

Course Brochure

52 Weeks Post Graduate Diploma Course in Power Plant Engineering Starting – 26/12/2018



Central Board of Irrigation and Power
Malcha Marg, Chanakyapuri, New Delhi-110021
Web Site: www.cbip.org Email: cbip@cbip.org
(More than 9 decades of Service to the Nation in Power Sector)

CBIP Centre of Excellence
Plot No-21, Sector-32, Gurgaon, Haryana
(Recognized as Grade A category-1 training Institute for providing training in the field of Hydro, Thermal,
Transmission, Distribution and Power management Ministry of Power, Government of India)

INTRODUCTION

Power is one of the most critical components of infrastructure, crucial for the economic growth and welfare of nations. The existence and development of adequate infrastructure is essential for sustained growth of the Indian economy.

India's power sector is one of the most diversified in the world. Sources of power generation range from conventional sources such as coal, lignite, natural gas, oil, hydro and nuclear power to viable non-conventional sources such as wind, solar, and agricultural and domestic waste. Electricity demand in the country has increased rapidly and is expected to rise further in the years to come. In order to meet the increasing demand for electricity in the country, massive addition to the installed generating capacity is required.

Indian power sector is undergoing a significant change that has redefined the industry outlook. Sustained economic growth continues to drive electricity demand in India. The Government of India's focus on attaining 'Power for all' has accelerated capacity addition in the country. At the same time, the competitive intensity is increasing at both the market and supply sides (fuel, logistics, finances, and manpower).

Total installed capacity of power stations in India stood at 344.71 Gigawatt (GW) between as of September 2018.

The Government of India is taking a number of steps and initiatives like 10-year tax exemption for solar energy projects, etc., in order to achieve India's ambitious renewable energy targets of adding 175 GW of renewable energy, including addition of 100 GW of solar power, by the year 2022. The government has also sought to restart the stalled hydro power projects and increase the wind energy production target to 60 GW by 2022 from the current 20 GW.

Several new Ultra Mega Thermal Power Projects are in the process of installation both in Public and private sectors where advanced technology like Super Critical Technology supported by the latest technology of Electrical, Control & Instrumentation systems etc are coming in a big way.

For operation and maintenance of huge installation with state of the art technologies and sophisticated machines and controls in Indian power sector, there is a need of engineers who are having in-depth knowledge for each discipline of power plant engineering along with the applied engineering knowledge of the power industry. This could only be possible when fresh engineers are groomed extensively by giving them exposure through a structured training program like Post Graduate Diploma in Power Plant Engineering. After completion of the course, the Engineers would be eligible for operation & Maintenance of Power plants of Capacity 100 MW and above as the course is designed in line with the mandatory training requirements set in Central Electricity Authority (CEA) under Regulations-2010.

The duration of the course would be 52 weeks having 2 semesters comprising class room sessions as well as on-the-job training. The students have to attend the on-job practice sessions in power plants, substations etc. visit to some reputed manufacturing plants is also an integral part of the course. On job maintenance and on job operation training along with Simulator training will be arranged having latest state of the art technology. To enhance the managerial skills, some inputs of management are also to be given to the students.

COURSE OBJECTIVES:

The objective of the course is to develop groomed manpower for the power sector having high skill and confidence in running the power plant. After completion of the course the students will acquire extensive knowledge and skill in:

- Operation & maintenance of power plant equipment and its process
- Necessary safety aspects required in a power plant
- Details of plant equipment
- Power plant project management
- Process flow
- Mechanical & Electrical aspects of power plants
- power plant schemes

METHODOLOGY FOR THE COURSE

- Classroom Lecture Sessions
- Thermal/Hydro/Solar Power Plant Visit
- Scheme Tracing in Thermal Power Plant
- On-Job Operation & Maintenance Training at Thermal/Hydro/Solar Power Plant
- Simulator Training of Thermal Power Plant
- Group Discussion session
- Projects, Seminars Submissions

WHY YOU SHOULD JOIN CBIP FOR THIS COURSE?

