

# TechXchange 2025-27

(Series of Knowledge Sharing Sessions)

Conference on

## Pumped Storage for Sustainable Power Systems - Implementation Challenges and way forward

20 Jan 2025 (Monday)

Conference Hall, CBIP, Malcha Marg, Chanakyapuri, New Delhi



Organized by



### Introduction

As the world transitions toward a low-carbon, sustainable energy future, the role of energy storage technologies has become increasingly critical. Among these, pumped storage stands out as one of the most mature, reliable, and scalable solutions to address the intermittent nature of renewable energy sources such as wind and solar. Pumped storage offers a proven mechanism for large-scale energy storage, enabling the balancing of supply and demand, providing grid stability, and ensuring the efficient use of renewable energy. However, despite its potential, the implementation of pumped storage projects faces significant challenges ranging from regulatory hurdles and environmental concerns to high capital costs and long development timelines.

The need for innovative solutions to overcome these challenges has never been more pressing. As countries worldwide ramp up their renewable energy capacity, accelerating the deployment of pumped storage systems is essential for achieving grid flexibility and energy security.

With the aim to provide a platform for discussion on Issues related to the subject, CBIP jointly with Indian National Hydropower Association (INHA) is organizing a Conference on “Pumped Storage for Sustainable Power Systems - Implementation Challenges and way forward” on 20<sup>th</sup> Jan 2025 (Monday) in the Conference Hall CBIP, Malcha Marg, Chanakyapuri, New Delhi.

This conference aims to bring together policymakers, industry experts, and technical professionals to discuss the key obstacles in implementing pumped storage projects and explore the path forward for scaling up these systems. By focusing on both the technical and non-technical barriers to implementation, we seek to identify actionable strategies that can facilitate the development of sustainable, resilient power systems for the future.

### Topics

The Conference shall cover, but not limited to, the following key topics:

#### ❖ Site Selection and Environmental Impact

- Challenges in identifying suitable locations, addressing geotechnical constraints, and securing environmental clearances
- Minimizing ecological impacts and managing social concerns during site development

#### ❖ Regulatory, Policy, and Legal Hurdles

- Navigating complex regulatory frameworks, permitting processes, and land acquisition challenges
- Addressing policy gaps and inconsistencies that delay project approvals and implementation

#### ❖ Financial Feasibility and Investment Models

- Overcoming the high capital costs and long payback periods of pumped storage projects
- Identifying innovative financing mechanisms, including public-private partnerships and international funding options

#### ❖ Technical and Operational Challenges

- Engineering complexities in system design, grid integration, and ensuring long-term reliability
- Addressing maintenance challenges and ensuring the operational efficiency of large-scale pumped storage plants

#### ❖ Integration with Renewables and Grid Stability

- Role of pumped storage in balancing intermittent renewable energy sources and ensuring grid flexibility
- Overcoming technical barriers to integrate pumped storage with evolving smart grids and energy management systems

#### ❖ Community Engagement and Stakeholder Management

- Addressing local opposition, stakeholder concerns, and building public trust in pumped storage projects
- Engaging communities in decision-making and ensuring fair compensation for affected populations

### Call for Papers

The experts, researchers, engineers, industry professionals and other stake holders are invited to contribute papers/ presentations on the topics and share their knowledge, experiences, and groundbreaking research to enrich the discourse and drive advancements in this field.

### Expected Takeaways

The participants are expected to gain a deeper understanding of the **key challenges and obstacles** facing pumped storage project implementation, including regulatory, financial, technical, and environmental issues and actionable insights into **innovative solutions** for overcoming these barriers. Attendees will also have the opportunity to network with industry leaders, government officials, and fellow professionals, fostering collaboration and knowledge exchange.

### Who Should Attend

This conference is designed for a diverse audience of professionals and experts engaged in the energy, infrastructure, and environmental sectors. It is highly relevant for policymakers, regulators, **and** government representatives involved in energy planning and policy development, as well as **project** developers **and** investors seeking to understand the financial, technical, and regulatory challenges of implementing pumped storage projects. Engineers, technologists, and academics specializing in energy

## Information Brochure

systems, hydropower, and energy storage technologies will also find valuable insights into the latest trends and innovations. Additionally, environmental consultants, community leaders, and NGO representatives working on issues of land use, environmental protection, and social impact will benefit from the discussions on mitigating environmental and social risks.

