

PROSPECTUS FOR ADMISSION TO ONE YEAR POST GRADUATE DIPLOMA COURSES IN

- 1. Power Plant Engineering**
- 2. Smart Grid Technologies**
- 3. Power System Operation**
- 4. Renewable Energy & Grid Interface Technologies**
- 5. Energy Market Management**

WINTER SESSION - 2021



NATIONAL POWER TRAINING INSTITUTE

A National Apex Body for Training in Power Sector
Established vide The Gazette of India, July 3, 1993

(An ISO 9001:2015 & ISO 14001:2015 Organization)

Ministry of Power, Govt. of India

PREAMBLE

National Power Training Institute (NPTI), an ISO 9001 & ISO 14001 organization under Ministry of Power, Government of India had been providing its dedicated service for more than five decades.

NPTI endowed with wonderful infrastructure facilities in its wide campus, the institution provides quality education and training facilities to the students and trainees in the Power Sector, which is the most important sector among various infrastructure sectors.

Higher quality standards and growing concerns of the Power sector have pushed the sector to adapt state-of-the-art Techniques for effective utilization of resources and optimized performance of the plants. The Indian Power Sector is demanding trained man power due to increasing capacity, modernization & technological advancements.

Given the growing demand for technically skilled professionals, and the rapid changes in technology, there is an increasing need to keep the academia abreast of the skill set requirement of the industry. NPTI recognized the need for making this technically trained manpower readily available to the Power Sector in line with its present and future requirements.

The “Post Graduate Diploma Courses (PGDC)” have been designed to meet this requirement. These job-oriented courses are designed with a proper balance of theory with practice, so that students get enough hands-on experience and enable them for readily absorption in the Sector. The curriculum of courses enables fresh graduate engineers/working engineers to enhance their skills and to get an exposure to industrial standards & practices.

The main aim of the courses is to create a pool of technically trained manpower readily available for recruitment to the State, Central and Private Power Utilities and allied Industries. Product of the courses has promising record of employment in the power industry.

PGDC ALUMNI TESTIMONIALS

- *Undoubtedly NPTI is the one of the very initial institute with a vision of skill development by Govt. which helped to tap the vast potential of power sector. And after so many years it is still one of the biggest sources where one can aspire a profession of dream. I also wished the same, for me, like any graduate and NPTI fulfilled that dream. Being associated with Institute is a matter of pride for me. NPTI gave me a strong fundamental of concept that comes very handy in my corporate life. All I can say is that the Institute gave us third eye to see how world is moving and where we can position ourselves globally.*

*Vivek Makode (PGDC-Power Plant Engineering)
Deputy General Manager, Essar Power Hazira Limited, Surat*

- *I have pursued PGDC in TPPE in the year of 2016-2017. I am thankful to the esteemed institute NPTI which inculcate knowledge and values in me to have a wonderful start to my career and further growth. NPTI is such an institute which fetches destination and pour joy in each and every students.*

*Ankita Prinsu (PGDC-Power Plant Engineering)
Vedanta-Cairn oil and gas*

- *PGDC in Power Plant Engineering was the best course I opted after my Engineering Graduation. The industry exposure and niche domain knowledge bestowed on me by my faculty, industry experts and alumni was incredible. This course trained me to bridge the gap between colleges to corporate in the field of Power. I am thankful to the Institute and my faculties for making valuable opportunities available to us, in terms of industry exposures, On Job trainings, domain specific workshops, conferences, real time industry developments, internships and good placements. I found the culture very nurturing, as the faculty has treated us like a parent and guided us all across whenever I needed any help.*

*SACHITANANDA MOHANTY (PGDC-Power Plant Engineering)
Senior Engineer - Business Development | Adani Power Ltd*

- *NPTI PGDC certainly helps you expand your knowledge and I would always be grateful to NPTI for giving me a multi-dimensional learning by providing the apt mix of academics, industry exposure, attitude and leadership.*

*Jyothi Mishra, (I Batch PGDC-Smart Grid Technologies)
Kamachi Sponge & Power Corporation Ltd. Chennai*

- *NPTI PGDC Program prompts you to think beyond classroom context. Here, I got a chance to learn from the best of the faculties and industry experts/leaders, compete with the best minds coming from diverse backgrounds. Not only the academic rigor but also my summer internship experience, live projects and chance to manage clubs and committee has taught me about the dynamic aspects of the corporate life and nurtured me to step into corporate world with confidence.*

*Dhruv Gupta, (I Batch PGDC-Smart Grid Technologies)
Noida Power Company Ltd., Greater Noida*

PGDC ALUMNI TESTIMONIALS

- *I strongly believe that opting for PGDC in Thermal Power Plant Engineering from NPTI is the reason for my evolution from a college going boy to a young confident professional. The in depth learning and the exposure to the industry through various guest lectures, workshops, conferences and other such engagements have contributed to my success as an expert in the field of power. I am more than grateful to all my faculty for endowing upon me their unparalleled experience and knowledge. The continuous guidance and the homely environment was a pillar of support. I fall short of words in conveying my gratitude to the institute and all its members for making me what I am today.*

*Ajay Sinha (PGDC-Power Plant Engineering)
Asst. General Manager-L&T C&A*

- *Power sector is the backbone of Indian economy. It has huge number of challenges and I really needed a powerful program to better groom myself to develop skills from which I can convert these challenges into opportunities. I am thankful to NPTI as it has given me the right platform to ascend the stairs of success*

*Priyanka Singh (PGDC-Power Plant Engineering)
GET, Emerson*

- *It was a great experience for me during the PGDC program. This course aims at training graduates and developing in their skill and knowledge related to functioning of thermal Power Plant. The course provides theoretical knowledge of power sector as well as practical training at Thermal Power Station to give students hands on experience. It gave me fully support and tremendous opportunity in many areas ranging from Thermal Power Plant Construction, Operation, Maintenance, Performance and Safety. Those technology concept and skills helped me to develop my career in power industry.*

*Sumit Jha (PGDC-Power Plant Engineering)
Power Projects Performance Analyst, Marubeni Power Asset Management Ltd.*

