Training & Academic Calendar

2015 - 2016

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Knowledge is Power Supreme

एन पी टी आई
NPTI
प्रावीण्यं परोपवृत्तिश्च

KBS JAS-ANZ
ISO Certified | Acc.no.M44905101F

NATIONAL POWER TRAINING INSTITUTE

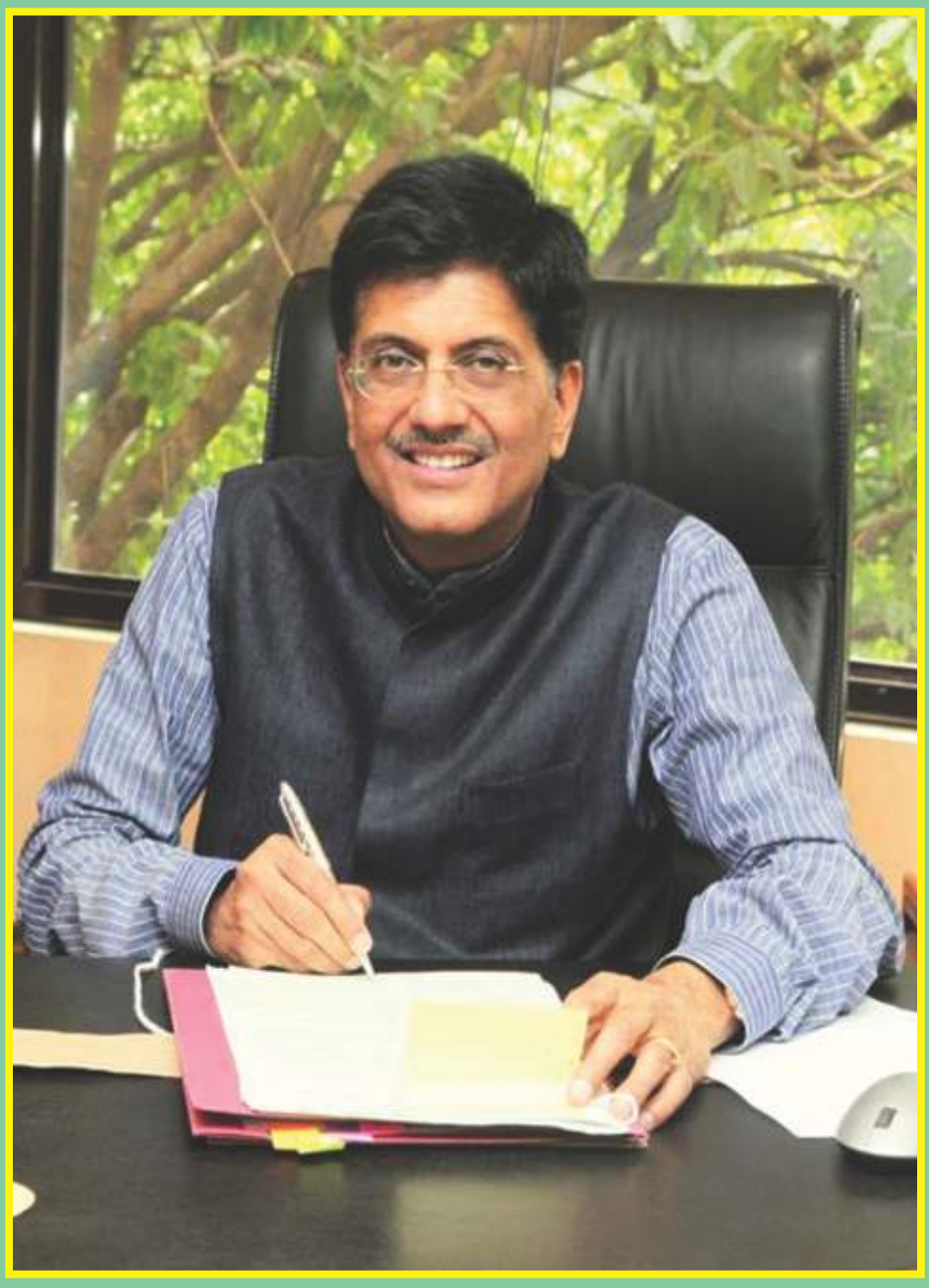
An ISO 9001 : 2008 & 14001:2004 Organisation

(Ministry of Power, Government of India)

NPTI Complex, Sector - 33, Faridabad - 121 003, India

Tel.: 0129 2257131 Fax: 0129 2277412 Website: www.npti.in

Our Source of Inspiration



Shri Piyush Goyal
Hon'ble Minister of State with Independent Charge
for
Power, Coal, New and Renewable Energy
Govt. of India

TOGETHER IN PURSUIT OF EXCELLENCE

Training & Academic Calendar

2015-2016

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Shri P. K. Sinha, Secretary (Power) released Training Calender-2014-15 of NPTI

FOREWORD

National Power Training Institute (NPTI), an **ISO 9001 & 14001** organization under Ministry of Power, Govt. of India is a National Apex body for Training and Human Resources Development in Power Sector with its corporate office at Faridabad. NPTI had been providing is dedicated service to the Power Sector for more than four decades.

Over the past decade, the Power Generation, Transmission and Distribution Landscape around the Globe has changed drastically which make paradigm changes in Government policies, economics environment and consumer awareness. Organizations are facing challenges due to technical and economic changes and hence need to prepare themselves to adapt to these changes.

Ministry of Power, Govt. of India has also aligned its overarching policy at "**Access, Availability and Affordability of Quality Power for All**".

As an offshoot of the urge to achieve these objectives in a time bound manner and to sustain in this competitive market, organization will have to inculcate up-gradation of skill, knowledge and change in the attitude and perception of individuals and groups.

It is necessary to develop a dynamic training infrastructure consonance with the changing business context to achieve higher productivity and customer satisfaction to cope up with the challenges of Power Sector.

Considering that the need for training in the Power Sector has acquired critical importance, the Government of India felt that it was necessary to put enormous efforts in providing adequate trained manpower to cope up with the new technologies being introduced from time to time. We all at NPTI believe the Trained personnel are valuable assest of an organisation and are responsible for its progress and stability. NPTI has trained over 2,49,557 Power Professionals in regular Programs over the last 4 decades. NPTI is the world's leading integrated power training institute and is the only institute of its kind in the world with such a wide geographical spread and covering such wide gamut of academic and training program in Power Sector.

To keep our trainees abreast with latest technologies, the existing training infrastructure is also being upgraded. All out, efforts are being made to ensure that the courses offered by NPTI stand out and meet the Power Sector needs. In line with the CEA's Guidelines, which mandate training for the Power Sector Personnel, we have taken up the initiative of preparation of study materials in the areas related to Operation & Maintenance of Thermal projects, Hydro Projects, Gas Projects and Transmission & Distribution Systems.

We have been modifying our training calender to incorporate the programs, which are in great demand. I wish the Training and Academic Calendar 2015-16 will be of immense use by all stakeholders. Any suggestion for improvement and addition of new programs in the calendar are most welcome.

I also wish that through imparting proper training we would be able to make

"स्वच्छ भारत,स्वस्थ भारत"

Faridabad
Feb. 2015

(Subodh Garg)
Director General

विद्या है धनम्, विद्या है बलम्
Knowledge is Power Supreme

GOVERNING COUNCIL
NATIONAL POWER TRAINING INSTITUTE

Shri Pradeep Kumar Sinha
Secretary, Ministry of Power
Chairman, Governing Council

Sh. Major Singh
Chairperson (I/C), CEA
Vice-Chairman, Governing Council

Shri P.K. Pahwa
Member (GO&D)
Permanent Member

Dr. Pradeep Kumar
Joint Secretary & FA
Ministry of Power, Permanent Member

Shri Raj Pal
Economic Adviser (T&R)
Ministry of Power, Permanent Member

Shri Subodh Garg
Director General, NPTI
Member Secretary, Governing Council

NOTE: Besides there are 14 more Members from various utilities.

NATIONAL POWER TRAINING INSTITUTE

INTEGRATED MANAGEMENT POLICY

NPTI is committed to enrich Human Resources in the Power Sector with frontier technologies, managerial skills and practical exposure; empowering them for sustainable and environment friendly growth of the Nation in compliance with legal provisions.

VISION

NPTI cherishes a vision of value orientation and value addition to the national and transnational power and energy sectors through Training and Human Resources Development, endeavoring to energize the people who energize the Nation.

MISSION

Emerge as global leaders in enhancing human and organizations excellence in Power and Energy Sectors by blending frontier Technologies with Management to facilitate HRD interventions that are instrumental in providing reliable, safe, economic and clean power.

VALUE

We value our drive and commitment to provide cutting edge technologies and top quality service to our clients, sharing our knowledge and caring for their needs.

ATTITUDE

We constantly strive to motivate every power professional to tap his unique human endowments, consciousness, imagination and willpower. Together we make a difference.

Four Decades of Service to the Power Sector

2014

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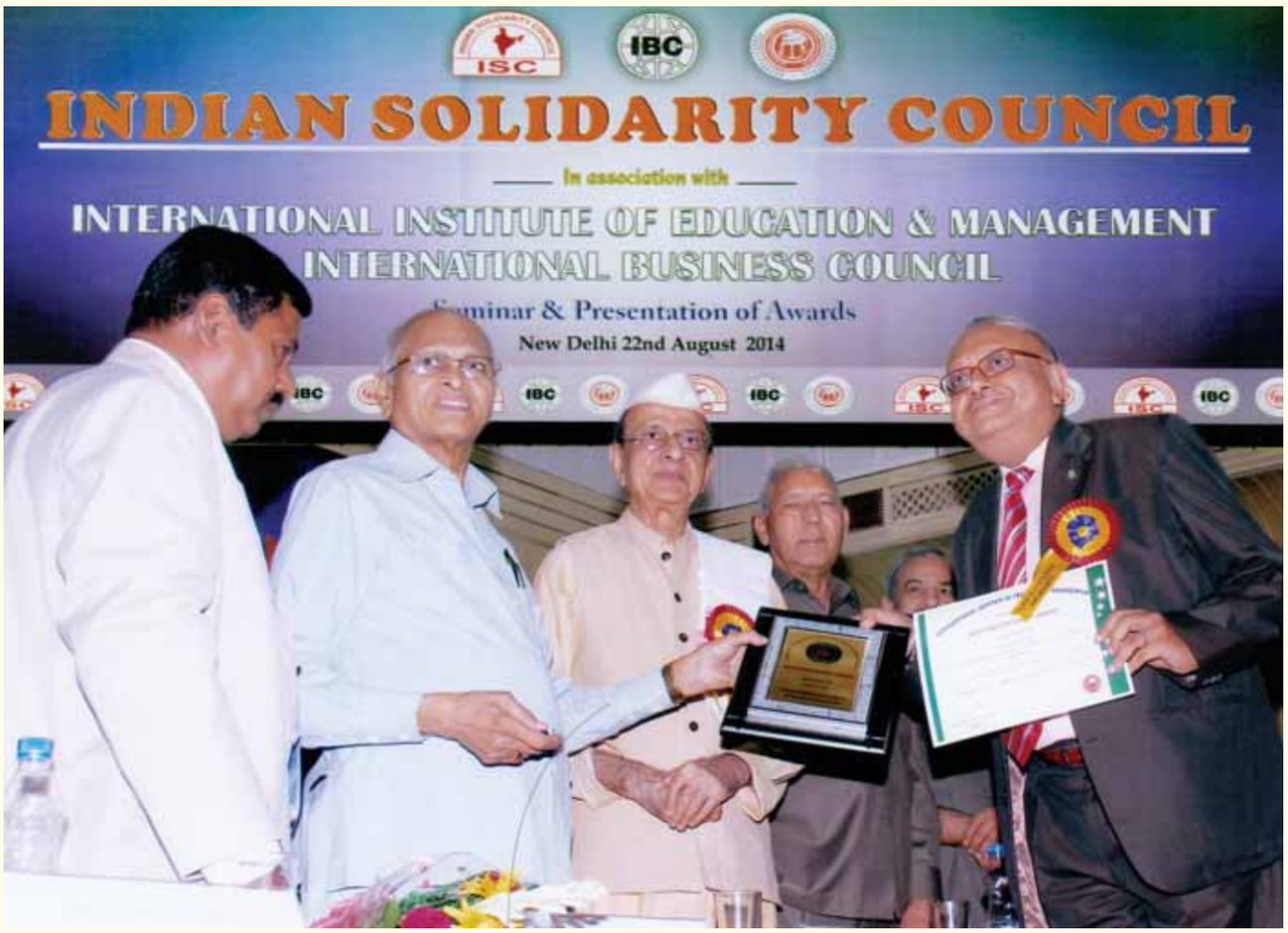
List of Holidays to be Observed During the Year 2015 in NPTI

S.No.	Holiday	Date	Day
1	Milad-Un-Nabi or Id-E-Milad (Birthday of Prophet Mohammad)	January 04	Sunday
2	Republic Day	January 26	Monday
3	Holi	March 06	Friday
4	Ram Navami	March 28	Saturday
5	Mahavir Jayanti	April 02	Thursday
6	Good Friday	April 03	Friday
7	Buddha Purnima	May 04	Monday
8	Idu'lFitr	July 18	Saturday
9	Independence day	August 15	Saturday
10	Janmashtami	September 05	Saturday
11	Id-ul-Zuha(Bakrid)	September 25	Friday
12	Mahatma Gandhi's Birthday	October 02	Friday
13	Dussehra	October 22	Thursday
14	Muharram	October 24	Saturday
15	Diwali (Deepavali)	November 11	Wednesday
16	Guru Nanak's Birthday	November 25	Wednesday
*	Milad-Un-Nabi or Id-E-Milad (Birthday of Prophet Mohammad)	December 24	Thursday
17	Christmas Day	December 25	Friday

**** Milad-Un-Nabi or Id-E-Milad (Birthday of Prophet Mohammad) falls twice in the year 2015***

Patron : Sh. Subodh Garg, Director General
Editor : Sh. R. K. Mishra, Director, (T/P)/(F&A)
Co-editors : Sh. S. Kar, Dy. Director
Sh. V. K. Pandey, Astt. Director
Visuals : Sh. K. L. Vijay Kumar, AVO
Coordination : Sh. Ram Mehar, JSO



Shri Subodh Garg, Director General, NPTI has been conferred upon with "Best Educationist' award for outstanding contribution andachievements in the field of Training and Education by International Institute of of Managenent. Shri Subodh Garg received the award from Shri B hishmaNarain Singh, Former Governor of Tamil Nadu & North-Eastern Region who was also a Prominent Former Central Cabinet Minister.

National Power Training Institute (NPTI) which is an autonomous organization under Ministry of Power, Govt. of India has been conferred the 8th Employer Brand Award 2014 for "**Excellence in Training**". The award was announced at a glittering ceremony held at Taj Lands End, Mumbai on 17th February, 2014. The award was decided by a panel of eminent jury consisting of Senior Professionals from the Industry. This was the part of World HRD Congress 2014, 22nd Edition.

NPTI has been conferred '**Global Training & Development Leadership**' award for "**Training Provider of the Year 2013**" by World Training & Development Congress. The award was announced at a glittering ceremony held at Taj Lands End, Mumbai on 15th February, 2014. This award was decided by an International Jury of World HRD Congress.

TRAINING & ACADEMIC CALENDAR 2015–2016

(E) SIMULATOR TRAINING PROGRAMS

Following program can be conducted/offered to National as well as International organization on request /demand basis on applicable terms and conditions at different NPTI Institutes

(F) MEDIUM TERM COURSES FOR ENGINEERS (5 WEEKS TO 16 WEEKS)

(G) SHORT-TERM COURSE FOR ENGINEERS (1 DAY TO 4 WEEKS)

Visit of Dignitries in the 500MW Simulator

Power System Operator Certificate Conferment Ceremony, New Delhi

National Power Training Institute (NTPI), an ISO 9001 & ISO 14001 organization is an autonomous organisation of the Ministry of Power, Govt. of India is a National Apex body for Training and Human Resources Development in Power Sector with its Corporate Office at Faridabad. NPTI had been providing its dedicated service for more than four decades.

NPTI has trained over 2,49,557 Power Professionals in regular Programs over the last 4 decades. NPTI is the world's leading integrated power training institute. NPTI is the only institute of its kind in the world with such a wide geographical spread and covering a wide gamut of academic and training programs in Power Sector. NPTI's committed faculty is providing excellent training in the Power Sector, which is the most important sector among various infrastructure sectors. A number of programs for foreign as well as national customers have been conducted. These programs have benefitted the executive from different organizations. Training provided by NPTI on Power Plant Simulators has improved Plant Load Factor of Generating Units, has increased the availability of Transmission & Distribution System and has decreased Aggregate Technical & Commercial Losses. This in turn is providing more power to the country. Thus the training being provided by NPTI is having a cascading effect in the growth of GDP and economy of the country.

NPTI operates on an all India basis with man-power strength of 324 including 105 officers through its 9 Institutes in different zones of the country as per detail below:

A. Northern Region

1. NPTI Corporate Office Faridabad.
2. NPTI (Northern Region) Badarpur, New Delhi
3. NPTI (Hydro Power Training Centre) Nangal

B. Southern Region

4. NPTI (Power System Training Institute) Bengaluru
5. NPTI (Hot Line Training Centre) Bengaluru
6. NPTI (Southern Region) Neyveli

C. Eastern & North Eastern Region

7. NPTI (Eastern Region) Durgapur
8. NPTI (North Eastern Region) Guwahati

D. Western Region

9. NPTI (Western Region) Nagpur

MANPOWER TRAINING AND ACADEMIC PROGRAMMES

NPTI conducts the following industry interfaced academic programs with the objective to create a pool of committed and competent professionals equipped with appropriate technical skills to steer the Indian Power Sector

- Two Year MBA in Power Management approved by AICTE
- Four year B.Tech./B.E. Degree in Power Engineering approved by AICTE
- One Year Post Graduate Diploma Course in Thermal Power Plant Engineering
- One Year Post Graduate Diploma Course in Sub-Transmission & Distribution system
- One Year Post Diplomat course in Thermal Power Plant Engineering
- Nine Months Post Graduate Diploma Course in Hydro Power Plant Engineering.
- Six Months Post Graduate Diploma Course in Transmission and Distribution System for Engineers.
- Six months Post Diploma course in Hydro Power Plant Engineering.
- 12 Weeks PGCC Diploma course in Thermal Power Plant Engineering for Engineers.

In addition to the above, several long-term, medium term and short-term training programs in the area of Thermal, Hydro, Transmission & Distribution and Management, Regulatory affairs etc. are being conducted in the various Institutes of NPTI. Customized training programs for various Power Utilities are also organized round the year. NPTI also conducts various training programmes to ensure availability of properly trained personnel covering the syllabus as per Indian Electricity Rules.

