

REFERENCE CASE STORY

# ABB provides power protection for famous Swiss dam

## Modular, high-performance DPA UPScale systems generate new levels of flexibility for major hydroelectric plant



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01 Verzasca dam

In an exciting plot development for power consumers in Switzerland, an immense dam made famous by a movie character with a license to kill is now being armed with ABB power protection technology.

The Verzasca SA storage hydroelectric plant, constructed between 1960 and 1965, uses the waters of the Verzasca Valley catchment. At 220m, the dam is one of the highest in Switzerland. The dam crosses the valley, forming an accumulation basin with a total reservoir of 105 million m<sup>3</sup>. Its average annual production is 227 million kWh (122 million kWh in summer and 105 million kWh in winter), equivalent to the power used by 50,444 Swiss residents each year.

Known for more than just its power production, the dam's imposing construction and spectacular surroundings have been exploited by numerous filmmakers. Its most famous cameo was an appearance in a bungee jump stunt scene in 007's film, 'Goldeneye', which not only set a bungee jump height record but also won 'Best Movie Stunt of All Time'.

Maintaining the power supply for such a large-scale plant is critical. To guarantee power availability and maximum safety for its critical components such as oil pumps for turbine regulators, control systems, dam controls, video safety, emergency lighting, drainage pumps, telephony and IT systems, Verzasca SA has called upon ABB for an uninterruptible power supply (UPS) solution.

"High energy availability, UPS product standardization, flexibility, high performance and proximity service have been our main objectives," says Andrea Papina, director of Verzasca SA.

Having already installed equipment in the power plant, the availability and reliability of which was noted favorably, ABB was selected by Verzasca SA to upgrade parts of the power protection infrastructure with its modular DPA UPScale systems (equipped with 10 modules of 20 kW each).

The modular architecture of DPA UPScale fulfills all Verzasca SA requirements. Designed for medium-power applications, this UPS delivers true modular power protection in a single frame.

Its flexible design provides a “pay-as-you-grow” model so there is no need to oversize the original configuration. Power modules can simply be added as required, without any footprint penalty or additional installation cost. Modules from elsewhere in the fleet can be used to reduce total cost of ownership and guarantee maximum flexibility.

“The DPA UPScale exploits and extends the standardization of the installed UPSs at the power plant managed by Verzasca SA,” says ABB local representative Renzo Salmina. “The customer also liked the easy installation and maintenance that assured continuity of critical processes. Servicing is easy, as modules can be replaced without powering down. Cost of ownership is low relative to comparable solutions. Furthermore, the ABB brand and the fact that the UPS is made in Switzerland underline the quality aspects of the product.”

ABB’s reputation, reliability, product quality and efficient service were success factors for this project. Salmina concludes, “The excellent collaboration and professionalism of the operators of Verzasca SA ensured that there were no problems with the installation and migration from the previous installed UPS.”