

# **Post Graduate Diploma Course In O & M of Transmission & Distribution System (6<sup>th</sup> Batch)**



**Central Board of Irrigation and Power**

Malcha Marg, Chanakyapuri, New Delhi-110021

Web Site: [www.cbip.org](http://www.cbip.org) Email: [cbip@cbip.org](mailto:cbip@cbip.org)

(More than 8 decades of Service to the Nation in Power Sector)

*(Recognized as category-1 training Institute for providing training in the field of Hydro, Thermal, Transmission, Distribution and Power management Ministry of Power, Government of India)*

## ABOUT THE COURSE:

The Indian power Sector is presently passing through a phase of transition of technology up-gradation in the area of Generation and Transmission. Several new Ultra Mega Thermal power Projects are in the process of installation both in Public and private sectors where advanced technology with super critical parameters supported by the state of the art Control & Instrumentation system are being adopted. Simultaneously to evacuate the power, several EHV substations and long Transmission lines would be erected with associated distribution system. Presently India has the largest Electricity Grid in the World and world's third largest Transmission and Distribution network. The ambitious plan of Govt. of India for adding additional 2,50,000MW generation Capacity during the 13<sup>th</sup> Plan period over and above is present installed Capacity of 2,45,000MW will be supplemented by corresponding strengthening of infrastructure addition in the T&D sector. To achieve this objective, additional 163000 CtKms and 30 Crores consumers would be added to the present T&D network. Various new technologies like Ultra High Voltage (AC/DC) transmission system, Facts, SCADA application, remote operation of Substation etc. The management of this huge network shall be a challenging task. To man this huge transmission System and Distribution network, a huge manpower adequately trained shall be required which will be of the order of 10.00 Lacs. Keeping all these aspects in view, CBIP has taken this initiative to launch the **26 weeks Post Graduate Diploma Course in Transmission & Distribution System** following the syllabus as per the requirement of Indian Electricity Regulations 2010 for the fresh graduate engineers who would be groomed as per the requirement of Indian Power Industry. The duration of the course would be 26 weeks which will include the class room sessions as well as on-the-job training. The students have to attend the on-job practice sessions in various Substations. Visit to some reputed manufacturing plants shall also be arranged. To enhance the personal skills, some inputs of Management are also to be given to the students.

The course is also open for the sponsored candidates from SEBs and Power Utilities (Public & Private).

## COURSE OBJECTIVES:

The objective of the course is to develop groomed manpower for the power sector having high skill and confidence in running a EHV substation as well as Distribution equipments. After completion of the course the students would be readily available working engineers in Indian Power Sector for taking over the charge of Operation & Maintenance of T&D sectors

After completion of the course the students will acquire extensive basic and advanced knowledge of

- Operation & Maintenance of Transmission and Distribution accessories
- Necessary Safety aspects required in T&D
- Details of associated equipments
- T&D project management
- Process flow
- Electrical and IT application in T&D
- T&D schemes

## METHODOLOGY FOR THE COURSE

- Classroom Lecture Sessions
- Sub-station Visits, Scheme Tracing in Switch yard of Substation
- On-Job Operation & Maintenance Training at different Substations
- Group Discussion session
- Projects, Seminars Submissions

## DETAILED COURSE CURRICULUM

Sl. No.	subject/Modules-first semester	Duration
1	Introduction to Power Sector Familiarization	1 Week
2	Safety	1 Week
3	Basic Electrical Engineering Fundamentals	2 Weeks
4	Introduction to Sub-station / Switchyard	1 Week
5	Design aspects of Sub-station equipment	2 Weeks
6	Transmission line Engineering & EHV Cables	1 Week
7	HVDC Transmission	1 Week
8	Erection & commissioning of Sub-station & Transmission Line	1 Week
9	Protection of Sub-station & Transmission Line	1 Week
10	O& M of Sub-station and its equipment	1 Week
11	Sub-station on-job operation	1 Week
12	SCADA, load dispatch & Grid Management	1 Week
13	Indian Electricity Grid Code, Regulatory Issues and tariff	1 Week
14	Transmission line on-job operation & Maintenance	1 Week
15	Visits to Manufacturing works / Testing labs etc.	2 Weeks
16	Distribution System Engineering & Energy Metering	2 Weeks
17	Distribution Lines and Cables	1 Week
18	IT, SCADA & GIS in Distribution System	2 Weeks
19	Distribution System on-job training	1 Week
20	General Management /Material Management/Personal Management	1 Week
21	Project & Final Appraisal	1 Week
	<b>Total</b>	<b>26 Weeks</b>

## FACULTY

In-house as well as Renowned/Reputed and well experienced faculty from Power Industry/T&D equipment manufacturers/Contractors/IIT/engineering colleges will be delivering the lectures for the entire program.

## ON-JOB

On-job training will be arranged at the sites of reputed Transmission & Distribution Companies of NCR.