NPTI has also been catering to the Training Needs of Power Sector Organisation Process Industries such as Steel, Cement, Aluminum, Fertilizers, Refineries viz., BBMB, BHEL, CEA, DPL, DVC, ECIL, FACT, GAIL, IFFCO, IOCL, IREDA, KRIBHCO, NALCO, NEEPCO, NFL, NHPC, NLC, NPC, NTPC, Power Grid, SAIL, THDC, APGENCO, CESC, HPGCL, KPCL, MPEB, OHPC, OPGCL, RRUVNL, UPRVUNL, ACC, AECO, BSES, HINDALCO etc.

INDUCTION TRAINING

NPTI has imparted induction training to fresh Graduate Engineers / Executives of various Power Sector Organization as indicated below:

Power Grid Corporation of India Ltd., Avantha Power & Infrastructure Ltd., Tata Power Company Ltd., National Hydroelectric Power Corporation Ltd., Rajasthan Rajya Vidyut Utpadan Nigam Ltd., LANCO Power, Dakshin Haryana Bijli Vitran Nigam Ltd., Lanco kondapalli Power Ltd & PPN Power, Generating Company Ltd., GMR Energy Ltd., Lanco Infratech Ltd., Lanco Vidarbha Thermal Power Power Ltd. & Udupi Power Corporation Ltd., UP Rajya Vidyut Utpadan Nigam Ltd., Bokaro Power Supply Corporation Ltd., Sterlite Grid Ltd., CLP (I) Pvt. Ltd., Ideal Energy Power Ltd., L&T Power Ltd., Chhattisgarh State Power, Generation Corporation Ltd., Torrent Power Ltd.

POWER TRAINING SIMULATOR

The Institutes of NPTI are well equipped with Hi-Tech infrastructural facilities for conducting different courses on technical as well as management subjects covering the needs of Thermal, Hydro, Transmission & Distribution Systems, and Energy related fields of the Indian Power and allied Energy sectors. NPTI has a 500MW Thermal Power Plant Training Simulator at Faridabad Institute and 210MW Thermal Power Plant Training Simulator at Nagpur and Badarpur Institute for imparting specialized skills to operation personnel across the country. Also a 430 MW (2 x 143 MW Gas Turbine and 1 x 144 MW Steam Turbine), Full Scope Combined Cycle Gas Turbine, Replica Simulator has been commissioned at NPTI Corporate Office, Faridabad. A High fidelity Load Dispatch Operator Simulator for the National Grid has been commissioned at PSTI, Bengaluru. A 250MW Hydro Simulator has been commissioned at HPTC, Nangal.

800MW SUPERCRITICAL SIMULATOR

NPTI is in the process of procuring a 800MW Supercritical Simulator which will be commissioned at NPTI, Faridabad.

6 more simulators under 12th plan is under process of Commissing.

GIS

A Geographical Information System (GIS) Resource Centre has been set up at NPTI Corporate Office, Faridabad. The Centre is conducting various courses in GIS and Remote Sensing to meet the requirements of the Power Sector.

HOT LINE TRAINING CENTRE

A facility has been created at NPTI's Hot Line Training Centre, Bengaluru for Live

Line Maintenance of Transmission Lines upto 400 KV (first of its kind in Asia) which enables trained personnel to attend to maintenance requirements without power interruptions. Facilities for water washing of sub-station equipments is also available.

CONSULTANCY SERVICES

In order to serve the industry requirements and made best usage of infrastructure and expertise, NPTI has ventured into providing consultancy services in Preparation of DPRs under R-APDRP (11th Plan) NPTI has also been appointed as REC Quality Monitor (RQM) for Tier-II Inspection of RGGVY Works under 11th Plan for Six (6) States. NPTI has also been awarded the Third Party Inspecting Agency (TPIA) works by few DISCOMs for the RGGVY works under the 10th Plan & 11th Plan.

NPTI is providing consultancy services to WAPCOS for preparation of DPR for establishment of Power Training Institute in Bhutan. NPTI is also providing consultancy services to NHPC for preparation of DPR for establishment of Hydro Power Training Institute in Jammu & Kashmir.

NPTI also provides consultancy in the field of Human Resources Development including Training Need Analysis, Upgradation of training facilities, Customized Course Designs, Capacity Assessment/Evaluation for Promotion etc.

Basic level System Operator Certification and Specialist level System Operator Exam on “Regulatory Frame work in Power Sector” and “Power System Reliability”

NPTI's Power System Training Institute (PSTI) has for the first time in the country conducted Training & Certification of Power System Operators for executives of NLDC, RLDCs and SLDCs. This course equips System Operators with necessary inputs to take up the System Operators Certification Exam.

The first Basic level On-Line System Operator Certification exam was conducted in Novermber, 2011 and subsequently in December, 2012 and July, 2014 at various centres across India. A total of 643 System Operators were certified against 809 who appeared for the exam.

NPTI also for the first time conducted Specialist Level Learning & Development courses for Certified Basic Level System Operators in 'Regulatory Framework in Power Sector' and 'Power System Reliability'.

The first On-line exam for Specialist level Certification on 'Regulatory Framework in Power Sector' was held in March, 2013 for Certified Basic level System Operators at various centres across India and 93 System Operators were certified against 181 who appeared for the exam.

NPTI has also organised a seminar on "Power System Stability & Control" for the system operations during March 2014.

INTERNATIONAL TRAINING

Professionals from various countries like Oman, Bangladesh, Cambodia, Bhutan, Ethiopia, Iraq, Kenya, Malaysia, Mexico, Myammar, Nepal, Nigeria, Afghanistan, Philippines, Sudan, Syria, Zambia, Zimbawe Electricity Supply Authority (ZESA) Zimbawe, Sri Lanka, Libya etc. have also undergone training at NPTI's various training Institutes.

INDO-GERMAN ENERGY PROGRAM

M/s STEAG Services (India) Pvt. Ltd. has entered with a long-term association with NPTI to jointly undertake activities related to the development, marketing, promotion and carrying out training program and training consultancy services.

NPTI'S PUBLICATION AND MULTI MEDIA CBTS

NPTI has published around 89 Training Manuals for different courses. NPTI has also developed more than 55 Multimedia Computer Based Training Packages for power professionals and marketing them at reasonable prices to the utilities and educational Institutes.

SETTING UP NEW TRAINING INSTITUTES

New Power Training Institute of NPTI in Southern Region at Pallipuram, Dist. Alappuzha, Kerala

In 12th Five Year Plan, Ministry of Power, Govt. of India has approved new Power training Institue of NPTI in Southern Region at Pallipuram, Dist. Alappuzha, Kerala. The project will cost about Rs. 58 crores and shall provide training in the area at Thermal, Hydel, Transmission, Distribution, Regulatory Affairs etc. This Training Institute shall also have multi function thermal and hydro training simulator. The Institute is being set up on 15 acres of land provided by Govt. of Kerala and having the infrastructure like Institute Building with classrooms, labs, workshops hostel facilities for trainees, canteen facilities, residential accommodation, conference hall, auditorium and guest house.

Foundation stone of this Training Institute was laid by Shri Oommen Chandy, Hon'ble Chief Minister of Kerala on 18th February, 2014 at Alappuzha, Kerala in the august presence of Shri K.C. Venugopal, Hon'ble Minister of State for Civil Aviation, Shri Subodh Garg, Director General, NPTI was also present on the occasion.

New Power Training Institute of NPTI in Western Region at Shivpuri, Madhya Pradesh

In 12th Five Year Plan, Ministry of Power, Govt. of India has approved New Power Training Institute of NPTI in Western Region at Shivpuri, Madhya Pradesh.The project will cost about Rs. 64 crores and shall provide training in the area at Thermal, Hydel, Transmission, Distribution, Regulatory Affairs etc. This Training Institute shall also have multi function thermal and hydro training simulator. The Institute will be set up on 15 acres of land for which a suitable land has already been identified and reserved by Govt. of Madhya Pradesh. The Institute is envisaging the infrastructure like Institute Building with classrooms, labs, workshops hostel facilities for trainees, canteen facilities, residential accommodation, conference hall, auditorium and guest house.

Foundation stone of this Power Training Institute was laid by Shri Jyotiraditya Madhavrao Scindia, Hon'ble Minister of State for Power on 13th February, 2014 at Shvpuri, Madhya Pradesh. The foundation stone laying ceremony was attended by Shri Subodh Garg, Director General, NPTI, Shri Mukesh Jain, Joint Secretary, Ministry of Power, Sh. Raj Pal, Economic Adviser, Ministry of Power and other senior officials.

New Hydro Power Training Institute at Itanagar, Arunachal Pradesh

Keeping in view the Hydro Potential of Arunachal Pradesh, Govt. of India is actively considering the proposal for establishment of a new Hydro Power Training Institute at Itanagar, Arunachal Pradesh. The proposed Institute is envisaging Institute Building with class rooms, labs, workshop, Training Simulator in Hydro, Hostel facility for trainees, canteen facilities, residential accommodation, conference hall and guest house. The project will cost about Rs. 62 crores and shall provide

training in the area of Hydro through various long term, short term training for engineers, supervisors, including the non technical new recruits and refresher training for Finance/ Administration Executives.

Solapur Power & Industrial Training Institute (Maharashtra)

Solapur Power & Industrial Training Institute (SPITI) has been set up by National Thermal Power Corporation Ltd. (NTPC) and is being managed by National Power Training Institute (NPTI). The aim of SPITI, Solapur is to develop trained manpower for power sector and focus on the skill development of power sector personnel and impart training in the area of Generation, Transmission and Distribution and thus meet the needs of trained manpower. The Institute is recognized by National council for Vocational Training (NCVT) for these trades of Electrician, Fitter and Welder. SPITI shall also offer various training courses including four more job oriented ITI trades and also advanced courses required for power sector.

PLACEMENT

Out students of MBA in Power Management, B.Tech. in Power Engineering, Post Graduate Diploma Course and Post Diploma Courses are finding placement in reqputed companies like PWC, KPMG, Care, Deloitte, Infraline, Tata Power, Torrent Power, Enercon Capital, Suzlon, Noida power, PTC, Satyam, UJVNL, GMR, Crisil, TERI, Lahmeyer, Enzen Global, NDPL, Erudite, KSK Energy Ventures, Datagen, LNJ Bhilwara, Moser Baer, CFL, Eco Securities, Feedback Ventures, ABPS Advisory, Adani, Care, IL&FS, Vedanta, Lanco, BSES etc.

VISION AHEAD

NPTI is furthering the quality of industry-interfaced education and training being provided by our various Institutes focusing on improvement in the following areas:

- Renovation & Modernization of existing nine (9) Institutes by way of Improvement of infrastructure of the Institute office buildings, Labs, hostels etc.
- Augmentation of the existing infrastructure of all Institutes by way of creation of more training infrastructure like class-rooms, conference halls, auditoriums, hostels, residential quarters etc.
- Establishment of more Power Training Institutes in the country.
- Starting of two new MBA program at Bengaluru and Nagpur.
- Starting of new part-time MBA program in Power Management.
- Starting of new MBA program in Power Management through correspondence.
- Starting new Executive MBA program in Power Management for experienced professionals.
- Starting of on-line MBA / PGDM course in Power Management through Distance Learning by making available all study material videos recording mode as well as text format through internet, to be available on demand, any time and from any where.

AWARDS AND RECOGNITIONS

NPTI was granted **ISO 9001 & 14001 Quality Environmental management Integrated System Certifications.**

NPTI's conscious commitments were recognized by the National Foundation of Indian Engineers (NAFEN) and their **'Best Training and HRD Institute of the Millenium Year Award' was conferred on NPTI by the Hon'ble Minister of Power in 2000.**

NPTI was conferred with the **'ISTD National Award 2001-02 for Best HRD Practices: Second Best Organization'** in a National Competition.

"Swatch Bharat Abhiyan" being observed in NPTI Complex, Faridabad

"**Jawaharlal Nehru Memorial National Award 2002**" for Excellence in Energy Conservation was conferred on NPTI by the International Greenland Society, Hyderabad during 2000-01.

NPTI was conferred upon "**Mother Teresa Memorial National Gold Award 2003**" for the best Educational Institution in the country by the MSBR Educational Society, Hyderabad.

NPTI Corporate Office was awarded with **NTPC Rajbhasha Shield for Excellent work in Hindi** for the year 2005-06.

NPTI was conferred with award for "**Institutional Building**" for the year 2008-09 by the World HRD Congress, Mumbai.

NPTI has been conferred the 2nd Asia Best Employer Brand Award 2011 for "**Excellence in Training**" for the year 2010-11 by the World HRD Congress, under the category Employer Branding Award at Singapore.

NPTI has been conferred the award for "**Best Learning and Development Strategy**" for the year 2010-11 by the World HRD Congress, under the category shine.com HR Leadership Award.

NPTI has been conferred the 4th Indian Power Award 2011 instituted by Council of Power utilities for "**Excellent Work in Imparting Training to Power Engineers**".

NPTI has been adjudged the winner in recognition for Institution of "**Excellence in Water and Energy Sector**" by council of power utility at forth India Power Award 2011 held at New Delhi, Nov. 2011.

NPTI has conferred the 3rd Asia's Best Employer Brand Awards 2012 for "**Excellence in Training**" for the year 2011-12 by the World HRD Congress, under the category Employer Branding Awards at Singapore.

NPTI has been awarded "Siver Medal" for "**Excellence in Display**" for the Ministries and Department Pavilion in the 32nd IITF - 2012 held at Pragti Maidan, New Delhi.

NPTI alongwith all the member organisations of ministry of Power, Govt. of India, has been awarded "**Gold Medal**" for **Excellence in display for Ministries & Departments pavilion** in the 33rd India International Trade Fair-2013.

NPTI has been conferred the 4th Asia's Best Employer Brand Awards 2013 for **"Executive in Training".** 4th Asia's Best Employer Brand Awards 2013 were hosted by Employer Branding Institute, World HRD Congress and Stars of the Industry Group and endorsed by Asian Confederation of Businesses and presented in a glittering ceremony at Singapore on 31st July, 2013.

Tree Plantation by Students at NPTI (WR), Nagpur during Independence Day 2014

ACHIEVEMENTS & PERFORMANCE

Since the inception of its first Institute in 1965, NPTI has so far imparted training to more than 2,49,557 personnel from Central

PSUs, SEB, Power Utilities and Private Sector organizations. More than 15,000 operation engineers have been imparted effective integrated unit operation training on the Simulators available with NPTI.

NPTI has trained 19,759 personal with 1,30,758 Trainee-weeks in the financial year 2013-14.

NOTABLE ACHIEVEMENTS

Some of the notable achievements of NPTI are indicated below :

- Conducted several training programs for foreign nationals of Afghanistan, Nigeria, Sudan, Bhutan, Sri Lanka etc.
- NPTI Faculty conducted training workshops for Senior Executives in Negeria for establishment of a Power Training Institute in Nigeria.
- Providing consultancy for R-APDRP and Inspection works under RGGVY.
- Conducting National Serminars by our various Institutes.
- Provided 100% text books, free of cost through Book Banks to all students of 4-years B.Tech. course in Power Engineering and 2 years MBA course in Power Management.
- Training on the country's only 250MW Hydel Simulator at Nangal.
- Training on the country's only Power System (Load Despatch) Simulator at Bengaluru.
- Country's first System Operators Training for System Operators of Load Despatch Centres and country's first On-line Certification Examination for System Operators.
- NPTI provided consultancy for preparation of DPRs for establishment of a Power Management Institute in Bhutan and to NHPC for setting up of a Hydro Power Training Institute at Kangan, J&K.
- Daily upload of Power News appearing in media on NPTI Website.
- PFC has selected NPTI as a Partner Training Institute for preparation of course material and conduction of Training under R-APDRP, Part C Capacity Building scheme.
- NPTI has been selected by Department of Personnel & Training (DoPT) to conduct a Five(5) day Training Program exclusively to IAS officers on “Procurement Procedures & Contracting”.

MANPOWER IN NPTI

NPTI is having on its roll total 324 nos. employees out of which group 'A' officers are 105.

ACADEMICS

(I) MBA (Power Management)

CAMPS launched its first ever MBA Program in Power Management, in the year 2002, which was a first for the sub-continent, to meet the huge requirement of Power Managers in Ministry of Power’s massive efforts of attaining self-sufficiency in Power Sector and run the Indian Power Sector on Commercial lines. This MBA Program duly approved by AICTE is affiliated to Maharshi Dayanand University, Rohtak. This Program with a Difference has a special emphasis on reforming Power Sector issues and ethos to give extra strength to Indian Power Sector Engineers applying management theories and concepts to live problems of electricity industry in these challenging times. This Post-Graduate program also provides cutting edge qualities to develop Business leaders and decision makers with appropriate managerial and technical skills capable of thinking innovatively and duly sensitized to social and environmental interface searching for alternative solutions and run the Indian Power Sector more effectively and efficiently. The intake for the program is

120 seats, out of which 15 seats are reserved for candidates sponsored from Power Sector organizations.

(II) B.Tech./B.E. (Power Engineering)

The 4-year B.Tech./B.E., in Power Engineering (Mechanical/Electrical) course being offered by NPTI is the first of its kind in India. The program is directed at the young aspirants who are looking for a bright career in the Power Industry, the backbone off all industrial activities.

The program coverage includes the regular inputs generally provided in B.Tech. programs and lays special emphasis on Indian Electricity Act 1956, preparing skilled Engineering Executives for the Power Sector.

This is an AICTE approved course being offered at New Delhi, Nagpur & Durgapur Institutes with an intake of 60 seats each and are respectively affiliated to GGSIP University, RTM Nagpur University & West Bengal University of Technology. The objective of the course is directed at creating a pool of committed and competent professionals equipped with appropriate Technical skills to steer the Indian Power Sector and run it on techno-commercial lines. The curriculum is also designed in such a way that by selecting Mechanical/Electrical electives the final award of Degree can be B.Tech., in Power Engineering (Mechanical/Electrical) which is offered at Badarpur Institute.

(III) Post Graduate Diploma in Thermal Power Plant Engineering (PGDC)

NPTI weaves formal education with industry oriented specialized skills to cater to the needs of Power Sector. In one of its most successful attempts to create a pool of Technically trained man power for ready availability for recruitment by PSUs/SEBs/ Power Utilities, NPTI launched a one year 'Post Graduate Diploma Course in Thermal Power Plant Engineering', in 1996 recognised by AICTE, at its institutes in Faridabad, New Delhi, Nagpur, Durgapur, Neyveli, Guwahati and Nangal. The PG Diploma Course is having an exceptionally encouraging response and many Power Companies recruited this trained man power through campus recruitments over the years.

This course is for fresh and practicing Graduate Engineers for a period of one (1) year.

(IV) PGDC in Sub-Transimission and Distribution 52 weeks in PSTI.

