

Press Release

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Storage Capacity and Network Regulation for the Energy Transition: Voith Modernizes Generators in Pumped Storage Plant Vianden

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Voith has been commissioned to modernize four motor-generators at the pumped storage plant Vianden in Luxemburg. The project includes design, construction, delivery and installation of four rotors of the motor-generators of the horizontal pumped-storage units. The power plant in Vianden is located closely on the border between Luxemburg and Germany and feeds directly into the German power network and so can be employed as a flexible power store and for network regulation to support the energy transition. The plant is owned by Societé Electrique de l'Our S.A. and is marketed and used by RWE Generation.

The goal of this modernization is continued safe, stable operation of the highly flexible machines. Because they can be started up and switched quickly and reliably between operation modes, pumped storage facilities compensate load fluctuation in the network to make a significant contribution to the energy transition. The more electricity is supplied by volatile energy sources such as wind and solar, the more susceptible the network is to fluctuation and instabilities. With their high storage capacity and fast reaction capabilities, pumped storage plants can reliably and efficiently equalize these fluctuations.

The modernization of existing hydropower plants ensures reliable operation and prevents unplanned downtimes. At the same time, a modernization can increase output, efficiency and effectiveness, while the plants are brought to the latest level of technology. For the generator modernization in pumped storage power plant Vianden, Voith is employing a new hammerhead groove construction instead of the previously used comb pole design. This way, the poles are more easily exchanged and inspection measures are more easily carried out.

The Vianden pumped-storage power plant was first set into operation in 1964. After expansions in 1976 and 2014, with its current total of eleven ma-

chine units, the plant has a generator capacity of 1,495 MVA and a turbine capacity of 1,290 MW. Total installed pump capacity is 1,045 MW.

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The Importance of Hydropower

Hydropower is the largest, oldest and also most reliable form of renewable energy generation. Worldwide it makes an indispensable contribution to stable power supplies and hence to economic and social development - in industrial countries and also in rapidly growing regions. At the same time, hydropower significantly contributes to climate-protecting energy generation. Voith has been a leading supplier of this technology since the early beginning of hydropower utilization, and continuously develops and improves this technology.

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About the Company

Voith sets standards in the markets energy, oil & gas, paper, raw materials and transport & automotive. Founded in 1867, Voith employs more than 39,000 people, generates €5.3 billion in sales, operates in over 50 countries around the world and is today one of the biggest family-owned companies in Europe.

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