Monthly Journal – December 2023

CENTRAL BOARD OF IRRIGATION & POWER OFFICE BEARERS

President		Mr. Ghanshyam Prasad, Chairperson, CEA
Sr. Vice President		Mr. Kushvinder Vohra, Chairman, CWC
Vice President		Mr. R.K Vishnoi, CMD, THDC India Ltd. & CMD, NHPC Ltd.
Vice President		Mr. Bhopal Singh, DG, National Water Development Agency
Vice President	141 144 9164010 20172	Mr. Sanjay Sharma, Director-Solar, Solar Energy Corporation of India Limited
Vice President	l ansen	Mr. Anil Kumar Pandey, MD, Jindal Power Limited
Secretary	se beng	Mr. A.K. Dinkar
Director (WR)		Mr. K.K. Singh
Director (Energy)	spectre	Mr. Sanjeev Singh

- The statements and opinions expressed in this Journal are not necessarily of Central Board of Irrigation & Power.
- Reproduction of articles from Water and Energy International is subject to approval of the Editor.
- Interested authors from India and abroad are requested to contribute their articles to this Journal and send the same to Secretary, Central Board of Irrigation & Power, well in advance.

All communications should be addressed to :

Secretary

Central Board of Irrigation & Power Malcha Marg, Chanakyapuri New Delhi 110 021

- Ph. : 91-11-2611 5984
- Fax : 91-11-2611 6347
- E-mail : cbip@cbip.org
- Website : www.cbip.org

Total Pages 84

Monthly Journal

Monthly Subscription Rs. 250/-Annual Subscription Rs. 3000/-

FROM EDITOR'S DESK

Mr. A.K. Dinkar, Secretary, CBIP

Articles

Water Resources Section

370 Effect of Non-Plastic Fines on the Liquefaction Resistance of Sand by Cyclic Simple Shear Equipment – Uday Bhanu Chakraborty, Suresh Maurya and N.P. Honkanadavar

6

12

20

- 371 Exploring the Potential of Ground Penetrating Radar Data-Based Simulation Technique for Assessing the Condition of Stilling Basin of a Dam – Sanjay Rana, Varun Narayan Mishra, Praveen Kumar Rai, Mallikarjun Mishra
- 372 Impact Analysis of Population Growth and Urbanization on Water Crisis : A Case Study of Delhi – Kiran Dabas

EDITORIAL BOARD

Mr. Vivek P. Kapadia, Secretary to Government of Gujarat and Director (Civil), Sardar Sarovar Narmada Nigam Limited

Mr. Avinash C. Tyagi, Former Secretary General, International Commission on Irrigation & Drainage

Mr. Manoj Aggarwal, Professor in Charge – Institute Incubation and Innovation Council, IIT Jammu

Mr. D.K. Chaturvedi, Former General Manager, NTPC Ltd.

Mr. Amandeep Singh, DGM, POWERGRID

Dr. Rajesh Arora, Sr. Manager, Delhi TRANSCO Ltd.

Publisher, Printer and Editor Mr. A.K. Dinkar on behalf of Central Board of Irrigation and Power, Printed at M/s Chandu Press, D-97, Shakarpur, Delhi, published from Central Board of Irrigation and Power, Malcha Marg, Chanakyapuri, New Delhi 110 021

CONTENTS

Energy Section

Z

Z

373	India's Renewable Energy Transition and the Role of Maharatna Companies in Achieving Industry 5.0 – Prof. (Dr.) Vijita Singh Aggarwal, Dr. Manoj Kumar Aggarwal, Ishant Kumar	25
374	Use of AI for Climate Change : Modelling the Barriers in Energy Sector by ISM Approach – Dr Shariq Mohammed, Dr Ruchi Tyagi, Dr Suresh Vishwakarma, Nidhi Bhatia	32
375	Impact of Time Zoning on the Indian Electricity Grid - A Critical Analysis – Prashant Bahuguna, B.C.K. Mishra, Anil Kumar, Avishek Ghosal	39
	Extract Discussion of Experts on Power Engineers Whats-App group "SPARKIgnited to Share"	49
	NS LETTER	
Wat	ter Resources Section	
	Tunnelling Asia 2023 – International Conference on Climate Resilience and Sustainability in Tunnelling and Underground Space, 22-23 November 2023, Mumbai	53
Ene	ergy Section	
	National Workshop on Energy Management, Energy Conservation and Energy Audit – 30th November – 1st December 2023, New Delhi	59
-	04 Weeks Induction Training Program for Newly Joined Trainee Engineers of NHPC Ltd. on HydroPower Development - 4-12-2023	63'
	12 Days Training Program on Construction, Design, O&M of Transmission Lines, Structure and Foundation including Substation etc. Organised by CBIP at Centre of Excellence Gurgaon for the Executives of Uganda Electricity Transmission Company Limited (UETCL) – 4th - 15th December 2023	65
y <u>ar</u> ik Noisi	Online Training Program on CERC Regulation, Grid Code Electricity Act & Latest Trends in Power Sector – 14th - 15th December, 2023	68
	One Day Conference on Emerging Power Market and Trading - 15th December 2023, New Delhi	69
СВ	IP ACTIVITIES DURING DECEMBER 2023 - JANUARY 2024	72
	addressed to 1 *	
	ATISTICAL DATA	74
	Water Resources Section Energy Section	76
	ATER & ENERGY ABSTRACTS	
	Water Resources Section	78
	Energy Section	80
FA	R & NEAR IN WATER AND ENERGY	
	News - Water Resources Section	81
•	News - Energy Section	82

(contd.)