

#### RusHydro Group announces 2Q and 1H 2018 operating results

**July 20, 2018. Moscow, Russia.** PJSC RusHydro (ticker symbol: MICEX-RTS, LSE: HYDR; OTCQX: RSHYY) announces operating results for the 2<sup>nd</sup> quarter and 1<sup>st</sup> half of 2018 of the parent company and the subsidiaries of RusHydro Group reflected in consolidated financial statements.

## Key highlights:

- Strong hydropower output in the second quarter of 2018 following rehabilitation and modernization of generating equipment on the hydropower plants of the Volga-Kama cascade prior to the flooding period, slightly lower than normal water inflows to most reservoirs aided by production growth of RAO ES of East due to increase in consumption and higher sales of electricity to China;
- Total electricity generation by power plants of RusHydro Group in 2Q 2018 amounted to 35,537 GWh (+3.2%), in 1H 2018 67,371 GWh (+6.0%);
- In 2Q 2018, total production by hydropower and pumped storage plants amounted to 28,481 GWh (+3.5%), total output by thermal power plants 6,943 GWh (+2.3%) and production of alternative renewable energy facilities 113 GWh (-3.9%);
- In 1H 2018, total production by hydropower and pumped storage plants amounted to 50,621 GWh (+5.5%), total output by thermal power plants 16,525 GWh (+7.7%) and production of alternative renewable energy facilities 227 GWh (-1.8%);
- In 2Q 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 1H 2018 amounted to 6,164 GWh (-8.6%)\*;
- Total production of RAO ES East Subgroup's power plants in 1H 2018 amounted to 17,908 GWh (+8.6%), heat output by thermal power plants - 17,659 thousand GCal (+5.4%);
- Electricity output by RusHydro Group's electricity retail companies in 1H 2018 amounted to 10,516 GWh (-0.3%);
- Water inflow to reservoirs, in the South of Russia and in Siberia in the third quarter of 2018 is expected to be close to the long-run average, to reservoirs of Volga-Kama cascade and the Far East – above the long-run average.

\* 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.

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

	2Q'18	2Q'17	chg, %	1H'18	1H'17	Chg, %
Center of Russia	15,027	15,079	-0.3%	25,985	23,808	9.1%
S. of Russia and N.Caucasus	2,468	2,251	9.7%	3,608	3,454	4.5%
Siberia	7,238	6,545	10.6%	12,832	12,333	4.0%
Total for the price zones	24,734	23,875	3.6%	42,425	39,595	7.1%
Far East	3,219	3,151	2.2%	6,844	7,227	-5.3%
RAO ES East	7,453	7,202	3.5%	17,908	16,493	8.6%
Armenia	131	195	-32.8%	194	233	-16.7%



TOTAL	35,537	34,423	3.2%	67,372	63,549	6.0%
incl. by HPPs, PSPPs**	28,481	27,520	3.5%	50,621	47,973	5.5%
incl. by TPPs	6,943	6,785	2.3%	16,525	15,349	7.7%
Incl. by alt. renewables	113	117	-3.0%	227	231	_1.8%
(geothermal, solar, wind)	115	117	-0.970	221	201	-1.070
Boguchanskaya HPP	3,361	3,572	-5.9%	6,164	6,748	-8.6%

\*\*Includes generation by HPPs of PJSC RusHydro, Kolymskaya HPP and Viluyskie HPPs, part of RAO ES of East Subgroup.

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

- total water inflow to reservoirs of the Volga-Kama cascade in the second quarter of 2018 was lower than normal, to hydropower plants of Siberia and South of Russia – on the normal level;
- growth of electricity generation by thermal power plants in the Far East by 3.8% in the second quarter (to 10,205 GWh) following increase in consumption in the region;
- increase in electricity sales to China and UES of Siberia by 4.8% (to 894 GWh) as compared to the same period last year.

# Center of Russia

In the beginning of 2018, water resources in the reservoirs of the cascade were higher as compared to the long-run average and to last year by 35% and 51% respectively. The available capacity of the reservoirs of the Volga-Kama cascade was 75.1 km<sup>3</sup> as compared to the long-run average of 58.3 km<sup>3</sup>.

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>).

Spring flooding came later than expected due to cold weather conditions allowing to draw down the cascade's reservoirs below the initially planned level. Delayed flooding inflows to the Kama reservoirs along with available free reservoir volume helped the HPPs on the Volga pass the peak-flooding season.

Water inflow to reservoirs on the upper Volga and to Volgogradskoye reservoir in June was below the normal level by 30-55%. Inflows to Kuybishevskoye, Kamskoye, Votkinskoye and Nizhnekamskoye reservoirs was 1.3-1.8x above the normal level, while inflows to Cheboksarskoye and Saratovskoye reservoirs was close to the long-run average. In June, inflows to Volga and Kama reservoirs totaled 31.0 km<sup>3</sup> or 31% above the long-run average.

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 the third quarter of the year, total water inflow to the reservoirs of the Volga-Kama cascade is expected to be in the range of 44-52 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 second quarter of 2018 decreased



insignificantly by 0.3% against the same figure of 2017 to 15,027 GWh, in the first half of the year – increased by 9.1% to 25,985 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. Similar situation is expected in the third quarter of the year. Filling up of the reservoirs of Chirkeiskaya and Irganayskaya HPPs is currently under way. Water inflow to Chirkeyskaya HPP on the Sulak River was 10% below the normal level in the second quarter.

The electricity generation by the hydropower plants of the South of Russia and North Caucasus in the second quarter of 2018 increased as compared to the corresponding period last year by 9.7% to 2,468 GWh, in the first half of the year increased by 4.5% to 3,608 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 is expected to be close to the normal level in the third quarter. Inflow to the Novosibirskoye reservoir is expected to be 5-20% above the normal level.

