Press release

UNDER EMBARGO UNTIL: 00:00:01 BST Wednesday, 25 June

Modernisation initiatives driving new wave of hydropower development in North America, but policy gaps remain

Signs of renewal are emerging across the region through investment in legacy infrastructure and pumped storage, but long-term growth depends on regulatory reform

- **The need for hydropower modernisation is increasingly recognised,** with major refurbishment programmes and re-contracting initiatives underway in Canada and the US.
- **Pumped storage hydropower is at the forefront of new development,** with more than 50GW of capacity at various stages of planning in the United States.
- **Canada marked key milestones in 2024,** including the commissioning of units at Site C and a landmark Quebec–Newfoundland & Labrador cooperation deal.
- **Central America continues to scale up hydropower to reduce fossil fuel dependency,** with projects advancing in Panama, Costa Rica, El Salvador and the Dominican Republic.
- **Despite these developments, hydropower continues to be overlooked in energy strategies,** and relicensing challenges in the US risk holding back critical clean power capacity.

The 2025 World Hydropower Outlook, released today by the International Hydropower Association (IHA), reveals that a wave of modernisation and new project development is reshaping the hydropower landscape in North and Central America – but continued progress will depend on more consistent political support and regulatory reform.

Across the region, hydropower is a mature but underleveraged energy source. While the United States and Canada are investing in modernising ageing infrastructure, and Central American nations are adding capacity to reduce fossil fuel use, hydropower still faces significant policy and market barriers. Political momentum has not kept pace with support for solar and wind, despite hydropower's vital role in delivering reliable, low-carbon power to balance renewable grids.

The Bipartisan Infrastructure Law (BIL) continues to benefit hydropower in the United States, with over $430 million awarded to nearly 300 projects for grid resilience, safety improvements and environmental upgrades. Pumped storage is also gaining momentum, as 67 new projects across 21 states are poised to add over 50GW of storage capacity. However, licensing and policy challenges persist. Nearly 40% of the non-federal hydropower fleet must be relicensed by 2035 – a process that is often prohibitively complex and costly without more government support.

In Canada, hydropower continues to account for nearly 60% of electricity generation, and several provinces are expanding capacity. British Columbia's Site C project reached a

commissioning milestone in 2024, and a new interprovincial partnership between Quebec and Newfoundland & Labrador will see the joint development of nearly 4,000MW of new hydropower. Ontario is advancing plans to recontract hydropower facilities recognising the benefits for flood control, irrigation and the support of local ecosystems, while pumped storage is gaining traction in both Ontario and Nova Scotia.

Central America and the Caribbean also saw signs of progress, with new investments in both greenfield developments and modernisation. Panama's 228MW Changuinola II is under construction; Costa Rica completed upgrades to the La Garita plant and announced a new 53MW project; El Salvador marked the first full year of operations at the 64MW 3 de Febrero plant; and the Dominican Republic is pursuing multiple projects, including pumped storage proposals.

However, the region faces mounting pressure from climate-related events. Severe droughts and heatwaves in Mexico and Central America have strained power systems and reduced hydro output – highlighting the need for adaptive planning and better integration with other renewables.

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."

North and Central America in numbers:

- Generation by hydropower: **637TWh**
- Total installed capacity: **207.5GW**
- Capacity added in 2024: **541MW**
- Total pumped storage installed capacity: **22.4GW**
- Pumped storage capacity added in 2024: **96MW**

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Notes to editors:

Global highlights of the 2025 World Hydropower Outlook include:

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- 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.

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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