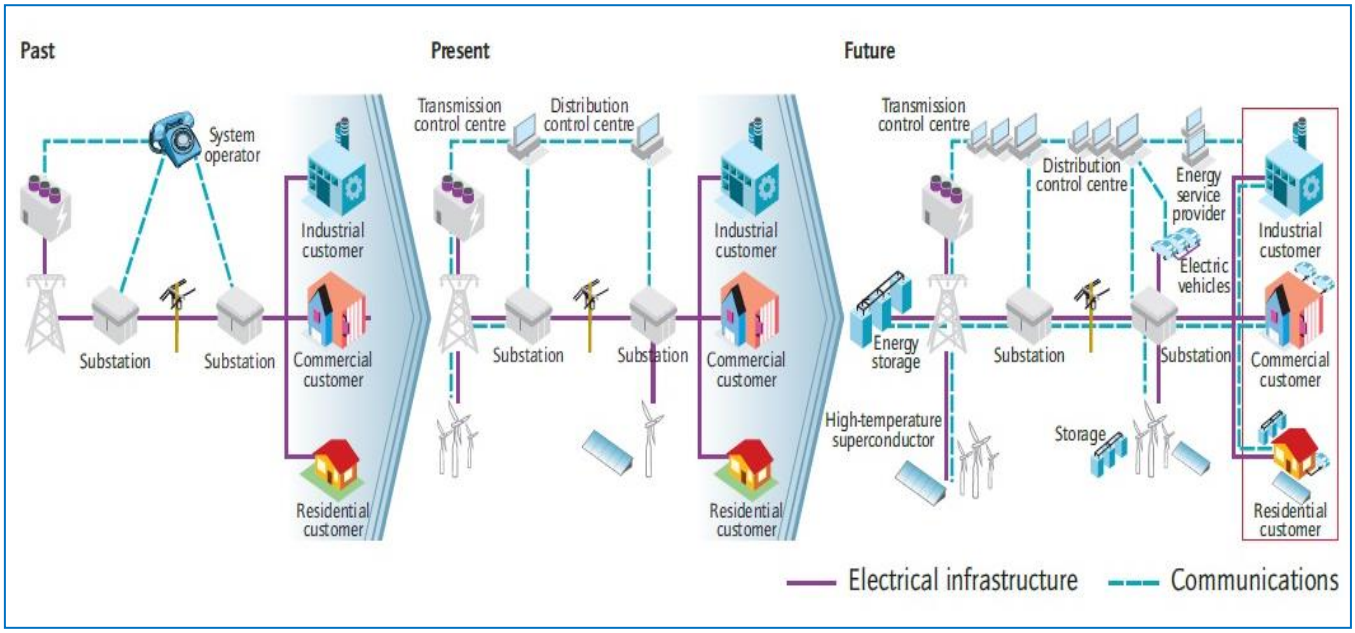
On Line Training and Capacity Building Program on

Best Practices in Power Distribution Systems including Demand Side Management and Smart Grid Technologies

22-23 December 2021
(Wednesday & Thursday) (14:30 – 16:30 hrs)

Smarter Electricity System



New Delhi
ISO 9001:2015

Organized by

Central Board of Irrigation & Power (CBIP)

INTRODUCTION

Electricity systems faces a number of challenges, including ageing infrastructure, continued growth in demand, the integration of increasing numbers of variable renewable energy sources and electric vehicles, the need to improve the security of supply and the need to lower carbon emissions. This issue is not specific to India but has taken a global shape. Smart grid technologies offer ways to mitigate these challenges.

These challenges needs to be addressed with regard to each region's unique technical, financial and commercial regulatory environment. Given the highly regulated nature of the electricity sector, proponents of smart grids must ensure that they engage with all stakeholders, including equipment manufacturers, system operators, consumer advocates and consumers.

Power distribution is the final and most crucial link in the electricity supply chain and, unfortunately, the weakest one in the country. It assumes great significance as the segment has a direct impact on the sector's commercial viability, and ultimately on the consumers who pay for power services. The sector has been plagued by high distribution losses (30% overall) coupled with theft of electricity, low metering levels and poor financial health of utilities with low cost recovery. Due to above reasons, the distribution companies have not been able to undertake corresponding investments in infrastructure augmentation.

The physical and institutional complexity of electricity systems makes it unlikely that the market alone will be able to implement smart grids on the scale that is needed. Governments, private sector, consumer and environmental advocacy groups must work together to define electricity system needs and determine smart grid solutions.