- *I had this dream of working in a world class company in core sector but unfortunately couldn't be placed in one from my college. When I joined NPTI, it enhanced my skills, my knowledge and my working capabilities which are the minimum requirements to work in a big company. NPTI gave me the platform and the opportunity to prove myself. Thanks to the people involved.*

*Shubham Verma (PGDC-Power Plant Engineering)
Assistant Manager, Vedanta Aluminum Limited, Jharsuguda*

- *After Engineering Graduation, PGDC in Thermal Power Plant Engineering proved as a best decision of my life. From theoretical knowledge to practical knowledge, I got everything best here that boost up my confidence. This Course makes me able as a multi-skilled engineer with good technical knowledge, management, leadership and entrepreneurship skills. Apart from Technical knowledge NPTI gives me a very healthy environment for self development. I am really thankful to NPTI & my respected faculties for the hard work; they have done for grooming me a capable POWER ENGINEER.*

*Diksha Kulshrestha (PGDC-Power Plant Engineering)
Automation Engineer- Andritz Hydro*

- *I feel the course prepared me for the real world. I have never once regretted attending the NPTI and I enjoyed the course and get placed in one of the leading Renewable energy company.*

*Souvik Chakrabarti (PGDC-Renewable Energy & Grid Interface Technologies)
Manager (Regulatory & Policy Affairs)- Amplus Solar*

PGDC ALUMNI TESTIMONIALS

- *NPTI - PGDC Program has nurtured me and made me what I am today. NPTI made me more disciplined and helped me to grow not only professionally but holistically...as a good human being.*

*Suprav Roy (I Batch PGDC-Smart Grid Technologies)
Federal Synergies India Private Ltd., Kolkatta*

- *Smart Grid is a combination of digital technology application and electric power network. It offers a lot of valuable technologies that can be used within the near future or are already in use today. Moreover this is very useful course. The only place in India where Education is not Business and offers you the 1 Year PGDC Program in Smart Grid Technologies.*

*Nirmal Mishra, (I Batch PGDC-Smart Grid Technologies)
Genus Power Infrastructures Ltd., Jaipur*

- *NPTI greatly helps you to expand your knowledge horizon and I would always be grateful to NPTI for providing a multi-dimensional learning by providing the apt mix of thermal & solar field with academics, industry exposure, with a platform to explore my leadership qualities.*

*Naman Kamboj (PGDC-Power Plant Engineering)
Vedanta , Hindustan Zinc Ltd.*

- *Since we know that "Power Sector is a bit of challenges and also the back bone of Indian economy, but I am thankful to NPTI Post Graduate Diploma Program that has given me such skill from which I can convert the challenges into opportunities. I am thankful to the NPTI and also thankful to NPTI faculty.*

*Vivek Pathak. (PGDC-Power Plant Engineering)
GET, Emerson*

- *"Woods are lovely dark & deep but I have promised to keep & miles to go before I sleep & miles to go before I sleep", my heartiest sincere Gratitude to NPTI for nourishing & helping me to develop this thought....!!! Proud to be an alumnus of NPTI & wish to see NPTI fly higher & higher....*

*S. Jayapradha (PGDC-Power System Operation)
Engineering Leadership Trainee, KEC International Ltd.*

- *I am very grateful to NPTI that gave platform to grow up myself. I have learnt so many practical things and also good industrial exposure.*

*Palak Makadia (PGDC-Power System Operation)
GET, Toshiba T & D*

- *This course extremely helps me to grow up my knowledge and skills and as we know this sector is filled with lot many of challenging opportunities which will help you to expand yourself also. I am very thankful to NPTI family and all visiting faculties through that I have got industrial exposure and fruitful sessions.*

*Keyur Dhakan (PGDC-Power System Operation)
Assistant Manager, Essar Power Transmission Co. Ltd.*

MESSAGE FROM THE DIRECTOR GENERAL



It is a great pleasure for me to welcome you to National Power Training Institute (NPTI) under Ministry of Power, Government of India which is a National Apex body for Training and Human Resources Development in Power Sector. The NPTI is working for development of Power Sector human resources for more than five decades.

With emerging Smart Grid era in the Power Sector and with evolving Computational Intelligence and Information Technology as an integral part of advanced power control, the Utilities must come up with upgrading operational strategy for Network reliability and quality power. Indian Power Sector which has been envisioned as Smart Grid architecture in order to ensure 24x7 power supply to all citizens of India needs technology integration. In order to address the quality and reliable power to all, it is required to have adequate scientific and technical manpower at all levels. In order to meet this, NPTI is successfully conducting job oriented & technologically advanced Post Graduate Diploma Courses in Power Plant Engineering, Smart Grid Technologies, Power System Operation, Renewable Energy & Grid Interface Technologies and Energy Market Management.

With our PGDC Programs, the learning emphasis and the delivery of education are not only based on knowledge enhancement but also to achieve certain qualities, traits and attitudes. Our programs have achieved great value in the sector. NPTI thus continues to provide the human resources who are tactical, hardworking and enthusiastic to shape organizations that are serving in power sector. NPTI also covers a wide range of training programs for utility professionals of the power sector in the areas of Generation, Transmission, Distribution, Power Management, Regulatory aspects etc. As the Covid-19 pandemic continues to interrupt lives and bring ever-changing guidelines, NPTI works hard to ensure that our trainees and faculty have access to critical learning, online tools and operating resources. Deep learning shaped by the values of excellence, hard work, integrity, and humility guide trainees to embark on this exciting journey and contribute significantly to the power sector.

The students who are going to take admission are going to witness a curriculum that is a unique blend of technical thinking and practical exposure. I sincerely hope that your learning pursuits in NPTI will be fruitful and enjoyable in every aspect and the experiences you gain here and the moments you spend here will be cherished by you all throughout your professional career.

Wish you a very happy and rigorous learning experience.



(Raj Pal)
Director General

ABOUT NPTI



NPTI Corporate Office, Faridabad, Haryana.

