



## **International Conference on** **“Sustainable Development of Pumped Storage Hydro Power Projects– Geotechnical Challenges”**

**Conference website: <https://egcon.in/2023>**

**Venue : Power Management Institute, NTPC, Noida**

**Dates of Conference : 20 - 21<sup>st</sup> November, 2023**

**Abstract Submission : 20<sup>th</sup> October, 2023**

**Confirmation of Acceptance : 30<sup>th</sup> October, 2023**



**Organized by**

**INDIAN SOCIETY OF ENGINEERING GEOLOGY (ISEG)**

(Indian National Group of IAEG)

[www.isegindia.org](http://www.isegindia.org), [www.joegindia.com](http://www.joegindia.com)

**In association with**

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## PRESIDENT'S INVITATION

Dear Colleagues,

Rapid depletion of fossil fuels together with associated adverse impacts on climate will result in large scale induction of renewable energy into the system in near future. There is an urgent need for the large renewable energy storage to ensure system. In this context accelerated development of pumped storage hydropower projects have gained prominence in India in recent past due to their potential for meeting peak load demand, stabilizing the grid, and providing ancillary services.

India has a huge Pumped Storage Hydropower potential of about 104 GW, out of which only 4.8 GW has been harnessed so far. Govt. of India has set an ambitious target of development of 18.8 GW Pumped Storage Projects by 2032 to meet out the renewable energy demand. For timely implementation of the pumped storage projects, extensive geological and geotechnical studies in DPR stage within scheduled time frame are pre requisites so as to avert geological uncertainties during construction/operation. Quantum of investigations to be performed for pumped storage hydropower projects keeping in view presence of two dams, deep seated caverns etc. also need to be firmed up.

Considering need of the hour, Indian Society of Engineering Geology (ISEG) – the only dedicated society towards development/growth of Engineering Geology and Allied Subjects in India, in association with NTPC is organizing a 2 days conference EGCON-2023, on the pertinent subject “**Sustainable Development of Pumped Storage Hydro Power Projects– Geotechnical Challenges**” at PMI, NTPC, Noida on 20-21 November, 2023 wherein various geological/geotechnical requirements and issues pertaining to pumped storage hydropower projects shall be discussed and pondered upon threadbare by the professionals, academicians and decision makers etc. with an aim to come out with a guideline/SOP which will definitely contribute towards accelerated development of pumped storage hydropower projects within schedule time without major geological uncertainties.

I take this opportunity to invite geologists, civil engineers, geophysicists, geotechnical engineers, mining engineers, academicians, instrumentation engineers, software developers, research scholars and other professionals to contribute technical papers and for attending conference.

With Warm Regards,

S L Kapil  
President, ISEG



## SECRETARY'S MESSAGE

I feel honored and privileged in informing about the EGCON 2023, scheduled to be held during 20-21 November 2023 at Power Management Institute, NTPC, Noida. The EGCON 2023 is being organized by Indian society of Engineering Geology, the Indian National group of IAEG, in association with National Thermal Power Corporation (NTPC). The EGCON 2023, the fifth in the EGCON Series is dedicated to Pump Storage Hydro Power Projects and related themes.

The Pump Storage Hydro Power Projects are the need of the Day as they provide large renewable energy storage with modest civil works and minimal disturbance to the environment. The identified potential of Pump Storage Projects in India is about 119 GW from 109 PSPs. Out of these, eight projects with 4.7 GW are under operation and four projects (2.8 GW) are under construction. It is aimed to commission 39 hydro PSPs with 47 GW capacity by 2030. The government of India has initiated several policy initiatives to speedup implementation of PSPs which are important for integrating intermittent renewable energy with power transmission grid.

Keeping in view, the importance of PSPs in the development of Nation, the ISEG is organizing EGCON 2023 to provide a vibrant platform for discussions and deliberations on sustainable development of Pump Storage Projects in India to achieve the goal of 50GW green energy through PSPs.

I cordially invite professionals, academicians, researchers and students from India associated with planning, investigation, designing, construction of Pump Storage Hydro Power Projects and related issues, to attend the conference in large numbers and contribute technical papers for making the event a grand success.

