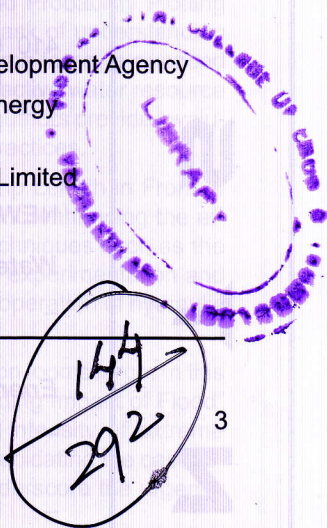


# CENTRAL BOARD OF IRRIGATION & POWER OFFICE BEARERS

<b>President</b>	:	<b>Mr. Ghanshyam Prasad</b> , Chairperson, CEA
<b>Sr. Vice President</b>	:	<b>Mr. Kushvinder Vohra</b> , Chairman, CWC
<b>Vice President</b>	:	<b>Mr. R.K Vishnoi</b> , CMD, THDC India Ltd.
<b>Vice President</b>	:	<b>Mr. Bhopal Singh</b> , DG, National Water Development Agency
<b>Vice President</b>	:	<b>Mr. Sanjay Sharma</b> , Director-Solar, Solar Energy Corporation of India Limited
<b>Vice President</b>	:	<b>Mr. Anil Kumar Pandey</b> , MD, Jindal Power Limited
<b>Secretary</b>	:	<b>Mr. A.K. Dinkar</b>
<b>Director (WR)</b>	:	<b>Mr. K.K. Singh</b>
<b>Director (Energy)</b>	:	<b>Mr. Sanjeev Singh</b>



- 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**

## FROM EDITOR'S DESK

**Mr. A.K. Dinkar**, Secretary, CBIP

## Articles

### Water Resources Section

- |  |        |
|--|--------|
| 404 Analysing Rainfall Patterns using Frequency Distribution and Probability Plotting in Kunigal Taluk, Tumkur District, Karnataka –<br><i>Ravindranath.C, Vijaya Kumar H, Pramodkumar Kappadi</i> | 3<br>6 |
| 405 Equation of Hydraulic Jump Length in Front of Sluice Gate using Baffle Block and Sill as Energy Reducer – <i>Sunik Sunik</i>   | 12     |
| 406 Need for Rehabilitation of Dam Considering the Cascading Impact of Flood –<br><i>Suresh Maurya and Karthikeyan M</i>   | 18     |

### Energy Section

- |   |    |
|---|----|
| 407 Renewable Energy Growth in Industry with Hydrogen – <i>Dr. Neel Rai and Dr. Vishal Srivastava</i> | 24 |
|---|----|

## EDITORIAL BOARD

**Mr. Vivek P. Kapadia**, Former 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.

## Monthly Journal

Monthly Subscription Rs. 250/-

Annual Subscription Rs. 3000/-

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

# CONTENTS

(contd.)

408	Significance of Condition Monitoring of Electrical Equipment in Transmission & Distribution System – <i>Dr. Rajesh Kumar Arora and Sunil Kumar Batra</i>	34
409	Concept of Line Differential Protection – With Case Study – <i>K.K. Murty, Santosh Bagade and Rajat Jain</i>	43
410	Coordination Challenges in Protection Systems – Case Studies of Protection System Failures in RE Grids – <i>Sanjay Bhatt</i>	48
–	Extract Discussion of Experts .... on Power Engineers Whats-App group “SPARK...Ignited to Share”	58

## NEWS LETTER

### **Water Resources Section**

–	Workshop on Sedimentation Management in Reservoirs for Sustainable Development – 2nd – 3rd May, 2024, Institution of Engineers (India), Chandigarh	62
---	--	----

### **Energy Section**

–	National Conference on Protection System & its Challenges in RE Rich Grid - 16th – 17th May, 2024, New Delhi	65
–	Rendezvous with the CMD of NHPC Ltd.	72

### **CBIP Activities during – May - June, 2024**

73

### **STATISTICAL DATA**

•	<b>Energy Section</b>	74
---	-----------------------	----

### **WATER & ENERGY ABSTRACTS**

•	<b>Water Resources Section</b>	76
•	<b>Energy Section</b>	77

### **FAR & NEAR IN WATER AND ENERGY**

•	<b>News - Water Resources Section</b>	78
•	<b>News - Energy Section</b>	79