National Power Training Institute (NPTI), the national apex body under the Ministry of Power, Government of India, has been engaged in the service of Human Resources Development in the country's power sector since 1965. NPTI operates on all India basis through its Seven Regional Institutes at Badarpur (New Delhi), Neyveli (Tamil Nadu), Alappuzha (Kerala), Durgapur (West Bengal), Guwahati (Assam), Nagpur (Maharashtra), Shivpuri (Madhya Pradesh) and four specialized Institutes i.e. Power System Training Institute (PSTI) & Hot Line Training Centre (HLTC) at Bengaluru, and Hydro Power Training Center (HPTC) at Nangal & Centre for Advanced Management and Power Studies (CAMPS) at Faridabad. All institutes of NPTI are fully equipped with latest state-of-the-art training infrastructure and expert faculties with long years of professional teaching background as well as R&D exposure. These institutes are conducting a number of training programs for Power Engineers, Operators and Technicians in the areas of Thermal & Hydro Generation and Power System. To provide off-job/hands on operation training, NPTI is equipped with three computerized full scope, fossil fuel Thermal Power Plant Simulators. Two numbers of 210 MW Thermal Power Simulators are available at Badarpur and Nagpur Institutes and a 500 MW Simulator at Faridabad Institute. Also, NPTI is having one CCGT Simulator of 430 MW at Faridabad and one 250 MW Hydro Power Training Simulator at HPTC, Nangal. Super Critical Thermal Simulator of 800 MW has been commissioned at Faridabad and also Six (6) multi-functional Training Simulators replicating the real-time integrated Unit operations for 210 MW, 500 MW, 800 MW Thermal Units, 250 MW Hydel Unit, 550 MW Combined Cycle Power Plant (CCPP)

with additional functionalities of SCADA & Smart Grid are being established at NPTI's various institutes. NPTI also provides consultancy to the Utilities on training and technical problems including setting up of Plant Level/State Level Training Institutes. The Regional Institutes are conducting large number of long-term and short-term courses every year. Long-term courses (52 weeks) cover the mandatory requirements under Indian Electricity Rules. In addition, these institutes are also conducting on plant/on-site training programs as per the need of the Power Sector organizations. Since inception of this organization over 3,60,000 personnel at various levels have been imparted training by the Institutes of NPTI.



PGDC students attending Workshop at NPTI

THE NEED FOR THE COURSE

The Indian Power Sector with approx. 374.2 GW installed capacity along with modernization of Indian Power Sector also with technological advancements and sophistication during last few decades has, in turn, been demanding trained manpower. In addition, India is also likely to surpass 175 GW of Renewable Energy Target by 2022. The technical knowledge acquired from Engineering Colleges provides the basic foundation, which needs to be supplemented with the Applied Engineering skills so as to groom the engineers for efficient functioning at every stage of planning, designing, engineering, procurement, construction, commissioning, operation, maintenance, transmission and distribution of power supply industry.

NPTI recognized the need for making this technically trained manpower readily available to the Power Sector in line with its present and future requirements. It was felt that requirement of trained manpower for Power Sector could be fulfilled if the engineers after passing their engineering degree are groomed by conducting a

technical course approved by the competent authority of Government of India and giving them an exposure to the theoretical as well as practical aspects.

The “Post Graduate Diploma Course in Thermal Power Plant Engineering” has been one of the many flagship programs of NPTI. Assessing the next decade’s requirements, NPTI has now re-designed the course contents to suit the needs of the Power Sector. It is now re-named as “Post Graduate Diploma Course in Power Plant Engineering”. The course profile covers the emerging Power Sector needs. Product of the course has promising record of employment in the power industry.

Further, in view of the latest trends and modern practices in the Power Sector, NPTI has launched the following new job oriented & technologically advanced programs in the year 2017:

- PGDC in Smart Grid Technologies
- PGDC in Power System Operation
- PGDC in Renewable Energy & Grid Interface Technologies
- PGDC in Energy Market Management

The courses are designed to improve knowledge in relevance to the present-day requirements and enhance skill of fresh graduate engineers/working engineers who wish to make their career in power and energy sector.



Multifunction (6 in 1) Simulator at NPTI

WHY SHOULD YOU JOIN THE COURSE?

With a view to build adequate technical capacity and develop economically viable Energy sector and energy efficient systems and compliance of laudable objectives of the Govt. of India, adequate scientific and technical manpower at all levels is a pre-requisite. The main aim of the courses is to create a pool of technically trained manpower readily available for recruitment to the State, Central and Private Power Utilities and allied Industries.



Students at NPTI Library



Students at Plant Visit

ABOUT THE COURSES

Duration of the course is one year, consisting of two semesters covering formal training at Institutes and industrial/field training. Course Details are tabulated below:

S. No.	Course Name	Course Details
1.	PGDC in Power Plant Engineering	The course covers operation and maintenance of Power Plants viz., Thermal including Gas, Solar, Wind, Biomass etc., with exposure to on-job training for substantiation of Operational and Maintenance practices and concepts. The program also satisfies all the requirements of on-going and emerging power sector needs The trained personnel shall develop the competence of O&M and Commissioning principles of plants based on different sources of energy.
2.	PGDC in Smart Grid Technologies	The objective of the course is to explain in detail the Smart Grid technologies, their applications covering Smart Generation, Smart Transmission and Smart Distribution. The candidates shall develop their skills to operate Smart Grids integrating Renewables, e-Vehicles, Storage system, Smart meters etc.
3.	PGDC in Power System Operation	Objective of the course is to provide the basics of electric power system generation, operation, and control to the students. The emphasis is on power system operation and operating mechanism/tools
4.	PGDC in Renewable Energy & Grid Interface Technologies	Focus of the course is to equip the students with technologies, economics and policy involving energy systems and supply with Renewable Energy sources. Detailed expertise will be offered in Solar Energy Systems involving photovoltaic as well as Thermal Energy Systems, Wind Energy, Biomass, Geothermal, Tidal and Wave energy, Hydrogen & Fuel cells, Small Hydro along with problem associated with grid integration issues of various sources, problems and Interfacing Technologies.
5.	PGDC in Energy Market Management	The course focuses on the market structures that exist within the electric energy industry. It includes mechanism of energy markets; comparative market systems; determination of prices under different market structures; electricity market architecture; electricity market design; dispatch and new build decisions; risk and risk management, current and proposed policies on the energy industry etc.

