

# Hydropower in India

Hydropower is the backbone of low-carbon electricity generation in the world. Its contribution is 55% higher than nuclear's and more significant than that of all other renewables combined. Hydropower plants also make a major contribution to the flexibility and security of electricity systems worldwide.

The International Energy Agency (IEA) and the Center for Study of Science, Technology and Policy (CSTEP) are organising a webinar on 'Hydropower in India' to assess the development of hydropower in the country. Scheduled on **12 October 2021 from 3:00 p.m. to 5:15 p.m. IST**, the webinar will have presentations from the IEA and CSTEP and panel discussions on different aspects of developing hydropower in India sustainably.

One of the presentations of the IEA will be on its first-ever market report on hydropower titled '[Hydropower Special Market Report](#),' published in June 2021. The report offers policy recommendations to accelerate growth and maintain the existing hydropower infrastructure globally. It also presents ten-year capacity and generation forecasts for reservoir, run-of-river, and pumped hydro storage (PSH) projects across the globe.

PSH should be of special interest to India as it remains the most cost-effective long-term storage option for us despite recent cost reductions in batteries. PSH plants can provide almost all system services while ensuring electricity security and grid stability. Though the Central Electricity Authority (CEA) estimated a PSH potential of 96 GW in 63 identified sites, only 3.3 GW is operational in India to date.

The relatively high initial investment cost of plants and poor business case due to the existing pricing mechanism could be the main reasons behind the slow expansion of PSH. CSTEP will present its study on a [differential pricing mechanism](#) that could help increase PSH uptake in India during the webinar.

In addition to the presentations, there will be panel discussions on 'Hydropower Development: Globally and in India' and the 'Potential of Hydro for System Integration, Flexibility, and Storage.'