With warm regards

Dr. Mridul Srivastava  
Secretary, ISEG



### THE SOCIETY (ISEG)

Indian Society of Engineering Geology (ISEG), the Indian National Group of International Association for Engineering Geology and the Environment (IAEG) was founded in 1965. IAEG, is an International scientific society which was founded in 1964. IAEG has more than 4,400 members and 61 national groups. ISEG is one of the oldest professional and scientific forums in the field of Engineering Geosciences in India. It comprises members from the fields of Engineering Geology, Geophysics, Geotechnical Engineering and Civil Engineering.

ISEG represents almost all the leading organizations engaged in infrastructural development projects in India. ISEG has been regularly organizing seminars/symposia and workshops in India focusing on advancement and challenges covering various aspects of Engineering Geology and Geo-technology. The main aim of organizing such technical conclaves is to provide a common platform for technical interactions and discussions amongst professionals, academicians and sharing technical expertise on challenges handled in different fields of Engineering Geology and Geotechnics.

### NTPC LIMITED

Energy is indispensable and is one of the essential pillars on which our economy thrives. NTPC is committed to provide uninterrupted and affordable power to fulfill this requirement, thereby bringing cheers to the farthest reaches of the country.

The total installed capacity of the company is 73,024 MW (including JVs) own stations include 26 coal based, 7 gas based, 1 Hydro, 15 Solar and 1 Small hydro project. Under JVs and Subsidiaries, NTPC has 9 coal based, 4 gas based, 8 hydro based and 18 renewable energy projects. By 2032, non fossil fuel based generation capacity shall make up nearly 50% of NTPC's portfolio. Today, over 73 GW installed capacity, NTPC is steering ahead to be India's largest integrated power company and targets to become a 130 GW firm with diversified fuel mix and a 600 BU company in terms of generation by 2032. NTPC has a very ambitious plan for development of PSP.

### EGCON-2023

Keeping pace with present time in prevailing circumstances, ISEG in association with NTPC is organising a Two days International Conference on [“Sustainable Development of Pumped Storage Hydro Power Projects– Geotechnical Challenges”](#) at NTPC Power Management Institute, Noida, UP on 20th to 21st November 2023. Main purpose of this is enlightening the Government of India's commitment to achieve the target of adding 500 GW installed capacity of Renewable Energy by the year 2030 and discuss various Geological, Geotechnical challenges along with Design aspects, Environmental Aspects, Hydrological Aspects, Economical & Financial Aspects for making Pumped Storage Projects – a Sustainable Renewable Energy Alternative.

This platform apart from providing awareness for the PSPs, also provides platform to deliberate and discuss advanced geological, geophysical techniques, civil, design, seismic aspects, earthquake engineering through presentations and lectures by the speakers from both academic & industrial fields in Geology / Geophysics / Civil Design/ Hydrology / Environment etc.

### VENUE – POWER MANAGEMENT INSTITUTE (PMI), NOIDA

PMI- the apex-training institute of NTPC is situated in a 10 acre campus at Noida (NCR) is capable of conducting upto 13 programme simultaneously. For large gatherings and conferences, the Institute has a plus 500-seater auditorium. PMI creates an excellent learning environment for the professionals that simultaneously educates and enriches. Over the years it has become the learning hub for most of the Power Sector Professionals in India and abroad.



## PUBLICATION OF CONFERENCE PAPERS IN JOEG

Journal of Engineering Geology (JoEG) is the oldest journal on the subject of Engineering Geology and Geotechnology in India and perhaps the only journal in this field. It is brought out on biannual basis and carries papers on Engineering Geology, Engineering Geophysics, Geotechnical Engineering, Geohazards (Seismology, Landslides, etc), Environment Geology, Rock Mechanics, Soil Mechanics, Groundwater contamination and Geological Engineering. It was launched in the year 1966 soon after formation of the society. Journal of Engineering Geology is a peer reviewed journal. The ISSN no of the Journal is 0970-5317. Some of the selected papers from the Conference will be published in the Journal.