This 52 week duration course cover all aspects of Sub-Transmission and Distribution of Electrical Power and having the objective to create technically trained man power readily available for recruitment.

(V) Post Graduate Diploma in Hydro Power Plant Engineering in HPTC Nangal

This 39 week duration course cover all aspects of Hydro Power Plant engineering viz creation O&M commissioning etc. The Course authorised the engineer to operate and maintain Hydro Power Plants

(VI) Post Graduate Diploma Course in Transmission and Distribution System

This 26 week duration is having the objective to create technically trained man power readily available for recruitment to the power companies in the area of transmission and distribution system. The course is being conducted at Badarpur, Bengaluru,Guwahati and Nagpur.

(VII) Post Diploma Course in Thermal Power Plant Engineering (PDC)

Sensing the need for trained man power in the Supervisory cadre a Post Diploma Course in Thermal Power Plant Engineering was

also launched in December 2000 at the four Institutes New Delhi, Nagpur, Durgapur, Neyveli and in Guwahati also. This one year course is aimed at developing skills and the attitude for fresh and practicing Diploma engineers.

(VIII) Post Diploma Course in Hydro Power Plant Engineering

This 26 week duration program is having the objective to prepare Diploma Engineers to become Power Station Managers in operation & maintenance of Hydro Power Station. Venue of this course is NPTI, HPTC-Nangal.

(IX) 12 Weeks Post Graduate Certificate Course In Thermal Power Plant Engineering

This 12 weeks Post Graduate Certificate Course in Thermal Power Plant Engineering for the candidates willing to make a career in the Power Industry. This course is designed for fresh and practicing Graduate Engineers. Venue of this Course is Faridabad & Guwahati Institute.

(X) Certificate of competency in Power Distribution

Ministry of Power has taken an initiative for development of Human Resources at Group 'C' and 'D' level in Transmission & Distribution area is being conducted in collaboration with IGNOU and NPTI. The program has been designed for the Technicians/Tradesmen working in Power Sector (sponsored by Utilities) and Non-sponsored general candidates at least 8th Pass. This course is being conducted at our Nagpur & Durgapur Institute.

New Publications of NPTI

NPTI CORPORATE OFFICE

The corporate office of NPTI is situated in Sector-33, Faridabad. While coming from Delhi to Faridabad, NPTI Complex is around 5 Kms. from Badarpur Border and located adjoining to NHPC Corporate office. One has to take local bus up to Badarpur Border form Railway Station, Sarai Kale Khan (Near Nizamuddin Railway Station), ISBT, Lajpat Nagar or Ashram. From Border autorickshaws are available upto NPTI complex, Auto rickshaws are also available form Faridabad to reach NPTI Corporate Centre. The Centre for Advanced Management and Power Studies (CAMPS) is located in the same campus.

NPTI Corporate Centre

NPTI NORTHERN REGION BADARPUR, NEW DELHI

The institute is located inside the Badarpur Thermal Power Station (BTPS) Complex, situated on the National Highway No. 2 (Mathura road). From Delhi & New Delhi railway Stations, Delhi Transport Corporation (DTC) and private buses ply to Badarpur Border and pass right by the side of Thermal Power Station Gate. DTC and Haryana Roadways buses going to Faridabad and Ballabgarh from Inter state Bus Terminal (ISBT) stop at BTPS Complex DTC and Private Buses of Route No. 405, 415, 460, 473 & 479 ply to Badarpur, Buses are also available form Faridabad to reach the institute.

NPTI Northern Region Badarpur, New Delhi

NPTI (HPTC), NANGAL

The Institute is located at Nangal, (district Ropar), Punjab, just besides Nangal Dam railway Station. It is close to the Bhakra Beas Management Board Township. It is about 390 Km from Delhi and 104 Km from Chandigarh. Nangal Dam can be reached by trains form Delhi Railway Station and by bus from I.S.B.T. Kashmiri Gate, New Delhi. Bus services are also available from Chandigarh.

NPTI (HPTC), Nangal

POWER SYSTEMS TRAINING INSTITUTE, 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. away from Bengaluru City railway Station / Bengaluru City Bus Stand and 20 Kms. From Bengaluru Airport. Pre-paid Auto Rickshawa servies are available form Bengaluru City railway Station. City buses also ply via Yarabnagar bus stop (Bus Route Nos. 15 C, 15 E, 15 H, 210 A, 210 R and P 210 A from Bengaluru City Bus Station). Pre-paid taxi services are available from the Airport also.

Power Systems Training Institute, Bengaluru.

HOT LINE TRAINING CENTRE, BENGALURU

This institute is about 35 Km from Bengaluru city Railway Station and City Bus Stand. It is situated next to 220KV Sub-Station of Karnataka Power Transmission Corporation Ltd. (KPTCL) and 400KV Sub- Station of Powergrid on Kanakapura Road (National Highway 209) and opposite to Acharya Patasala College (APS) of Engineering Campus. Buses are available from Krishna Rajendra (K.R.) Market which is about 3 Km from City railway station / City Bus Stand. The Institute can be reached by buses with the following route numbers 211, 211D, 211E, 211G, 211N, 211Q, 213, 213A, 213B, 213K, 213F/A etc. The Bengaluru city (International) Airport is about 60 kms North-West of the institute from where prepaid taxies are available.

Hot Line Training Centre, Bengaluru

NPTI SOUTHERN REGION, NEYVELI

The Institute Complex is located at Block 14 of 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 Southern Region, Neyveli

NPTI EASTERN REGION, DURGAPUR

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

NPTI Eastern Region, Durgapur

NPTI NORTH EASTERN REGION, GUWAHATI

The Institute is located near SLDC Complex, ASEB, Kahilipara, Dakhingaon, Guwahati-19. In order to reach the Institute, city buses, (Route No.-2 at Kachhari), autorickshaws, taxis are available from the Guwahati Railway Station. The Institute is about 10 Km from Guwahati Railway Station and 30 Km from Gopinath Bardoloi International Airport, Guwahati.

NPTI North Eastern Region, Guwahati

NPTI WESTERN REGION, NAGPUR

The Nagpur Institute is located at about 8 kms. From the Nagpur railway staion. Taxis, auto-ricksahaws and city buses are available to reach the Institute. The Institute is situated opposite to the main gate of Vishweshvarayya National Institute of Technology (VNIT) on South Ambazari Road and the nearby area is called Gopalnagar. The institute is about 10 kms from the Dr. Baba Saheb Ambedkar International Airport

NPTI Western Region, Nagpur

MAIN OBJECTIVES

The primary objectives of this organization are:

- To function as a National Organistion for training in the fields of (a) Operation and Maintenance of Power Stations, and (b) All other aspects of Electrical Energy Systems including transmission, sub-transmission and distribution.
- To act as an Apex Body for initiating and coordinating training programs in the Power Sector of the Country.
- To establish and run Training Institutes for Engineers, Operators, Technicians and other personnel of the Power Sector.

Subsidiary Objectives

- To design syllabi/courses for the Graduate Engineers, Operators and Technicians to be inducted in Power Stations.
- To co-ordinate the training activities of the various utilities with those of other technical institutions and industries.
- To establish standard norms regarding qualifications and training for personnel at various levels.
- To serve as a National Certification Authority (NCA) for the purpose of certification of competence and/or participation to ensure availability of properly trained personnel to man the electricity supply industry.
- To initiate and co-ordinate the research and development in the field of operation, maintenance and management of power generation and transmission distribution systems.
- To establish, maintain and manage laboratories, workshops, experimental transmission lines, sub-stations and other facilities required in the pursuance of its objectives.
- To collect information and maintain documentation in the field of electricity generation and distribution.
- To collect, prepare, edit, print and publish materials, papers, periodicals or reports in furtherance of objectives of the Society.
- To organize seminars and workshops.
- To enter into agreements with any enterprise(s) or institution(s) or person(s) and provide efforts for specific training programs, demonstrations, assignments, preparation of training material or technical guidance.

Training – A Necessity

- Power industry is a multi-disciplinary, highly capital intensive industry.
- Human element is the most vital input of the Power Sector.
- Power Generating Stations require technically trained manpower for project planning, implementation, erection, commissioning, testing, O&M including transmission and distribution of power.
- Formal studies available in educational institutions can not equip a person with knowledge of different inputs required for the job performance in Power Sector.
- Special training becomes necessary for personnel at every level in the industry to keep abreast with rapidly advancing state-of-the-art in the power industry.
- Power is basic to national development and industrialization, thus making it imperative to have optimum efficiency.

Training Methodology

To achieve the objectives of providing total concept of power plant training, different types of learning situations will have to be created/ organized. These are :-

- Class room lectures for imparting formal, theoretical and technical knowledge.
- Case studies/Group discussions.

- Self learning techniques, like computer based self learning training packages etc.
- Practical hands-on training in corrective maintenance methods and techniques.
- Through simulation techniques and on-job training in Power Stations/Power Systems. The training methodology so adopted creates step by step environment for all round development of skills and knowledge of the participants.

On-job Training

On-job training is an essential supplement to formal training which provides the trainees an understanding of the functions through involvement with real work situations. Special stress is laid on acquisition of required skills for undertaking specific responsibilities in a particular area of work. On-job experience simplifies and consolidates knowledge in a particular sphere for which special type of work books have been designed according to the needs of area where on-job training is conducted.

Training Support Services

A Technical section is setup under NPTI to develop training aids like manuals, periodicals, slides etc., to meet the training needs of the Power Sector. Technical Section is playing crucial role in the following areas:-

- To design appropriate programs for Power Sector personnel.
- To design and develop manuals, lessons, notes, tests including the Audio-Visual training aids.
- To revalidate training programs through evaluation, feed back on training effectiveness and follow-up.
- To advise on training methodology.
- To establish and maintain data bank, and reprographic facilities.
- To collect, prepare, edit, print and publish training manuals, papers, periodicals, annual training programs calender and reports.
- To collect information and maintain documentation in areas related to Power Sector.
- To render assistance in equipping the Regional Training Centres with appropriate training equipments and materials.
- To organize Seminars/Workshops/ Conferences as per the need of the Power Sector.

Dr. Mahesh Sharma, Hon'ble Minister of State (I/C) for Culture, Tourism and MOS for Ministry of Civil Aviation, Govt. of India felicitating NPTI for Excellence in Display of Theme in the 34th India International Trade Fair-2014

Multimedia Computer Based Training (CBT)

Multimedia CBT has been identified as one of the cost effective means of delivering consistent high quality training. In view of this, a CBT cell has been established at NPTI, Corporate office at Faridabad and also at other Regional Centres for developing the multi media "Self-Learning" packages in various technical areas concerning Power Generation, T&D and Management. These packages are widely used by the trainees at the open Learning Centres (OLCs) of NPTI as well as by the other power utilities of the country like APGENCO ,BHEL, MSEB, RRVUNL, NTPC, NHPC, SJVNL, J&KPDC, PSEB, NPCL, TNEB, OHPC, NLC, DVB,

KLTPS, DVC, WBPDCL, IPPGCL, BBMB, BSES, TATA POWER, Thermax, ACC, APSEB, NDPL, UPRVUN, BSEB, WSEB, JSW energy Ltd., Bellari Karnataka, Adani Power, THDC, Orissa Power Transmission Corpn. Ltd., MP Poorv Kshetra Vidyut Vitran Corpn. Ltd., Mahavitran Maharashtra, Karebo System (P) Ltd., (U.K), Meghalaya SEB etc.

Engineering Institutions: G.B. Pant University of Agriculture and Technology, NIT, Raipur, NIT, Durgapur, Jawaharlal Nehru Technological University (AP), Kalyani University (WB), CMERI (Durgapur), VNIT (Nagpur), Delhi College of Engineering (Delhi), Bharati Vidyapeeth, Deemed University, Pune etc.

These CBT packages developed are available for sale, at cost–effective nominal prices.

This cell also provides assistance to the SEB's and Utilities in developing facilities for use of these packages.

Hostel Facilities

Well furnished Executive hostel and Trainee hostel with modern lodging and boarding facilities are available to accommodate about 550 trainees at NPTI Corporate Centre complex, Faridabad.

Well furnished hostels are also available at each of the regional institute of NPTI where modern and hygienic lodging and boarding facilities are available. Those desirous of availing the hostel facilities will have to intimate in advance to the Principal Director/HoI and obtain confirmation for the same. In case a participant does not stay in the hostel, he has to make his own arrangements to reach the Institute. Recreation and indoor sports facilities like Table Tennis, Badminton, Carom, Chess etc. are available for trainees in Hostel, creating a congenial atmosphere of a Home away from Home.

The hostel accommodation is provided to the trainees only for the period of training course.

Library

NPTI Corporate Centre library has a large collection of books and video packages on modern power station technology and practices, various branches of engineering, science, industrial relations, management etc. It subscribes to a number of Indian and foreign technical journals and periodicals.

All regional institutes have modern libraries having a large collection of books and multimedia films on Power Station Technology, Mechanical Engineering, Electrical Engineering, Power Plant, Chemistry, Control and Instrumentation, Electronics, Computers, Management etc. These libraries also subscribe to a variety of Indian and foreign periodicals and journals for keeping in tune with the latest developments in Engineering & Technology.

As many as 85 Technical manuals/books have been published by NPTI faculty with lucid presentations to enhance the conceptual understanding of various subsystems. These are available at nominal prices for procurement by Power Utilities and individual. Price List of NPTI Publications can be provided on request.

Delegates from Royal Govt. of Bhutan during their visit at NPTI Corporate Office, Faridabad

Auditorium, Conference Hall, Residential Quarters

The NPTI Corporate Centre Complex is situated on a picturesque landscape of about 15 acres. The campus houses the main institute building, guest house, hostels, sports complex and residential quarters for the employees. The main Institute building houses lecture halls, a Syndicate room, Sanctum Sanctorum, Library, Administrative Office, a 500MW Simulator, and a 430MW CCGT Simulator etc. A centrally air-conditioned 275 seat capacity Auditorium with the latest Audio/Video System with motorized screen has been established at NPTI Corporate Centre. A cozy conference hall with most modern amenities and seating capacity for 55 persons is also available. Both Conference Hall and Auditorium are being used for conducting Seminars, Conferences, Workshops and for Cultural Activities.

Each Regional Institute has auditorium/ conference hall for conducting Conferences, Seminars and workshops etc. These auditoriums are also provided for conducting of cultural programs by the trainees, staff and their family members.

SIMULATORS

A. 500 MW Simulator

NPTI has set up a high-quality, high-fidelity real-time full scope 500 MW Fossil Fuel Fired Power Plant Training Simulator, at its Corporate Centre. The Simulator realistically emulates the behavior of the entire process simulation in a real-time scenario for a meaningful and off-job Operator Training. This is a replica of the 500 MW Stage-III, Unit-5 of Chandrapur Thermal Power Station of MAHAGENCO and has a unique facility of imparting training on the 'Conventional Control Panels' as well as on the 'Video Process Control' (DDC/CRT-Key Board based Unit Operation) Panels in Virtual Panel and Control Schematic modes of Unit Operation, taking care of the needs of futuristic trends in Power Plant Operation. The Simulator training results in Operators making better judgment calls, reduced plant trips, trouble free start-ups and maneuvering of plant sub-systems, optimum usage of auxiliary resources, extended equipment life, less down time and lower costs. The Simulator has more than 250 emergency conditions, including DAS functions for applications ranging from Operator Training to engineering and plant performance analysis and improvements etc.

Trainees in 500MW Training Simulator, NPTI Corporate Office, Faridabad

B. Combined Cycle Gas Turbine Simulator

NPTI has set up a high-quality, high-fidelity real-time 430 MW Combined Cycle Gas Turbine Power Plant Simulator, at its Corporate Centre. The Simulator realistically emulates the behavior of the entire process simulation in a real-time scenario for a meaningful and off-job Operator Training. This is a replica of NTPC Faridabad Gas Power Plant, Siemens Make V-94.2 Model comprising of 2x143 MW Gas Turbines and 1x144 MW steam Turbine. This CCGT replica Simulator is equipped with all the CRT controls with Latest State-of-the art Barco Screens. The training on this simulator will benefit operators and Shift Charge Engineers working or being posted on Combined Cycle Gas Plants.

C. 210 MW Thermal Power Plant Simulators

Regional institutes at Badarpur and Nagpur are equipped with 210 MW Fossil Fuel fired thermal power plant full scope real time Simulators. The Simulator at Badarpur is a replica of 210 MW Unit of Badarpur Thermal Power Station, New Delhi and the one at Nagpur replicates 210 MW unit of Khaperkheda T.P.S. of MAHAGENCO These Simulators provide a unique opportunity for the trainees to experience a full range of operation and stress situations in an integrated mode of Unit Operation. These state-of-the-art Simulator facilities improve the reflex operational skills of Shift Charge Engineers, Unit Controllers, Operators and fresh engineers being inducted into Operation and fine-tune their skills in

Operational emergencies together with tremendous integrated Unit experience, exposure and understanding of normal operations viz., Cold, Warm & Hot Start up processes as well. NPTI has trained more than 10,000 engineers and operators on these simulators, since their installation.

D. Dispatcher Training simulator (DTS)

The DTS laboratory at PSTI Bengaluru is a digital computer based high fidelity Power System Simulator in which a representative system of National Grid is simulated. It has options for all types of generation like Hydro, Thermal, Nuclear, Gas, Pumped Storage System and for Transmission schemes covering 200KV & above and also for the various generation voltages. The transmission equipment like Transformers, Transmission lines, Capacitor banks, Bus Line Reactors, SVCs, CBs, isolators etc. are all suitably represented in the simulator. The real-timesimulation is carried out for normal and emergency conditions of the network with initial conditions. The behaviour of various Power System elements for different loading conditions can be studied in the Simulator. Time tagged or manual events can be introduced on-line into the Simulator during exercises. Protection schemes could be implemented with the help of voltage relays, frequency relays, rate of change of frequency relays, over current relays etc. Thus the actual system occurrences can be Simulated and saved as save cases. Hence, it is a comprehensive training tool for training of Power System and Load Dispatch Engineers and Operators.

E. Hydro Simulator, Nangal

NPTI has installed a state of the art real time full scope 250 MW hydro simulator replica of Unit-1 of Nathpa Jhakri Hydro Power Plant at HPTC Nangal. The Simulator has the facility to operate from the conventional Panel as well as from the VPC mode of operation.

Laboratories/Workshops

The laboratories and Workshops are the prerequisites for providing off-job, hands-on training in the maintenance aspects. The institutes under NPTI have built well equipped laboratories and workshops with wide ranging facilities for imparting training from Technicians to Operators to Engineers, in various aspects of Power Stations. Some of the areas where expertise have been built up are:

(i) Control and Instrumentation Laboratories with facilities for testing, calibration and repairs of different types of process control instruments.

(ii) Maintenance workshops for Valves, Bearings & Shaft alignment, Pumps, Motors etc.

