Press release

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South America in urgent need of hydropower investment amid rising energy demand

As variable renewables accelerate across the region, flexible hydropower is key to meeting demand and balancing the grid.

- **Hydropower is delivering 45% of South America's electricity supply,** yet only 30% of its total potential has been harnessed.
- **Over 7GW of new hydropower is advancing in Argentina, Bolivia, and Colombia** by 2030, but the overall rate of hydropower development in South America has plateaued.
- **Regulatory reforms are urgently needed,** with policy frameworks failing to keep pace with hydropower development needs
- **Hydropower projects in South America are challenging outdated perceptions,** with three new certifications under the Hydropower Sustainability Standard: Mascarenhas in Brazil (Gold), and Ituango and Chorreritas in Colombia (both Silver).
- **Hybrid hydro-solar is on the rise** – Brazil is building its largest floating solar plant.

The 2025 World Hydropower Outlook, released today by the International Hydropower Association (IHA), reveals that South America is falling behind in developing hydropower at the pace needed to meet rising demand. Currently, only 30% of the continent's available hydropower resources are being harnessed, even though hydropower satisfies 45% of the continent's electricity demand.

Electricity demand is poised to rise sharply in South America as the deployment of variable renewables accelerates. Solar and wind are expanding, reaching 36.8 GW of installed capacity across the continent in 2024. A growing reliance on intermittent renewables poses risks to grid stability. Hydropower is uniquely placed to complement wind and solar power, offering a pathway to stabilise supply and meet increasing demand.

At the same time, the continent is witnessing a wave of billion-dollar investments in energy-intensive infrastructure, including mega-port logistics hub and data centres, placing additional strain on national grids. Peru's Chancay Port is among the most energy-intensive developments in recent years, while Colombia is being considered by global tech companies for new facilities. This highlights the pressing need for resilient, low-carbon infrastructure, with hydropower offering a uniquely scalable and dependable solution.

Brazil has emerged as a regional pioneer in hybrid renewable energy. In late 2024, the country began construction of its largest floating solar facility – a 54 MW plant at the Lajeado hydro reservoir in Tocantins. The project uses the reservoir's surface to deploy thousands of solar panels, benefiting from existing transmission infrastructure and enhanced efficiency due to the cooling effect of water.

Severe droughts have had a significant impact on generation and water resource management, with both Brazil and Ecuador experiencing system strain because of low rainfall. Policymakers are responding with measures to improve system resilience and integrate a broader mix of renewables.

Meanwhile, progress continues in demonstrating sustainability by adhering to international standards across the region. In January 2025, Brazil's 198MW Mascarenhas plant earned gold certification under the Hydropower Sustainability Standard, the second project in South America to do so after Brazil's

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3.75GW Jirau plant. Colombia's Ituango (2.45GW) and Chorreritas (19.9MW) projects both achieved silver status in 2024.

Malcolm Turnbull, IHA President says: "Encouragingly, this year's World Hydropower Outlook shows that global new capacity is accelerating after several years of stagnation. Hydropower is playing an increasingly vital role in the global energy transition. Continued momentum will require bold policy action, including reforms to reward hydropower's multiple benefits, and faster permitting. And in the face of growing climate volatility, we must build not just clean energy systems, but resilient ones."

Eddie Rich, IHA CEO says: "As the renewable energy market continues to grow, the story of this year's Outlook is clearly that pumped storage hydropower is at the forefront as the world looks to more energy storage. It also reaffirms that all forms of hydropower remain essential to achieving global climate and development goals."

Despite the challenges across the region, there are still signs of momentum on the ground:

- **Argentina:** Significant projects are advancing, including the 1,310MW Santa Cruz hydroelectric plant, slated for completion in 2026.
- **Bolivia:** The 3GW Rio Madera project has completed initial site selection, and could be commissioned as early as 2031.
- **Colombia:** Ituango – the country's largest project – is halfway complete, with 1,200MW coming online in 2024.
- **Peru:** Six hydropower projects totalling 664MW are on track to enter commercial operation between 2025-27.

South America Hydropower in numbers:

- Generation by hydropower: 725TWh
- Total installed capacity: 182.6GW
- Capacity added in 2024: 306MW
- Total pumped storage installed capacity: 994MW
- Pumped storage capacity added in 2024: 0GW

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Notes to editors:

Global highlights of the 2025 World Hydropower Outlook include:

- Global hydropower capacity grew by 24.6GW in 2024, including 16.2GW of conventional hydropower and 8.4GW of pumped storage hydropower
- The global hydropower development pipeline now exceeds 1,075GW, including 600GW of pumped storage and 475GW of conventional projects.
- China continues to dominate global hydropower development, with 14.4GW of new capacity added in 2024, including 7.75GW of PSH.
- Africa more than doubles the previous three years' development, commissioning 4.5GW of new hydropower capacity in 2024.
- Europe saw a decade-high 680TWh in hydropower generation supported by strong rainfall, while EU and national policy measures drive momentum for pumped storage.

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More information:

- 2025 World Hydropower Outlook will launch during London Climate Action Week at a high-level global event hosted by EBRD in Canary Wharf, in partnership with EBRD, the British Hydropower Association, and the Global Renewables Alliance.

About IHA:

The International Hydropower Association (IHA) is the global voice of sustainable hydropower. It is a non-profit membership organisation committed to sustainable hydropower. Its mission is to advance sustainable hydropower by building and sharing knowledge on its role in renewable energy systems, responsible freshwater management and climate change solutions. IHA seeks to achieve this through monitoring the hydropower sector, building an open, innovative and trusted platform for knowledge, and advancing strategies that strengthen performance.
Learn more: www.hydropower.org.

The International Forum on Pumped Storage Hydropower, held at UNESCO Headquarters in Paris from 9-10 September is expected to gather 400 Heads of State, government ministers, CEOs, and leaders to unlock the full potential of pumped storage. Building on the momentum of the 2021 Forum — which featured leaders like Mark Carney, Canada's Prime Minister, and former US Energy Secretary Jennifer Granholm — this year's event will turn global ambition into high-impact action.
Learn more: www.pumpedstorageforum.com
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