Press release

UNDER EMBARGO UNTIL 00:00:01 BST 25 JUNE 2025

China set to break 2030 pumped storage target years in advance

With more than 200GW of PSH under construction, China is on course to exceed its 120GW target, potentially reaching 130GW by the end of the decade

- China continues to dominate hydropower development globally, with 14.4GW of new capacity added in 2024, including 7.75GW of PSH.
- Australia, Vietnam, the Philippines, Thailand and Laos are advancing new projects and refining regulatory frameworks to support hydropower development.
- Hybrid hydro-solar technology is advancing in the region, with Thailand completing a 24MW floating solar PV system at Ubol Ratana Dam in 2024, while Malaysia and Indonesia are both exploring new developments.
- Laos is positioning itself as the "Battery of Southeast Asia", implementing policy reforms to expand hydroelectricity exports to Thailand, Vietnam and Cambodia.
- Despite promising progress, hydropower projects in the region still face barriers such as permitting delays, land rights complexities and financing gaps.
- Greater policy clarity and market mechanisms for capacity payment will be critical to unlocking private sector participation at scale.

The 2025 World Hydropower Outlook, released today by the International Hydropower Association, reveals China's continued leadership in hydropower development in the East Asia and Pacific region; adding 14.4GW of new installed capacity in 2024 to reach a total of 435.95GW.

Pumped storage hydropower (PSH) accounted for more than half of this new capacity, with 7.75GW added that year, bringing total installed PSH capacity to 58.69GW. With more than 200GW of PSH under construction or approved, China is on track to exceed its 2030 target of 120GW, potentially reaching 130GW by the end of the decade.

This puts China on a similar trajectory to its leadership on other renewables. By the end of 2024, China's wind and solar capacity surpassed 1,200GW, a milestone originally targeted for 2030.

PSH, the world's most proven technology for storing electricity at scale, is gaining political and investor attention across the region amid market volatility and system stress. Countries including Australia, Vietnam, and the Philippines have reinforced policies incentivising PSH investment.

International energy trade is a key story within the East Asia and Pacific region this year, with Laos exporting hydroelectricity to Thailand, Vietnam and Cambodia. Conversely, Singapore is expanding hydropower imports via regional collaborations.

Despite strong momentum, hydropower and projects in the East Asia and Pacific region continue to face significant headwinds outside China. Financing remains a major constraint, with high upfront costs and long payback periods limiting private sector involvement. In many markets, the absence of clear mechanisms for valuing capacity services makes it harder for developers to secure investment.

Press release

Regulatory and permitting delays are also hampering progress in countries such as Australia, Indonesia and Vietnam, where complex approval processes, land rights issues and environmental assessments create uncertainty. Grid integration challenges are becoming more pronounced as variable renewables surge, highlighting the need for transmission upgrades and stable balancing resources.

Hydropower remains essential for energy security and flexible grid operation in the region. However, overcoming financial and regulatory hurdles, while navigating the growing pressures of climate change and water availability, will be critical to unlocking its full potential.

Malcolm Turnbull, IHA President, commented: "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, said: "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."

East Asia and Pacific Hydropower in numbers:

- Generation by hydropower: 1,804GWh
- Total installed capacity: 576.5GW
- Capacity added in 2024: 14.6GW
- Total pumped storage installed capacity: 98.4GW
- Pumped storage capacity added in 2024: 7,750MW

-ENDS-

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.

More information:

Hydropower.org

Press release

- The 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

Find IHA on Twitter: @iha_org #WithHydropower

Media Contact:
Kiran Bose
Senior Communications Officer (Asia)
International Hydropower Association
t: +44 7399 049 171
e: kiran.bose@hydropower.org