The modules of the courses are listed in the detailed curriculum. The sequences of these modules are not rigid and may be modified suiting to requirements of power companies, from time-to-time.



PGDC Students in Classroom



PGDC Students during Campus Placement

PLACEMENT

In order to provide career opportunities in the Indian Power Sector, NPTI maintains close linkages with the power utilities and reputed concerns for placement of trained engineers. In the past, companies like ABB, Abellon Clean Energy, Abhijeet Power, Adani, Mercados, Bajaj Energy, BLACK & VEATCH, BSES, CESC, Chambal Fertilizers, CLP, CRISIL, Deloitte, DVB, DVC, Ecoren, Ernst & Young, ESSAR POWER, Feedback Infra, Gamesa, GMR, HCL, HINDALCO, ICRA, IDAM Infra Advisory, IEPL, India Bulls, Indian Energy Exchange, IL&FS, IREDA, Jindal Power, KPMG, KSK Energy, LANCO, L&T, Moser Baer, Mytrah Energy, NALCO, NDPL, PTC, PwC, Reliance Industries, Reliance Power, ROLLS ROYCE, SIEMENS, Su-Kam, SUZLON, TATA Power, THERMAX, Torrent Power, Vedanta, Welspun Energy etc. visited NPTI for placement of students of various courses.

Sponsored candidates are not eligible for Campus Placement.



Life at NPTI

List of Modules for PGDC Courses

Subject / Module - First semester				
PGDC in Power Plant Engineering	PGDC in Smart Grid Technologies	PGDC in Power System Operation	PGDC in Renewable Energy & Grid Interface Technologies	PGDC in Energy Market Management
Power Plant Familiarization & Industrial Safety	Evolution of the Indian Power Sector, Legislative & Regulatory Framework	Evolution of Indian Power Systems	Evolution of Indian Power Sector	Energy Resources and Conventional Energy Systems
CCGT, Co-Generation & Hybrid Systems	Introduction to Traditional Power Systems	Legislative and Regulatory Framework	Legislative and Regulatory Framework	Transmission Network Planning for secure Energy Markets
Power Plant Briefing & Scheme Tracing work	Introduction to Smart Grids, Policies and Regulations	Managerial and Interpersonal Skills	Managerial and Interpersonal Skills	Energy Market Management & System Operation
Power Plant Operation	Smart Transmission & Distribution Technologies	Communication Skills and Technical Writing	Communication Skills and Technical Writing	Electricity Regulations in evolving Energy Markets
Power Plant Performance & Efficiency Calculation	Communications Interoperability & Cyber Security	Elements of Power System	Renewable Energy Sources Conversion and Technology	Financial assessment of Market Mechanism
Nuclear Power Plants	Renewable Energy Technologies & Grid Integrations	Principles of Power System Operation	Solar Photovoltaic Power Plant: Planning, Design and Balance of Systems	Evaluation of Energy Pricing - Commercial & Technical Pricing
Advanced Steam Generation Technology-Supercritical and FBC	Smart Grid Operation & Control Elements/AMI	Power System Stability and Control –I	Solar Thermal Applications-1: Low and Medium Temperatures	Electricity Markets Design
Rotational On-Job (Operation)	Smart Power Flow controllers and Intelligent Automation	Reactive Power Management	Solar Thermal Applications-2: Concentrators and Solar Thermal Power Plants	Managerial and Interpersonal Skills
Chemistry, Metallurgy, NDT & Welding	Energy storage, micro-grids, alternative grid designs	Power System Analysis	Solar PV and Thermal Power Plant Grid Integration Concepts-1, Related Issues and Control Strategies	Communication Skills and Technical Writing
Renewable energy resources and Renewable Energy Systems	Communication Skills, Technical Writing, Managerial & Interpersonal Skills	On Job Training and Site Visits to Transmission Substation/O & M of Substation/ Switchyard/NLDC/ HVDC/FACTS facility	Tariff and Commercial Aspects, Contract Management	Visits to IEX/PXIL/RLDC
Solar PV & Thermal Technologies	Onsite Visits to AIS & GIS Substations/SG Lab	On Job Training on Load Dispatch Simulator and Power Systems Lab /HV Lab	Visits to Solar Thermal, Solar PV plants and Laboratory work	
Business Communication & Personality Development	On Job Training on Smart Grid Projects		Internship/On Job Training in Solar Technology interfaced Industries, Financial Institutions, Consultancies, Regulatory bodies, Power Utilities etc.	
Following Online Courses conducted by NPTI is a mandatory part of curriculum:				
<ol style="list-style-type: none"> 1. e-Mobility and Charging Infrastructure 2. Solar Energy Technology: Fundamentals and Applications 				
First Semester Examination				

