Peru pumped hydro storage

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Founded in Zurich, Switzerland, in 2004 and headquartered in Lima, Peru, since 2007, LSH Consulting Engineers specializes in providing comprehensive engineering solutions focusing on renewable energy, particularly hydropower and underground works. LSH is involved from inception to execution, offering services such as due diligence, design, and construction supervision, playing a pivotal role in shaping Latin America"s sustainable energy landscape.

LSH is joining the International Hydropower Association (IHA) membership, furthering its commitment to sustainability and aligning with global leaders in hydropower development. As the urgency of the energy transition grows, LSH views this membership as an opportunity to promote hydropower, especially pump storage solutions, as a vital clean energy solution in Latin America and beyond.

"Hydropower sits at the intersection of ancient wisdom and cutting-edge technology, harnessing one of nature's most enduring forces to drive a sustainable future. At LSH, we are dedicated to advancing hydropower across Latin America--from micro-hydropower stations in the remote Andes to large-scale pump storage solutions for solar and eolic energy storage--fostering resilience and progress in the global fight against climate change and accelerating the transition to renewable energy in Latin America."

"We are delighted that LSH Consulting Engineers brings its expertise in hybrid systems, which combine solar, wind and pumped storage hydropower to the IHA membership. This is the crucial backbone to renewable energy systems, and it is more important now than ever. Its track record of sustainability will also strengthen the global dialogue on hydropower development."

Norwegian energy giant Statkraft announced in September 2023 that it is evaluating the possibility of expanding the hydropower fleet on the Devoll river cascade, by adding a new PSH facility. The expected capacity of the plant will be around 1,200MW. The reservoir will exploit the natural flat morphology of the upper part of the valley, located around 8km east of the existing Moglic? Dam. The feasibility study phase is expected to end in 2024. The implementation phase could start as soon as 2025, with the plant reaching commercial operations by 2030

The 2,070MW La?ca hydropower station in Angola, constructed by ANDRITZ, is now fully operational, contributing to the country's energy supply and socioeconomic development, with plans for a green hydrogen project in partnership with German companies. Angola is also embarking on ambitious hydropower projects like the 2,172MW Caculo-Cabaca hydropower station in collaboration with China. It is also aiming to connect to the Southern African Power Pool to enhance regional power integration and meet growing demand.

Argentina"s 750MW R?o Grande de C?rdoba plant, the largest PSH project in South America, is set for a major upgrade. Currently operating at only 50% efficiency due to ageing infrastructure, a US$100 million

investment aims to modernise the facility, restoring its full operational potential. The 1,310MW hydropower development of the Santa Cruz River has reached 50% of construction progress.

The complex will include the 950MW Presidente N?stor Kirchner plant equipped with five Francis turbines, and the 360MW Governor Jorge Cepernic plant, featuring three Kaplan turbines. Together, they are expected to generate up to 5TWh annually. This large-scale investment, nearing US$5 billion, is 70% financed by the China Gezhouba Group Company Limited, in partnership with Argentine firms. It will supply electricity to over a million homes in the country.

Australia continues to promote clean energy and to phase out coal capacity, with energy storage playing a critical role in its push towards a renewable energy future in the country. The Queensland Premier has allocated another A$13m in the state budget to accelerate key technical studies to enable a final investment decision to advance the 1 GW/24 GWh Borumba PSH project near Gympie in the state"s south-east.

Queensland"s mid-coast is set to provide 5 GW of storage - enough to supply half of Queensland"s entire energy needs. Stage one of the Pioneer-Burdekin pumped hydro project, said to be part of the largest pumped hydro energy storage scheme in the world (according to Queensland"s premier), was announced in September 2022 and is estimated to be completed in 2032, with the final stage operational by 2035.