### Dates & Venue

The date for the event is 20<sup>th</sup> Jan. 2025 (Monday) at CBIP Hall, (1st Floor), CBIP Building, Malcha Marg, Chanakyapuri, New Delhi.

### Official Language

The official language for the event is English.

### Registration Fee\*

- The registration fee for participation is Rs.6,000/- per participant.
- There would be discounted fee of Rs.5,000/- per participant, applicable for Members of CBIP.
- 50% discount in the fee will be applicable for Young Participants (upto 35 years of age)
- The Speakers will be exempted from Payment of Registration Fee.

\*GST 18% will be charged extra on Registration fee.

The registration fee includes registration kit, working lunch, tea/ coffee during the event only. The participants will have to make their own arrangement for boarding and lodging, transport, etc. Registration fee once paid will not be refunded. Spot registration facility will also be available provided prior Information is received.

### Payments

The payment related to the event is to be remitted either through cheque to be drawn in favour of “Central Board of Irrigation and Power” or by bank transfer to the following account:

- Account holder name: **Central Board of Irrigation and Power**
- Bank name: **HDFC Bank**
- Branch &Address: 209-214, Kailash Building, 26 Kasturba Gandhi Marg, New Delhi110001
- Saving Bank Account No: 00031110004411; Branch/RTG/NEFT IFSC: **HDFC0000003**;
- MICR Code: **110240001**; Swift Code; **HDFCINBBDEL**

Bank charges if any, must be borne by the participants and should not be deducted from the amount remitted.

### Opportunities For Sponsorship

Scope exists for organizations to be the Sponsor on lump sum payment with following attendant benefits:

<b>Platinum Sponsor :</b> <b>Rs. 2,00,000/-</b>	<b>Gold Sponsor :</b> <b>Rs. 1,00,000/-</b>	<b>Silver sponsor :</b> <b>Rs. 75,000/-</b>
<ul style="list-style-type: none"><li>● 10 delegate passes for participation</li><li>● Company logo on main banner</li><li>● Announcement - Thanking sponsor</li><li>● Circulation of Company Literature</li><li>● Speaking Opportunity</li><li>● Table Space to display</li><li>● Complimentary Advertisement in the Key Journal Published immediately after the event covering report of the event</li><li>● Special Invite to the head of organization.</li></ul>	<ul style="list-style-type: none"><li>● 04 delegate passes for participation</li><li>● Company logo on main banner</li><li>● Announcement -Thanking sponsor</li><li>● Circulation of Company Literature</li><li>● Speaking Opportunity</li><li>● Table Space to display</li><li>● Complimentary Advertisement in the Key Journal Published immediately after the event covering report of the event</li></ul>	<ul style="list-style-type: none"><li>● 03 delegate passes for participation</li><li>● Company logo on main Banner</li><li>● Announcement - Thanking sponsor</li><li>● Circulation of Company Literature</li></ul>

**Opportunities for Table Top Display :** Limited Slots are available on first come basis, @ Rs. 50,000/- Plus GST per slot, for display of products, services & Innovations.

### Conference Secretariat

All correspondence relating to the event should be addressed to:

**Shri A.K. Dinkar**, Secretary, CBIP, and Secretary General, INHA - email - [secretary@cbip.org](mailto:secretary@cbip.org)

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Phone: 91-11-26115984 / 26116567; Fax: 91-11-26116347

### Contact Person:

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Conference on

**Pumped Storage for Sustainable Power Systems  
- Implementation Challenges and way forward**

**20 Jan 2025 (Monday)**

Conference Hall CBIP, Malcha Marg, Chanakyapuri, New Delhi

**REGISTRATION FORM**

(to be sent to the secretariat)

1. Name : .....
2. Position : .....
3. Organization : .....
4. Address : .....
5. Mobile No : ..... E-mail ID : .....
6. Details of Payment of fee : Bank Draft No. \_\_\_\_\_ and dated \_\_\_\_\_ OR  
Online Bank Transaction ID \_\_\_\_\_ dated \_\_\_\_\_, for  
Rs. \_\_\_\_\_.

(Signature)

Place: \_\_\_\_\_

Date : \_\_\_\_\_