

Call for Papers: 2025 International Hydropower Development Conference

We are delighted to invite paper submissions for the 2025 International Hydropower Development Conference (IHDC 2025), following the remarkable success of the 2024 conference in Beijing. The IHDC 2024, organized by the China Society for Hydropower Engineering (CSHE) with Huadian Overseas Investment Company Limited and the China Renewable Energy Engineering Institute (Office for China - IRENA Cooperation) was endorsed by prestigious organizations including the International Association for Hydro - Environment Engineering and Research (IAHR), the International Hydropower Association (IHA), and the Beijing Association for Science and Technology. The event, which reached over 1.5 million viewers via live broadcast, significantly advanced global dialogue and cooperation in hydropower and new energy development.

The 2025 conference will delve into the integrated application of energy storage and renewables in the hydropower sector, aiming to unlock synergistic development opportunities. It will serve as a vital platform for sharing cutting-edge technologies, practical experiences, and collaborative visions for building a sustainable future energy system.

Theme for 2025: “Hydropower and New Energies: Powering a Sustainable Future with Storage and Renewables”

In 2025, the conference aims to deeply explore the integrated application of energy storage and renewable energies in the hydropower sector and tap the potential for synergistic development. Meanwhile, it will establish a platform for communication and cooperation, enabling the sharing of cutting - edge technologies and experiences, and jointly contributing ideas to the construction of a sustainable future energy system.

Highlighted Conference Topics

Theme 1: Synergistic Technologies and System Optimization for Hydropower and Renewable Energy

- Optimization and scheduling of hydropower, wind, and solar hybrid generation systems
- The role of hydropower in balancing renewable energy intermittency and regulation techniques
- Optimization strategies for multi-energy complementary systems (wind-solar-hydro-storage)
- Integration of hydropower and renewable energy in smart microgrids
- Modeling and simulation of large-scale hydropower-renewable integrated systems

Theme 2: Innovation and Engineering Practices in Energy Storage Technologies

- Advances and engineering practices in pumped storage hydropower technology
- Applications of novel battery storage technologies (solid-state, sodium-ion, flow batteries) in hydropower systems
- Hydrogen production, storage, and its collaborative operation with hydropower
- Optimization of distributed energy storage and hydropower station co-scheduling
- Economic analysis and business model innovation for large-scale energy storage
- Emerging energy storage technologies in hydropower systems: superconducting, gravity storage, etc.

Theme 3: Environmental Sustainability and Climate Change in Hydropower and Renewable Energy

- Environmental impact assessment and optimization strategies for hydropower and renewable projects
- Adaptive operation of hydropower stations under extreme climate conditions
- Ecological flow management and river ecosystem protection
- Life-cycle carbon emissions assessment of hydropower-renewable integrated systems
- Optimization of hydropower scheduling and adaptation strategies under climate change
- Impact of renewable energy development on water resource management

Theme 4: Smart Energy Systems, Digital Technologies, and Future Trends

- AI applications in hydropower and renewable energy scheduling optimization
- Digital twin technology for hydropower station operation monitoring and prediction
- Big data and machine learning-driven energy storage optimization
- IoT and smart sensors in hydropower and renewable energy management
- Blockchain technology in hydropower and renewable energy trading and security
- Future trends in intelligent and multi-energy complementary energy systems

Submission Guidelines:

- Full papers will be reviewed and selected based on scientific/engineering merit, relevance, and overall quality. You are reminded that, due to time and space constraints for the event, that not all submissions will be selected for the conference.
- The paper must be original and should not have been published in other conferences or journals.
- Authors are required to upload a complete full-length paper in English, with the total number of pages not exceeding 10. [Please click here to download the template.](#)
- After the main text of the paper, an author's brief introduction of about 100 English words, along with the personal communication address and telephone number, should be attached. Papers shall be submitted online at www.ihdc2025.com

Important Dates:



Submission Deadline:
April 30th, 2025



Notification of Acceptance:
Jun 30th, 2025



Conference Dates:
October 2025

Your contributions will play a vital role in shaping the future of hydropower and renewable energy integration. IHDC 2025 offers a unique platform for researchers, industry leaders, and policymakers to exchange insights, foster collaborations, and drive innovation toward a more sustainable energy future.

We look forward to receiving your submissions and to welcoming you in October 2025 for an inspiring and impactful event.