Subject / Module - Second semester				
PGDC in Power Plant Engineering	PGDC in Smart Grid Technologies	PGDC in Power System Operation	PGDC in Renewable Energy & Grid Interface Technologies	PGDC in Energy Market Management
Power Plant Protection	E-mobility	Legislative and Regulatory Framework – II	Wind Energy Technology	Load Dispatch Simulator Training
Maintenance Planning, Inspection & Cost Control	Load Forecasting	Commercial Aspects and Contracts Management	Internship/OJT in Wind Technology interfaced Industries, Financial Institutions, Consultancies, Regulatory bodies, etc.	Detailed Project Report (DPR) for Energy Mix Markets
Control & Instrumentation	Energy Management Systems	Transmission Pricing	Bio Mass Technology, Hydrogen and Fuel Cells	Ancillary Services Markets
IT Application in Power Sector & GIS	Demand Side Management & Demand Response/DER	Power System Stability and Control –II	Geothermal, Tide, Wave Energy, Hydrogen Energy & Fuel Cell	Methodology for Efficient Energy Markets
Load Dispatch	Smart Grid Applications & IoT	Power Systems Planning and New Technologies	Hydel Energy & Concept of co-generation	Electricity Storage Technology
Power Sector Reforms and Regulations	Big Data Analytics	System Security and Reliability	Tri-Generation And Waste Energy Recovery	Risk Management in Energy Markets
Wind Energy and Hydro	GIS Mapping & Assets Management	Smart Power Flow Controllers and Intelligent Automation	Renewable Energy Grid Integration-2	Evaluation of Renewable Energy integration on Power Markets
Bio Mass, Bio Energy and Waste to Energy	Integration of Legacy Systems/ International Benchmarks	Power Markets	Energy Storage Technologies	Smart Grid - A Pre-requisite for Secure Energy Markets
Energy Storage Technologies	Smart Grid as enablers for Smart Cities	Ancillary Services Management	Financing of Renewable Energy Projects	Optimisation in Energy Bids
Renewable Energy Grid Interface Technologies	Contract & Purchase Management	SCADA / EMS and IT & Telecommunication Systems	Concept of Smart Grid, Smart Power Flow Controllers and Intelligent Automation	Intelligent Energy Market
Erection, Commissioning & Construction Management	Smart Grid Maturity Models	Protection Systems	Internship/OJT in Hydro, Bio Mass, Energy Storage Cell Technology interfaced Industries etc	Cyber Security in Power Systems
Energy Audit & Project Management	Pilot Projects/ Case Studies and Business Models for Smart Grids	Power System Operation in emergency	Visits to RLDC/SCADA, Sub Station, Bio Mass Plant, Hydro Plant, Waste Energy Plant, etc.	Climate Change and the impact on Energy Systems
Environmental Management	Rotational On Job at ISGF & BESCO/BSES	Power System Restoration	Project Work	Power Market Simulation Lab
Rotational On Job (Maint.)	HOMER/PS CAD/MATLAB Simulation	Optimization Techniques and MATLAB		
Simulator Training, visit to Mfrs. Works	Onsite Visit to Solar/Wind Smart Controller/Power System/Power Electronics Lab	Power Markets Simulation Lab.		
Project Presentation				
Second Semester Examination				

Note: The students have to select Topics for the Project before commencement of the second semester and complete by the end of second semester.

SEAT DISTRIBUTION (TOTAL)

Reservation for EWS/SC/ST/OBC-NCL/Physically Challenged as per Govt. of India Norms. 25% seats are reserved for candidates sponsored from Power utilities. All Institutes have equal level of infrastructure as per the requirement of the courses. The seat allocations of the institutes are as below:

Institute wise Seat allocation Matrix for PGDC courses

Institute PGDC Course	Faridabad	Badarpur	Nangal	Neyveli	Durgapur	Guwahati	Nagpur	PSTI, Bengaluru	Alappuzha	Shivpuri	Total
Power Plant Engineering	60	60	60	60	60	60	60	60	60	60	600
Smart Grid Technologies	60	-	-	-	60	-	60	60	60	60	360
Power System Operation	60	-	-	-	60	-	60	60	60	60	360
Energy Market Management	60	-	-	-	60	-	60	60	60	60	360
Renewable Energy & Grid Interface Technologies	60	-	-	-	60	-	60	60	60	60	360
TOTAL											2040

WHO CAN APPLY?

ELIGIBILITY:

PGDC Course	Eligibility
(1) Power Plant Engineering	B.Tech. / B.E. or its equivalent with minimum 60% marks in Mechanical/ Electrical /Electrical & Electronics / C& I / Power Engineering and related branches
(2) Smart Grid Technologies	B.Tech. / B.E. or its equivalent with minimum 60% marks in Electrical /Electrical & Electronics / Electronics & Communication / C&I /Computer Science/ Information & Communication Technology / IT and related branches
(3) Power System Operation	B.Tech. / B.E. or its equivalent with minimum 60% marks in Electrical/Electrical & Electronics / C&I / Power Engineering and related branches
(4) Renewable Energy & Grid Interface Technologies	B.Tech. / B.E. or its equivalent with minimum 60% marks in Electrical /Electrical & Electronics / C&I / Mechanical / Power Engineering and related branches
(5) Energy Market Management	B.Tech. / B.E. or its equivalent with minimum 60% marks in Electrical /Electrical & Electronics / Electronics & Communication / C&I /Computer Science/ Information & Communication Technology / IT / Mechanical / Power Engineering and related branches

Applicants must submit **their final degree/provisional degree certificate at the time of Counseling/Reporting.**

AGE LIMIT

There is no age limit for admission to PGDC courses.

SELECTION CRITERIA FOR ADMISSION

A common merit list of eligible candidates will be prepared on the basis of the % marks obtained by the candidates in the qualifying degree and interview conducted by NPTI.

90% and 10% weightage will be given to marks obtained in degree and interview, respectively while preparing the merit list. Interview will be conducted through Telephone/conferencing App/online platforms. Detailed information and interview schedule will be displayed at our website in due course of time. The shortlisted candidates will be offered admission to the PGDC programs through counseling.

The consolidated degree grade points/CGPA obtained by the candidate in qualifying degree as per degree awarding norms of the concerned institutes/universities will be taken for preparing the list. Candidate has to fill up the equivalent % marks based on conversion formula (grade point to equivalent percentage) of the concerned Institutes/Universities. Students will show/provide the document proof (grade point to equivalent percentage) at the time of document verification at respective institutes.

COUNSELING

The physical presence of the candidates may be relaxed for attending the counselling. Counselling may be conducted at institute level by connecting the candidates through video calling/conferencing. Candidates may deposit the admission fee/counselling fee at the respective institute where they applied. After the counselling, candidates may submit the hard copies of the necessary documents/certificates (Ref. Annexure) for verification and undertakings at the respective institutes while joining/reporting for the course.

In case of candidates of OBC category for Sponsored/Non-Sponsored, Non-Creamy Layer Certificate must have been issued by the concerned authority on or after 01/04/2020.

