

Press Release

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Successful commissioning of Voith machines: Swiss hydropower plant Röchlig will continue to supply electricity for the next 59 years

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- Voith successfully completes extensive upgrades – plant capacity raised by about 10 percent
- The refurbished 11 MW power plant will supply 17,000 Swiss households with climate-friendly electricity
- Stringent environmental standards met

Heidenheim/Röchlig. Technology Group Voith has successfully completed the refurbishment of the Swiss run-of-river hydropower plant at Röchlig, Aarau. In mid-June 2015, Switzerland's state-owned energy group Axpo and Voith joined with other suppliers to celebrate the plant's official opening following a construction phase of around three and a half years. With its new capacity of 11 MW, the modernized power plant on the Aare river will be capable of generating approximately 64 GWh/year to provide around 17,000 households with clean, eco-friendly power.

"As a result of the upgrades we have increased the capacity of the existing bulb turbines by more than 25 percent, primarily due to the significantly higher water flow through the turbines. The total output of the power plant could therefore be increased by around 10 percent," says Rolf Geissberger, Axpo's project manager responsible for the plant's electromechanical systems. In the main powerhouse at the Swiss facility, Voith modernized the electromechanical equipment of the existing three Kaplan bulb turbines and built a new, structurally identical power unit. The company also supplied the gear units, generators, turbine governors and a specially developed cooling water system. The three existing vertical power units were eliminated as a result of installing two additional flood relieve gates. "Despite a tight schedule and restricted working times due to

noise emission constraints, we were able to connect the last machine to the grid one month earlier than planned,” adds Markus Göttken, Project Manager from Voith Hydro Heidenheim.

As well as improved flood control, the Röchlig run-of-river hydropower plant also meets stringent environmental standards following the upgrade. For example, Voith installed fish-friendly turbines, designed to enable fish to pass through them easily and to also improve water quality. “The Röchlig hydropower plant is a great example of how economic and ecological interests can be reconciled,” concludes Markus Göttken.

The run-of-river hydropower facility at Röchlig has been in existence since the 1920s. Following expiry of the concession in 2011, its current operator Axpo decided to undertake a comprehensive upgrade. As a result of the modernization, the plant is now licensed for electricity production until the end of 2074 and is a good example of sustainable, eco-friendly and cost-efficient energy production from hydropower.

On the importance of hydropower

Hydropower is the largest, oldest and most reliable form of renewable energy generation. Worldwide it makes an indispensable contribution to a stable power supply and thus to economic and social development – in industrialized countries and also in regions seeing strong growth. In addition, hydropower contributes significantly to climate-friendly energy production. Since the early days of hydropower exploitation Voith has been a leading supplier of this technology and is constantly developing it further.

About the company

Voith sets standards in the energy, oil & gas, paper, raw materials and transport & automotive markets. Founded in 1867, Voith today has more than 39,000 employees and earns 5.3 billion euros in sales. It has locations in over 50 countries in all regions of the world and is one of the largest family-owned companies in Europe.

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Page 3 of 3

Captions: (Pictures: Voith)

DSC_1805:

The installation phase allows for an interesting perspective that will not be available after startup, when water will flow through the intake area to the Kaplan runner behind it via the stay vanes and distributor.

DSC_1726:

The distributor of a turbine in Rüchlig is 5 meters in diameter.

DSC_1513:

The scope of supply included a new cooling water system in addition to the four primary machines.