(iii) Electrical laboratories with facilities for testing of relays, electrical equipments, insulating oils etc., along with repairs as per requirement.

(iv) A lab of 120 nos. computers along with

instructor console has been established with the facilities of LAN and Internet connectivity at corporate office Faridabad.

OLCs. (Open Learning Centres)

OLC (Open learning Centre) is the infrastructural facility available to help the trainee/trainer to go through the multimedia CBT packages at their own choice and pace without any help of the subject expert. OLCs have been established at all the six Regional Institutes. The multimedia CBT packages developed at NPTI Corporate Centre and other Institutes are being used by the Institutes for training.

Additionally all the OLCs at the Corporte Centre and the Regional Institutes have complete Internet access through all days of the week.

Consultancy Services

In order to serve the industry requirements and make best usage of infrastructure and expertise, NPTI has ventured into providing consultancy services in the field of Human Resources Development including Training Need Analysis, Up-gradation of training facilities, Customized Course Designs, Capacity Assessment / Evaluation for Promotion / Recruitment etc. NPTI also provides consultancy in Preparation of DPRs under R-APDRP (11th Plan) and NPTI is also REC Quality Monitors (RQM) for Tier-II Inspection of RGGVY Works under 11th Plan for Six States. NPTI has also been awarded the Third Party Inspecting Agency (TPIA) works for a few DISCOMs for the RGGVY works under the 10th and 11th Plans. A few of the consultancy assignments are :

1. NPTI has been engaged as consultant by M/s Advanced Engineering Associates International, Inc., USA for the Project on “Human and Institutional Capacity Building for Afghanistan Energy and Natural resources Sector” awarded by USAID. M/s. AEAI & NPTI entered into MOU for undertaking the above work. A report for establishment of a Vocational Training Centre (VTC) at Kabul has also been submitted.
2. NPTI has undertaken consultancy assignments of preparation of DPRs for the Energy & Power Department, Govt. of Sikkim and Purvanchal Vidyut Vitaran Nigam Ltd., Varanasi under the R-APDRP Scheme of the Govt. of India of the 11th Plan. The work involves study for improvement of existing Power Distribution System and preparation of comprehensive DPRs for renovation & modernization of Sub-transmission & distribution system along with proposal for new 33/11 KV Sub-Stations, Installation of new 11/0.4 KV distribution sub-stations, drawing of new HT/LT lines etc. The DPRs for about 20 Towns in Sikkim and 29 towns in PUVVNL, Varanasi have also been submitted to the Utilities.
3. Rural Electrification Corpn. empanelled NPTI as a Third Party Inspecting Agency (TPIA) for inspection of Village Electrification works. NPTI has been assigned with the Third Party Inspecting agency works for DISCOMs of Karnataka viz. MESCOM, GESCOM for the RGGVY works under the 10th and 11th Plans.
4. National Power Training Institute (NPTI) gests consultancy Contract fro preparation of FR/DPR for the establishment of a new Power Training Institute (PTI) in Bhutan. Hydroelectric Projects of 10,000 MW have been planned at Bhutan with the support of Govt. of India to meet the manpower requirements fro the projects and generate employment, the local youths needs to be trained M/s WAPCOS Ltd., (A Govt. of India Undertaking has been given an order dated 24.2.2012 to NPTI for preparation of FR/DPR for the

establishment a new Power Training Institute (PTI) within Bhutan sole dedicated to the hydropower sector to provide training Graduate Engineers, Diploma holders and ITI/VTI certificate holder in Operation and Maintenance aspect. The broad scope of work includes study of assessment the requirements in respect of infrastructure (plot area buildings, laboratories and workshops, other non-residential building, hostel and staff quarters, recreation areas, electrification, telecommunication, water supply and sewage, computer hardware and software, tools and equipment, vehicles, training simulators), consumables, training staff, training courses to be offered, course contents and schedules, entry qualifications, financing mode, fund requirement and time frames etc.

5. NPTI has been awarded a consultancy contract by NHPC on 15.10.2012 for preparation of Detailed Project Report (DPR) for setting up of a Hydro Power Training Institute at Kangan (near Srinagar), J&K. The State of J&K has a hydel potential about 20,000 MW out of which on 2456 MW has been harnessed so far. The State Govt. and Central Govt. have drawn up an ambitious plan for harnessing the vast hydel potential of the State and generation about 6565 MW of Power during the next five years. There a need of trained manpower to operate and maintenance these upcoming plants in the state. To cater such a massive requirement of training. State Government of Jammu & Kashmir requested NHPC for establishing, operating and maintenance a Hydro Power Training Institute.

Trainees in Combined Cycle Gas Turbine Simulator at
NPTI Corporate Office, Faridabad.

Power Sector Famillarrisation program for IES Officers
at NPTI Corporate Office, Faridabad

Models

All the Institutes under NPTI have good number of working and non-working models relating to various main systems and equipments of Thermal Power Stations, Hydro Power Stations and Power Systems. Models for demonstration in the diversified areas of training in NPTI are also available.

Audio Visual Aids

All the institutes are well equipped with Audio Visual aids which are required for efficient running of training programs. Latest computer compatible projection systems have been added to the existing slide projectors, over head projectors, DVD Players televisions, recoding decks, personal computers, slide-synchronized packages for various lessons in operation and maintenance of Power Stations.

Medical Services

Services of well qualified doctors are available on part-time basis in each of the Institute Complex.

General Information

NPTI and its Institute work on five days a week (Monday to Friday) and the working hours are from 09:30 to 18:00 hrs. The changes in program schedule, if any, shall be duly intimated. NPTI regularly organizes Training programs/ Seminars/ Workshops in collaboration with National/ International Power Sector Organizations, details of which are circulated separately. NPTI publications provided to the trainees of various courses are also available for sale on specific requests.

How to apply for participation

Nomination along with course fee for various courses may be sent to The Principal Director/ HoI of the respective institute at least 15 days in advance from the date of commencement of the course.

Training Academic Programs

NPTI is conducting the following training programs at its institutes

- Two year MBA in power management at Faridabad.
- Four Year B.Tech/B.E in Power Engineering
- One year Post Graduate Diploma in Thermal Power Plant Engineering
- One year Post Graduate Diploma Course in Sub-Transmission and Distribution
- 52 weeks Graduate Engineers Course in Thermal.
- 26 weeks Post Graduate Diploma Course in Transmission and Distribution.
- 52 weeks induction level training course in Operation and Maintenance of TPS for Graduate Engineers, Diploma Engineers/ Operators.
- Nine months Post Graduate Diploma Course in Hydro Power Plant Engineering.
- Six months Post Graduate Diploma course in Transmission and Distribution System.
- Six months Post Diploma course in Thermal Power Plant Engineering.
- Short-term refresher courses for in-service Engineers/supervisors/Operators.
- Short-term courses for maintenance Technicians.
- Simulator training courses.
- Power System Training Courses at PSTI.
- Live Line Maintenance Courses at HLTC.
- Short Term Training Course in Hydro-Power Training Centre at Nangal.

Shri Subodh Garg, Director General, NPTI presenting awards to the childrens of NPTI Corporate Office employees during "Hindi Saptah"

पश्चिम क्षेत्र नागपुर में हिन्दी पुस्तक प्रर्दशनी का अयोजन

Shri Subodh Garg, Director General, NPTI presenting awards during "**Hindi Saptah**" NPTI Corporate Office, Faridabad

NPTI ORGANISATION

Besides its Corporate Office at Faridabad (Haryana), National Power Training Institute operates on all India basis through its Regional Institutes located in the different Power Zones of the country. These Institutes are headed by Principal Directors/Directors under the overall control of the Director General, NPTI. The addresses of NPTI Corporate Office and Regional Training Institutes are given below:

NPTI CORPORTATE OFFICE

Director General
National Power Training Institute
NPTI Complex, Sector-33, Faridabad – 121 003 (Haryana)
Telephone: 0-129-2275475, 2257131, EPABX : 0129-2274916, 2274917
Fax: 0-129-2277412 e-mail: nptifaridabad@npti.in Website: www.npti.in

TRAINING INSTITUTES

1. **Principal Director, (CP&M/BDD/Purchase)**
   NPTI Complex, Sector-33, Faridabad-121003 (Haryana)
   Ph.: (0129) 2275213
   e-mail: jssrao@npti.in
2. **Principal, (Management Studies/IT/ER/NER)**
   NPTI Complex, Sector-33, Faridabad-121003 (Haryana)
   Ph.: (0129) 2270949
   e-mail: skchoudhary@npti.in
3. **Director, (Training/ Project)/(F&A)**
   NPTI Complex, Sector-33, Faridabad-121003 (Haryana)
   Ph.: (0129) 2272210
   e-mail: rkmishra@npti.in
4. **Head of Institute, National Power Training Institute (N.R.)**
   Badarpur, New Delhi -110044
   Ph.: (011) 26940722, 26947043
   Fax: (011) 26940722
   e-mail: nptibadarpur@npti.in
5. **Head of Institute, National Power Training Institute (HPTC)**
   Opp. Nangal Dam Rly. Station, Nangal, Distt. Ropar, Punjab - 140124
   Ph.: (01887) 220573, 221129
   e-mail: nptinangal@npti.in
6. **Head of Institute, Power Systems Training Institute, National Power Training Institute**
   P.O. Box: 8201 Subramanyapuran Road, Banashankari II Stage, Bengaluru-560070 (Karnataka)
   Ph.: (080) 26713758 Fax: (080) 26713758
   e-mail: nptipsti@npti.in
7. **Head of Institute, Hotline Training Centre, National Power Training Institute**
   26th Km, Kanakapura Road, Somanahalli Gate Udaypura Post, Bengaluru-560082 (Karnataka)
   Ph.: (080) 28432596, 28432053 Fax: 28432596
   e-mail: nptihltc@npti.in
8. **Principal Director, National Power Training Institute (S.R.)**
   Block 14, NLC Township,
   Neyveli – 607803 (Tamil Nadu)
   Ph.: (04142) 269427, 268185 Fax: (04142) 269427
   e-mail: nptineyveli@npti.in
9. **Head of Institute, National Power Training Institute (E.R.)**
   City Centre, Durgapur-7132616 (WB)
   Ph.: (0343) 2545888, 2546237 Fax: (0343) 2545888
   e-mail: nptidurgapur@npti.in
10. **Head of Institute, National Power Training Institute (NER)**
    Dakhingaon, Kahilipara (Assam),
    Guwahati-781019
    Ph.: (0361) 2381346 Fax: (0361) 2381329
    e-mail: nptiguwahati@npti.in
11. **Principal Director, National Power Training Institute (W.R.)**
    South Ambazari Road, Gopal Nagar,
    Nagpur – 440 022, (Maharashtra)
    Ph.: (0712) 2236545, 2226176 Fax: (0712) 2220413
    e-mail: nptinagpur@npti.in

Shri R. K. Mishra, Director (Training & Projects), NPTI has been selected for the "**Asia Pascific HRM Congress Awards 2014**" in the Individual Award Catergory of "**Leaders of Tomorrow Award**" by World HRD Congress. This award is for his outstanding work & achievements in the area of Training and Development.

The award was announced at a glittering ceremony held at Bengaluru on 11th September, 2014.


भारतीय अन्तरराष्ट्रीय व्यापार मेला 2013
स्वर्ण पदक से पुरस्कृत
India International Trade Fair 2013
GOLD MEDAL
विद्युत मंत्रालय
Ministry of Power
shine
HR LEADERSHIP
AWARDS
THE AWARD FOR BEST LEARNING & DEVELOPMENT STRATEGY
National Power Training Institute
3rd Asia's Best Employer Brand Awards
AWARD FOR EXCELLENCE IN TRAINING
National Power Training Institute
UNIVERSUM
Dr. R.L. Bhatia
Phil Knight
4th Asia's Best Employer Brand Awards
AWARD FOR EXCELLENCE IN TRAINING
NATIONAL POWER TRAINING INSTITUTE
Dr. R. L. Bhatia
Phil Knight

TRANSNATIONAL TRAINING

NPTI and its Regional Institutes are equipped with state-of-the-art infrastructural facilities to meet the specific requirements of training foreign nationals. NPTI offers all the courses detailed out in this calendar and also tailor-made/customized need base programs to suit the organization's objectives. Typical training capsules have been designed on Power Plant Management, Combined Cycle Gas Turbine Power Plants, Transmission & Distribution areas etc.

NPTI in its various courses has trained many foreign Nationals from Zimbabwe, Iraq, Oman, Bhutan, Bangladesh, Sudan, Ethiopia, Syria, Malaysia, Philippines, Cambodia, Myanmar, Zambia, Mexico, Nigeria, Kenya, Afghanistan, Papua New Guinea, Ecuador, South America etc. Programs conducted for these Nationals did receive exceptionally encouraging feedback with rave reviews.

Foreign Training Course Fee: 2015-2016

S.No.	Course	SAARC Countries	All other countries
1	Regular Course on Power Plant Engg.	US $700 per week per participant subject to maximum of US $ 15000 up to 52 weeks duration	US $ 800 per week per participant subject to maximum of US $ 17000 up to 52 weeks duration
2	Simulator Training	US $ 1650 per week per participant	US $ 2000 per week per participant
3	Boarding and Lodging in NPTI Hostel	US $ 700 per week per participant (AC Rooms on single occupancy basis)	US $ 800 per week per participant (AC Rooms on single occupancy basis)
4	Specialized need based Tailor made courses	As per estimate	As per estimate

A New Power Training Institute (PTI) at Dekiling, Bhutan was inaugrated by Sh. Pranab Mukherjee, Hon'ble President of the Republic of India on 7th November 2014. The members of a committee constituted by the Ministry of Power, GOI, Sh. A. C. Chaturvedi, E.D, PMI-NTPC and Sh. R. K. Mishra, Director (Tech.), NPTI attended the Inaugural Function of the Power Training Institute.

FEE STRUCTURE FOR VARIOUS TRAINING PROGRAMS OF NPTI

FOR THE YEAR 2015-2016

S.No.	Name of the Course	Duration	Training Fee (Common for all viz. SEBs/PSUs/ Private organisations) (₹)
	LONG TERM COURSES (Period 17 to 52 Weeks)		
1	Graduate Engineer (Thermal)*		
	i) Non-sponsored candidates	52 Weeks	2,30,000
	ii) Sponsored candidates	52 Weeks	3,60,000
2	Graduate Engineers(Thermal Condensed)*	26 Weeks	2,00,000
3	Post Graduate Diploma course in Thermal Power Plant Engineering*		
	i) Non-sponsored candidates	52 Weeks	2,30,000
	ii) Sponsored candidates	52 Weeks	3,60,000
4	Post Graduate Diploma Course in Hydro Power Plant Engineering*		
	i) Non-sponsored candidates	39 Weeks	1,75,000
	ii) Sponsored candidates	39 Weeks	2,00,000
5	Post Graduate Diploma Course (PGDC) in Sub Transmission & Distribution System*		
	i) Non-sponsored candidates	52 weeks	2,30,000
	ii) Sponsored candidates	52 weeks	3,60,000
6	Post Graduate Diploma Course in T&D Systems*		
	i) Non-sponsored candidates	26 Weeks	1,45,000
	ii) Sponsored candidates	26 Weeks	1,90,000
7	Post Diploma Course in Thermal Power Plant Engineering*		
	i) Non-sponsored candidates	52 Weeks	1,45,000
	ii) Sponsored candidates	52 Weeks	2,20,000
8	Post Diploma Course in Hydro Power Plant Engineering*		
	i) Non-sponsored candidates	26 Weeks	80,000
	ii) Sponsored candidates	26 Weeks	1,35,000
	MEDIUM TERM COURSE: (Period 5 to 16 Weeks)		
9	Specialized Courses	16 weeks	1,20,000
10	Specialized Courses	15 weeks	1,15,000
11	Specialized Courses	14 weeks	1,10,000
12	Specialized Courses	13 weeks	1,05,000
13	Specialized Courses	12 weeks	1,00,000
14	Specialized Courses	11 weeks	95,000
15	Specialized Courses	10 weeks	90,000
16	Specialized Courses	9 weeks	84,000
17	Specialized Courses	8 weeks	78,000
18	Specialized Courses	7 weeks	72,000
19	Specialized Courses	6 weeks	65,000
20	Specialized Courses	5 weeks	57,000

	SHORT TERM COURSES: **(Period 1 to 4 Weeks)		
21	Specialized Courses	4 weeks	47,500
22	Specialized Courses	3 weeks	37,500
23	Specialized Courses	2 weeks	27,500
24	Specialized Courses	1 week	15,000
25	Specialized Courses	4 Days	13,500
26	Specialized Courses	3 Days	11,000
27	Specialized Courses	2 Days	7,500
28	Specialized Courses	1 Day	4,000
29	Training Fees for On-site/On-plant training Programs	1 week	25,000#
30	Training Fees for On-site/On-plant training Programs	4 Days	23,000#
31	Training Fees for On-site/On-plant training Programs	3 Days	18,500#
32	Training Fees for On-site/On-plant training Programs	2 Days	13,000#
33	Training Fees for On-site/On-plant training Programs	1 Day	7,000#

(#Minimum10 Participants)

Includes Thermal Simulator Training fee of 2 weeks/ CCGT Simulator Training fee of 2 weeks / Hydel Simulator Training fees of 1 week / Power System Training Simulator fee of 1 week as applicable.

****In respect of short term courses, fee is inclusive of tea/snacks and working lunch. In respect of other courses, fee is exclusive of tea/snacks and working lunch.***

Note: For specialized courses/on-site/on-plant Training Programs minimum no. of participants should be 10. If no. of participants are less than 10, then fee for 10 participants will be charged.

HLTC, BENGALURU
REGULAR PROGRAMS – RESIDENTIAL (2015-2016)

S.No.	Name of Course	Duration	*Training fee ₹ Per Participant
1	Live Line Maintenance Techniques(LLMT) using Hot Stick Method	12 weeks	1,55,000
2	Live Line Maintenance Techniques(LLMT) using Bare Hand Technique	05 weeks	1,15,000
3	Switchgear Maintenance Techniques using LLMT for Linemen/Supervisors	04 weeks	90,000
4	Special Course on Cold Line	04 weeks	72,000
5	Capsule course for Executives on Hot Line Activities	01 week	18,000
6	Training on Insulator washing Techniques	01 week	18,000

*** Training Fee includes Boarding and Lodging Charges.***

SIMULATOR TRAINING FEE FOR THE YEAR 2015-16

External Participants	* Training Fee (₹) / Week / Participant
Thermal Simulator	27,500
Hydel Simulator	20,000
CCGT Simulator	27,500
Power System Simulator	20,000

**** Training fee include tea/snacks and working lunch.***

NOTE : Service Tax will be levied extra as applicable on various components like Training Fee, Boarding & Lodging Charges, Transportation Charges and the present rates are as under :

S.No.	Items	Rate of Service Tax
1.	Training Fee	12.36%
2.	Boarding Charges	7.42%
3.	Lodging Charges (Above ₹ 1000/day/room)	7.42%
4.	Transportation Charges	4.94%

Shri Shri Vishwakarma Puja Celebration at NPTI (CO), Faridabad.

