# RusHydro Group announces its operating results for the 3Q and 9 months of 2016

PJSC RusHydro (ticker symbol: MICEX-RTS, LSE: HYDR; OTCQX: RSHYY) announces operating results for the 3<sup>rd</sup> quarter and nine months of 2016 of the parent company and the subsidiaries of RusHydro Group reflected in consolidated financial statements.

# Key highlights:

- Strong operating results due to increased water inflows to major reservoirs as well as substitution of inefficient condensing electricity power generation from thermal power plants with hydro in the Far East of Russia in the 3<sup>rd</sup> quarter of 2016;
- Total electricity generation by power plants of RusHydro Group in 3Q 2016 amounted to 31,007 GWh (+17.3%), in 9M 2016 94,117 GWh (+12.6%);
- In 3Q 2016, total production by HPPs/PSPPs amounted to 26,009 GWh (+28.4%), in 9M 2016 72,844 GWh (+20.3%);
- In 9M 2016, total water inflow to reservoirs in the Far East of Russia was higher than long-run average (+74%), to reservoirs of Volga-Kama cascade, Siberia and HPPs of the South of Russia – close to long-run average;
- Electricity generation by the plants of RAO ES East in 3Q 2016 5,244 GWh (-18.3%), in 9M 2016 22,439 GWh (-7.4%);
- The electricity generation by the Boguchanskaya hydropower plant in 3Q 2016 amounted to 4,026 GWh (-4.8%); in 9M 2016 – 10,517 GWh (+3.2%)<sup>1</sup>;
- Water inflow to reservoirs of major hydropower plants of the Group in 4Q 2016 is expected to be close long-run average or could deviate from long-run average by  $\pm 10\%$ ;
- The company expects a 14-16% increase in output of its hydropower plants in FY 2016 compared to FY 2015.

In the 3<sup>rd</sup> quarter of 2016, total electricity generation by power plants of RusHydro Group amounted to 31,007 GWh, a 17.3% increase as compared to the same period of 2015, total power generation in the 9 months of 2016 amounted to 94,117 GWh (a 12.6% growth as compared to the same period of 2015). In the 3<sup>rd</sup> quarter of 2016, hydropower (HPPs) and pumped storage power plants (PSPPs) of RusHydro Group increased electricity generation by 28.4% to 26,009 GWh, in the 9 months of 2016 generation increased by 20.3% to 72,844 GWh, output by thermal (TPPs) and geothermal plants located in the Far East of Russia in the 3<sup>rd</sup> quarter of 2016 decreased by 19.1% to 4,998 GWh, in the 9 months of 2016 – by 7.8% to 21,273 GWh.

## Electricity generation by the plants of RusHydro Group, GWh

	3Q'16	3Q'15	chg, %	9M'16	9M'15	chg, %
Center of Russia	8,446	10,074	-16.2%	30,930	28,389	9.0%
S. of Russia and N.Caucasus	2,667	2,020	32.0%	6,853	5,349	28.1%
Siberia	9,859	4,631	112.9%	22,179	16,156	37.3%
Total for the price zones	20,972	16,725	25.4%	59,962	49,894	20.2%
Far East	4,632	3,131	48,0%	11,342	9,057	25.2%
RAO ES of the East	5,244	6,422	-18.3%	22,439	24,242	-7.4%
Armenia	159	162	-2.1%	375	422	-11.2%
TOTAL	31,007	26,440	17.3%	94,117	83,614	12.6%
incl. by HPPs, PSPPs <sup>2</sup>	26,009	20,263	28.4%	72,844	60,547	20.3%
incl. by TPPs and other	4,998	6,177	-19.1%	21,273	23,067	-7.8%
Boguchanskaya HPP	4,026	4,231	-4.8%	10,517	10,195	3.2%

The underlying factors of the production change in January-September 2016 were:

- total water inflow to reservoirs of the Volga-Kama cascade in the 3<sup>rd</sup> quarter of 2016 was somewhat lower than normal (-7%), in the 9 months of 2016 – slightly higher than longrun average (+5%);
- water inflow to major reservoirs of Siberia in the 9 months of 2016 was close to normal;
- increased electricity generation by hydropower plants of the South of Russia against the backdrop of water levels close to long-run average and launch of 100 MW Gotsatlinskaya HPP in 2015;
- decrease in electricity generation by TPPs of RAO ES East Holding due to higher electricity generation by hydropower plants of the Far East.

### Center of Russia

Due to increased water inflow in 2H 2015, water storage in reservoirs of the Volgo-Kama cascade, in the beginning of 2016, amounted to 65.55 km<sup>3</sup>, which is 18% higher than long-run average and 49% higher than at the beginning of 2015. In the 1<sup>st</sup> quarter of 2016, water inflow to reservoirs of the Volgo-Kama cascade was 1.3-2.2x higher than long-run average.

In the 2<sup>nd</sup> quarter of 2016, water inflow to reservoirs located at the Upper Volga was 20-35% lower than long-run average, to Volgogradskoe reservoir – only 25% of norm, to Gorkovskoe, Cheboksarskoe, Kuybyshevskoe and Nizhnekamskoe reservoirs – close to normal, to Kamskoe and Votkinskoe reservoirs – 25-65% higher than long-run average.

