following

- A provision for average annual output of 50% of electricity and 20% of heat power using wind power generated by the wind-diesel power plant;
- Diesel fuel savings will amount to some 350 tons or RUR 12.5 million per annum (in 2013 prices).

This is the first industrial wind power generation facility implemented pursuant to the Program. In the future, the Program will allow for the replacement of up to 50% of diesel generation in isolated power districts of the Kamchatka Region. Apart from Bering Island, the wind-diesel power plants will be installed in 7 settlements located mainly along the peninsula's shorelines.

In June 2013, Yakutsk hosted an international conference "Renewable generation in isolated systems of the Russian Far East Region." The conference was supported by the Ministry of Federal Relations and Foreign Affairs of the Republic of Sakha (Yakutia). The conference was organized by RusHydro and RAO ES of the East.

"An example of a wind-diesel power plant on Bering Island demonstrates a unique economic model that allows for the implementation of such models without any tariff consequences for consumers. Renewable power generation is quite new in Russia and we take special pride in the fact that the RusHydro Group became a segment leader."

**Evgeny Dod,**

Chairman of the Management Board -  
General Director

### Solar power generation in the Polar Regions

Starting from 2011, the Sakhaenergo, a subsidiary of JSC Yakutenergo (a member of RAO ES of the East) has successfully operated four solar power plants (SPP) with a total capacity of 90 kW. The SPPs are located in the remote regions of the Republic of Sakha (Yakutia). Two of the SPPs were commissioned in 2013. All

SPPs in the Polar Regions operate in a combined mode, using the energy of 80 solar batteries and diesel fuel.

Expert assessments of solar power potential in the Far East Federal District prove that the total capacity of priority SPP construction projects with a cost

recovery period of up to 12 years comprises 46 MW\*. The forecast increase in fuel prices strengthens solar power potential all the more.

(\*) According to data of the State Information System in the field of power saving and improving energy efficiency ([www.gisee.ru](http://www.gisee.ru))

# Glossary

## Terms and abbreviations used in the report

The RusHydro Holding or the Holding	Organizations, including JSC RusHydro, its subsidiary companies included in the scope of the Report (a complete list is available in the chapter ABOUT THE REPORT)
The RusHydro Group or the Group	The Group of companies, JSC RusHydro and subsidiary companies which have control and management relations with JSC RusHydro. (a complete list is available on the website: <a href="http://www.rushydro.ru/company/structure">www.rushydro.ru / company / structure</a> )
JSC RusHydro or the Company	The Holding company with head office in Moscow, includes Executive office of JSC RusHydro and branches of JSC RusHydro
BWMB	Basin Water Management
VZO	Subsidiary and dependent companies of SDCs of JSC RusHydro
Restoration and reconstruction of the SSH HPP	Action list as part of the restoration program of the SSH HPP which is developed in accordance with the design documentation of the restoration project of the SSH HPP. This action list does not include the activities of technical rehabilitation and reconstruction of property complex of the SSH HPP and the Mainskaya HPP set out in TPIR of the Investment Program of JSC RusHydro
Hydro-power facilities	All existing, under construction and designed facilities, qualified as renewable hydro-power energy sources - HPPs, PSPPs, TPPs
HS	Hydro-power structures
PSPP	Pumped storage power plant
HPP	Hydro-power plant – power plant as a single production-technological complex which includes HSEs and equipment that converts mechanical energy of water into electrical energy. In this Report, HPPs include small HPPs and PSPPs, unless otherwise indicated
SDCs	Subsidiaries and dependent companies of JSC RusHydro
LLGHGS	Long-lived greenhouse gases - associated with human activities and include: carbon dioxide, methane, nitrous oxide, CFC-12 and CFC-11. These five major gases account for approximately 96% of radiation exposure to the atmosphere caused by LLGHGs
UES	The Unified Energy System of Russia (UES of Russia) consists of 69 regional electric power systems, which, in its turn, form 7 integrated energy systems (IES): of the East, Siberia, the Urals and Middle Volga, South, Center and North-West. All energy systems operate in synchronous mode (in parallel)
Life cycle of production complex of HPPs / PSPPs	Phase sequence, which is passed by production complex of HPPs/ PSPPs - "Initiation", "Design", "Construction", "Operation", "Liquidation"
Investment program of JSC RusHydro	Set of investment projects as a list of objects of capital investment in fixed assets, their main characteristics and amounts of funding which is drawn up for one year or other specified time period and formed on the basis of local regulatory documents of JSC RusHydro
Executive office	Permanent executive management bodies, as well as officials (employees) and structural divisions of JSC RusHydro, which do not relate to the branches of the Company
KPI	Key performance indicators
Large and medium-sized hydro-power facilities	Hydro-generating assets of JSC RusHydro with an installed capacity of over 25 MW
SHHPs	Small HPPs