(A). ACADEMIC COURSES

1. MBA (POWER MANAGEMENT)

The program is targeted towards fresh and practicing engineers and is a unique golden opportunity for the Management of Power Utilities to groom bright executives with engineering background who are expected to move to key positions in the near future. In addition to the inputs provided in regular MBA programs, this 'Program with a Difference' lends special emphasis on specific Power Sector issues and ethos to give extra strength to the Indian Power Sector engineers to steer Power Sector of the country in the challenging times ahead. The curriculum design and the learning process emphasize the development of students' skills and abilities to apply management theories and concepts to live problems of electricity industry. The course is duly recognized by AICTE and affiliated to Maharshi Dayanand University, Rohtak.

Objective

i To create a pool of committed and competent professionals equipped with the appropriate managerial and technical skills to steer the Indian Power Sector and run it on commercial lines.

ii To develop future world class business leaders and decision makers who can think innovatively, duly sensitized to social and environmental interface and are capable of searching for alternative solutions

iii To imbibe basic values and ethos with in-depth understanding of Indian realities.

Pedagogy

Class room lectures, seminars, case studies, group discussions, role plays, group works, summer project at organizations related to electricity business will be resorted to impart knowledge and skills to the students. In addition visits to power stations, Transmission and Distribution facilities, manufacturers' works shall be organized to ensure that the students have the real 'feel' of the power sector.

Program Structure

This is a two-year program spread over four Semesters. In the first year, the students take courses in major functional / general management areas like Human Resources, Operations, Finance & Accounting, Marketing, Information Technology and core Power Sector areas. In the second year, the students take compulsory specialized courses in the area of Power and Management. In addition they have to opt from a list of electives covering various specific courses from the areas of Power and Management.

Summer Project

Students are required to undertake 8-week Summer Training Projects in a Company/ Organization related to Consultancies, Power and associated industries after completion of First Year. A Compulsory Project also needs to be carried out in the IV Semester concurrently with the subjects. Evaluation will again be based on submission of written Project Reports and a defense presentation.

Intake

The intake is 120 Seats.

Distribution of Seats				
Non-Sponsored Seats				Sponsored Seats
Gen	SC	ST	OBC	
53	16	08	28	15

The reservation of seats is as per the Reservation Policy of the Central Government and is subject to any change/amendment by the Central Govt. from time to time

Eligibility for Admission

A) All candidates (excluding sponsored

category) are required to appear for CAT Examination conducted by IIMs.

B) The candidates (including sponsored category) who have obtained B.E./B.Tech/ B.Sc. (Engineering) in any branch of Engineering recognised by the M.D. University/AIU securing a minimum of 60 % marks in aggregate of all semesters or equivalent in terms of CGPA grade are eligible to apply for admission to the course. For SC/ST candidates minimum pass marks are required.

(or equivalent in CGPA grade).

C) Candidates having a CAT Score of 50 percentile and above are only eligible to apply. Any other information you can visit on NPTI website (www.npti.in)

Course Fees: (includes development fund to the University)

Non–sponsored Rs.1,25,000/- per semester

Sponsored Rs. 5,00,000/- per annum

Date of Commencement: August 2015

2. B.TECH. / B.E. IN POWER ENGINEERING

BARDARPUR

B.Tech. Power Engineering (Electrical/ Mechanical) program addresses the technical and human resource needs of the power sector, in context of remarkable changes in this particular sector since last decade. India, which is on growth trajectory, is witnessing high growth in all spheres of economy, and so does the power sector, the backbone of all industrial activity.

Power industry is multi disciplinary, highly capital intensive and as any other sector, human resource plays pivotal role in this sector. Power industry requires trained manpower for project planning, implementation, erection, commissioning, operation & maintenance protection and transmission & distribution. No conventional engineering stream available in educational institutions can equip a person with such vast knowledge of different inputs required for the job performance in the power sector. Therefore, a specialized degree course is necessary for the manpower needs of power sector which is growing at spectacular rate.

This four-year degree course, B.Tech. in Power Engineering (Electrical/Mechanical) being offered by NPTI (NR) is first of its kind in the country.

This degree course is duly recognized by AICTE and NPTI (NR) is running it with affiliation to Guru Gobind Singh Indraprastha University, New Delhi.

Admission

Admissions to this course are made through Common Entrace Test (CET) conducted by Guru Gobind Singh Indraprastha University (GGSIPU) in May/June every year with an intake of 60 students. Six seats are reserved for diploma holders who are admitted through an entrance test, conducted by GGSIPU, in the third semester directly.

Course Overview

B.Tech. Power Engineering (Electrical/ Mechanical) program is divided into eight semesters. The first two semesters being the introduction to the technical world, inculcates the basics required by an engineer. The foundation for power engineering is laid in the next two semesters by providing the insight in subjects like electrical machines, thermodynamics, fluid mechanics, control engineering and energy conversion. The course content laid down in the following semesters is designed in such a manner that it provides edge over conventional electrical and mechanical engineers and lead to the emergence of power engineers. The semester wise subject break-up is as follows:

SEMESTER	SUBJECTS					
I	Applied Mathematics-1	Applied Physics-1	Applied Chemistry-1	Manufacturing Process	Introduction to Computers	Communication Skills-1
II	Applied Mathematics	Applied Physics-2	Applied Chemistry-2	Introduction to Programming	Engineering Mechanics	Electrical Science
III	Material Science & Metallurgy	Thermo Dynamics	SOM TOM	Circuit Theory	Analog Electronics	Electrical Machines
IV	Engineering Economics	Energy Conversion	Heat & Mass Transfer	Fluid Mechanics	Digital Electronics	Control Engineering
V	Power Generation Engineering	Steam Generator and Its Auxiliaries	Steam Turbine And its Auxiliaries	PPEMS	Power System	RAC* OR EEM#
VI	Power System Protection and Switchgear	TPPER-I	Power Plant Operation	Power Plant Control and Instrumentation	I.C.Engines & Gas Dynamics* OR Power Electronics & Electric Drives	Machine Design* OR Engineering Electro-Magnetics
VII	Power Distribution And Utilization	TPPER-II	Power Plant Maintenance	Theory of Machine* OR Power System Analysis & Stability#	Manufacturing & Industrial Engineering* OR Communication Engineering#	Civil Works in Power Engineering
VIII	Load dispatch and regulatory issues	Environmental management, energy conversion	Management concepts and techniques	Mechanical vibration* OR Design of electrical machines#	Energy management* OR HVDC Technology	

**** Power Engineering (Mechanical)***

**** Power Engineering(Electrical)***

ISTS-Impact of Science & Technology on Society

SOM TOM-Strength of Material & Theory of Machines

PPEMS-Power Plant Electrical Machines & Systems

RAC-Refrigeration & Air Conditioning EEM-Electrical & Electronics Measurements

TPPER-Thermal Power Plant Engineering Related Topics

Course fee of B.E. as per University Norms

Intake Capacity - 60

DURGAPUR

Course Overview and Admission

This course started at Durgapur Institute from financial year 2002-2003 along with other institutes and approved by AICTE and affiliated to West Bengal University of Technology (WBUT). Admission to this course is open through WBJEE / AIEEE. The medium of instruction & examination is English. The duration of the course is four academic years. Each academic year (1st July to 30th June) is divided into two semesters of about sixteen effective weeks each. The courses include study at the college, visits to work sites and practical in the college workshop & labs, different engineering works, Power Plants etc.

ELIGIBILITY

A Candidate is eligible for admission to B-Tech (Power Engineering) at NPTI (ER), Durgapur subject to the following conditions:

a] He / She should pass the Higher Secondary Examination (10+2) of West Bengal Council of Higher Secondary Education with English, Chemistry, Mathematics and Physics or an equivalent examination. In case of Lateral entry, he/she should pass the diploma in Mech-/Elect. Engg. from Govt. approved polytechnic college.

b] He / She should maintain good mental and physical health. No abnormality in heart, Lungs and vision.

c] He / She should have to qualify in the Joint Entrance Examination, of the year of admission, conducted by the West Bengal Board of Examination for Admission to Engineering and Technological Degree Colleges.

d] He / She will have to submit school leaving / Migration Certificate / Continuity Certificate as the case may be, within a specified date, otherwise the provisional admission of the candidate will stand automatically concealed.

INTAKE

Discipline Sanctioned Intake:

Engineering Sixty (60) WB-JEE/AIEEE through CSC

Management Quota - 06, WB-JEE - 48, AIEEE- 06

Six (06) seats are filled up through lateral entry (WB-JELET) for diploma students (Elect./ Mech.) directly in second year.

Course fee of B.E. as per University Norms.
Intake Capacity - 60

SEMESTER	SUBJECTS					
I	Mathematics	Engineering Physics	Mechanical Sciences	Basic Electrical Engineering	Environment & Ecology	English Language & Communication
II	Engineering Physics	Mathematics	Mechanical Sciences	Introduction to Computing	Basic Electronics Engineering	Engineering Chemistry
III	Fluid Mechanics	Thermo Dynamics	Mathematics	Mechanics of Deformable Bodies	Circuit Theory & Network	Electrical Electronic Measurement
IV	Fluid Machinary	Engineering Thermodynamics	Materials Science and Technology	Theory of Machines	Electrical Machines	Digital Electronics & Integrated circuits
V	Renewable Energy Systems	Hydro Power Generation	Nuclear Power Generation	Electrical Machines - II	Heat Transfer	Microprocessor and Microcontrollers
VI	Steam Generators and its Auxiliaries	Steam Turbines and its Auxiliaries	Electrical Equipment in Power Station	Power Transmission and Distribution	Control Systems	Refrigeration and Air Conditioning OR High Voltage Engg
VII	Advance Technology	Protection, Control& Instrumentation	IC Engine	Control Systems	Elective Paper : II Design of Mech. Equipments OR Design of Elect. Equipments	Elective Paper : III Power Electronics OR Tribology & CBM
VIII	Thermal Power Plant Operation & Maintenance	Operation Research & Industrial Engineering	Elective : IV Manufacturing Science OR Electric Drives	Elective : V Technology of Machining and metal cutting OR HVDC Transmission		

NAGPUR

NPTI Nagpur has started 4 years degree course in the year 2001.The course is approved by AICTE and affiliated to RTM Nagpur University, Nagpur. The Tuition fees is approved by Shikshan Shulk Samiti Mumbai which is an approved body of Directorate of Technical education. Maharashtra Govt. and Tuition fees is revised every year based on the expenditure and infrastructure of the Institute.

Technical education contributes substantially to the Socio Economic development of the country as a whole. The development sustenance of the industrial sector is entirely dependent upon the availability of trained manpower to perform the multidimensional activities needed to keep the wheel of industry running. Thus this program aims towards making available these trained technically qualified hands to serve the power industry & society. Equality of educational opportunities and preparing highly skilled work force for enterprises widely with excellence is also objective of Technical Education. Technical Education system is thus has to be flexible enough to adopt to rapid change. Thus precise aim of the system is to develop and transfer of technology to the power sector.

Admission

The admissions of 1st year are made through Common Admission Process (CAP) of Maharashtra Govt ie DTE. First year curicullam is based on yearly pattern and rest of the years are on semester pattern. The degree is awarded by RTM Nagpur University. Essar Power ltd has sponsored Gold medal for this program for the student who secure first merit position in this branch.

The Tuition fees of B.E. as per Directorate Technical Education (DTE)Norms.

Intake capacity - 60

SEMESTER	SUBJECTS					
I & II (Ist Year) Yearly	Applied Mathematics-I, Applied Physics, Applied Chemistry, English Social Science, Applied Mathematics-II, Engineering Drawing, Workshop Engineering Mechanics, Electrical Engineering					
III	Applied Mathematics III	Fluid Power-I	Manufacturing Process	Network Analysis	Electronic Devices & Circuits	Computer Programming
IV	Theory of Machines	Engg. Thermodyn amics	Digital Circuits	Basic elect m/c	Fluid Power II	Material Science & Metallurgy
V	Heat Transfer	Auto Control	Thermal Power Station Layout, Common Aux. & Safety	Machine Design I	Environmental Management	Power plant visits
VI	Energy Conversion I	Indl. Economics & Management	Thermal Power Plant Control & Instrumentation	Power generation technology	Steam Generators & its Aux.	Power plant Training/visits
VII	Steam turbine & its Aux	Machine Design II	Turbo Generator and its Aux.	Thermal Power Plant Commissio ning	Energy Conversion II	Project Seminar
VIII	Switchgear & Protections	Thermal Power Plant Operation & Performance	Power Plant Maint. Practices	Power plant operation practices	Elective-1	Project work

Elective I- Subjects 1. IT and its applications in Power Engg. 2. Materials Handling System 3. Non-conventional Energy Sources

Date of Commencement July 2015

3. POST GRADUATE DIPLOMA COURSE IN THERMAL POWER PLANT ENGINEERING

Objective

To prepare the fresh Graduate Engineers to become Power Station Managers in Operation and Maintenance of Thermal Power Stations. The admission to this course is done through a common entrance test held on all India Basis.

Program Profile

Module No.	Description	Duration
GF-1	Introduction	
GF-2	Power Plant Description	5 weeks
GF-3	Power Plant Scheme Tracing & System Discussion	2 weeks
GF-4	Power Plant Operation	3 weeks
GOJ-1	Power Plant Operation (Manual)	4 weeks
GOJ-2	Power Plant Operation (Supervisory)	4 weeks
GF-5	Performance (Formal)	1 week
GF-6	Safety	1 week
GF-7	Plant training (Practical)	5 weeks
GF-8	Planning & Cost Control	1 week
GOJ-3	Maintenance (Supervisory)	8 weeks
GOJ-4	Performance (On-job)	1 week
GF-9	Chemistry	1 week
GF-10	Basic Welding	½ week
GF-11	Non-Destructive Testing	½ week
GF-12	Protection	1 week
GF-13	Introduction to Management	2 weeks
GF-14	Simulator Training	2 weeks
GF-15	Metallurgy	1 week
GF-16	Computer Applications	1 week
GF-17	Load Dispatch	1 week
GF-18	Control & Instrumentation	2 weeks
GF-19	Maintenance & Inspection	4 weeks
	Appraisal & Valedictory	1 week
		Total 52 Weeks

Venue	Duration	Date of Commencement
Faridabad	52 weeks	19-08-2015
Badarpur	52 weeks	19-08-2015
Nangal	52 weeks	19-08-2015
Neyveli	52 weeks	19-08-2015
Durgapur	52 weeks	19-08-2015
Guwahati	52 weeks	19-08-2015
Nagpur	52 weeks	19-08-2015

Who may attend

B.E./B. Tech. or equivalent in Mechanical/Electrical/Electrical & Electronics/Power Engg.

4. PGDC IN SUB-TRANSMISSION AND DISTRIBUTION SYSTEMS

Objective

The main objective of the course is to create a technically trained manpower readily available for recruitment by the power companies and electrical service divisions of large industries in the area of Sub-Transmission & Distribution of Electrical Power.

This is a Post Graduate Diploma Course for those who desire to make a career in the power sector. On successfully undergoing this course the Electrical Graduate Engineers will find immense opportunities and preference in employment with various power companies.

Outline

The course covers the Syllabus as per Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulation, 2010.

Semester-I

General Introduction Overview of Power Sector Scenario

Fundamentals of Electricity, Power Quality, Harmonics & Mitigation

Distribution Planning, Optimization, Design & Engineering Erection & Commissioning of Distribution Substation HT and LT Switchgears, Metering, Power Cables, LT Cables

Sub-Transmission and Distribution Lines

PLCs and Power Factor Correction

Grounding & IE Safety Regulations

Protective Relays

Distribution System Protection

Control Panels

Distribution Automation

Distributed Generation & Grid Integration

Labs in PSTI: Power System, High Voltage Testing, Relay Testing and Despatcher Training Simulator

Reliability issues, customer awareness and satisfaction & IT Interventions

Service Connections, H R Aspects & CRM

Semester II

On job training-Electrical Machines, Wiring, Meters and Illumination

Rural Electrification

Regulatory environment-Rules and Regulations and Energy Efficiency

Demand Side Management and Smart Grids

Best Practices in Power Distribution

Project Management & Contracts

Electrical Maintenance

HLTC Training-Switchyard, Live Line Maintenance, Rubber Glove Maintenance, Hot Line washing

Venue	Duration	Date of Commencement
PSTI Bengaluru	52 weeks	05-10-2015
NPTI-NER Guwahati	26 weeks	16-11-2015

Who may attend

B.E./B. Tech. or equivalent in Electrical/Electrical & Electronics/Power Engg.

Methodology

Lectures, Lab Sessions, Appraisal, Communication skills & Project work

5. POST GRADUATE DIPLOMA IN HYDRO POWER PLANT ENGINEERING

Objective

To prepare engineers to become Power Station Managers in Operation and Maintenance of Hydro Power Stations.

Program Profile

Module No.	Description	Duration
1	General Introduction of Hydro Power Plant Engineering	2 Weeks
2	Power plant familiarization of Hydro Power Plant Engineering	3 Weeks
3	Planning & cost control	1 Week
4	Safety & First aid	1 Week
5	Construction activity of a Hydro Power Plants	2 Weeks
6	Electro mechanical equipment using in HYDRO Power Plants	3 Weeks
7	Hydro mechanical equipment Testing Erection & Commissioning	1 Week
8	Welding and NDT	1 Week
9	Control & Instrumentation	2 Weeks
10	Computer application in Hydro Power plant	1 Week
11	Power Plant Protections	2 Weeks
12	Switchyard Equipments	1 Week
13	Power Plant Operation	2 Weeks
14	Load dispatch	1 Week
15	Maintenance of Hydro Power Plant Equipments	1 Week
16	Inspection of Hydro Power Plant Equipments	1 Week
17	Hydro Power Plant Simulator	1 Week
18	Introduction to Management	1 Week
19	Plant Operational Training at Hydro Power Plant (On-JOB)	6 Weeks
20	Plant maintenance Training at Hydro Power Plant (ON-JOB)	5 Week
21	Final assessment & Evaluation	1 Week
		Total 39 Weeks

Venue	Duration	Date of Commencement
Nangal	39 weeks	07-09-2015

Who may attend

B.E./B. Tech. or equivalent in Mechanical/Electrical/Electrical & Electronics/Power Engg.

6. POST GRADUATE DIPLOMA COURSE IN TRANSMISSION & DISTRIBUTION SYSTEM

Objective

The main objective of the course is to create technically trained manpower readily available for recruitment to the power companies in the area of Transmission & Distribution of electrical power.