## WHY SHOULD YOU JOIN CBIP FOR THIS COURSE?

In order to mitigate the shortage of trained manpower Govt. of India has already taken many initiatives for providing training and developing the required manpower. However, the requirement of trained manpower is so high that there is a need of training/retraining of fresh and in service engineers and groom them by providing the required training inputs and make them readily available for deploying them in the Power Sector as per its manpower requirements.

Keeping all these aspects in view, CBIP has taken this initiative to launch the **26 weeks Post Graduate Diploma Course in O&M of Transmission & Distribution System** (modular course) following the syllabus as per the requirement of Indian Electricity Regulations Act 2010 for the fresh graduate engineers who would be groomed as per the requirement of Indian Power Industry.

Hence, there is an ample scope of making a career in Operation & Maintenance of Transmission & Distribution System of Indian Power Sector for the fresh Electrical Engineers who undertake this program.

Main objective of CBIP is to disseminate technical information through various modes to the Indian Power sector Organizations. Most of the organizations (Govt. Sector & Private) of Indian Power sector involved in Generation, Transmission and Distribution of Power are the members of CBIP and CBIP has a good network with various reputed manufacturing and service organizations in the field of Transmission and Distribution of Indian Power Sector (Both Govt. and Private organizations) which would facilitate for the placement of the participants.

## **RECOGNISION/CERTIFICATION OF THE COURSE**

Certificate will be issued by Central Board of irrigation & Power (CBIP) which is a reputed autonomous body in the field of Power & Water Resources having liaison with various Govt./Semi-Govt./Pioneer-Pvt. Sector Organizations including Central Electricity Authority, NTPC, NHPC, Power grid etc.

***CBIP institute has been recognized as Category-I training Institute by Ministry of Power, Govt. of India under CEA regulations-2010. The syllabus of the course is as per the mandatory Training requirements specified in Central Electricity Authority regulations-2010.***

## **STRENGTHS OF CBIP**

- A 87 years old establishment into dissemination of knowledge in Power, Irrigation and Renewable sectors.
- Almost all reputed utilities of Power, Irrigation and Renewable sectors of the country are the institutional members and at least.
- 3000 senior officers of the level of Chief engineer and above from these sectors are the members.
- Has a great networking and close relations with all reputed utilities of these sectors. Institute is located in most posh and central place of the capital city of the country i.e. Chanakyapuri, New Delhi.
- Easy availability and access to the reputed and highly experienced faculty because of above two facts.
- Has a strong base of the very senior officers with deep experience of various disciplines of Power and irrigation sector.
- Has state of the art infrastructure facilities like digitized library, dining hall, classrooms, conference hall etc. well equipped with audio visual aids and Air conditioning system.
- Publishes very strong technical publications on very thrust areas in above three sectors.
- Has the secretariat of at least 10 international organizations and the Secretary CBIP is the secretary or the member secretary of their India chapters.
- A very strong Board with Chairperson, CEA as the President, Chairman Power Grid as the Vice President (Power), Member, CWC as the vice President (WR) and Joint Secretary, MNRE as Vice President (RE).
- CBIP has set up an Institute at new plots allotted by HUDA in Gurgaon for conducting long term/short term training programs in all the three niche sectors i.e. Power, Water Resources and Renewable Energy.
- CBIP has also signed a Memorandum of Understanding (MoU) with Indian Electrical and Electronics Manufacturers Association (IEEMA) which has a network of around 650 member organizations from public, joint & private sectors including good no. of organizations associated with Transmission & Distribution systems for collaborative ventures/ efforts for enhancement of quality service through various activities viz., joint assignments, training programs, conferences, seminars, consultancy, R&D activities, joint studies and surveys, knowledge sharing and action plans identified by CBIP and/or IEEMA.
- The “Excellence Enhancement Centre for India power Sector” has been established under the aegis of CEA at CBIP, Malcha Marg.

- Power Sector Skill Council (PSSC) is housed in CBIP premises at Malcha Marg, Chankyapuri, New Delhi, and CBIP is providing the secretariat support to PSSC. Smt. Neerja Mathur, Chairperson CEA, is the president and Shri V.K. Kanjlia, Secretary, CBIP is Secretary of PSSC
- Most of the organizations (Govt. sector & Private) of Indian Power sector involved in Generation, Transmission and Distribution of Power are the members of CBIP.
- CBIP has a strong team of senior training officers, having in-depth knowledge of conducting various long term training programs related to Power sector and were among the team of main initiators for launching the Post Graduate Diploma Course and Post Diploma Certificate programs in Thermal/T&D/GIS and B-Tech(Power) in the country.

## **ELIGIBILITY**

- **For Non-sponsored candidates,**
  - Bachelor of Engineering or equivalent in Electrical Engineering and Electrical & Electronics Engineering (EEE) with minimum 60% marks.
- **For Sponsored candidates,**
  - Bachelor of Engineering or equivalent in Electrical Engineering and Electrical & Electronics Engineering (EEE) with minimum 60% marks
  - One year experience in the relevant field.