ALLOCATION OF COURSE & INSTITUTE

Allocation of course in desired Institute will be done on the basis of Merit List subject to availability of seats at institutes at the time of respective Counseling. Allotment of all seats will be done only by Counseling.

Counseling schedule and details will be displayed on respective institute website. All candidates are advised to check the website frequently for any updates. No individual communication shall be entertained.

Note

- 1. All Instructions/ Notifications or any further information to the candidates regarding PGDC Admission/Counseling shall be displayed at NPTI websites.**
- 2. All dates indicated are tentative. Any change in the schedule of any activity will be displayed on website only. All candidates are advised to check website frequently for any updates. No individual communication shall be entertained.**
- 3. All the admissions will be done by counseling only.**
- 4. Candidates have to make their own arrangements for travel and stay at their own cost.**
- 5. NPTI reserves all the rights to start or stop any PGDC program at any institute and also reserves the rights to make any changes in important dates, curriculum, counseling centers and no. of seats in courses offered.**



Onsite Visits of PGDC Students

COURSE FEE DETAILS

1.	Course fee for the Non-sponsored candidates	<p>Rs. 2,30,000/- + GST @18%* per participant with following details:</p> <p>a) (Rs 20,000 + GST @18%) = Rs. 23,600/-** to be paid at the time of counseling for confirmation of admission.</p> <p>b) (Rs. 1,00,000/- + GST @18%) = Rs. 1,18,000/-** towards 1st installment of course fee (Non Refundable) to be paid at the time of reporting/joining the allocated institute.</p> <p>c) (Rs. 1,10,000/- + GST @18%) = Rs. 1,29,800/-** (Non Refundable) towards 2nd installment of course fee (to be paid by 5th July-2021)</p>
2.	Course fee for the sponsored candidates	<p>Rs. 3,60,000/- + GST @18%* per participant with following details:</p> <p>a) (Rs 20,000 + GST @18%) = Rs. 23,600/-** to be paid at the time of counseling for confirmation of admission.</p> <p>b) (Rs. 3,40,000/- + GST @18%) = Rs. 4,01,200/-** towards course fee (Non Refundable) to be paid at the time of reporting/joining the allocated institute.</p>
3.	Course fee for International Candidates	<p>US\$ 20,000+ GST @18%* (**10% to be deposited at the time of counseling for confirmation of admission and **balance at allocated institute at the time of joining)</p>

*Subject to Govt. Notification /prevailing at the time

** To be deposited at the respective Institute by Demand Draft/On-line favoring & payable in the name of Institute where admission is confirmed during counseling.

Note: - **There is no Fee concession to any category of students.**

OTHER FEES TO BE PAID BY THE CANDIDATES

The above course fee does not include other fees like Lodging/Boarding Charges etc.

However, twin sharing hostel accommodation shall be provided to the candidates at the respective training Institute at reasonable charges. Dining facility in the hostels is available at each institute on payment of charges to the institute.

The other institutional fees like **Security deposit, Hostel Rent, Transport Charges, food charges, examination fees etc. has to be paid extra at respective institutes at the time of joining.** Separate circular will be issued by respective institute to the candidates at the time of joining.

Placement charges @ Rs. 15,000/- + GST @18%* to be paid by the student if he/she got selected in any organization through campus placements.

HOW TO APPLY

Applications are to be filled online through Google Form link shown on Page-23. The registration fee is **Rs.1000/-** (including GST) to be paid online through SB Collect or through IMPS/NEFT/UPI. **Candidates are required to apply and pay to respective institute where they wish to admit (Bank details shown on Page-23).**

No application will be accepted without on-line payment.

IMPORTANT DATES

Online Registration	10/01/2021 to 10/02/2021
Date of Declaration of Merit List on respective institute website	12/02/2021
Date of Counseling by respective institute	15/02/2021
Date of Reporting & Commencement of course	22/02/2021
Date of Spot admission for vacant seats if any by Counseling by respective institute	02/03/2021

Note:

- 1. All Instructions/ Notifications or any further information to the candidates regarding PGDC Admissions shall be displayed on NPTI website.**
- 2. All dates indicated above are tentative. Any change in the schedule of any activity will be displayed on website only. All candidates are advised to check our website regularly for new updates. No individual communication shall be entertained.**

CENTRALIZED CONTACT DETAILS FOR ANY QUERY RELATED TO PROSPECTUS

Director (Training/R&D)
National Power Training Institute (CO), Faridabad
NPTI Complex, Sector-33,
Faridabad - 121003 (Haryana)
Tele-Fax: 0129-2277412
Phone: 0129-2274917
Email: nptipgdcadmissions@gmail.com

You may contact respective Institute directly for any query related to particular institute where you wish to take admission.

Details shown on next page regarding Institute-wise PGDC Course coordinators contact details & Bank account details and also link given for online application form of Particular Institute where you wish to take admission.