Program Profile	Duration
• General Introduction Power Senerio & General Introduction	1 week
• Power Generation Thermal Power Plant Familiarization	1 week
• Power Transmission Lines Engineering and O&M	2 weeks
• Live Line Maintenance Technique	1 week
• Substation Planning & engineering	1 week
• Substation Operation & Maintenance	1 week
• Load Despatch & Grid Management	2 weeks
• Communications in Power Systems	1 week
• Power Distribution /Distribution Lines/Cables	1week
• Systems Engineering O&M	2 weeks
• Distribution Sub-Stations	1 week
• Distribution Metering	1 week
• Energy Audit and Conservation in Distribution Systems	1 week
• Information Technology Office applications	1 week
• In T & D Power System Planning Studies	1 week
• Safety, Statutory Safety & Statutory regulations	1 week
• Commercial aspects Commercial aspects in T&D systems	1 week
• Management of Electrical Contract	1 week
• New Technologies Power System Protection	1 week
• High Voltage Testing Power System Equipment	1 week
• HVDC Transmission System	1 week
• Simulator Training/Lab Simulator Training, Relay Testing	1 week
• Appraisal	1 week
Total	**26 Weeks**

Venue	Duration	Date of Commencement
Badarpur	26 weeks	16-09-2015
PSTI Bengaluru	26 weeks	01-06-2015
PSTI Bengaluru	26 weeks	04-01-2016
NPTI-NER Guwahati	26 Weeks	16-11-2015
Nagpur	26 Weeks	01-06-2015
		07-12-2015

Who may attend

B.E./B. Tech. or equivalent in Electrical/Electrical & Electronics/Power Engg.

7. POST DIPLOMA COURSE IN THERMAL POWER PLANT ENGG.

Objective

To give the Operators/Supervisors the knowledge and skill of overall operation and maintenance of thermal Power Plants along with specific background in Distribution Engineering.

Program Profile

Module No.	Description	Duration
1.	General Introduction and Orientation	01 week
2.	Environment & Personal Safety	08 week
3.	Power Plant Description	06 weeks
4.	Power Plant Scheme Description and Tracing	02 weeks
5.	Power Plant Operation (Supervisory)	02 weeks
6.	Power Plant Chemistry	01 week
7.	Power Plant Instrumentation	01 week
8.	Power Plant Efficiency Performance	01 week
9.	Basic Welding Practice & NDT	01 week
10.	Maintenance Planning Inspection and Cost Control	06 weeks
11.	Power Plant O&M (On-Job)	10 weeks
12.	Introduction to Management	01 week
13.	Computer Application	01 week
14.	Power System Operation and Electrical Protection	01 week
15.	Power Distribution Engineering and Systems	03 weeks
16.	Distribution Metering and Techniques of loss minimization	03 week
17.	Simulator	02 week
18.	Protection	01 week
19.	Final Appraisal	01 week
	Total	**52 Weeks**

Venue	Duration	Date of Commencement
Badarpur	52 weeks	16-09-2014
Neyveli	52 Weeks	30-11-2015
Durgapur	52 Weeks	01-03-2014
Guwahati	52 weeks	24-08-2015
Nagpur	52 Weeks	23-11-2015

Who may attend

Diploma or equivalent in Mechanical/Electrical/Electrical & Electronics

8. POST DIPLOMA COURSE IN HYDRO POWER PLANT ENGINEERING

Objective

To prepare Engineers to become Power Station Managers in Operation and Maintenance of Hydro Power Station

Module No.	Description	Duration
1.	General Introduction & Orientation	0.5 weeks
2.	Concept of Hydro Power Stations, Site Section, Component & Layout	1.5 weeks
3.	Hydro Mechanical Equipments	1 week
4.	Hydro Turbines	1 week
5.	Hydro Generator & Excitation	1 week
6.	Transformers	1 week
7.	Switchyard & GIS	1 week
8.	Working Principles, Characteristics and Operation of Auxiliary System	1 week
9.	Hydro Lab. Practical	1 week
10.	Control & Instrumentation	1 week
11.	C & I Lab. Practical	1 week
12.	Electrical Lab. Practical	1 week
13.	Protection & Interlocks	1 week
14.	Power Plant Operation	1 week
15.	Erection, Testing and Commissioning	1 week
16.	Load Dispatch & SCADA	1 week
17.	Power Plant Safety & Acts	1 week
18.	On Job Training	2 weeks
19.	Mechanical Maintenance	1 week
20.	On Job Training in Mechanical Maintenance	1 week
21.	Electrical Maintenance	1 week
22.	On Job Training in Electrical Maintenance	1 week
23.	Hydro Power Plant Simulator	1 week
24.	Final Evaluation & Project Assessment	2 weeks
	Total	**26 Weeks**

Venue	Duration	Date of Commencement
Nangal	26 weeks	03.08.2015

Who may attend

Diploma or equivalent in Mechanical/Electrical/Electrical & Electronics

(B). LONG TERM COURSES FOR ENGINEERS/SUPERVISORS/ OPERATORS (17 WEEKS AND ABOVE)

1. GRADUATE ENGINEERS COURSE (THERMAL)

Objective

To prepare the fresh Graduate Engineers to become Power Station Managers in Operation and Maintenance of Thermal Power Stations.

Program Profile

Module No.	Description	Duration
GF-1	Introduction	
GF-2	Power Plant Description	5 weeks
GF-3	Power Plant Scheme Tracing & System Discussion	2 weeks
GF-4	Power Plant Operation	3 weeks
GOJ-1	Power Plant Operation (Manual)	4 weeks
GOJ-2	Power Plant Operation (Supervisory)	4 weeks
GF-5	Performance (Formal)	1 weeks
GF-6	Safety	1 week
GF-7	Plant training (Practicals)	5 weeks
GF-8	Planning & Cost Control	1 week
GOJ-3	Maintenance (Supervisory)	8 weeks
GOJ-4	Performance (On-job)	1 week
GF-9	Chemistry	1 week
GF-10	Basic Welding	1/2 week
GF-11	Non-Destructive Testing	1/2 week
GF-12	Protection	1 week
GF-13	Introduction to Management	2 weeks
GF-14	Simulator Training	2 weeks
GF-15	Metallurgy	1 week
GF-16	Computer Applications	1 week
GF-17	Load Dispatch	1 week
GF-18	Control & Instrumentation	2 weeks
GF-19	Maintenance & Inspection	4 weeks
	Appraisal & Valedictory	1 week
		Total 52 Weeks

Venue	Duration	Date of Commencement
Neyveli	52 weeks	22-02-2016

Who may attend

B.E./B. Tech. or equivalent in Mechanical/Electrical/Electrical & Electronics/Power Engg.

(C). MEDIUM-TERM COURSES (5 WEEKS TO 16 WEEKS) FOR ENGINEERS / SUPERVISORS / OPERATORS

1. LIVE LINE MAINTENANCE TECHNIQUES (LLMT), USING HOT STICK METHOD (HSM)

Learning the Hot Stick Method of training is a basic necessity to execute works Live on Transmission Lines & Switchyard. The course covers the overall features of Hot Line Techniques including awareness about Hot Line Washing, Insulator testing, Switchyard Maintenance, etc. It is intended to enhance the competence level of the participants to handle the maintenance both on transmission lines and Switchyard using Hot Stick Methods. The training programme offers direct benefit to the organizations involved in maintenance of transmission lines / Switchyards by reducing the number and duration of shutdowns as well.

Objective

- To Provide in-depth approach and technical know-how in live line maintenance
- To highlight the importance of maintenance of HV and EHV Power Transmission lines using Hot Stick Method.
- To give an introduction to Bare Hand Method of Live Line Maintenance

Program Profile

- General Principles of LLMT.
- Introduction to maintenance of Power lines using Hot Stick Method.
- Practical oriented Operation covering various tower configurations.
- Sefety aspects and Regulatory requirements.
- Study Tours to Certain Important substations and transmission line locations.
- Hands on training on commercial lines of various configurations up to 220 kv.
- Field testing of insulators - use of analogue and digital methods, demo on the use of Punctured Insulators - use of analogue and digital methods, demo on the use of Punctured Insulator Detector (PID) test kit.
- Introduction to maintenance using Bare Hand Method of Live Line Maintenance and switchyard maintenance using LLMT.

Venue	Duration	Date of Course
HLTC, Bengaluru	12 Weeks	20-07-2015 28-12-2015

Who may attend

Foreman, Lineman, Asst. Linemen, Supervisors, Junior Engineers, Asst. Engineers, etc. actively involved in Line Maintenance activities having physical fitness. It is preferred that one of the nominee be in the rank of Executive cadre.

2. LIVE LINE MAINTENANCE TECHNIQUES (LLMT) USING BARE HAND METHOD (BHM) ON 400KV LINES

The fast growing HT / EHT / UHT Transmission lines and the rapid addition of 400 KV lines in the country, has made it imperative to upgrade the Live Line Maintenance Technology. The training program offers direct benefit to the organizations involved in maintenance of transmission lines by reducing the number and duration of shutdown. learning the Bare Hand Techniques in essential in order to exploit the fill potential of LLMT and it can increase the scope of Maintenance activities.

Objective

- To provide in-depth approach and technical know-how in Live Line Maintenance Techniques.
- To highlight the importance of Operation and Maintenance of HV and EHV Power Transmission Lines using Bare Hand Techniques

Program Profile

- Brief revision on LLMT using HSM
- Introduction to maintenance of Power Lines using Bare Hand Techniques
- Additional Safety Aspects and requirements
- Practical Oriented Operation Covering various tower configurations
- Hands-on training on 400 kv commercial lines of various configurations.
- Field training on testing of Insulators
- Introduction to switchyard maintenance using LLMT
- Study Tours to certain important substations and transmission line locations, if time permits. Major time will be devoted to impart training in the field on 400kv transmission lines as well as on commercial lines of POWERGRID Corporation of India dealing with practical aspects.

Venue	Duration	Date
HLTC Bengaluru	5 weeks	09-11-2015

Who may attend:

Foreman, Linemen, Asst. Linemen, Supervisors Junior Engineers, Asst Engineers etc. actively involved in Line Maintenance activities having physical fitness. It is prefered that one of the nominee be in the rank of Executive cadre. The candidates should have already been trained in Live Line Maintenance Techniques using Hot Stick Method.

3. POST GRADUATE CERTIFICATE COURSE IN THERMAL POWER PLANT ENGINEERING

Objective

Post Graduate Certificate Course in Thermal Power Plant Engineering for the candidate willing to make a career in the Power Industry. This course is designed for fresh and practicing Graduate Engineers.

Program Profile

- General Introduction: - Concept of Modern Thermal Power Plant, Location / Site Selection, Plant layout & Power Plant Safety.
- Constructional details and basic principles of large pulverized fuel Boiler and auxiliaries.
- Construction and working principles of Turbine and auxiliaries.
- Various types of Valves and Pumps.
- Construction and working principles of Alternators and Excitation Systems, Transformers, Motors, Switchgears, Power Supply System and Switchyard.
- Tariff Calculation.
- Tariff Based Bidding , Concept of UMPPs
- Fuel Handling Plant, Ash Handling System and Cooling Water System.
- Water Sources and treatment.
- Operation, control and supervision of Boiler, Turbine and Alternator.
- Instrumentation & Control (including DAS & DDC) and Protection system.
- Power Plant Maintenance practices.
- Scheme Tracing/ Plant Visits.
- Simulator Training

Venue	Duration	Date
Faridabad	12 weeks	29-06-2015 19-10-2015 22-02-2016
NPTI-NER Guwahati	12 weeks	04-01-2016

Who may attend

B.Tech., B.E. (Mech.), Electrical, Electronics, Control & Instrumentation and Power Engineering.

4. CERTIFICATE COURSE FOR HYDRO POWER PLANT ENGINEERS AND SUPERVISORS

Objective

To prepare Engineers and supervisors to work in Operation and Maintenance of Hydro Power Stations.

Program Profile

- Safety &First aid, General Introduction of Hydro Power Plant
- Power plant familiarization of Hydro Power Plant Engineering
- O&M of Hydro Power Plant components; Turbine, Governing System, Valves, Generators, Excitation system, etc.
- Switchgears, protection in HE station
- Power Plant Operation and function of Load dispatch centre
- Maintenance of Hydro Power Plant Equipments
- Hydro Power Plant Simulator Training
- Plant Operational Training at Hydro Power Plant(On-job)
- Plant maintenance Training at Hydro Power Plant (On-job)
- Final assessment & Evaluation

Venue	Duration	Date
Nangal	08.06.2015	12 weeks

Who may attend

Newly recruited Engineers and supervisors those posted in hydro power stations (Mechanical, Electrical & Instrumentation)

Delegates from Royal Govt. of Bhutan during their visit in Hydro Lab. at HPTC, NPTI, Nangal

5. SPECIALIZED TRAINING FOR HYDRO POWER PLANT WORKING ENGINEERS AND SUPERVISORS

Objective

To enhance knowledge & skill of working Engineers & Supervisors in O&M of Hydro Power Station

Program Profile

- Concept of modern hydro power station, site selection, Components, layout
- Hydraulic system, reservoir, storage capacity, dams and Barrages, intake, surge tank, power tunnels/channel, fore Bay and penstocks, pressure shaft, surge shaft, tail race and Tail race tunnel/channel, protection against water hammer And negative pressure in penstocks and suction head, Dewating of water conductor systems
- O&M of Hydro Power Plant components; Turbine, Gover Ning systems, Valve, Generator, Excitation system etc.
- Hydro Power Plant Simulator Training
- Plant visits at Hydro Power Plant sites

Venue	Duration	Date
Nangal	6 weeks	15.06.2015

Who may attend

Working Engineers and Supervisors in hydro power station (Mechanical, Electrical & Instrumentation.

Inauguration of PGDC program at NPTI Corporate Office, Faridabad

(D). SHORT-TERM COURSES FOR ENGINEERS / SUPERVISORS / OPERATORS (I DAY TO 4 WEEKS)

1. FACULTY DEVELOPMENT PROGRAM

Objective

To make the faculties aware of new teaching pedagogy, case studies, etc.

Program Profile

Focusing on the new updates, new teaching methodology, getting new Idea and a platform for discussion

Description

- Accreditation as a measure of quality ensure
- Involving students through case study in classroom teaching
- Creative teaching strategies take learning to a new level
- Emotional intelligence : The ultimate stress buster
- Helping your students develop critical thinking skills
- Behavioral communication skills for teaching profession
- Simulation exercise
- External advisory bodies

Duration	Venue	Date
1 week	Faridabad	09-06-2015

Who may attend

The program is designed for management teachers and researchers working. In management schools, universities, colleges and professional institutes. People from any stream taking any management and allied subjects like Economics, statistics, computer applications, commerce, banking, Sociology, etc are welcome.

2. RLA & LIFE EXTENSION OF SUB-STATION EQUIPMENT

Objective

To familiarize power engineers with the Remaining Life Assessment (RLA) of substation equipment.

Outline

- RLA – Objective and Methods
- Testing procedures and Methodologies
- RLA of Oil filled transformers
- RLA of Instrument Transformers
- RLA of circuit breakers
- RLA of Other sub station switchgear
- RLA of power cables
- Testing and calibration of substation meters

Venue	Duration	Date
PSTI Bengaluru	1 week	07-12-2015

Who may attend

Engineers / Supervisors from Power Utilities, Power Stations, Transmission and Distribution Companies, R & D organizations & Academic institutions.

3. POWER SYSTEM COMMUNICATION SCADA & EMS

Objectives

To familiarise power engineers with the architecture, functions and advantages of SCADA & EMS

Outline

- Data Acquisition System
- Supervisory Control
- Communication- VSAT, Microwave, Optical Fibre
- Communication networks & protocols

- SCADA in Distribution
- EMS Hardware: SCADA
- EMS Hardware: Control Centre
- EMS Software: SCADA & Database
- EMS Software: Generation applications
- EMS Software: Networking applications
- Field Visits

Venue	Duration	Date
PSTI Bengaluru	1 week	13-04-2015 07-12-2015

Who may attend

Engineers from State Electricity Boards, Power Utilities/ Corporations, R & D organizations and Academic institutions.

4. SUBSTATION PLANNING & ENGINEERING

Objective

To familiarize participants with the planning layout, design & engineering of Substation and selection of Substation equipment.

Outline

- Planning of substation & Preparation of Project Report
- Layout of Substation, Choice of Switching Schemes and Bus Bar/Bay Design
- Selection of Substation Main Equipment
- Design of Substation Earthing
- Electrical Clearances
- Over Voltages & Selection of Surge Arrestors
- Engineering of Protection System for Substation
- Measurement of Soil Resistivity
- RPC System
- Metering in Sub-station
- Sub-station Automation
- Field visits

Venue	Duration	Date
PSTI Bengaluru	1 week	06-04-2015 04-01-2016

Who may attend

Engineers from State Electricity Boards, Power Utilities/ Corporations, R & D organizations, Academic institutions

5. ENERGY EFFICIENCY MANAGEMENT IN POWER SYSTEM

Objective

To acquaint with the existing and emerging technologies in the area of energy efficiency and energy management

Program Profile

- Salient features of power generation, transmission and distribution system equipments and their functioning and monitoring.
- Measurement of performance parameters and energy efficiency calculations.
- Energy efficient technologies.
- Demand side management.
- Investment decisions for enhancement of energy efficiency.

Venue	Duration	Date
Durgapur	3 days	07-12-2015

Who may attend

Engineers working in the area generation, transmission and distribution.

6. CAPSULE COURSE FOR EXECUTIVE IN HOT LINE ACTIVITIES

Objective

The course is meant for spreading awareness about the live Line Maintenance Techniques (LLMT) amongst executives involved in EHV Line Maintenance in general and intended to highlight the scope of LLMT and Its potential extension to EHV switchyards in particular.

Program Profile

- Introduction to Hot Line Tools, Activities & Maintenance
- Live participation in maintenance operation on 66KV, 220 KV Commercial lines.
- Live insulator Testing methods
- Video and Film shows on Hot Stick Method and Bare Hand Technique
- Introduction to Hot Line Washing (Wet & Dry)
- Extension of LLMT activities to switchyard

Venue	Duration	Date
HLTCBengaluru	1 week	25-05-2015 22-09-2015 29-02-2016

Who may attend

Executives in the rank of Junior Engineer and above who are not trained in Hot line Activities.