R&D	Research and development activities
SR	Scientific research
RES facilities	Facilities in the field of renewable energy sources usage, including hydro-power facilities with a single installed capacity of less than 25 MW, wind, tidal, geothermal and solar energy facilities
WECM	Wholesale electricity and capacity market
IES	Integrated Energy System - combination of several energy systems united by a common mode of operation, having a common dispatch control
D&S	Design and survey work
Project BEMA	Project "Boguchanskoye Energy Metallurgical Association" - the investment project of JSC RusHydro and Company RUSAL to create the Boguchanskoye Energy and Metallurgical Association which includes completion of the construction of the Boguchanskaya HPP and construction of aluminum factory
Production complex	Portfolio of generating assets of the Company by type of production process
REM	Retail electricity market
Management of the Company	Chairman of the Management Board - General Director, Deputy Chairmen of the Management Board - Deputy General Directors; members of the Management Board, Directors of the branches
MM	Mass Media
SS HPP	The Sayano-Shushenskaya HPP named after P.S.Neporozhniy
Technological complex	SDCs of JSC RusHydro united by type of activity, supportive to the production complex. Technological complexes include scientific and research complex, design complex, construction and installation complex, repair complex and information and technological complex;
TPiR	Technical rehabilitation and reconstruction
Installed capacity	Total nominal active capacity of generators at electric power plants which are part of the Company's structure
Electric Power Complex	The electric power complex of UES of Russia includes about 700 electric power plants (with capacity of over 5 MW). At the end of 2012 the total installed capacity of UES of Russia was 223,070.83 MW. In 2013, electric power plants of UES of Russia produced 1,023.5 billion kWh. In 2013 output of HPPs was 174.8 billion kWh (data of SO UES)

## Units of Measurement

GW	Gigawatt – a unit of electric power (1 gigawatt equals 1,000 megawatts)
Gcal	Gigacalorie – a unit of measurement for thermal energy
Gcal/h	Gigacalorie/hour - a unit of measurement for thermal capacity
kWh	Kilowatt-hour – a unit of measurement for produced electricity
MW	Megawatt – a unit of measurement for electrical capacity



## Statement GRI Application Level Check

GRI hereby states that **The RusHydro Group** has presented its report "Report on sustainable development of the RusHydro Group" (2014) to GRI's Report Services which have concluded that the report fulfills the requirement of Application Level B+.

GRI Application Levels communicate the extent to which the content of the G3.1 Guidelines has been used in the submitted sustainability reporting. The Check confirms that the required set and number of disclosures for that Application Level have been addressed in the reporting and that the GRI Content Index demonstrates a valid representation of the required disclosures, as described in the GRI G3.1 Guidelines. For methodology, see [www.globalreporting.org/SiteCollectionDocuments/ALC-Methodology.pdf](http://www.globalreporting.org/SiteCollectionDocuments/ALC-Methodology.pdf)

Application Levels do not provide an opinion on the sustainability performance of the reporter nor the quality of the information in the report.

Amsterdam, 4 June 2014

A handwritten signature in black ink, appearing to read "Ásthildur Hjaltadóttir".

Ásthildur Hjaltadóttir  
Director Services  
Global Reporting Initiative



The "+" has been added to this Application Level because **The RusHydro Group** has submitted (part of) this report for external assurance. GRI accepts the reporter's own criteria for choosing the relevant assurance provider.

*The Global Reporting Initiative (GRI) is a network-based organization that has pioneered the development of the world's most widely used sustainability reporting framework and is committed to its continuous improvement and application worldwide. The GRI Guidelines set out the principles and indicators that organizations can use to measure and report their economic, environmental, and social performance. [www.globalreporting.org](http://www.globalreporting.org)*

**Disclaimer:** Where the relevant sustainability reporting includes external links, including to audio visual material, this statement only concerns material submitted to GRI at the time of the Check on 20 May 2014. GRI explicitly excludes the statement being applied to any later changes to such material.