Total water inflow to reservoirs of the Volgo-Kama cascade in the  $3^{rd}$  quarter of 2016 amounted to 34.5 km<sup>3</sup> as compared to the average of 37.0 km<sup>3</sup>, in the 9 months of 2016 – 229.4 km<sup>3</sup> as compared to the average of 219.3 km<sup>3</sup>. Special water supply spill for agricultural needs of lower Volga was longer than in previous years and amounted to 127.25 km<sup>3</sup> as compared to 65.46 km<sup>3</sup> in 2015.

Total electricity generation by RusHydro's hydropower plants of the Volgo-Kama cascade together with Zagorskaya pumped storage plant in the 3<sup>rd</sup> quarter of 2016 amounted to 8,446 GWh, a 16.2% decrease as compared to the same period of 2015. In the 9 months of 2016, generation reached 30,930 GWh, which is 9.0% higher than in the same period of the previous year.

### South of Russia and North Caucasus

In the 9 months of 2016, water conditions on the rivers of the South of Russia and North Caucasus were close to long-run average. In January-September 2016, water inflow to the Chirkeyskoe reservoir was 5% higher than long-run average.

Hydropower plants of the Dagestan branch of RusHydro successfully went through the peak flood period, which took place in the first decade of June. In July, Kubanskoe reservoir was filled to its normal level of 629 m. By the beginning of September Chirkeyskoe reservoir was also filled up to its normal water level of 355 m. Currently, the Chirkeyskaya HPP operates in normal regime.

The electricity generation by the hydropower plants of the South of Russia and North Caucasus in the 3<sup>rd</sup> quarter of 2016 increased by 32.0% to 2,667 GWh, in the 9 months of 2016 – by 28.1% to 6,853 GWh.

#### Siberia

In January - September 2016, water inflow to the Ob and Yenisei rivers was close to normal. In 2016, the spring flood period in the basin of the Sayano-Shushenskaya HPP started later than usual. In the end of August, reservoir of the Sayano-Shushenskaya HPP was filled to its maximum level of 538.5 m. On September 2, 2016, the plant generated its all-time high daily amount of electricity – 110,306,939 kWh. The record high amount of electricity produced by the Sayano-Shushenskaya HPP is a result of favorable hydrological conditions, as well as modernization of automatic reliability system of the plant made in 2015.

The flood period in the basin of Novosibirskoe reservoir started earlier than usual. There were two peak periods of flooding: in April and July 2016.

The Boguchanskaya hydropower plant in the 9 months of 2016 generated 10,597 GWh, 3.2% increase as compared to the same period of the previous year. DThe reservoir of the Boguchanskaya HPP had been drawn down to 207.0 m. As of the end of September, the reservoir level was 207.5 m.

Total electricity generation by RusHydro's Siberian hydropower plants in the 3<sup>rd</sup> quarter of 2016 increased by 112.9% to 9,859 GWh, in the 9 months of 2016 –by 37.3% to 22,179 GWh.

## Far East

In the 3<sup>rd</sup> quarter of 2016, after heavy rains water inflow to reservoirs of the Zeyskaya and Kolymskaya HPPs was 1.8x and 1.9x higher than normal (respectively), water inflow to the Far Eastern rivers was 10-74% higher than normal.

In order to provide for safe and uninterrupted operation of hydropower facilities during the flood period, the spare capacity was created in reservoirs to accumulate spring and summer inflows.

In 2016, unlike two previous years, the reservoir of the Zeyskaya HPP was filled over its normal water level of 315 m and limitations of output were removed allowing the plant to reach its annual output of 4.3 TWh.

Total electricity generated by hydro and geothermal power plants of the Far East in the 3<sup>rd</sup> quarter of 2016, increased by 48.0% to 4,632 GWh. In the 9 months of 2016, generation increased by 25.2% to 11,342 GWh.

In the 3<sup>rd</sup> quarter of 2016, generating assets of RAO ES East Holding, a subsidiary of RusHydro, produced 5,244 GWh of electricity, 18.3% decrease as compared to the 3<sup>rd</sup> quarter of 2015, in the 9 months of 2016 generation decreased by 7.4% and amounted to 22,439 GWh. Of this total, 72% was generated by JSC Far East Generating Company (DGK), which decreased production by 9.3% in the 9 months of 2016 to 16,798 GWh, mainly due to 30% increase in electricity output by the Zeyskaya and Bureyskaya hydropower plants. In the 9 months of 2016, electricity generation by companies operating in isolated energy systems of the Far East remained flat year-on-year.

In the 9 months of 2016, heat output by thermal plants of RAO ES East increased by 3.8% to 20,233 ths. GCal as compared to the same period of 2015.

