

## Media Release

Voith Group

Mailing address  
Voith GmbH & Co. KGaA  
Group Communications  
St. Poeltener Strasse 43  
89522 Heidenheim, Germany  
Tel. +49 7321 37-2209  
Fax +49 7321 37-7000  
[www.voith.com](http://www.voith.com)

2019-12-12

### **Voith is a leading member of the XFLEX HYDRO project, a new initiative to build a resilient, renewable power system with flexible hydropower technology**

- The XFLEX HYDRO project demonstrates how modern hydropower plants can provide the vital power grid services required by variable renewables such as wind and solar power
- The project is a four-year initiative by leading utilities, equipment manufacturers, universities, research centres and consultancies
- Voith Hydro is in the lead of the development and implementation of additional solutions to make the Frades 2 demonstrator even more efficient

**HEIDENHEIM, Germany.** Voith Hydro is a leading member of the XFLEX HYDRO (Hydropower Extending Power System Flexibility) project, a major new energy innovation project to demonstrate how smart hydropower technologies can deliver a low-carbon, reliable and resilient power system. The €18 million initiative was announced by the European Commission and a consortium of 19 partners at the United Nations climate change conference (COP25) in Madrid, Spain. It will show how innovative and flexible hydropower systems can help countries across the world to meet their renewable energy targets. The official launch of the project comes after a major UN Emissions Gap Report looking at ways to reduce global carbon emissions said that greater power system flexibility was “key” to integrating larger shares of variable renewable energy into the power supply.

#### **About the XFLEX HYDRO project**

The XFLEX HYDRO technologies to be tested are enhanced variable- and fixed-speed turbine systems, smart controls and a battery-turbine hybrid, each of which will be demonstrated at hydropower plant sites across Europe. The project will conclude in 2023 by delivering a roadmap to

increase adoption of the technologies across the hydropower fleet, with policy and market recommendations for governments, regulators and industry. The initiative has received funding from the European Union's Horizon 2020 research and innovation programme. It aims to help the EU achieve a target of achieving 32% of energy from renewable sources by 2030.

### **Making the Frades 2 demonstrator even more efficient**

Voith supplied the pumped storage plant Frades 2 in Portugal with two variable speed pump turbines each with a rated output of 390 MW, two asynchronous motor generators with a rated output of 440 MVA each, the frequency converter and control systems as well as the hydraulic steel components. Within the XFLEX HYDRO project, Voith Hydro is in the lead of the development and implementation of additional solutions to make the Frades 2 demonstrator even more efficient. The aim is to extend power range through integration of hydraulic short circuit technology for variable speed machines and therewith increase the dispatchability of renewable energies. Another goal is to enhance high-quality and flexible ancillary services of the electric power system by implementing synthetic inertia and frequency containment reserve. By optimizing plant operation through application of multidimensional hillchart methods and optimized mode change procedures, maintenance intervals will be improved and outage times minimized. Furthermore, the annual energy production will be increased by reducing the power consumption of the auxiliary equipment.

### **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.

Voith Group

Mailing address  
Voith GmbH & Co. KGaA  
Group Communications  
St. Poeltener Strasse 43  
89522 Heidenheim, Germany  
Tel. +49 7321 37-2209  
Fax +49 7321 37-7000  
[www.voith.com](http://www.voith.com)



**Caption 1:** The pumped storage power plant Frades 2 is located in the north-west of Portugal and is installed in an underground cavern.

Voith Group

Mailing address

Voith GmbH & Co. KGaA

Group Communications

St. Poeltener Strasse 43

89522 Heidenheim, Germany

Tel. +49 7321 37-2209

Fax +49 7321 37-7000

[www.voith.com](http://www.voith.com)

Page 3 of 3

## Contact:

Teresa Krieger

Manager Market Communication EMEA, Key Contact Voith Hydro

Tel. +49 7321 37-2209

[Teresa.Krieger@voith.com](mailto:Teresa.Krieger@voith.com)

## Twitter

<https://twitter.com/voithgroup>

[https://twitter.com/voith\\_hydro](https://twitter.com/voith_hydro)

[https://twitter.com/voith\\_paper](https://twitter.com/voith_paper)

[https://twitter.com/voith\\_turbo](https://twitter.com/voith_turbo)

[https://twitter.com/Voith\\_Digital](https://twitter.com/Voith_Digital)

[https://twitter.com/Voith\\_Career](https://twitter.com/Voith_Career)

## LinkedIn

<https://www.linkedin.com/company/voithgroup>

<https://www.linkedin.com/company/voith-hydro>

<https://www.linkedin.com/company/voith-turbo>

<https://www.linkedin.com/company/voith-paper>

<https://www.linkedin.com/company/voith-digital>

<https://www.linkedin.com/company/voith-robotics>

## YouTube

<https://www.youtube.com/VoithGroup>

## Instagram

<https://www.instagram.com/voithgroup/>