## Introduction

We have been engaged by the directors of OJSC RusHydro to provide limited assurance<sup>1</sup> on the selected information described below and included in the Sustainability Report of OJSC RusHydro and its selected subsidiaries (RusHydro Group) for the year ended 31 December 2013. The selected subsidiaries are listed in the reporting scope of the Sustainability Report.

## Selected Information

We assessed the qualitative and quantitative information that is disclosed in the Sustainability Report and included in the Table of the Global Reporting Initiative (GRI) Sustainability Reporting Guidelines for standard disclosures in environmental, workforce, safety and socio-economic areas for selected subsidiaries as listed in the reporting scope of the Sustainability report (the "selected information"). The scope of our assurance procedures was limited to selected information for the year ended 31 December 2013.

## Reporting Criteria

We assessed the selected information using the Global Reporting Initiative (GRI) Sustainability Reporting Framework, including version 3.1 of the Sustainability Reporting Guidelines and GRI Electric Utilities Sector Supplement (collectively, GRI G3.1). 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 Sustainability Report 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;
- accuracy, completeness and fair presentation of the information in the Sustainability Report 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 Sustainability Report of RusHydro Group for the year ended 31 December 2013, 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 with our prior consent in writing.

## 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 G3.1.

## 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>2</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 2013 has not been prepared, in all material respects, in accordance with the requirements of GRI G3.1; and**
- **nothing has come to our attention that causes us to believe that the selected information does not meet the requirements of GRI G3.1 application level of "B+".**

**ZAO "PricewaterhouseCoopers Audit",  
Moscow, Russia**

**27 June 2014**

<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 №307-FZ of 30.12.2008 "On Auditing Activities" (edition of 28.12.2010).

<sup>2</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 these matters and, accordingly, we accept no responsibility for any differences between the Sustainability Report of RusHydro Group on which the assurance report was issued or the assurance report that was issued and the information presented on the OJSC RusHydro website.

**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)

## Opinion of RSPP's Non-Financial Reporting Council on the Results of Considering the 2013 Report on RusHydro Group Sustainable Development for the Purpose of Public Assurance

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 the RusHydro Group (hereinafter the Company, the Holding Company, the Group, RusHydro), has considered the 2013 Report on RusHydro Group 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 June 3 to June 23, 2014, 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 the RusHydro Group. 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 Sustainable Development Report for 2013 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 the Company's activities in these areas.

Recommendations of the RSPP's Council following the public assurance of the Company's previous report for 2012 were taken into account during preparation of the 2013 Report. The relevant information is contained within the text of the Report. RSPP Council recommendations have found their ways into, in particular, improvement in the Report's structure, a fuller disclosure of the implementation of its sustainable development strategy and approaches in the field of manage-

ment, and an expansion in the disclosed performance indicators, including environmental and social aspects of the Company and its subsidiaries' performance.

The Company's Report for 2013 contains significant information on the following aspects of responsible business practices:

Economic freedom and responsibility. The Report provides data on the activities of RusHydro within the context of sustainable development strategy. It contains information about events during the reporting period, which are important for the Company to achieve its strategic goals, the Group's key performance indicators for 2013, and 2014 development priorities. The Report shows the Company's exclusive role in the development of electric power engineering in Russia. It provides information on the ongoing modernization policy, emphasizes the importance of innovation and related prospects for the Group's business and sustainable hydro-power development in general, and includes information on relevant corporate programs. It provides a list of the largest investment projects. It reports on achievements and plans for the development of alternative and renewable energy sources. The Report provides the general system of corporate governance, including the allocation of responsibility for sustainable development issues. It provides information on the implementation and development of the integrated risk management system, which, as noted, is based on ISO 31000 principles. The Report outlines the main actions to comply with RusHydro's Code of Ethics. The Report emphasizes the importance of measures taken to implement control procedures and ensure fair business practices, the commitment to which is demonstrated by the Holding Company joining the Social Charter of Russian Business in 2013 and the signing of the Anti-Corruption Charter.