The integration of Demand Side Management (DSM) with smart grid (SG) can facilitate residents' transfer into smart homes and sustainable cities by reducing the carbon emission. The implementation of DSM in Smart Grid deals with a number of challenges such as security and privacy, tariff regulation, energy transmission, distribution, and effective utilization of energy resources. However hybrid algorithms have showed better performance than single algorithms due to their faster convergence speed.

In the Indian power scenario DSM has assumed a significant role in the recent five-year plans. Over the years power development has seen Generation addition manifold along with expansion in Transmission and Distribution system. Optimum utilization of resources in overall sense, however, calls for managing the demand also for proper capacity utilization. A lot of potential exists in implementing the measures at Demand Side Management (DSM) and Energy Efficiency. There is immediate requirement to create awareness and to start a movement in this direction.

Smart grid tools and technologies implemented in the electrical grid infrastructure enable bidirectional flows of energy and communication. These new capabilities can lead to improved Efficiency, Reliability, Interoperability, and Security. Significant progress is being made toward the development and implementation of a smart grid, but there are many challenges that still need to be addressed. A number of roadmaps and reports have outlined the technical issues and potential approaches for overcoming them, from the federal, state, industry, and even global perspectives.

There is a pressing need to accelerate the development of Low-Carbon Energy Technologies in order to address the global challenges of energy security, climate change and economic growth. Smart grids are particularly important as they enable several other Low-Carbon Energy

Technologies, Electric Vehicles, Variable Renewable Energy Sources and Demand response. This roadmap provides a consensus view on the current status of smart grid technologies, and maps out a global path for expanded use of smart grids, together with milestones and recommendations respect of Technology and Policy Development

ANNOUNCEMENT

Central Board of Irrigation and Power (CBIP) has taken initiative of organizing an online Training and Capacity Building Program on Best Practices in Power Distribution Systems including Demand Side Managements and Smart Grid Technologies during 22 -23 December 2021 (Wednesday and Thursday) (14:30-16:00 hrs each day)..The Online Training Program will be beneficial for the participants to enhance their knowledge on Power Distribution Systems and Smart Grid Technologies -- its benefit and challenges.

The program is expected to be attended by the Senior officers of Power Utilities Viz. Corporations/ SEBs, state Govt., IPPs, State Renewable Energy Departments, State Electricity Regulators, Energy Planners, Private Entrepreneurs, Manufacturers, Development Consultants, Construction Companies, Financial Institutions, Training Institutes , other relevant stakeholders etc..

THIS ON LINE TRAINING PROGRAM WILL ENABLE THE PARTICIPANTS TO UNDERSTAND ----

1. Energy Technology Perspective - Scenario in India under Power Distribution Reform Scheme
2. Future Demand Vs. Supply Road Map
3. Electricity System Consideration and Reliability
4. All generation and storage options
5. Deployment of Variable Generation Technology
6. Informed Participation by Customers
7. New products, services and market
8. Power Quality for the range of needs
9. Barriers for Utility, ERC & Consumer
10. Demand Side Management and Smart Grid
11. Integration of Distributed Generation and Energy Storage with the Grid
12. Optimize Assets Utilization and Operating Efficiencies
13. Resiliency to disturbances, attacks and natural disasters
14. Cross-Cutting Challenges

COVID 19 SPECIAL REGISTRATION FEE

The duration for online training will be of 2 days (2 hrs) out of which 90 minutes will be for technical session followed by 30 minutes for question/ answer session. The Registration fee for training will be Rs.3,000/- per participant.

- 18% GST will be extra.

The program is limited to 100 participants on First cum First serve basis.

TO REGISTER

The perspective participants, desirous of attending the above On Line Training Program may register themselves by sending the following details to CBIP along with necessary payments:

Name: _____

Designation: _____

Organization: _____

Mailing address: _____

Phone and E-mail: _____

Note: After registration, the participants will be provided the link 1 day prior to the session to participate in the Technical session

(GST No. 07AAAJC0237F1ZU)

Payments of registration fee should be made by cheque at par/Demand Draft drawn in favour of "Central Board of Irrigation and Power", payable at New Delhi or by transfer the amount to HDFC, Bank, Address : 209-214, Kailash Building, 26 Kasturba Gandhi, Marg, New Delhi 110001, Saving Bank Account No. : 00031110004411; Swift Code: HDFCINBBDEL; IFSC: HDFC 0000003 MICR Code: 110240001

Address for Correspondence

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Secretary, CBIP
Dr. G.P. Patel,
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