

## RusHydro Group announces 3Q and 9M 2018 operating results

**October 22, 2018. Moscow, Russia.** PJSC RusHydro (ticker symbol: MICEX-RTS, LSE: HYDR; OTCQX: RSHYY) announces operating results for the 3<sup>rd</sup> quarter and 9 months of 2018 of the parent company and the subsidiaries of RusHydro Group reflected in consolidated financial statements.

### Key highlights:

- Record production output in the first nine months of 2018 on the back of higher inflows to reservoirs on the Volga-Kama cascade in the first half of the year and to hydropower reservoirs in Siberia in the third quarter aided by production growth of RAO ES of East following increase in consumption along with higher sales of electricity to China;
- Total electricity generation by power plants of RusHydro Group in 3Q 2018 amounted to 32,246 GWh (+3.9%), in 9M 2018 – 99,618 GWh (+5.3%);
- In 3Q 2018, total production by hydropower and pumped storage plants amounted to 25,961 GWh (+4.3%), total output by thermal power plants – 6,197 GWh (+2.4%) and production of alternative renewable energy facilities – 87 GWh (-8.4%);
- In 9M 2018, total production by hydropower and pumped storage plants amounted to 76,582 GWh (+5.1%), total output by thermal power plants – 22,718 GWh (+6.2%) and production of alternative renewable energy facilities – 314 GWh (-3.5%);
- In 3Q 2018, total water inflow to reservoirs of the Volga-Kama cascade, HPPs of Siberia, South of Russia and the Far East of Russia was close to normal or slightly below it;
- Total electricity generation by the Boguchanskaya hydropower plant in 9 months of 2018 amounted to 10,286 GWh (-1.7%)\*;
- Total production of RAO ES East Subgroup's power plants in 9M 2018 amounted to 24,550 GWh (+7.3%), heat output by thermal power plants - 19,574 thousand GCal (+4.6%);
- Electricity output by RusHydro Group's electricity retail companies in 9M 2018 amounted to 14,706 GWh (-1.5%);
- Water inflow to reservoirs, in Siberia and the Far East in 4Q 2018 is expected to be close to or slightly below the long-run average, to reservoirs of Volga-Kama cascade and the South of Russia – below the long-run average.

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

	3Q'18	3Q'17	chg, %	9M'18	9M'17	Chg, %
Center of Russia	9,843	12,395	-20.6%	35,828	36,203	-1.0%
S. of Russia and N.Caucasus	2,494	2,250	10.8%	6,102	5,705	7.0%
Siberia	9,406	6,319	48.9%	22,239	18,652	19.2%
<b>Total for the price zones</b>	<b>21,743</b>	<b>20,964</b>	<b>3.7%</b>	<b>64,169</b>	<b>60,560</b>	<b>6.0%</b>
Far East (HPP, geothermal)	3,688	3,474	6.1%	10,352	10,702	-1.6%
RAO ES East Subgroup	6,641	6,389	4.0%	24,550	22,882	7.3%
Armenia	174	202	-13.9%	368	435	-15.4%
<b>TOTAL</b>	<b>32,246</b>	<b>31,029</b>	<b>3.9%</b>	<b>99,618</b>	<b>94,577</b>	<b>5.3%</b>
incl. by HPPs, PSPPs**	25,961	24,880	4.3%	76,582	72,852	5.1%
incl. by TPPs	6,197	6,055	2.4%	22,722	21,400	6.2%
Incl. by alt. renewables (geothermal, solar, wind)	87	95	-8.4%	314	325	-3.5%
<i>Boguchanskaya HPP*</i>	4,122	3,716	10.9%	10,286	10,463	-1.7%

The underlying factors of the production change in January-September 2018 were:

- total water inflow to reservoirs of the Volga-Kama cascade in the first quarter of the year was 1.2-2.5x higher than normal, in the second quarter of 2018 - lower than normal, in the 3<sup>rd</sup> quarter – at the normal level;
- total water inflow to hydropower plants of Siberia was at the normal level, to HPPS in the South of Russia – slightly below the normal level;
- growth of electricity generation by thermal power plants in the Far East by 7.3% (to 24,550 GWh) following increase in consumption in the region by 5.3% as well as increase in electricity sales to China and UES of Siberia by 4.0%.

### ***Center of Russia***

In the first quarter of 2018, water inflow to most of the reservoirs on Volga and Kama was 1.2-2.5x higher than normal. Total water inflow to the reservoirs of the Volga-Kama cascade reached 38.7 km<sup>3</sup> (normal level - 21.3 km<sup>3</sup>).

Flooding inflows to most of the reservoirs on the Volga-Kama cascade in the second quarter was close to the long-run average with inflows to Ivankovskoye, Saratovskoye, Volgogradskoye and Nizhnekamskoye reservoirs 20-45% below the normal level. Total inflow to reservoirs on Volga and Kama in the second quarter was close to normal level, at 153 km<sup>3</sup> against the long-run average of 161 km<sup>3</sup>.