Total electricity generation by RusHydro's Siberian hydropower plants in the second quarter of 2018 increased by 10.6% to 7,238 GWh, in the first half of 2018 increased – by 4.0% to 12,832 GWh. The Boguchanskaya hydropower plant in the second quarter of 2018 generated 3,361 GWh, 5.9% decrease as compared to the same period of the previous year, in the first half of the year – 6,164 GWh (-8.6%).

### Far East

Water inflow to Zeyskoe reservoir in the first quarter was 20% higher than the long-run average and to Kolymskaya 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 inflow in May to Bureyskoye and Zeyskoye reservoirs were 57% and 60% of the normal level respectively. As a result, both reservoirs have been operating under water conservation mode in accordance with the water resource regulations. 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 the third quarter of the year, the inflow to the reservoirs on the Zeya and Bureya rivers is expected to be close to the long-run average or slightly below it, while inflow to the reservoirs on the Kolyma River is expected to be 15-30% above normal.

Total electricity generated by hydro and geothermal power plants of the Far East in the second quarter of 2018, increased by 2.2% to 3,219 GWh, in the first half of the year – decreased by 5.3% against the same period of previous year to 6,834 GWh.

In the second quarter of 2018, generating assets of RAO ES of East Subgroup, a subsidiary of RusHydro, produced 7,453 GWh, or 3,5% higher than in the second quarter of 2017. Of this total, 77% was generated by JSC Far East Generating Company (DGK), which increased production by 4.2% in the second quarter of 2018, mainly due to higher outflows of electricity to China and United Power System of Siberia by 4.8% along with increase of electricity consumption in the United Power System of the East by 2.9%.

Overall electricity production by RAO ES of East Subgroup in the first half of 2018 increased by 8.6% to 17,908 GWh.

In the first half of 2018, heat output by thermal plants of RAO ES of East increased by 5.4% to 17,659 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 with an exception of Chukotka Autonomous Okrug. Decrease in heat output in the second quarter is driven by reduced length of heating season in a number of towns of the region compounded by higher air temperatures.

	2Q'18	2Q'17	chg, %	1H'18	1H'17	chg,%
JSC DGK	2,993	3,016	-0.7%	12,413	11,657	6.5%
PJSC Yakutskenergo	318	334	-4.8%	1,377	1,311	4.9%
JSC Sakhaenergo	14	14	5.9%	52	49	7.0%
JSC Teploenergoservice	163	171	-5.0%	711	698	1.9%
PJSC Kamchatskenergo	438	417	5.2%	1,178	1,123	4.9%
JSC KSEN	17	16	3.3%	47	46	2.3%
PJSC Magadanenergo	253	254	-0.4%	716	695	3.0%
JSC Chukotenergo	92	101	-9.1%	240	260	-7.8%
PJSC Sakhalinenergo	330	332	-0.6%	925	917	0.8%
Total	4,618	4,654	-0.8%	17,659	16,756	5.4%

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

### Armenia

In the first half of 2018, electricity generation by the Sevan-Hrazdan cascade of hydropower plants in Armenia decreased by 16.7% to 194 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 second quarter of 2018, total electricity output by RusHydro's retail companies, operating in Chuvashia, Ryazan and Krasnoyarsk regions, amounted to 4,524 GWh, a 1.8% decrease as compared to the same period of 2017, in the first half of 2018 – 10,516 GWh, insignificantly lower as compared to the corresponding period last year.



The decrease in output is driven by record low output of Ryazan retail company in May and negative performance of ESC RusHydro after cancelation of service agreement with Bahkirskaya Sotovaya Kompaniya. Favorable performance of Krasnoyarskenergosbyt comes on the back of extension of heating season until May 31, 2018.

	2Q'18	2Q'17	chg, %	1H'18	1H'17	chg, %
Krasnoyarskenergosbyt	2,760	2,674	3.2%	6,676	6,370	4.8%
Chuvash retail company	749	748	0.0%	1,709	1,681	1.7%
Ryazan retail company	599	610	-1.7%	1,329	1,345	-1.2%
ESC RusHydro	415	574	-27.7%	802	1,154	-30.5%
Total	4,524	4,606	-1.8%	10,516	10,550	-0.3%

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

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 second quarter decreased by 11% to 4,349 GWh as compared to the same period of 2017, in the first half of the year – 10,993 GWh (-6.9%).

# 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 third quarter of 2018:

- water inflow to the reservoirs on Volga and Kama is expected above the long-run average level. Inflows to Kuybishevskoye and Kamskoye reservoirs are expected to be 1.7-1.9x higher than normal. Total inflows to reservoirs on Volga and Kama in the third quarter is expected in the range of 44-52 km<sup>3</sup> as compared to the average of 37.0 km<sup>3</sup>;
- water inflow to major reservoirs on Ob' and Kolyma is expected to be 15-30% higher than normal;
- water inflow to the reservoirs of hydropower plants located in the North Caucasus is expected to be close to the long-run average;
- water inflow to Zeyskoye reservoirs is expected to be close to the long-run average or slightly below the norm.

### 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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The information in this press release may contain projections or other forward-looking statements regarding future events or the future financial performance of PJSC "RusHydro" ("RusHydro"). One can identify forward-looking statements by terms such as "expect", "believe", "anticipate", "plan", "aim", "target", "forecast", "project", "should", "estimate", "intend", "will", "could", "may" or "might", the negative of such terms or other similar expressions. We wish to caution you that these statements are only predictions and that actual events or results may differ materially from these statements.

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.