## CONFERENCE THEMES

- ✱ *Geological, Geotechnical Challenges for Investigation of Infrastructures/ PSPs.*
- ✱ *Introduction of Pumped Storage Projects, Policy and Regulatory Guidelines.*
- ✱ *Identification / Layout / Planning and Execution of on & off the River PSPs.*
- ✱ *Geological / Hydrological / Design / Environmental / Financial Aspects of PSPs.*
- ✱ *Advanced Topographical Survey using Remote Sensing / Drone /GIS for PSPs.*
- ✱ *Advances in Ground Mass Characterization and Rock mass Classification.*
- ✱ *Execution of Deep Tunnels/Caverns with Special Reference to PSPs*
- ✱ *Advanced Geophysical Techniques in Investigation of PSPs.*
- ✱ *Seismological and Earthquake Engineering Aspects for PSPs and Infrastructure Projects.*
- ✱ *Commercial Aspects of Pumped Storage Projects.*
- ✱ *Lift Irrigation Projects for Energy and Water Security .*
- ✱ *Stabilization & monitoring of project components using Advanced techniques.*
- ✱ *“Disasters in Himalayas- A result of climate change or aggressive Infrastructure development”*
- ✱ *Mitigation of Multihazards -Mass Wasting and Disaster Risk Reduction*



ABSTRACT SUBMISSION GUIDELINE

The abstracts are to be submitted in MS Word file up to 500 words. This may be submitted by email to [india.seg@gmail.com](mailto:india.seg@gmail.com) or at conference website <https://egcon.in/2023> which will be available shortly.

Abstract is to be submitted in A4 size page with 2.54 cm. borders on all sides and with a line spacing as multiple 1.2; Font to be used is Times New Roman. Title of the Abstract: Size 18 Bold, Author(s)/ Affiliation Size Bold 12 italics, Text headings Size 12 bold; Text sub headings: size 12 italics; Text size 12 normal; illustrations/ figures should have at least 600 DPI resolution.

Accepted Abstracts will be published in the proceedings volume and accepted full length papers will be published in forthcoming issues of JOEG.

IMPORTANT DATES

The timeline for submission of papers and acceptance is given below:

Submission of Abstract	:	20 <sup>th</sup> October 2023
Confirmation of Acceptance	:	30 <sup>th</sup> October 2023
Submission of Full Length Paper	:	10 <sup>th</sup> November, 2023

REGISTRATION FEE

Delegates including authors attending the conference shall pay the registration fee as per the rates mentioned below.

ISEG Member	: INR 4000*	Non-ISEG Member	: INR 5000*
Foreign Delegates	: USD 150*	Students from India	: INR 2500*
Foreign students	: USD 50*	Accompanying Delegate	: INR 2500*
Retired ISEG Member:	Free		

*\* GST@18% extra at the time of registration shall be levied.*

The registration fee may be paid directly to ISEG in following ways:

- 1. **Demand Draft**, drawn in favour of the ‘Indian Society of Engineering Geology, payable at UCO Bank, Lucknow.
- 2. **Online Bank Transfer** as detailed below.  
**Name of the Bank** : UCO Bank, GSI Branch, Aliganj, Lucknow - 226024  
**Name of account** : ‘INDIAN.SOC.OF.ENG.’  
**Account Number** : 90330200000045      **IFSC Code** : UCBA0002024  
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SPONSORSHIP :

Government organizations, Public Sector and Private Companies involved in Infrastructural Development Projects are welcome to sponsor/co-sponsor the conference. The sponsorship categories are:

PLATINUM	DIAMOND	GOLD	SILVER	BRONZE
Rs 4.0 Lakhs*, Company name and logo on conference website, free registration for 8 delegates, full page advertisement in the proceedings, link of the sponsor websites on conference website, free of charge KIOSK (6mx2m) for exhibition, sharing of brochure/ company prospectus, promotional videos in the exhibition gallery. One slot of 15min for company presentation	Rs 3.0 Lakhs*, Company name and logo on conference website, free registration for 6 delegates, full page advertisement in the proceedings, link of the sponsor websites on conference website, free of charge KIOSK (4mx2m) for exhibition, sharing of brochure/ company prospectus, promotional videos in the exhibition gallery. One slot of 10 min for company presentation	Rs 2.0 Lakhs*, Company name and logo on conference website, free registration for 4 delegates, full page advertisement in the proceedings, link of the sponsor websites on conference website, free of charge KIOSK (2mx2m) for exhibition, sharing of brochure/ company prospectus, promotional videos in the exhibition gallery.	Rs 1.0 Lakhs*, Company name and logo on conference website, free registration for 2 delegates, free of charge KIOSK (2mx2m) for exhibition, half page advertisement in the proceedings.	Rs 0.50 Lakhs*, Company name and logo on conference website, free registration for 1 delegates, free of charge KIOSK (2mx2m) for exhibition, half page advertisement in the proceedings.



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★ Half page - INR 25000\*

\* The above rates are exclusive of GST @ 18%.

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