7. VALVE AND PUMP MAINTENANCE

Objective

To acquaint the trainees with correct and modern methods of operation and maintenance of valves and pumps so that at the end of the course the trainees will be able to undertake maintenance of valves and pumps in dependently with confidence

Program Profile

- Description of different types of valves, their construction, operation and applications
- Correct use to tools, Dismantling
- Identifying the types of valves
- Replacement of worn out or damaged parts
- Description of different types of pumps, their construction, operation and applications.
- Single stage and multi stage centrifugal pump
- Maintenance of BFP & CEP
- Trouble Shooting

Valedictory Function for PGDC 18th Batch at NPTI (SR), Neyveli

Venue	Duration	Date
Badarpur	1 week	23-11-2015
Durgapur	1 week	20-04-2015

Who may attend

Engineers from SEBs/Power Utilities/ corporations with 2-3 years of experience in relevant field of power station

8. GAS TURBINE & CCPP REFRESHER COURSE

Objective

To familiarise the Engineers with Gas Turbine and Combined Cycle Power Plants and their role in the Indian Power Scenario, fuel options, efficient operation.

Program Profile

- Philosophy of Gas Turbine and Combined Cycle power Plant
- Fuel Options
- Waste Heat Recovery Boiler
- Steam Turbine and associated auxilaries
- Operational aspects and efficiency
- Visit to modern Combined Cycle Power Plant.
- Case Studies

Venue	Duration	Date
Badarpur	1 week	27-04-2015
Neyveli	1 week	01-02-2016

Who may attend

Engineers working in Gas Turbine & Combined Cycle Power Plants in the field of design, erection, commissioning and operation & maintenance.

9. PUMPS OPERATION, MAINTENANCE AND PERFORMANCE MONITORING

Objective

To acquaint the participants with the various aspects of pumps and the associated problems in their operation and maintenance

Program Profile

- Different types of pumps, their application & selection criteria for Power Station.
- Theory & working principles of different type of Pumps.
- Design & selection aspects and construction of boiler feed pump.
- CW Pumps (Centrifugal & Propeller)
- Special aspects of positive displacement Pumps.
- Components material selection for pumps installation & commissioning.
- Operation & trouble shooting.
- Maintenance Aspects
- Pump Characteristics on series/parallel operation.
- Performance assessments techniques & Monitoring Case Studies

Venue	Duration	Date
Badarpur	1 week	07-12-2015
Neyveli	1 week	06-04-2015
Nagpur	3 days	17-11-2015

Who may attend

Engineers of Power Plant & Industry.

Shri Subodh Garg, Director General,
at NPTI stall, India International Trade Fair, 2014, New Delhi

10.VALVE ACTUATORS MAINTENANCE

Objective

To train the participants on Actuators and associated gears and maintenance aspects.

Program Profile

- Different types of actuators and their selection.
- Description and working of: Electric, Pneumatic and Hydraulic Actuators.
- Maintenance of seals.
- Gears and Levers
- Setting and checking of actuators.
- Limit switches and torque switches.
- Actuator control equipment including position control.
- Feed back circuits and thyristors.

Venue	Duration	Date
Neyveli	3 days	06-05-2015

Who may attend

Power station technicians working in electrical and C&I maintenance sections.

11. THERMAL POWER STATION OPERATION

Objective

To provide the participants the in-depth knowledge of various operational aspects of thermal power station so that correct, efficient and safe operation is ensured.

Program Profile

- Power Station Schemes
- Boiler and Turbine controls.
- Excitation systems and AVR
- Cold, Warm and hot start-ups.
- Steam Turbine governing and protection systems, trouble shooting.
- Boiler, Turbine, Generator and Integrated unit operation under normal and emergency conditions.
- Unit shut down procedures and safety.
- Performance monitoring.
- Duties and responsibilities of operation engineers.

Venue	Duration	Date
Badarpur	1 week	11-05-2015
Neyveli	1 week	11-05-2015
Durgapur	1 week	03-08-2015
Nagpur	4 days	08-09-2015

Who may attend

Engineers having 1-2 years experience in Thermal Power Stations.

12. POWER PLANT AUTO CONTROL

Objective

To enable participants to line up, test, commission and maintain all control loops along with their hardware components.

Program Profile

- Auto Control Action Theory (PID) and their relevance to process reaction rate and dead time.
- Auto loops in Power Station with their built up action Hardware and Software.
- Selection and application of final control elements such as control valves, dampers, etc.
- Feed forward and feed back signal selections.
- Actuators: electric, Pneumatic and Hydraulic; their relative merits and applications.
- Thyristor drives and thyristor controlled drives.
- Limit switches and Torque switches
- Coordinated control concept and applications.
- Microprocessor based programmable logic controllers (PLC's) Distributed Digital Control System concepts.
- Periodical tuning Techniques and tuning

requirements.
- Commissioning of Automatic control loops with individual action, tuning techniques on Automatic Control Simulators.

Venue	Duration	Date
Neyveli	1 week	11-05-2015 06-07-2015

Who may attend

Engineers with 2-3 years experience in the relevant field.

13. VALVE MAINTENANCE

Objective

To acquaint the trainees with correct and modern methods of operation & maintenance of valves so that at the end of the course the trainees will be able to undertake maintenance of valves independently with confidence.

Program Profile

- Description of different types of valves, their construction, operation and applications.
- Correct use of tools, Dismantling.
- Identifying the types of valves.
- Replacement of worn-out or damaged parts.
- Use of correct lapping discs.
- Overhaul and maintenance of cover joints and bonnet joints.
- Correct method of cutting & jointing.
- Overhauling of valves.
- Hydraulic testing of valves.

Venue	Duration	Date
Neyveli	1 week	11-05-2015

Who may attend

The course is for technicians with 2-3 years experience in relevant field of Power Station.

14. FANS & AIR HEATERS

Objective

To acquaint the participants with the various types of fans and airheaters used in thermal power stations and their selection and design engineering aspects.

Program Profile

- Fans: Different types of fans and their applications, engineering, design and selection criteria.
- Construction details and components description for different types of fans.
- Fan operation techniques in series/ parallel conditions.
- Fan characteristics and performance monitoring.
- Condition Monitoring: Vibration measurement, rubbing sound measurement and other diagnostic studies.
- Fan maintenance procedures and practices.
- Air Heater: Different types, their design construction and selection aspects etc.
- Alignment & Adjustment Techniques of seals
- Lubrication
- Problems-Case studies and analysis.

Venue	Duration	Date
Neyveli	3 days	03-06-2015

Who may attend

Engineers with 1-2 years of experience in O&M of Boilers/ auxilliaries in a Thermal Power Station/Industry.

15. SWITCHGEAR & TRANSFORMER MAINTENANCE

Objective

To enable the participants to carry out maintenance of different types of circuit breakers and transformers by using correct procedures and tools. After completion of

the course the participants will be able to take up the repairs and routine maintenance of switchgears and transformers independently.

Program Profile

- Introduction to circuit breakers, Arc formation, Arc quenching etc. Constructional details of different types and makes of circuit breakers like air circuit breakers, minimum oil circuit breakers, air blast circuit breakers, vacuum circuit breakers, SF6 breakers etc.
- Insulating oil, identification, sampling and testing procedures.
- Oil Testing details for Crackle Testing, Break down testing, Oil filtration.
- Reading of schemes, control and wiring diagrams.
- Transformer construction details.
- Transformer maintenance procedures.

Venue	Duration	Date
Durgapur	1 weeks	25-05-2015

Who may attend

This course is meant for maintenance technicians with 2-3 years experience in Switchgear and Transformer maintenance.

16. SWITCHYARD MAINTENANCE TECHNIQUES USING LLMT FOR LINEMEN/SUPERVISOR

The fast growing EHT/UHT Transmission lines and the rapid addition of 400 KV lines in the country, has made it imperative to upgrade the Live Line Maintenance Technology. The training program offers direct benefit to the organizations involved in maintenance of sub-stations by reducing the number and duration of shutdown. Learning these Techniques is essential in

Meeting with Foreign Deligation at NPTI, Corporate Office, Faridabad

order to exploit the full potential of LLMT and it can increase the scope of Maintenance activities.

Objective

- Appreciation on maintenance of switchyard equipments.
- To highlight the importance of Live Line maintenance Technology in EHV switchyard.
- Give an introduction to Live Line washing techniques of EHV Substation Insulators.

Program Profile

- Electrical Safety & Safe Clearances.
- General practice of switchyard maintenance
- Practice on climbing towers and switchyard structure, precaution at different working positions
- Use of different hardware used in the maintenance works (Ropes, earthing equipment, load handing equipments, etc.)
- Hands on demo/training on live switchyard location using Hot Stick Method (HSM) and using Bare Hand Methods (BHM).
- Use of thermo vision Camera for detection of Hot Spots in Maintenance Works.
- Introduction to live line washing of insulators, video films on LLMT

Venue	Duration	Date
HLTC Bengaluru	4 weeks	15-06-2015

Who may attend

Foremen, Linemen, Asstt Linemen, Supervisors, Junior Engineers, asst. Engineers etc. actively involved in EHV Substation Maintenance activities having physical fitness. It is preferred that one of the nominee be in the rank of Executive cadre.

17. ELECTRICAL SAFETY AND INSPECTION OF ELECTRICAL INSTALLATIONS UNDER IE RULES-1956

Objective

To familiarize about the mandatory procedures before energizing any electrical equipment form LV to EHV level by consumers/suppliers and the role of electrical inspectors in enforcing IE Rules 1956.

Outline

- Overview & Safety Requirements of IE Rules
- Design of Electrical installations
- Earthing System Design
- Circuit Breakers and Protective Relays
- Basic Protection Schemes of Power Equipments
- Inspection procedures for statutory inspection by Electrical inspectors
- Check Point of Electrical inspection
- Pre-commissioning tests of Transformers, Switchgears and Power Cables
- First aid and Fire Fighting Practices in Industrial Installations/Substations
- Field Visit

Venue	Duration	Date
PSTI Bengaluru	1 week	18-05-2015
		01-03-2016

Who may attend

Industrial/other consumers of electricity, electrical inspectors/ assisting officers, utility representatives, manufacturers/dealers of electrical equip-ment/power cables/LT/HT switchgear

18. REACTIVE POWER MANAGEMENT

Objectives

To familiarize the engineers with the design and performance aspects of power system elements so as to have an understanding of reactive power management and control

Outline

- Reactive Power Control Equipment
- Performance of Reactive Power Equipment under different Operating Conditions
- Comparative Study of AVRs, OLTCs, Power Capacitors, Shunt Reactors, SVCs, TCRs,
- Automatic Power Factor Controllers
- Harmonics – cause, measurement and mitigation

Venue	Duration	Date
PSTI Bengaluru	3 days	27-01-2016

Who may attend

Transmission and Distribution Operating Personnel, Engineers involved in Planning, Design and Testing of Power Control Equipment and Engineers in charge of electrical maintenance.

19. DISTRIBUTION METERING

Objective

To Provide comprehensive view of Distribution metering, rules & regulations and rationalization required.

Outline

- Energy meters: Types & Construction
- Testing, setting and calibration
- Failure analysis
- IE Rules
- Theft/Tampering and Inspection of consumer premises
- Distribution meter reading
- Rationalization and computerization
- Field visits

Venue	Duration	Date
PSTI Bengaluru	1 week	25-05-2015
Guwahati	1 week	18-05-2015

Who may attend

Engineers from state Electricity Boards/ Power utilities/ Distribution System, R & D organizations, Academic institutions, manufacturers, contractors, consultants etc.

20. O & M OF TRANSFORMERS AND CIRCUIT BREAKERS

Objective

To give insight into various aspects on operation, maintenance, testing and condition monitoring of Transformers and Circuit breakers

Outline

- Insulation Systems
- Transformer engineering
- Transformer loading, testing, maintenance and condition monitoring
- Circuit Breaker maintenance, testing and condition monitoring
- Field visits

Venue	Duration	Date
Badarpur	1 week	12-10-2015
PSTI Bengaluru	1 week	01-06-2015
		01-02-2016

Who may attend

Engineers from state Electricity Boards, Power Utilities/ Corporations, R & D organizations, Academic institutions.

21. POWER QUALITY AND HARMONICS MITIGATION

Objective

To familiarise the power engineer regarding the power quality and causes, consequences and cures to harmonics in electrical systems/ industry.

Program Profile

- Introduction to power quality
- Power Quality – impacts, manifestations.
- Consequences of power quality.
- Power quality measurement.
- Harmonics – Sources, measurements and mitigation.
- Filters – Active and Passive filters.
- Statcoms, custom power devices, Statics Var Compensators.
- Case studies.
- Technical Visits.

Venue	Duration	Date
PSTI Bengaluru	1 week	20-04-2015 07-03-2016

Who may attend

Practicing Engineers / supervisors of industry, Utilities and faculty of educational institutions involved in maintenance of power quality and mitigation of harmonics.

22. BOILER OPERATION/ BOILER & ITS AUXILIARIES OPERATION

Objective

To acquaint the participants with the safe and efficient operation of boiler and its auxiliaries.

Program Profile

- Working principle, function and classification of Boilers
- Description of Boiler components
- Function and working principle of Boilers Auxiliaries-Mills & Feeders, fan, Air pre heaters, soot blowers, etc.

Venue	Duration	Date
Neyveli	1 week	06-07-2015
Durgapur	1 week	04-01-2016
Nagpur	4 days	05-05-2015

Who may attend

Chemists with minimum five years experience in TPS Laboratory.

23. HT/LT SWITCHGEAR (O&M)

Objective

The main objective of the course is to update the Knowledge of plant engineers in the field of switch gear and its erection testing/ commissioning, operation and maintenance.

Program Profile

- Types of Switchgears.
- Selection Criteria for Switchgears.
- Design & Construction Data.
- Erection/Commissioning.
- Check-list and precautions.
- Fault finding.
- Testing procedures & Equipments.
- Case Studies.

Venue	Duration	Date
Guwahati	1 week	07-09-2015

Who may attend

Engineers with 2-3 years experience in switchgear electrical installation of industry.

24. CONTROL & INSTRUMENTATION IN POWER STATION (FOR OPERATION ENGINEERS)

Objective

To acquaint the engineers working in Non-C&I areas with working principles of various instruments, the process parameters and with the relative process/plant behavior.

Program Profile

- General description of Power Station Instrumentation and control and their layout details.
- Basic Principles and working principles

of instruments.
- Temperature Measurement.
- Flow Measurement
- Introduction to On-Line Analytical Instrument
- Introduction to Turbovisory Instruments & Vibration Analysis
- Discussion on Protection & Interlocks.
- Introduction to Automatic Control Loops.

Venue	Duration	Date
Badarpur	1 week	21-09-2015
Nagpur	3 days	16-06-2015

Who may attend

Engineers with 2-3 years experience in the relevant field.

25. POWER SYSTEM STUDIES

Objective

To familiarize the power system engineers with modeling of power system components and the power system studies software for power flow studies, short circuit studies, stability studies and relay coordination

Outline:

- Load flow: Modeling and case studies
- Short circuit studies; Z bus matrix and symmetrical components
- Balanced and unbalanced faults and case studies
- Over current relay coordination-case studies
- Stability studies-modeling case studies
- Laboratory: use of MiPower software
- Field visits

Venue	Duration	Date
PSTI Bengaluru	1 week	10-08-2015

Who may attend

Transmission and distribution engineers involved in system design, planning, protection and control, engineers from R & D organizations and Academic institution

26. POWER SYSTEM OPERATION

Objective

To familiarize the load dispatch engineers to sector set up, system control, market operations, logistics and new technologies. To develop the system operators for secure operation of power system in India in the scenario of continuous load growth, system expansion and multiplying number of organizations.

Outline

Power Sector Overview, Policy, Legal framework

- Power sector overview in India, Hydro station layout, startup, shutdown and emergency response, Electricity Act 2003, Legal Framework, policies & regulations and organizational set up in India, EHV AC Substations: Layout, Equipment & Bus arrangements, Gas Insulated Sub-Station, Ring Fencing of System Operation & Independent functioning of Load Despatch Centres, Thermal station Layout, startup, shut down and emergency response. New technologies, Smart Grid Operation Prevailing practices and future roadmap, CEA Grid connectivity standards, Grid Standards Regulations Metering Standards.

Power System Operation and Control

- Frequency control-Primary, Secondary and Tertiary Control and RGMO; Reactive power management, Indian Electricity Grid Code, Protection of Generators and transformers, Protection of Bus Bars and Distribution Systems, Impedance protection fault loops, impedance relay characteristics, reactance, impedance, admittance (MHO), quadrilateral, special characteristics, faults affecting impedance relay performance, Fault resistance, load encroachment, remove in feed, mutual induction; System protection schemes,

Protection for abnormal frequency and voltages.

Power Market Operation

- Power system reliability, TTC/ATC Computations and Ancillary Services in Indian Electricity Market, POC Tariff Philosophy and Transmission Losses, Open Access Regulations and Long Term & Medium Term Access and connectivity with Regional and States Perspectives, Metering and settlement principles, Power Exchange Operations, Regional energy, UI and reactive energy account, Terms and condition of Tariff Regulations, Renewable energy in Power Sector, Integration of Renewable, REC Mechanism & RRF.

Power System Logistics-SCADA, Communications & It, Energy Management System

- State estimation techniques, Energy Management Systems: Load Forecasting and Network Study, UI and Congestion Charge Regulations, SCADA/EMS-Overview, Architecture, Main Components; Communication Systems overview, VSAT, Microwave, Optical Fiber etc., Hardware Protocols, Configuration, Communication network, System software-Displays, Database; Disturbance data collection modules/HDR retrieval & playback, HIM, Trends, Alarms, Health check, trouble shooting.

Venue	Duration	Date
PSTI Bengaluru	2 weeks	11-05-2015 06-07-2015 07-09-2015 15-02-2016

Who may attend

System operation Engineers from State Electricity utilities/ Distribution Systems, R&D organizations, Academic institutions etc.

Methodology

Lectures, demo sessions, field visits

27. POWER SYSTEM PROTECTION

Objective

To familiarize the power engineers with protection in power systems

Outline

- Fault analysis
- Relay input sources
- Protection of Generators & motors
- Protection of bus bars
- Protection of Transformers
- Protection of EHV lines
- Protection of Distribution systems
- Protection against over voltages
- Insulation Co-ordination
- Testing of Surge Arrestors
- Testing & commissioning of relays
- Present trends in protection
- Case studies
- Laboratory Sessios
- Tutorials
- Field visits

Venue	Duration	Date
PSTI Bengaluru	2 week	08-06-2015 14-03-2016

Who may attend

Engineers from state Electricity Boards, Power Utilities/ Corporations, R & D organizations, Academic institutions

28. ADVANCED POWER SYSTEM PROTECTION

Objective

To familiarize the power engineers on the advanced aspects of protection in power systems

Outline

- Overview of System Protection
- Numerical Relays
- Protection of Transformers, Transmission

lines, Bus bars, Feeders
- Integrated Protection, Control & Monitoring
- Intelligent electronic Devices in system protection
- Software architecture and performance characteristics of numerical relays
- Wide Area Protection
- Video Sessions
- Field Visits

Venue	Duration	Date
PSTI Bengaluru	1 week	15-06-2015 21-03-2016

Who may attend

Engineers from State Electricity Boards, Power Utilities/ Corporations, R & D organizations, Academic institutions

29. STEAM TURBINE & AUX. OPERATION

Objective

To familiarize the participants with operational procedure of turbine and its associated auxiliaries under various conditions of operation.