Institute-wise Application form link & Bank account details for fee payment

S. No.	Name of Institute	PGDC Coordinator's details	Bank details	Link for online application form
1.	Faridabad	Admission Committee/Dr. KPS Parmar, DD Ph./Mb. No. 0129-2274917, 9654260217 E-mail ID: nptipgdcadmissions@gmail.com	Account Name: National Power Training Institute Bank Name: SBI A/c No. 10724879119 IFSC: SBIN0003245	https://bit.ly/3bcY9Ee
2.	Guwahati	Sh. Sambit Diptiman Gantayat, Dy. Director Mb. No. +91-90047-35957 E-mail ID: sambitgantayat.npti@gov.in powergantayat@gmail.com	Account Name: National Power Training Institute (NER) Bank Name: SBI A/c No. 30869765833 IFSC: SBIN0004420	http://bit.ly/38j8v3v
3.	Badarpur	Dr. N.K. Srivastava, Dy. Director Mb. No. 9212444369 E-mail ID: nksrivastava.npti@gov.in	Account Name: National Power Training Institute Bank Name: SBI A/c No. 33713719759 IFSC: SBIN0016106	http://bit.ly/2JSM1NA
4.	Nagpur	Sh. S.I. Mahant, Dy. Director Mb. No. 9225222284 E-mail ID: shekhhar.npti@gov.in shekharmahant@gmail.com	Account Name: National Power Training Institute (WR), Nagpur Bank Name: SBI A/c No. 10259420040 IFSC: SBIN0006702	https://forms.gle/v7bDtVn53tXcps9y5
5.	Neyveli	Sh. S. Senthil Kumar, Dy. Director Mb. No. 9443088015 E-mail ID: ssenthil.npti@gov.in senthilkumar.nptisr@gmail.com	Account Name: National Power Training Institute Bank Name: SBI A/c No. 10548142041 IFSC: SBIN0002242	https://forms.gle/MsteXPFaiNTERQZrZ
6.	Durgapur	Sh. Rajneesh Vachaspati, Dy. Director Mb. No. 9781392002 E-mail ID: rajneesh.npti@gov.in rvachaspati@gmail.com	Account Name: National Power Training Institute Bank Name: SBI A/c No. 10306801182 IFSC: SBIN0006152	http://bit.ly/35am03C
7.	PSTI- Bengaluru	Dr. K.S.S.Ravi Kumar, Dy. Director Mb. No. 9448360966 E-mail ID: kssravi.npti@gov.in	Account Name: Power Systems Training Institute Bank Name: SBI A/c No. 10031210203 IFSC: SBIN0006767	https://forms.gle/AzshLBwpc8zUdvAX6
8.	Nangal	Sh. Piyush Kumar Singh, Dy. Director Mb. No. 9417976581 E-mail ID: piyush.npti@gov.in	Account Name: Hydro Power Training Centre, NPTI Bank Name: SBI A/c No. 30476401576 IFSC: SBIN0000689	https://bit.ly/3ngnXSv
9.	Alappuzha, Kerala	Sh. K.Vetrivel, Dy. Director Mb. No. 9449017475 E-mail ID: kvetrival.npti@gov.in eluswamy@gmail.com	Account Name: National Power Training Institute Bank Name: SBI A/c No. 38992295505 IFSC: SBIN0070081	https://forms.gle/WTphoPnKHRr1a6F46
10.	Shivpuri, MP	Sh. Akshitiz Jain, Dy. Director Mb. No. 9999015619 E-mail ID: akshitiz.npti@gov.in	Account Name: National Power Training Institute Bank Name: SBI A/c No. 39063432236 IFSC: SBIN0030086	https://forms.gle/yQEhq36Yu6g98DF6

ADDRESSES OF NPTI CORPORATE OFFICE AND REGIONAL TRAINING INSTITUTES:

NPTI Corporate Office
National Power Training Institute
An ISO 9001:2015 & ISO 14001:2015 Organization
NPTI Complex, Sector-33
Faridabad-121003 (Haryana)
EPBAX: 0129-2274916
Fax: 0129-2277412
Website: npti.gov.in

TRAINING INSTITUTES

1. Director (Training/R&D) NPTI Complex, Sector-33 Faridabad-121003 (Haryana) Tele Fax: 0129-2277412 Ph. 0129-2274917 https://npti.gov.in/	6. Director NPTI (Eastern Region) City Centre, Durgapur-713216(WB) Ph. 0343-2545888,2546237 Fax :0343-2545888 http://npti.gov.in/npti_durgapur/
2. Principal Director NPTI (Northern Region) Badarpur, Mathura Road, New Delhi-110044 Ph.(011) 26947043, 26940722, Fax :011-26940722 http://npti.gov.in/npti_badarpur/	7. Principal Director NPTI (NER) Dakhinagaon Road, Kahilipara, Guwahati -781019 (Assam) Ph: 0361-2381346 Fax: 0361-2381329 http://npti.gov.in/npti_guwahati/
3. Director NPTI (HPTC), BBMB Township, Nangal Punjab - 140124 Ph: 01887-220573, 221129 Fax: 01887-221129 http://npti.gov.in/npti_nangal/	8. Principal Director NPTI (WR) S. A. Road, Gopal Nagar, Nagpur-440022 (Maharashtra) Ph.0712-2236545,2226176, Fax: 0712-2220413 http://npti.gov.in/npti_nagpur/
4. Director NPTI (Southern Region) Block No. 14, NLC Township, Neyveli-607803 (Tamil Nadu) Ph. 04142- 269427,268185 Fax: 04142-269427 http://npti.gov.in/npti_neyveli/	9. Director NPTI Pallippuram, Cherthala Taluka District: Alappuzha (Kerala) Pin Code:688524 http://npti.gov.in/npti_alappuzha/
5. Director NPTI (PSTI) P.O. Box 8201, Subramanyapura Road Banashankari II Stage Bengaluru - 560070 Phone/Fax : 080-26713758, http://npti.gov.in/npti_psti_bangalore/	10. Director NPTI Shyampur, Satanwada, AB Road District: Shivpuri (Madhya Pradesh) http://npti.gov.in/npti_shivpuri/

HOW TO REACH THE INSTITUTES

NPTI (CO), FARIDABAD

NPTI's Corporate Centre campus is spread over a picturesque landscape of about 15 acres in Faridabad in the suburbs of New Delhi in the National Capital Region (NCR). The campus is located, just about 5 kms from New Delhi - Haryana Border, about 30 kms from the International Airport and 25 kms from New Delhi Railway Station. Nearest Metro Rail Station is NHPC Chowk.

NPTI (NR), BADARPUR (NEW DELHI)

The institute is located inside the Badarpur Thermal Power Station (BTPS) Complex, situated on National Highway No.2 (Mathura Road), and 9 KM. from Ashram crossing. From Delhi & New Delhi Railway Station, Delhi Metro Rail, DTC and private buses may be availed to reach Badarpur. DTC and Haryana Roadways buses going to Faridabad and Ballabhgarh from inter State Bus Terminal (ISBT) stop at BTPS Complex. From most of the major points in Delhi local buses are available for Badarpur. Nearest Metro Rail Station is Tughlaqabad.

