



Press Release

Another building block for the energy transition PORR to build caverns and tunnel system for Forbach pumped storage power plant

Vienna/Munich, 05.07.2023 - EnBW Energie Baden-Württemberg AG is investing around EUR 280m in the conversion of the Rudolf Fettweis Plant (RFW) in Forbach from a storage and run-of-river power plant to a pumped storage power plant. PORR has secured the contract for Lot 2 “Civil works” with a total volume of EUR 98.3m.

“Pumped storage power plants are a particularly effective solution for generating alternative energy. They are therefore an important building block for the energy transition”, said Karl-Heinz Strauss, CEO of PORR AG. As a construction company, PORR already has extensive experience in building pumped storage power plants such as Limberg III in Kaprun. “With Lot 2 of the Forbach power plant, we are making a powerful contribution to tomorrow’s energy supply”.

When the heritage-protected Forbach run-of-river power plant was commissioned in 1914, it was essential for electrification in the north of the Black Forest. Converting it to a pumped storage power plant will now significantly increase its efficiency. Until now, after the water from the Schwarzenbach and Murg dams had passed the turbine wheels, it first flowed into an equalisation basin and then into the Murg. Now an additional, underground sub-basin is being built, which will serve as an indirect power reservoir. From there, the water can be circulated as often as desired and used to generate electricity.

Balancing peaks in energy demand

If, for example, renewable energy is generated that is surplus to requirements, such as wind energy at night, this is used to pump the water from the underground sub-basin back into the day storage tank. If increased demand then occurs during the day, this day storage is used to generate energy. Since it requires no start-up time, the power plant is ideal for balancing energy demand peaks. In daytime storage mode, it has a capacity of around 456 MWh.

Thorsten Weiner, Technical Division Manager PORR Tunnelling Germany, is looking forward to the project: “Even with 3D forecast modelling, BIM planning and exploratory drilling, underground construction work always remains challenging. Having an experienced team that can master these challenges with flying colours is essential. Taking a proactive role in the energy transition gives us additional motivation. It will be a pleasure for us to work on delivering the Forbach pumped storage power plant”.

Massive caverns and tunnels

Construction will begin in autumn 2023. The work on Lot 2 includes, among other things, the construction of caverns, water reservoirs and tunnels using the mining method, the shell of the power plant cavern, the construction of two pressure shafts, and foundation engineering work. Before the new power plant can go into operation in 2027, the PORR team will have to blast and excavate huge cavities and tunnels in the rock. An estimated 450,000m³ of rock excavation material will be produced.

The tunnel system has a total length of 5,200m. In addition, about 510 metres of shafts will be constructed using the raise-boring method. The volume of the underground water reservoirs is 200 million litres. The main tunnel alone will have a length of 946m and a cross-section of up to 71.72m². In addition, there will be six side tunnels as well as access tunnels, supply tunnels and tunnels for energy transmission.

Facts and figures at a glance:

Project type:	Tunnelling
Scope of services:	Cavity construction of caverns, water reservoirs and tunnels using the mining method, shell construction of the power plant cavern, construction of two pressure shafts as well as specialist civil engineering
Client:	EnBW Energie Baden-Württemberg AG
Contractor:	PORR GmbH & Co. KGaA / PORR AG
Contract volume:	EUR 98.3m
Construction start:	Autumn 2023
Completion:	2027

Photo:



Rudolf Fettweis Plant in Forbach © EnBW, Ingo Kamuf

The press release including high-resolution images is available for download from the [PORR Newsroom](#).



About the PORR Group

Top performance driven by innovation - that is what PORR has embodied for more than 150 years. With around 20,000 employees and production output of around EUR 6.2 bn (business year 2022), PORR is one of the largest construction companies in Austria and among the top players in Europe. As a full-service provider, PORR offers every aspect of building construction, civil engineering and infrastructure construction across the entire value chain. The focus is on the home markets of Austria, Germany, Switzerland, Poland, the Czech Republic, Slovakia and Romania. PORR also works in selected international project markets such as Norway, UK, UAE and Qatar. The PORR share is listed in the prime market segment of the Vienna Stock Exchange.

About PORR GmbH & Co. KGaA

PORR GmbH & Co. KGaA in Germany is part of the listed PORR AG and employs around 2,300 people. As a technology leader, it designs and builds to sophisticated, individual customer requirements using its own teams of experts - in a way that is safe and cost-effective. Its extensive know-how allows it to deliver customised solutions. The portfolio ranges from general planning to turnkey implementation. The use of modern methods and technologies, such as Building Information Modelling (BIM) and LEAN management, ensures construction projects are realised economically and safely. PORR is active in Germany in the fields of building construction, industrial construction, civil engineering, tunnelling, traffic route construction, foundation engineering, steel construction and environmental engineering.

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