

CENTRAL BOARD OF IRRIGATION & POWER OFFICE BEARERS

President	: Mr. S.D. Dubey, Chairperson, CEA
(i) Vice President	: Mr. G.S. Jha, Chairman, CWC
(ii) Vice President	: Mr. K.S. Popli, CMD, IREDA
(iii) Vice President	: Mr. Ashok Sethi, COO & ED, Tata Power
Secretary	: Mr. V.K. Kanjlia
Director	: Mr. P.P. Wahi
Director (WR)	: Mr. A.C. Gupta
Director (E)	: Mr. C.S. Malik



- 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 Subscription ₹ 200/-
Annual Subscription ₹ 2400/-

FROM EDITOR'S DESK

V.K. Kanjlia, Secretary, CBIP	5
4 th Conference on Advances and Innovations in Substations – 26 & 27 May 2016, New Delhi	6
One Day Training Programme on Overview of Solar PV and Solar Thermal – Its Potential in India for Executives of IREDA – 17 June 2016, CBIP Centre of Excellence, Gurgaon	16

W&E INTERNATIONAL

• Energy Section	
– EHV Substations - Journey from AIS to Digital – <i>N.S. Sodha</i>	19
– Underground Substations : Reliable, Safe and Invisible Power Solution – <i>Bhagyalakshmi Nair, Ramchandran Pillai, Vrushali Adkar, Chintamani K.Chitnis, FN Havaldar and S.B.Kundargi</i>	24
– Advances and Innovations in Substations – <i>Gantam Chakrader</i>	29
– Optimized & Resources-saving New Substation Design by using Hybrid Switchgear Technology Development – <i>Rajdeepak Pandey</i>	37

INTERNATIONAL EDITORIAL ADVISORY BOARD

V.C. Patel - Distinguished Professor and Director, University of IOWA, U.S.A.
Donggi Zuo - Prof. & President's Advisor of Hohai University, Ministry of Water Resources, People's Rep. of China,
K.G. Ranga Raju - Former Professor of Civil Engineering University of Roorkee (Now IIT Roorkee)
Secretary General, CIGRE, France.
Jose M. Martin Mendiluce - Doctor Ingeniero de Caminos ASINC, S.L. Spain,
Alison Bartle - Editor, Aqua-Media International Ltd., United Kingdom.

Publisher, Printer and Editor Shri V.K. Kanjlia on behalf of Central Board of Irrigation and Power, Printed at M/s Chandu Press, D-97, Shukarpur, Delhi, published from Central Board of Irrigation and Power, Malcha Marg, Chanakyapuri, New Delhi: 110 021

W&E INTERNATIONAL

• *Water Resources Section*

- Development of Water Resources Projects to Harness Untapped Potential of Godavari Basin Opportunities and Challenges – *G.L. Dwivedi and Rajesh Shrivastava* 40
- Irrigation Water Management for Improved WUR: Context of National Water Policy 2012 – *K. Yella Reddy and L. Narayan Reddy* 58

W&E RESEARCH DIGEST

Water Resources Section

- Optimization Approach for Hydrologic Channel Routing – *Mohammad Zakwan and Mohd. Mezzammil* 66

STATISTICAL DATA





- *Water Resources Section* 70
- *Energy Section* 71

WATER & ENERGY ABSTRACTS*

- *Energy Section* 73
- *Water Resources Section* 74

FAR & NEAR IN WATER AND ENERGY

- *News - Energy Section* 76
- *News - Water Resources Section* 79

BOOK ADVERTISEMENT TODAY

IN CBIP W&E INTL. JOURNAL

(Monthly Issue)

Tariff	
Back Cover	Rs. 35,000/-*
2nd / 3rd Cover	Rs. 25,000/-*
Inner Pages	Rs. 15,000/-*
* Service tax extra @ 12.36%	

For Advertisement Please Contact:
Secretary
Central Board of Irrigation & Power
 Mulcha Marg, Chanakyaपुरi, New Delhi 110 021
 Ph. :91 - 11 - 2611 5984, Fax : 91 - 11 - 2611 6347
 E-mail: cbip@cbip.org