NPTI (HPTC), NANGAL

The institute is located at Nangal, district Ropar, Punjab just beside Nangal Dam Railway Station, near Bhakra Beas Management Board Township. It is about 390 Km from Delhi and 104 Km from Chandigarh. To reach to Nangal Dam, trains are available from Delhi Railway Station, bus services are also available from I.S.B.T., Kashmiri Gate, New Delhi and also from Chandigarh.

NPTI (SR), NEYVELI

The institute complex is located at Block 14 Neyveli Township and is about 6 Kms. from the Neyveli Central Bus Stand. Auto Rickshaws are available at the bus stand to reach the Institute Complex. Neyveli can be reached from Chennai by Tamil Nadu State Transport Corporation buses. Neyveli can also be reached by train from Chennai Egmore Railway Station to Virudhachalam Railway Station and by bus from Virudhachalam to Neyveli. Neyveli is about 200 Kms. by road and 250 Kms by train from Chennai.

NPTI (ER), DURGAPUR (WB)

The institute complex is located at the City Centre area (Michael Faraday Avenue) and is about 9 Kms. from Durgapur Railway Station, Taxis, Auto Rickshaws are available at Railway Station. City buses also ply up to City Centre from where Auto/Rickshaws can be engaged for reaching the institute.

NPTI (NER), Guwahati

The Institute is located near SLDC Complex, ASEB, Kahilipara, Dakhingaon, Guwahati. To reach the Institute, city buses, (Route No.-2 at Kachhari), auto rickshaws, taxis are available from the Guwahati Railways Station. The institute is about 10 Km from Guwahati Railways Station and 30Km from Gopinath Bardolori International Airport.

NPTI (WR), NAGPUR

The Institute is located about 8 Kms. from Nagpur Railway Station as well as 8 kms from Dr. Ambedkar International Airport from where Taxis, Auto Rickshaws and city buses are available for reaching the Institute. It is situated opposite to main gate of Visvesvaraya National Institute of Technology, on South Ambazari Road. The nearby area of the institute is called Gopal Nagar.

NPTI – PSTI, Bengaluru

The Institute is situated on the Subramanyapura Road opposite to 9th main road, Yarabnagar, Banashankari second stage behind Banashankari temple, Bengaluru. The Institute is about 10 Kms south of Bangalore City Railway Station/Bangalore City Bus Stand (Majestic) and 45 Kms from Bangalore International Air Port. The Pre-paid taxi / Auto-rickshaw services are available. City buses also ply via Yarab Nagar bus stop. Bus route Nos. 15C, 15E, 15H, 210A, 210R and 210E taken from Bengaluru City Bus Station to reach Yarabnagar bus stop.

NPTI-Shivpuri (MP)

The institute is located at Satanwada (Shivpuri) in National Highway, NH3 (A.B. road) from Gwalior towards Indore high ways and situated before 18 kms from Shivpuri railway station and bus stop. It is about 100 Kms from Rajmata Vijaya Raje Scindia Air Terminal, Gwalior (MP).

NPTI- Alappuzha (Kerala)

The institute is about 35 Kms from Ernakulum Railway station where KSTRC. Buses are available up to Thuruvoor junction and from there auto rickshaws are available. Institute is 10 Kms from Cherthala Railway station, and Cherthala KSRTC bus stand. Institute is 58 Kms from Cochin International Airport from where prepaid taxi/Ola taxi services are available.



NPTI Institutes

ANNEXURE

Documents to be produced in Original and one set of photocopies at the time of Reporting

(A) For Non-Sponsored Candidates

1. Qualifying Degree/ Provisional Degree certificate issued by the University
2. All semester mark sheets of B.E. /B. Tech. or equivalent issued by the University. In case of final year appearing candidates:
 - a. **If final year mark sheet issued by University is not available then internet downloaded copy certified by Principal/HOD of the college is acceptable.**
 - b. **If result is not declared then candidates are not eligible for counseling round.**
3. Disability certificate issued by competent authority for Physically Challenged candidates.
4. Caste certificate (ST/SC/OBC) *and* non-creamy layer for OBC candidates.
5. EWS certificate for Economically Weaker Section candidates.
6. ***In-case of candidates of OBC non creamy layer, the certificate must have*** been issued by the concerned authority on or after 1st April 2020.
7. 10th / 12th Mark sheets & Certificates.
8. Photo ID proof issued by Govt.
9. Demand Draft/E-payment: D.D./ E-payment of Rs. 23,600/- drawn in favor of Respective Institute name. This amount is a part of course fee & for confirmation of admission at the time of counseling. **No admission is offered without the above said payment. In case a selected candidate withdraws before the commencement of the program for any reasons, his/her fee of Rs. 23,600/- shall be refunded. In case a selected candidate joins the session and attends the program, his/her course fee will not be refunded.**
10. Two Number of recently taken passport size photos (with name and rank in Merit List of Winter Session on the back side of the photograph).

(B) Sponsored Candidates

1. Qualifying Degree/Provisional Degree certificate issued by the University
2. All semester mark sheets of B.E. /B. Tech. or equivalent issued by University
3. Caste certificate (ST/SC/OBC) *and* non-creamy layer for OBC candidates
In case of candidates of OBC non creamy layer, the certificate must have been issued by the concerned authority on or after 1st April 2020.
4. 10th / 12th Mark sheets & Certificates.
5. Photo ID proof issued by Govt.
6. Demand Draft/E-payment: D.D./ E-payment of Rs. 23,600/- drawn in favor of Respective Institute name. This amount is a part of course fee & for confirmation of admission at the time of counseling. **No admission is offered without the above said payment. In case a selected candidate withdraws before the commencement of the program for any reasons, his/her fee of Rs. 23,600/- shall be refunded. In case a selected candidate joins the session and attends the program, his/her course fee will not be refunded.**
7. Sponsorship letter on organization letter head.
8. Two Nos. of recently taken passport size photos (with name and rank in Merit List of Winter Session on the back).