Human resource development and capacity building in the present power scenario demands a very comprehensive and pragmatic approach to attract, utilize, develop, and conserve valuable human resources. Training, re-training, and career prospects are some of the important elements of human resource development. By the working group on manpower planning in power sector, It has been estimated that there is a shortage of skilled manpower to the tune of 4 Lakhs which is fast emerging as a serious obstacle to the Govt. efforts related to capacity addition of power generation in the country. Technically trained manpower comprising skilled engineers, supervisors, artisans/technicians and managers is required in every sphere of the power supply industry to mitigate the shortage of trained manpower in Indian Power Sector.

In view of this, CBIP has taken initiative and launched this 52 weeks Post Graduate Diploma Course in Power Plant Engineering as training in Power Sector is the niche area of CBIP

CBIP Centre of Excellence, Gurgaon is recognized by Ministry of Power, Govt. of India, Hence, there is an ample scope of making a carrier in the Power Sector for the Engineers who undertake this program.

STRENGTHS OF CBIP

- A 91 years old establishment into dissemination of knowledge in Power, Renewable and water resources sectors.
- Almost all reputed utilities of Power, Irrigation and Renewable sectors of the country are the institutional members of CBIP
- 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. CBIP is located in most posh and central place of the capital city of the country i.e. Chanakyapuri, New Delhi.
- Has a strong base of the very senior officers with deep experience of various disciplines Power, Renewable and Water Resources sectors.
- 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, ED Tata Power as the Vice President (Power), Chairman, CWC as the vice President (WR) and CMD, IREDA as Vice President (RE).
- 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.
- Power Sector Skill Council (PSSC) is housed in CBIP premises at Malcha Marg, Chanakyapuri, New Delhi, and CBIP is providing the secretariat support to PSSC. Chairman, 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.

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, Powergrid etc.

CBIP institute has been recognized as Grade – A 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.

CBIP is also a recognized training partner of National Skill Development Corporation (NSDC), Power Sector Skill Council (PSSC) and Skill Council for Green Jobs (SCGJ)

FACULTY

In house as well as renowned/reputed faculty members from Power Utilities/Distribution equipment manufacturers/Contractors/IIT/Engineering colleges having rich knowledge/experience in the concerned area will be delivering the lectures during the entire program.

COURSE COVERAGE

Sl. No.	Subject/Modules	Sl. No.	Subject/Modules
1.	Power Plant Introduction and Industrial Safety	17.	Power Plant Protection
2.	Basic Engineering Fundamentals	18.	Load Despatch
3.	Power Plant Familiarization	19.	Energy Audit
4.	Power Plant Briefing and Scheme Tracing	20.	Maintenance Management
5.	Power Plant Operation	21.	Renewable Energy Sources & Hydro Power Plants
6.	Rotational On-Job (Operation)	22.	Maintenance Practices
7.	Erection & Commissioning	23.	Design Aspects of Power Plant equipment
8.	Construction Management	24.	Power Reforms, Regulations and Tariff
9.	Power Plant Performance & Efficiency Calculations	25.	Control & Instrumentation
10.	Power Plant Chemistry, Metallurgy, NDT & Welding	26.	IT Application in Power Sector & GIS
11.	Gas Turbine & Combined Cycle Power Plant	27.	Environment Management
12.	Supercritical Technology	28.	Rotational On-Job (Maintenance)
13.	Management & Personality Development	29.	Training & Visit to Manufacturing Works
14.	Design, Installation and O&M of Solar PV	30.	Hydro Power Development including Erection, Commissioning and O&M
15.	Aptitude Test	31.	Simulator
16.	Mid-term Appraisal	32.	Project
		33.	Final Appraisal

VISITS & ON-JOB TRAINING

On-job training will be arranged at power stations of various capacities. Visit will be arranged to various manufacturing plants, labs, sub –station, contractors site etc.