In August 2018, the Volga-Kama cascade experienced low-water period. Total water inflow to most reservoirs was 5% below the normal level. In the beginning of September the figure was already 23% below normal level.

In the third quarter of the year, total water inflow to Gorkovskoye reservoir was below the normal level, to Cheboksarskoye and Kamskoye reservoirs – close to the normal level and to Kuybishevskoye reservoir – 35% above the normal level. Total water inflow to the reservoirs of the Volga-Kama cascade was 37.2 km<sup>3</sup> (normal level – 37.0 km<sup>3</sup>).

Total production by the hydropower plants of Volga-Kama cascade, operated by RusHydro group, and Zagorskaya pumped storage in the third quarter of 2018 decreased by 20.6% against the same figure of 2017 to 9,843 GWh (high base effect, water inflows in 3Q 2018 reaching normal level), in the first nine months of the year – decreased by 1.0% to 35,828 GWh.

### ***South of Russia and North Caucasus***

Hydropower plants of the North Caucasus were operating under hydrological conditions close to the long-run average in the first half of 2018. The third quarter of the year saw production increase by the power plants of the Dagestan branch on the back of increased rainfall and higher than expected water inflows. Total water inflow to Chirkeiskaya HPP was 20% below the normal level in the third quarter.

The electricity generation by the hydropower plants of the South of Russia and North Caucasus in the third quarter of 2018 increased by 10.8% compared to the corresponding period last year to 2,494 GWh, in the first nine months of the year increased by 7.0% to 6,102 GWh.

## ***Siberia***

Water inflow to the reservoirs on the rivers of Siberia in the first quarter of 2018 was higher than normal level: inflow to Sayano-Shushenskoe reservoir and Novosibirskaya HPP was higher by 20% and 15%, respectively.

In the second quarter of the year, the inflows to Siberian rivers was predominantly close to the long-run average with the exception of Novosibirskoye and Krasnoyarskoye reservoirs, where water inflow was 10% above the long-run average. Debits on Novosibirskaya HPP were increased to offset higher water inflows. There were no signs of flooding at the tailrace in the current year.

Water inflows to the reservoirs on the Yenisei and Angara rivers were for the most part close to the normal level in the third quarter. Inflow to the Novosibirskoye reservoir was 15% below the normal level. In August, water inflow to Sayano-Shushenskoye reservoir was 8% higher than normal. The plant has produced 3,490 GWh, an all-time high amount of electricity. Record output was a result of a combination of factors, including favorable hydrological conditions and improved coordination of the plant's regime with the System Operator. In September, water inflow to Sayano-Shushenskoye reservoir was 9% higher than normal. Thanks to favorable hydrological conditions, the facility has produced a record 2,950 GWh.

Total electricity generation by RusHydro's Siberian hydropower plants in the third quarter of 2018 increased by 48.9% to 9,406 GWh as compared to the corresponding period last year, in the first nine months of 2018 – increased by 19.2% to 22,239 GWh. The Boguchanskaya hydropower plant in the third quarter of 2018 generated 4,122 GWh, an increase of 10.9% y-o-y, in the first nine months of the year – 10,286 GWh (slight decrease of -1.7% over the same period last year).

## ***Far East***

Water inflow to Zeyskoe reservoir in the first quarter was 20% higher than the long-run average and to Kolymanskaya HPP - 35% above the long-run average.

The reservoirs in the Far East have been going through low water period in the second quarter of the year.

Water inflows to Kolymskoye reservoir in May, unlike Zeyskoye and Bureyskoye, was three times the normal level on the back of ample snow. In June, water inflows were above the normal level as well.

In the second quarter of 2018 water inflow to Zeyskoye reservoir was 35% below the normal level, while inflows to Kolymskoye reservoir was 60% above the long-run average.

In August, water inflow to the reservoirs on the Zeya and Bureya rivers, which was forecast above the normal level, turned out to be significantly below the normal level following reduction in rainfall. The reservoir on the Zeya river, in particular, saw water inflow twice below the normal level. On the other hand, water inflow to Kolymskoye reservoir was 163% of the normal level.

In the third quarter of the year, total water inflow was close to the long-run average. Inflow to the reservoirs on the Kolyma River was 40% above normal, to the reservoirs on the Zeya river – 15% below the normal level.

Total electricity generated by hydro and geothermal power plants of the Far East in the third quarter of 2018, increased by 6.1% to 3,688 GWh, in the first nine months of the year – decreased by 1.6% against the same period of previous year to 10,532 GWh.

In the third quarter of 2018, generating assets of RAO ES of East Subgroup, a subsidiary of RusHydro, produced 6,641 GWh, or 4.0% higher than in the third quarter of 2017. Of this total, 75% was generated by JSC Far East Generating Company (DGK), which increased production by 1.7% in the third quarter of 2018.

Electricity production by RAO ES of East Subgroup increased by 7.3% in the nine months of 2018 to 24,550 GWh following higher outflows of electricity to China and United Power System of Siberia by 4.0% along with increase of electricity consumption in the United Power System of the East by 5.3%.