	3Q'16	3Q'15	chg, %	9M'16	9M'15	chg, %
JSC DGK	1,416	1,418	-0.1%	14,123	13,600	3.8%
PJSC Yakutskenergo	162	167	-3%	1,559	1,484	5%
SC Sakhaenergo	4	5	-16%	58	66	-12%
SC Teploenergoservice	57	57	0%	823	846	-3%
PJSC Kamchatskenergo	136	120	14%	1,467	1,294	13%
SC KSEN	4	2	66%	52	49	7%
PJSC Magadanenergo	105	92	14%	834	821	2%
SC Chukotenergo	42	45	-6%	320	335	-4%
JSC Sakhalinenergo	49	55	-12%	997	992	0.5%
Total	1,974	1,960	0.7%	20,233	19,487	3.8%

### Heat output by thermal plants of RAO ES East, ths. GCal

### Armenia

In the 3<sup>rd</sup> quarter of 2016, electricity generation by the Sevan-Hrazdan cascade of hydropower plants in Armenia decreased by 2.1% to 159 GWh, in the 9 months of 2016,

electricity generation decreased by 11.2% to 375 GWh. Power generation by the plants of the cascade is dependent on water inflows of the Hrazdan river and water releases from Sevan lake.

## Electricity retail

In the 3<sup>rd</sup> quarter of 2016, total electricity output by RusHydro's four retail companies, operating in Bashkiria, Chuvashia, Ryazan and Krasnoyarsk regions, amounted to 7,354 GWh, a 0.2% decrease as compared to the same period of 2015; in the 9 months of 2016 output amounted to 25,151 GWh (-2.7%).

In the reporting period ESC RusHydro, a holding company for all electricity retail operations, increased electricity output by 476 GWh (+37.7%) as compared to the same period of 2015 due to addition of major consumers.

The decrease in electricity output by JSC Krasnoyarskenergosbyt by 363 GWh or 3.6%, Bashkiria power retail company by 716 GWh (-7%), JSC Chuvash retail company by 13 GW (-0.6%) and PJSC Ryazan retail company by 73 GWh (-3.6%) in the 9 months of 2016 is attributable to recession in manufacturing industry, transfer of a number of major consumers to independent wholesale electricity purchases and abnormally high air temperature in autumn.

	3Q'16	3Q'15	chg, %	9M'16	9M'15	chg, %
Krasnoyarskenergosbyt	2,526	2,744	-8.0%	9,610	9,973	-3.6%
Bashkiria retail company	2,807	2,874	-2.3%	9,497	10,213	-7.0%
Chuvash retail company	708	696	1.7%	2,334	2,347	-0.6%
Ryazan retail company	625	657	-4.9%	1,970	2,043	-3.6%
ESC RusHydro	688	397	73.1%	1,741	1,264	37.7%
Total	7,354	7,368	-0.2%	25,151	25,841	-2.7%

## Electricity output by RusHydro Group's retail companies, GWh

### Water inflows forecast

According to the forecast of the Hydrometeorological Center of Russia, the following dynamics of water inflows to the major reservoirs is expected in the 4<sup>th</sup> quarter of 2016:

- total expected water inflow to reservoirs of the Volgo-Kama may amount to 32-40 km<sup>3</sup> as compared to the average of 36.6 km<sup>3</sup>;
- water inflow to the reservoir of Chirkeyskaya hydropower plant in the North Caucasus is expected to be close to long-run average;
- water inflow to major reservoirs of hydropower plants of Siberia expected to be close to normal;
- water inflow to the HPP's of the Far East is expected to be close to or slightly higher than long-run average.

The company expects that its total production from hydropower plants in full year 2016 could increase by 14-16% as compared to 2015.

<sup>&</sup>lt;sup>1</sup> The Boguchanskaya hydropower plant is part of the Boguchanskiy Energy and Metals Complex (BEMO), a 50/50 joint venture (JV) between RusHydro and UC RUSAL, and is not part of RusHydro Group. According to RusHydro's shareholding in the JV (50%), the results of the plant are reported in the official financial statements in "Share of results of associates and jointly controlled entities". Operations of the HPP have been put into the press-release for general reference.

<sup>&</sup>lt;sup>2</sup> Includes generation by HPPs of JSC RusHydro, Kolymskaya HPP and Viluiskie HPPs, part of RAO ES East Subgroup.

#### About RusHydro

RusHydro Group is one of Russia's largest generating companies. RusHydro is the leading producer of renewable energy in Russia with over 70 generating facilities in Russia and abroad. The company also manages a number of R&D, engineering and electricity retail companies. Group's thermal assets are operated by subsidiary – RAO Energy System of East in the Far East of Russia. Total electricity generation capacity of the Group is 38.6 GW, heat capacity – 16.2 thousand GCal/h.

Russian Federation owns 66.8% in RusHydro, the rest is held by other institutional and individual shareholders (over 360,000). The company's stock is traded on Moscow Exchange (MOEX), and included in MSCI EM и MSCI Russia indexes. Company's GDRs in the IOB section of LSE, ADRs – in OTCQX.

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We do not intend to update these statements to reflect events and circumstances occurring after the date hereof or to reflect the occurrence of unanticipated events. Many factors could cause the actual results to differ materially from those contained in our projections or forward-looking statements, including, among others, general economic and political conditions, our competitive environment, risks associated with operating in Russia and rapid technological and market changes in our industries, as well as many other risks specifically related to RusHydro and its operations.