INFORMATION TO THE CANDIDATES

A. ELIGIBILITY

- Bachelor of Engineering or equivalent in Mechanical / Electrical / Electronics & Instrumentation / Control & Instrumentation / Electronics & Communication/Power/Civil Engineering with minimum 60% marks.
- One year experience in the relevant field is also required for Sponsored candidates,

Those appearing in their final year examination can also apply. However, they must submit their degree/provisional degree at the time of counseling/start of the course. The candidates shall also have to submit medical fitness certificate at the time of admission with no color blindness

B. SELECTION CRITERIA FOR ADMISSION

The students will be shortlisted based on the merit of the marks obtained by the candidates in Class 10th, 12th & engineering degree and or GATE 2018. Merit list of the eligible candidates will be declared in CBIP Web site. Admission shall be subject to strict verification of all the original testimonials/documents and depositing of the required fees (given in the brochure).

C. SPONSORED CANDIDATES

The Candidates who are sponsored from any organization have to enclose a sponsorship certificate issued by their respective organizations in their letter head in the format given on the CBIP website.

D. COURSE CHARGES

- **Admission Fee:**
 - a. **For Non-Sponsored candidates:** Rs. 1,60,000/- excluding the lodging & boarding (payable in 3 installments; 1st installment - Rs.60,000/- at the time of allotment of seat, 2nd Installment - Rs.60,000/- latest by March, 2019 and 3rd Installment – Rs. 40,000/- latest by June, 2019)
 - b. **For sponsored candidates:** Rs. 2, 00,000/- may be paid in two equal installments.
- **Caution Money:** An amount of Rs. 5000/- as security deposit which is refundable has to be deposited by the student at the time of admission.
- **Charges for working Lunch & Tea:** Rs. 24,000/- payable in three equal installments for lunch and two times tea in the institute during the working days.
- **Charges for Lodging/Boarding:** CBIP has tied-up with local Guest Houses / Hostels. Accommodation will be made for lodging, boarding on nominal payment basis. The candidates who are interested to have accommodation may give option for the same. The charges may vary from 6000 to 7000 per month.

The course fee may be paid in the form of demand draft/multicity cheque *drawn in favour of "Central Board of Irrigation and Power" payable at New Delhi*

E. LOAN FACILITY

The candidates who get confirmed admission and wish to avail loan from a Bank/Financial institute may also take a certificate from CBIP for availing the same.

HOW TO APPLY

Application may be submitted through online through CBIP Website .The downloaded hard copy of the application form along-with the demand draft/multicity cheque of Rs. 400/- in favour of ***"Central Board of Irrigation and Power" payable at New Delhi*** should reach the Director, CBIP Centre of Excellence, (address given below) latest by 06.12.2018

Points to be noted:

- a. All the future notifications/ information will be available on CBIP website. The candidates are advised to be regularly in touch with the website.
- b. Please Attach self attested copies of proof of Date of birth, certificates / mark sheets of 10th / 12th / Degree issued by Registrar/controller of the concerned university.
- c. Application fee is non refundable.
- d. Candidates are advised to book their tickets in advance to avoid any last moment inconvenience.

ADDRESS FOR COMMUNICATION

The Director (E),

CBIP Centre of Excellence,
Plot No-21, Sector-32,
Gurgaon, Haryana-121009

Tel No: 0124- 4380272/4035267

Mob No: 09818737480 (Mr. S.K. Ghosh) / 09871718218 (Mr. Jaideep)

E-mail: training@cbip.org / ghoshsk@cbip.org / jaideep@cbip.org

REFUND

Fee once deposited will not be refunded. In case a selected candidate wishes to withdraw from the course for any reason, no part of course fee will be refunded except the security deposit.

OTHER EXPENSES

The candidates have to bear charges against uniforms, safety shoes, safety helmets, bus facility. Travelling/lodging cost in case of outstation visits is to be borne by the students.

IMPORTANT DATES

SI. NO.	DESCRIPTION	DATES
1	LAST DATE OF ONLINE APPLICATION	22.12.2018
2	STARTING OF COURSE	26.12.2018

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.