

Media Release

Voith Group

Mailing address
Voith GmbH & Co. KGaA
Group Communications
St. Poeltener Strasse 43
89522 Heidenheim, Germany
Tel. +49 7321 37-2783
Fax +49 7321 37-7000
www.voith.com

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Small hydropower plant Verkhnebalkarskaya in Russia put into commercial operation

- Voith delivered the main equipment for the hydropower plant
- The commissioning was carried out by Voith with remote assistance due to travel restrictions caused by the COVID-19 pandemic
- The new power plant will ensure stable production of clean electricity in the Republic Kabardino-Balkaria, Russia

KABARDINO-BALKARIA, RUSSIA. On June 25, 2020, all three units of the Russian small hydropower plant Verkhnebalkarskaya were successfully commissioned, connected and synchronized with the energy grid of Russia. The commissioning took place within 72 hours, although it had to be carried out by remote assistance due to travel restrictions caused by the COVID-19 pandemic. The technology group Voith delivered the main equipment for the hydropower plant.

The scope of supply of Voith Hydro in Balakovo, Russia, included three horizontal Francis spiral turbines with a pre-turbine gate valve, three synchronous generators with excitation system, three sets of automatic control systems along with thermal and vibration control, installation supervision and the commissioning of the three identical Francis units. The engineering and supply of the horizontal Francis spiral turbines, with a unit capacity of 3.34 MW each, was carried out by Voith Hydro in St. Georgen/Stfd., Austria.

Great care was taken to preserve the environment. The design provides a completely oil-free operation of the turbines, using electrical drives for the wicket gate actuation and the turbine inlet valves as well as water-lubricated guide bearings to protect the environment and reduce the need for maintenance.

About the Verkhnebalkarskaya small hydropower plant

The Verkhnebalkarskaya small hydropower plant is located at the mountain river Cherek Balkarskiy at an altitude of more than 1000 m in Kabardino-Balkaria, a southern region in Russia. The hydropower plant has a rated capacity of 10 MW and is owned by PAO RusHydro, the largest hydropower plant operator in Russia. With an average annual electricity generation of 60 million kWh, the hydropower plant will contribute to the energy deficit reduction in Russia.

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Significant hydropower potential in Russia

The economic potential of hydropower resources in the world's largest country is around 850 TWh/year. So far, only about one-fifth of this potential has been developed. Voith has a long history in Russia; the company delivered the first hydropower turbine to the country in 1898 and supplied electromechanical hydropower equipment to the Soviet Union in the following decades. To strengthen its local footprint, Voith Hydro opened a new production facility in Balakovo, Russia, in June 2019. From there, Voith serves customers in Russia and the CIS-countries.

About the Voith Group

The Voith Group is a global technology company. With its broad portfolio of systems, products, services and digital applications, Voith sets standards in the markets of energy, oil & gas, paper, raw materials and transport & automotive. Founded in 1867, the company today has more than 19,000 employees, sales of € 4.3 billion and locations in over 60 countries worldwide and is thus one of the larger family-owned companies in Europe.

The Group Division Voith Hydro is part of the Voith Group and a leading full-line supplier as well as trusted partner for equipping hydropower plants. Voith develops customized, long-term solutions and services for large and small hydro plants all over the world. Its portfolio of products and services covers the entire life cycle and all major components for large and small hydro plants, from generators, turbines, pumps and automation systems, right through to spare parts, maintenance and training services, and digital solutions for intelligent hydropower.



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Verkhnebalkarskaya is one of five small hydropower plants being built by PAO RusHydro in the territory of the North Caucasian Federal District in Russia.

Contact

Marc Pieprzytza
Market Communication Manager EMEA
Tel. +49 7321 37-2783
Marc.Pieprzytza-extern@voith.com

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