In the first nine months of 2018, heat output by thermal plants of RAO ES of East increased by 4.6% to 19,574 thousand GCal as compared to the corresponding period of 2017. The increase came on the back of lower temperatures in all the regions of the Far East in the first quarter of the year with an exception of Chukotka Autonomous Okrug. Slight decrease in heat output in the third quarter is a result of higher air temperatures.

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

	3Q'18	3Q'17	chg, %	9M'18	9M'17	chg,%
JSC DGK	1,373	1,413	-2.8%	13,786	13,071	5.5%
PJSC Yakutskenergo	162	167	-2.6%	1,539	1,478	4.1%
JSC Sakhaenergo	3	3	-6.1%	55	52	6.1%
JSC Teploenergoservice	59	52	12.3%	770	750	2.6%
PJSC Kamchatskenergo	119	115	4.2%	1,298	1,238	4.9%
JSC KSEN	4	3	17.5%	50	49	3.3%
PJSC Magadanenergo	98	95	3.1%	814	790	3.0%
JSC Chukotenergo	41	48	-14.9%	281	309	-8.9%
PJSC Sakhalinenergo	56	55	2.2%	981	972	0.9%
<b>Total</b>	<b>1,916</b>	<b>1,952</b>	<b>-1.8%</b>	<b>19,574</b>	<b>18,708</b>	<b>4.6%</b>

#### Armenia

In the first nine months of 2018, electricity generation by the Sevan-Hrazdan cascade of hydropower plants in Armenia decreased by 15.4% to 368 GWh as compared to the corresponding period last year. The 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 third quarter of 2018, total electricity output by RusHydro's retail companies, operating in Chuvashia, Ryazan and Krasnoyarsk regions, amounted to 4,192 GWh, a 4.4% decrease as compared to the same period of 2017, in the first nine months of 2018 – 14,706 GWh, a decrease of 1.5% as compared to the corresponding period last year.

Increase in output by PJSC Krasnoyarsenergosbyt and JSC Chuvash retail company in the first nine months of the year is driven by extension of heating season in the Krasnoyarskiy Krai until May 31, 2018 and climate conditions in Chuvashia. Decrease in output by Ryazan retail company came on the back of cancellation of service with "Gardian Steklo Ryazan"

production company. Negative performance of ESC RusHydro a result of cancelation of service agreement with Bahkirsкая Sotovaya Kompaniya.

### Electricity output by Subgroup ESC RusHydro's retail companies, GWh

	3Q'18	3Q'17	chg, %	9M'18	9M'17	chg, %
Krasnoyarskenergosbyt	2,450	2,544	-3.7%	9,126	8,914	2.4%
Chuvash retail company	723	714	1.2%	2,432	2,395	1.5%
Ryazan retail company	605	599	1.0%	1,934	1,943	-0.5%
ESC RusHydro	413	529	-21.8%	1,214	1,683	-27.9%
<b>Total</b>	<b>4,192</b>	<b>4,385</b>	<b>-4.4%</b>	<b>14,706</b>	<b>14,936</b>	<b>-1.5%</b>

Electricity output by PJSC DEK (energy retail company operating in the Primorskiy krai, Khabarovskiy Krai, Amur region and Jewish Autonomous region, the main supplier of electricity to the population in the second non-price zone of the wholesale energy market) in the third quarter decreased by 10.7% to 4,002 GWh as compared to the same period of 2017, in the first nine months of the year – decreased by 7.9% to 14,995 GWh.

The decrease in performance in the nine months of the year is primarily driven by cancelation of service agreement with LLC Rusenergosbyt that started operating on the wholesale electricity market.

### Water inflows forecast

According to the forecast of the Hydrometeorologic Center of Russia, the following dynamics of water inflows to the major reservoirs is expected in the fourth quarter of 2018:

- water inflow to the reservoirs on Volga and Kama is expected below the long-run average level. Inflows to Ivankovskoye, Uglichskoye, Gorkovskoye and Kamskoye reservoirs are expected to be 15-35% below the normal level. Inflows to Cheboksarskoye, Kuybishevskoye and Nizhnekamskoye reservoirs are expected to be close to the long-run average. Total inflows to reservoirs on Volga and Kama in the fourth quarter is expected in the range of 31.7-35.7 km<sup>3</sup> as compared to the average of 36.6 km<sup>3</sup>;
- water inflow to the reservoirs of hydropower plants located in the North Caucasus is expected to be 25% below the long-run average;
- water inflow to reservoirs in Siberia and the Far East expected to be close to the long-run average or slightly below the norm, to major reservoirs on Ob' and Kolyma - 25-40% higher than normal.

\*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.

\*\* Includes generation by HPPs of PJSC RusHydro, Kolymskaya HPP and Viluyeskie HPPs, part of RAO ES of 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 400 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 39 GW, heat capacity – 18.5 thousand GCal/h.

Russian Federation owns 60.56% 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.*