Partnership in business. The Report states that stakeholder engagement is seen as a condition of corporate social responsibility, an important factor for sustainable development. It shows approaches to interactions with stake-



holders; the analysis of which, as stated, was held during the reporting year to develop and improve the practice in this area. The Report outlines the Company's actions in the interests of shareholders, an important component of which includes information distribution and reporting, and dividend policy. It covers the issues of cooperation with investors and the financial community, provides information about the collaboration with higher education institutions for innovative development and personnel training. Developing and strengthening human resources are among the Company's priorities. The Report provides information on measures being undertaken to improve the efficiency of staff relations, including information on the adoption of RusHydro's Social Policy, the signing of a new Collective Agreement, the implementation of a set of personnel programs, social guarantees for workers, and measures to improve working conditions and labor protection. It presents information on numerous performance indicators within the field of personnel management. The report addresses the issues of building business relationships with suppliers and customers, including improving customer service, and upgrading procurement procedures, as well as measures to control the activities of suppliers and contractors. It includes information about the interaction with different levels of governmental authorities, including signing socio-economic cooperation agreements in the regions in which the Company operates. The Report provides information on membership and participation in various Russian and international organizations, including the Global Partnership for Sustainable Energy, in which JSC RusHydro has been presiding since 2013. The Report also contains a summary of the dialogue with stakeholders when this Report was being prepared, and announces plans to develop this practice in the future.

**Human rights.** The Report states that respect for human rights within the Company is carried out under Russian law. It presents detailed information on various aspects related to employment and the social protection of workers. Respective obligations are fixed in various RusHydro corporate documents.

**Environmental conservation.** The Report states that ensuring environmental safety and reducing the negative impact on the environment are among priorities

of the Company's responsible business practice. It indicates the objectives and principles of the Environmental Policy, presents plans to reduce the negative impact, certify environmental management systems in corporate branches, and develop scientific research for ecological orientation. The Report includes information on biodiversity conservation, the organization of a complex assessment on how power facility construction projects have an environmental impact throughout the life cycle of power equipment. It provides data for the branches on emissions and discharge of pollutants into the air and water bodies, and industrial waste, as well as measures to reduce these impacts. The Report outlines the Company's plans to participate in the sales of CO<sub>2</sub> emission quotas within the framework of Kyoto Agreement implementation. Considerable attention in the Report is given to energy efficiency and resource conservation in the Company's operations. Lines of activities and main measures in this area are fixed within the relevant Program of JSC RusHydro for 2010-2015, and reflected in the Innovative Development Program of the Comprehensive Modernization Program. The Report contains specific indicators for environmental aspects, including data on the costs of environmental protection in 2013. The Company is reported to be actively participating in the development of environmental legislation in cooperation with government agencies, including in the area of creating a regulatory framework for promoting the use of alternative energy sources.

Participation in the development of local communities. The Report states that the Company is actively involved in the socio-economic development of the regions in which it operates, concluding agreements with local authorities. Key activities in 2013 included the construction of new hydro-power facilities, the creation of power complexes, and the development of industrial engineering. The Report devotes considerable attention to the Company's participation in the development of the Far East. It also shows the Company's role in fighting against abnormal floods and overcoming the consequences (of said floods). The Report provides information on programs to assist residents in connection with the accident at the Company's Sayano-Shushenskaya HPP, the activities of the Charitable Foundation "Involvement", and the practice

of corporate volunteering. The Report covers the Company's social programs and activities addressed to local communities. These programs and activities are implemented in prioritized areas of the Company. The Report provides information on the expenditures of RusHydro to implement social programs.

### Final Provisions

In general, the information presented in the 2013 Report of the RusHydro Group, outlines the Company's position in respect to priority tasks in the field of corporate social responsibility and sustainable development and their connection to business strategy, presents the main elements of the control system, and highlights 2013 results in key activity areas. The Report presents a target development trend for the period up to 2015 and with a view till 2020, including the creation of an effective innovation management system, human resources development, labor and environmental protection, and the promotion of the reliability of existing assets. Within the context of sustainable development, the Report highlights approaches to stakeholder engagement and challenges for the future in this area.

The Report contains a significant amount of specific indicators for economic, social and environmental performance, and has been prepared using guidelines applied in Russian and international reporting practices (the Global Reporting Initiative Sustainability Reporting Guidelines version 3.1 and the GRI Electric Utilities Sector Supplement), which ensures the continuity of information and comparability with other companies in the industry.

The Report on the Sustainable Development of the RusHydro Group for 2013 is the sixth corporate non-financial report, which reflects continuity in the development of reporting process, adherence to the principles of openness and transparency, and the Company's progress on the way to increasing transparency.