## **SELECTION CRITERIA FOR ADMISSION**

The students will be shortlisted based on the merit of the marks obtained by the candidates in Class 10<sup>th</sup>, 12<sup>th</sup> & Engineering degree and merit wise list of the eligible candidates will be declared in CBIP web site. Admission shall be subjected to strict verification of all the original testimonials/documents and deposing of the required fees (given in the brochure).

## **AGE LIMIT**

Maximum 27 years for non-sponsored candidates as on **08.12.2014**. No age limit for sponsored candidates.

## **ADMISSION FEES**

- Rs. **1,50,000/-** excluding the Lodging & Boarding (payable in two installments Rs.80,000/- and Rs.70,000/- for non-sponsored candidates
- For sponsored candidates Rs. **2,00,000/-** (in one installment)
- Caution Money-Rs. 5000/- to be deposited during admission which would be refunded back after completion of the course
- Placement Assistance Charges: Rs.2000/- (non refundable) only for non sponsored candidates
- Placement Charges: Rs.14000/- to be paid after 3 months of joining the course (refundable if placement is not there)
- Transportation Charges for On- job/ outstation visit: Rs. 7000/- to be paid at the time of admission

## **LODGING/ BOARDING**

CBIP has tied-up with local Guest Houses / Hostels. Accommodation will be made for lodging, boarding and transport (To and Fro) from guest house on nominal payment basis. The candidates who are interested to have accommodation may give option for the same in the online application form. The accommodation shall

be arranged for the candidates only if response is good. The lunch and two times tea in the institute during the working days (5 days) will be available @ Rs.1700/- per month (compulsory).

## **TOTAL SEATS**

60 (Sixty Seats - Provisional), 25% seats reserved for candidates sponsored from Power Utilities and reputed companies of Indian Power Sector having more than one year experience. No. of seats may vary. In case of non-availability of sponsored candidates, the balance seats under this category shall be available for non-sponsored candidates.

## **SPONSORED CANDIDATES**

The Candidates who are sponsored from any organization have to enclose a sponsorship certificate from their respective organizations in the format given in the CBIP web site.

## **PLACEMENT**

CBIP maintains close linkages with various power utilities and reputed companies of Indian Power Sector. Most of the Govt. utilities, IPPS, T&D utilities etc and other reputed manufacturing organizations of the above said field are associated with CBIP as member organizations and prefer to depute their Engineers to attend the training programs/Workshops/ Seminars at CBIP. CBIP would try its best and exploit all the opportunities for arranging campus interviews through its good networking with all of the power sector utilities/companies including reputed manufacturers.

No placement for the sponsored candidates.

***Though CBIP is not committed for any confirmed placement, more than 54% students of current batch (5<sup>th</sup> batch completing in Mid November, 2014) have already been placed and process is still on.***

## **HOW TO APPLY**

Application may be submitted through online through CBIP Website. Hard copy of online filled application with the demand draft of Rs. 400/- in favour of "CBIP" payable at New Delhi, should reach the Secretary, CBIP, (address given below) latest by 25.11.2014 with One passport size photographs.

Candidates are advised to go through the brochure thoroughly before filling the form.

Points to be noted:

- All the future notifications/ information will be available on CBIP website. The candidates are advised to be regularly in touch with the website.
- Attach self attested copies of proof of Date of birth, certificates / mark sheets of 10th / 12th / Diploma/Engineering degree /CGPA/CPI Conversion Chart issued by Registrar/controller of the concerned university.
- Application fee is non refundable.
- Applications after due date will not be accepted.
- Candidates are advised to book their tickets in advance according to the date of declaration of result to avoid any last moment inconvenience.

## IMPORTANT DATES

SI. NO.	DESCRIPTION	DATES
1	LAST DATE OF ONLINE APPLICATION	17.11.2014
2	LAST DATE OF RECEIVING HARD COPY THROUGH POST	25.11.2014
3	DECLARATION OF RESULT	28.11.2014
4	STARTING OF COURSE	08.12.2014

## ADDRESS FOR COMMUNICATION

Secretary,  
CBIP,  
Malcha Marg, Chanakyapuri,  
New Delhi-110021  
Tel No: 011-26875017/26116567/24102437/Fax:011-26116347  
E-mail: [cbip@cbip.org](mailto:cbip@cbip.org)/[ghoshsk@cbip.org](mailto:ghoshsk@cbip.org)/[malhotraak@cbip.org](mailto:malhotraak@cbip.org)/[jaideep@cbip.org](mailto:jaideep@cbip.org)

## HOW TO REACH CBIP

CBIP is located at Malcha Marg, adjacent to Malcha Market, Chanakypuri, New Delhi, which is around 15KM from New Delhi Railway Station and around 18KM from Delhi Domestic Airport.

## HOW TO REACH CBIP CENTRE OF EXCELLENCE, PLOT NO-21, SECTOR-32, GURGAON, (TRAINING INSTITUTE)

Gurgaon, is the second largest city in the Indian state of Haryana and is a part of the National Capital Region(NCR). It is about 15 Kilometers from IGI Airport, New Delhi. Gurgaon is well connected to Delhi via an expressway(NH8 highway) and Delhi Metro.