PROJECT REPORT

PSW Limberg III

Data and facts

Company	PORR Bau GmbH
Type	Power plant construction and plant engineering
Runtime	04.2021 - 11.2025
Principal	Verbund Hydro Power GmbH (VHP)

Project report online

www.porr.at

Limberg III: A milestone for the energy transition

Limberg III further expands the total capacity of the Glockner-Kaprun power station group, with a capacity of 480 MW in both turbine and pump modes. It is specifically tailored to the future needs of the energy transition. Special sets of machinery in the new power station are capable of responding with a high degree of flexibility to the demand for balancing and regulating energy in the grid, creating ideal conditions for a secure and affordable electricity supply. The total investment volume for the project amounts to over 525 million euros.

A total of 8 km of tunnels will be excavated, comprising 3 km of pressure tunnels using PORR's own TBM (D = 7.3 m) and 770 m of TBM tunnelling with a gradient of 90 per cent (D = 5.8 m). In addition, a power cavern approximately 60 m long, 25 m wide and 42 m high is being constructed. 900 tonnes of explosives are being used to excavate a total of 375,000 m^3 of rock. A further 11 tonnes of explosives and 20,000 helicopter flight minutes were also required for avalanche blasting.

A particular challenge at this high-altitude construction site was the need for accompanying ecological measures to protect the environment. To ensure the safety of staff, extensive asbestos and COVID-19 safety measures were also in place.

Since November 2025, Limberg III has been storing surplus electricity, balancing out grid fluctuations and thereby guaranteeing a secure, flexible and sustainable energy supply. Up to 72 m³ of water per second can be pumped per set of -class machinery in turbine or pump mode. Together with Limberg I and II, the group of pumped-storage power stations in Kaprun now achieves a total capacity of 1,100 MW. Three dams, each over 100 metres high (the Limberg Dam at Wasserfallboden; the Mooser Dam and the Drossens Dam at Mooserboden), store water from the Glockner Group with a volume of over 160 million m³ – an indispensable power bank for Austria's clean electricity.

Limberg III represents a technical masterpiece whose influence extends far beyond Kaprun – a project that impressively demonstrates what can be achieved through passion, team spirit and solidarity.

Impressions

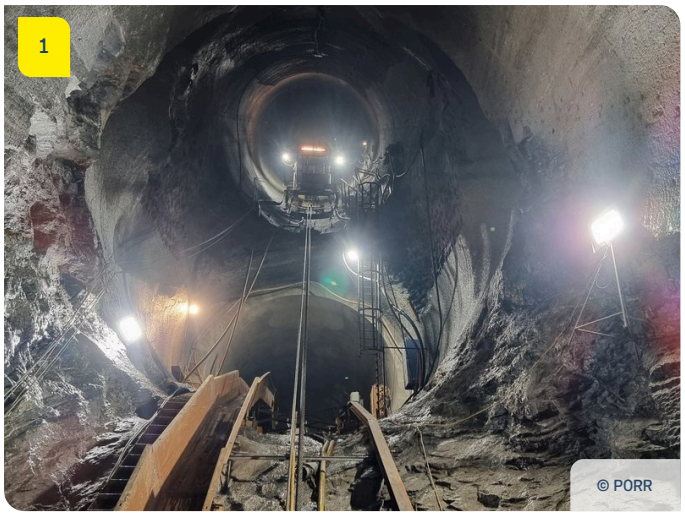

Image notes

1 Working in extreme conditions

2 Building in the high mountains

Gradients of up to 42 degrees posed major challenges for staff during the tunnel construction

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The underground pumped-storage power station connects the two reservoirs, Wasserfallboden (maximum water level approx. 1,672 m above sea level) and Mooserboden (maximum water level approx. 2,036 m above sea level).

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3

The power station cavern is taking shape

At 43 metres high, the Limberg 3 turbine cavern would be big enough to accommodate St Stephen's Cathedral in Vienna.

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4

Connections deep beneath the surface

Connecting and service tunnels provide access to the underground construction sections

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5

View into an illuminated tunnel bore with technical equipment; in the background, an illuminated work vehicle.

Client – Factory acceptance of the PORR TBM at the PES site in Anthering

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Do you have questions about the project or would you like to learn more? Feel free to contact us for further information.

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