Program Profile

- Constructional features of turbine, turbine auxiliaries like condenser, pumps, feed heaters etc.
- Operational procedure of associated systems such as condensate, feed, lube oil, CW etc. On line cleaning system , Operation of boiler feed pump and condensate extraction pump.
- Interlock protection of turbine and its auxiliaries.
- Starting and shutting down of turbine.
- Operation of turbine under normal and emergency conditions.
- Emergencies & case studies.

Venue	Duration	Date
Badarpur	1 week	08-02-2016
Neyveli	1 week	08-06-2015
Durgapur	1 week	08-02-2016
Nagpur	4 days	01-03-2016

Who may attend

Engineers with 3-4 years experience in Thermal Power Station.

30. ELECTROSTATIC PRECIPITATOR

Objective

To impart knowledge on installation, maintenance and operation of ESPs and their control circuits.

Program Profile

- General discussion on pollution.
- Types of ESP & selection aspects.
- Principles of construction & functioning of ESP.
- Corona and Ionization.
- Description of Dust precipitator.
- Installation, Operation and Maintenance of ESP.
- Mechanical Parts Maintenance.
- Electrical control circuit maintenance and checking. Efficiency and performance of ESPs and Factors affecting the performance.

Venue	Duration	Date
Neyveli	3 days	24-06-2015

Who may attend

Engineers engaged in operation and maintenance of power station & process industry with 2-3 years experience.

31. BOILER FIRING SYSTEM & EQUIPMENTS

Objective

To acquaint the participants with the various types of Boiler firing systems, problems faced, rectification and trouble shooting.

Program Profile

- Combustion of Fuels.
- Different firing systems – tangential firing, wall firing and down shot firing- their requirements and applications Igniters
- Oil atomizers
- Coal Burners
- Burner Management system
- Direct Ignition of Pulverized Coal
- Operation Procedure, Maintenance &
- Trouble Shooting in firing system components.

Venue	Duration	Date
Neyveli	1 week	13-07-2015

Who may attend

Operation & Maintenance engineers of Thermal Power Station with 4-5 years experience.

32. ELECTRICAL PROTECTION SYSTEM

Objective

To enhance the knowledge of in-service engineers involved in commissioning & maintenance of protective relays both in Generation and Transmission wings.

Program Profile

- Requirement of protective system (criteria for selection & choice of protection scheme).
- Instrument transformers, system grounding, fault parameters, fault analysis, sequential recorder & disturbance recorders.
- Generator protection (This topic will be covered in derail with special reference to 210 MW & 500 MW generators).
- Transformers and Bus-bar protection schemes, Transmission line protection (principles of relaying and commissioning).

Venue	Duration	Date
Badarpur	1 week	11-01-2016
Neyveli	1 week	20-07-2015
Durgapur	1 week	27-07-2015
Nagpur	4 days	19-01-2016

Who may attend

In-service Power Station Engineers having 2-3 years experience in the relevant field.

33. DISTRIBUTION ENGINEERING

Objective

To familiarize the participants with various aspects of electricity distribution engineering

Programe Profile

Growth, Development, Equipment, Standards specification, construction Practice and guidelines, design aspects-testing and installation of Distribution equipment-Layout of Sub-Station.

Venue	Duration	Date
Guwahati	1 week	07-03-2016

Who may attend

Engineers engaged in distribution of electricity with 2-3 years experience.

34. RELIABILITY CENTERED MAINTENANCE OF ROTARY EQUIPMENTS

Objective

The objective of the course is to give a thorough knowledge to the Engineers working in the Maintenance Section, regarding the recent maintenance techniques and systems of the rotary equipments. This special and modern development of maintenance system will also enhance the conventional maintenance skill of the engineers.

Program Profile

- Introduction to Reliability Centered

Maintenance (RCM); steps and benefits of RCM.
- First approach to RCM-Functions, failure and significant of Rotary equipments, consequences of failure as per RCM.
- Reliability centered maintenance tasks for Rotary equipments.
- Condition monitoring of rotary equipments-as an important role for RCM.
- Description of condition monitoring equipments.
- Description of vibration and signature analysis.
- RCM recording systems and documentation system.
- Preventive maintenance techniques of pumps, fans, turbine and other rotary equipments.
- Overhauling job schedule for the above mentioned equipments.
- Trouble shooting and failure diagnosis of rotary equipments.
- Bearings, Lubrication and tribology.
- Balancing and Alignment of rotary equipments.

Venue	Duration	Date
Badarpur	1 week	03-08-2015

Who may attend

Experienced Engineers working in Power Plants, Utility Industries and other Industries.

35. O&M OF COAL MILLS & FEEDERS

Objective

To acquaint the participants with the latest Milling system, their operation and maintenance techniques so as to reduce the outage in the Thermal Power Stations.

Program Profile

- Description of different types of Mills & Milling system components such as Raw Coal Feeders, Classifiers and variators etc. their design, construction and selection aspects.
- Description of Coal grinding Principles and grinding elements.
- Frequently eroding parts and eroding characteristics analysis.
- Proper maintenance techniques and replacement procedures of eroding parts.
- Driving Mechanisms and their maintenance procedures.
- Lubrication and sealing system.
- Maintenance planning for Milling system.
- Routine Maintenance and Breakdown Maintenance of Milling Plant.
- Overhauling of Milling Plant.
- Preventive measures for stopping erosion of Pulverized Coal lines bends and their proper alignment.

Venue	Duration	Date
Neyveli	3 days	18-11-2015

Who may attend

Engineers with 2-3 years experience in Operation and Maintenance in a Power Station.

36. REDUCTION IN POWER DISTRIBUTION LOSSES

Objective

To assist participants to modify their approach and to treat their feeders as profit centers.

Program Profile

- IE rules
- Source of technical Losses and methods of reducing them
- Application of new Technologies (HVDS&ABC) in distribution System
- Source of commercial Losses
- Setting and checking of actuators and methods of reducing them.
- Legal empowerment to control the menace of power theft
- AT&C Losses
- Role of consumer associationand

franchises to control commercial losses.

Venue	Duration	Date
Durgapur	3 days	21-07-2015

Who may attend

Engineers from SEBs/ Power Utilities/ corporations with 2-3 years of experience

37. FLEXIBLE AC TRANSMISSION SYSTEM (FACTS)

Objective

To familiarize power engineers about the Flexible AC Transmission devices and their applications in power systems with respect to active/reactive power control.

Outline

- Introduction
- Unified Power Flow Controller
- Thyristor Controlled Series Capacitor
- Static Var Compensator
- Thyristor Controlled Reactor
- HVDC
- Applications of FACTS
- Tutorial
- Technical Visits

Venue	Duration	Date
Badadpur	1 week	30-11-2015
PSTI Bengaluru	1 week	13-07-2015

Who may attend

Practicing engineers involved in planning, design and implementation of FACTS devices.

38. POWER SYSTEM RELIABILITY

Objective

Ensuring reliable and secure power system is the primary responsibility of every system operators. Recent gird incidents of July 2012 have underlined the importance of grid security.

As the grid grows in size and complexity, gird security has to be enhanced because the consequences of failure of a large grid are severe.

Therefore capacity building in reliability is essential for all personnel in the power sector. This is recognized as the next step forward in the continued capability enhancement of system operators and an area of specific specialization. Hence, a specialist learning and development programmed and certification exam has been planned on “Power System Reliability”. This is a specialist level system operator course on “Power System Reliability” for basic level certified system operators having a minimum of 10 years experience in power sector.

Outline

- **Module 1:** Basics of Power System
  - Basic Concepts
  - EHV AC Transmission and HDVC Transmission
  - Power System Planning
- **Module 2:** Power System Operation and Control
  - System Operation Concepts
  - Load Frequency Control
  - Voltage Control
  - Power System Restoration
- **Module 3:** Power System Analysis
  - Steady State Power Flow Analysis
  - Fault Analysis
  - Power System Stability
  - Power System Protection

Venue	Duration	Date
PSTI Bengaluru	1 week	21-06-2015
		16-08-2015
		11-10-2015
		17-01-2016

Who may attend

Middle level engineers from State Electricity Boards, Power Utilities/Corporations, R&D Organisations, Academic Institutions etc.

39. LOW VOLTAGE POWER DISTRIBUTION SYSTEM DESIGN

Objective

To familiarise the participants from the low voltage power distribution system design including selection and sizing of cables, switchgear, control panels and safety requirements

Outline

- General Rules of Electrical Installation and Design,
- L V Distribution and Earthing schemes,
- Cables, Bus ways & Switchboards,
- L V Swithgear: functions & selection, Understanding the wiring system and Cable sizing,
- Understanding MV/LV installation design by ID Spec Large software & Understanding the LV installation calculation by My Ecodial L Software,
- Distribution System protection & Technical Visits.

Venue	Duration	Date
PSTI Bengaluru	1 week	03-08-2015

Who may attend

The medium voltage and low voltage distribution engineers working in utilities and industries and responsible for design installation and maintenance of distribution system.

40. GENERATOR & AUXILLIARIES INCLUDING EXCITATION SYSTEM

Objective

To develop proper understanding of the generator and auxiliaries along with the various excitation systems and their characteristics.

Program Profile

- Generator construction and design aspects.
- Generator characteristics, synchronization & parallel operation
- Generator protection.
- Excitation & AVR-various types and their selection aspects
- Problems faced.
- Case studies

Venue	Duration	Date
Badarpur	1 week	14-12-2015
Neyveli	1 week	07-12-2015
Durgapur	1 week	09-11-2015
Nagpur	3 days	07-07-2015

Who may attend

Engineers with 2-3 years experience in erection, commissioning operation and maintenance of generator system

41. POWER CABLES AND JOINTING TECHNIQUES

Objective

The application of cables in power industry has been a subject matter of intense discussion among power engineers in the recent times. This is because of the increased use of cables in the modern power system especially with the advent of new technologies like HVDC transmission etc. and also to the new conception in the field of power system protection & control. Cables are available in varying sizes configuration. Proper application of these to suit the utilities requirement needs great acumen & skill on the part of power engineers. This workshop is being organized to familiarize power engineers on the mechanical considerations in the design of cables, application of different types of cables in the power industry with regard to physical configuration of cores, current carrying capacity, insulation strength etc. and also different electrical properties, study of cables is incomplete without a discussion on testing and hence testing will also be a part of the program.

Outline

- Design & construction of Power Cables
- Testing of cables
- Testing of cable accessories
- Failure of cables and case studies
- Condition monitoring of power cables

Venue	Duration	Date
PSTI Bengaluru	3 days	01-07-2015
PSTI Bengaluru	4 days	28-12-2015

Who may attend

Engineers from State Electricity Boards Power Utilities/ Corporations, R & D organizations, Academic institutions, Power consumers, consultants/ contractors etc.

42. HIGH VOLTAGE TESTING OF POWER SYSTEM EQUIPMENT

Objective

To give insight into all the facets of High Voltage Testing of Power system equipment

Outline

- High voltage technology
- Solid insulating media, liquid insulation media
- Gas & Vacuum Insulation
- Generation of high voltage for testing
- High voltage measurements
- High voltage testing of transformers
- Circuit Breakers
- Surge arrestors
- Insulators, Cables, Capacitors
- High Power Testing of switchgear
- Partial Discharges
- Field visits

Venue	Duration	Date
PSTI Bengaluru	1 week	24-08-2015 08-02-2016

Who may attend

Engineers involved in procurement, installation and testing of power system equipments.

43. TRANSFORMER OIL

Objectives

Insulating liquids obtained by processing of petroleum crude (mineral oils) are in use as coolant and insulating medium in Transformer for over a century. The quality & performance have been improved significantly, owing to the advancement of refining techniques, knowledge of chemistry and design of Transformer introduced to suit Oil characteristics. Since indigenization of Transformer oil manufacture, Indian industry has gained substantial expertise. Various research institutions in India have contributed greatly to the development, standardization, analysis, reclamation etc. of Transformer oil to make it a mature technology. It is felt that interaction of researchers, manufacturers of Transformer and Transformer oil, engineers of power utilities can help to disseminate knowledge and update with the state of art and also exchange experience on various aspects of Transformer oil.

Outline

- Latest trends in Manufacturing Transformer Oil
- Evaluation of Transformer Oil
- Quality of Transformer Oil
- Impurity effect on Oil Characteristics
- Maintenance of Transformer Oil
- Condition Monitoring of Transformer Oil
- Dissolved Gas Analysis (Case Histories)
- Mixing of Oils & the effects therein
- Reclamation of Transformer Oil
- RLA of Solid insulation through Furan Analysis
- Field visits

Venue	Duration	Date
PSTI Bengaluru	3 Days	28-09-2015

Who may attend

Engineers form State Electricity Boards, Power Utilities/ Corporations, R & D organizations, Academic institutions, Transformer Manufacturers, Transformer Oil Manufacturers and processors.

44. POWER MARKET REGULATIONS

Objective

To familiarize the engineers with the power market regulations and operations.

Outline

- Power Business in India
- Regulatory Structure and issues
- Indian Electricity Grid Code
- Transmission tariff regulations
- Generation Tariff
- Open Access in T & D
- Trading Electricity Derivatives
- Clearing and Settlement of Electricity Contracts
- Risk and Portfolio Management
- Legislation, Governance, Market Surveillance and Ownership of Power Exchanges
- Transmission Tariffs and System Operation
- Environmental Challenges and Trade of Energy Certificates

Venue	Duration	Date
PSTI Bengaluru	1 week	05-10-2015

Who may attend

System Operators and from SEBs, power utilities/corporations, PSUs, R&D Organisations, Academic Institutions.

45. DISTRIBUTED GENERATION GRID & INTEGRATION

Objective

To investigate the impacts of DG integration on the operation of a distribution system.

Outline

- Renewable energy in Power Sector
- Power Sector Restructuring and Renewable Energy
- Benefits and impacts of DG
- Integration of DG with power system
- Impact of DG on power systems
- Power Quality Issues
- Field Visits

Venue	Duration	Date
PSTI Bengaluru	4 days	21-09-2015

Who may attend

Engineers from State Electricity Boards, Power Utilities / Corporations, R & D organizations, other organizations, Academic institutions

46. NON DESTRUCTIVE TESTING & WELDING DEFECTS

Objective

Objective of the course is to create technically trained manpower and to make working Engineers aware of the various NDT procedures being adopted for inspection of welding joints & other materials.

Program Profile

- Introduction to Non Destructive Testing Procedures
- Welding defects and associated Non Destructive Testing Methods.
- Types of material defects
- Various NDT Techniques and their Applications
- Dye Penetrant Test

- Magnetic Participle Test
- Ultrasonic NDT Methods
- Ultrasonic Flaw Detectors
- Eddy Currents Non Destructive Testing
- Radiography & Test Applications
- Applicable ASTM Standards
- Various Types of weldings Defects & Preparation of Welding Procedures in various positions as per AWS

Venue	Duration	Date
Badarpur	1 Week	31-08-2015

Who may attend

Engineers / Supervisors with one or two years relevant experience may attend

47. THERMAL PP EFFICIENCY & PERFORMANCE MONITORING

Objective

To acquaint the trainees with the latest techniques of monitoring and testing of unit performance, analysing data and suggesting ways and means for performance improvement.

Program Profile

- Steam cycle theory and optimization.
- To identify and record the factors and data needed for monitoring efficiency and performance.
- Analysis of the performance of different systems and equipments like station heatbalance, mill performance, condenser performance, feed heaters performance, boiler efficiency, turbine efficiency etc.
- Corelation among different systems and their effect on performance.
- Application of computer for performance calculation and analysis.
- Improvement of plant availability through efficiency and performance monitoring.
- Plant on-job / practicals.

Venue	Duration	Date
Neyveli	1 week	17-08-2015
Durgapur	1 week	21-09-2015
Nagpur	3 days	09-02-2016

Who may attend

Power Station Engineers having 2-3 years experience in operation and maintenance.

48. O&M OF TRANSMISSION LINES & SUB-STATION

Objective

To update knowledge of the participants in various operational & Maintenance aspects of Transmission line & Sub-Station.

Program Profile

- Transmission and Distribution—a business mission.
- Operation Procedures and practices of Transmission line and Sub-Station.
- Equipment inspection and Selection aspects.
- Equipment Failure analysis and its maintenance.
- Maintenance of Sub-Station equipments.
- Hot line Maintenance and ERS of Transmission line.
- Routine, Preventive and breakdown Maintenance.
- Protection System and its equipment.
- Safety aspects and fire protection devices.

Venue	Duration	Date
Durgapur	1 week	17-08-2015

Who may attend

Engineers with minimum 2-3 years experience in O&M of Transmission and Distribution or Power Station.

49. RELAY MAINTENANCE

Objective

To make the technicians understand and identify various types of relays, their applications, maintenance and calibration requirements.

Program Profile

- Basic protection requirements.
- Basic relay terminology.
- Different types of relays.
- Fault discrimination methods.
- Relay characteristics and setting, testing etc.

Venue	Duration	Date
Neyveli	3 days	19-08-2015

Who may attend

Technicians having 2-3 years experience in the relevant field.

50. BOILER OPERATION REFRESHER COURSE

Objective

To acquaint the participants with the safe and efficient operation of boiler and its auxiliaries.

Program Profile

- Working principle, function and classification of Boilers.
- Description of Boiler components.
- Function and working principle of Boiler Auxiliaries-Mills & feeders, fans, Air Pre-heaters, Soot Blowers etc.
- Boiler Mountings; safety valves, drains and vents.
- Operation of Boiler Auxiliaries.
- Alkali boil out and Acid cleaning.
- Hydraulic Test.
- Boiler start-up and shut down.
- Interlocks and Protections including B.M.S./F.S.S.S.
- Efficiency and Performance monitoring of Boiler and its auxiliaries.
- Important do's and don'ts under emergency conditions.

Venue	Duration	Date
Neyveli	1 week	14-09-2015

Who may attend

Operators working in Thermal Power Stations/industries with 3-4 years experience.

51. POWER PLANT CHEMISTRY FOR OPERATION ENGINEERS

Objective

To provide understanding and knowledge to the Operation Engineers on various techniques of chemical controls and their effect on-plant performance and failure. The program will help the Operation Engineers in day-to-day for decision making and also in emergencies.

Program Profile

- Corrosion/depositions in Boiler, S.H. Turbine condensers and their prevention techniques.
- Acid cleaning of boiler/condensers etc.
- Unit preservation during idle time.
- Characterization of coal for the power plant.
- Optimization of combustion.

Venue	Duration	Date
Badarpur	1 week	07-09-2015
Durgapur	1 week	14-09-2015
Nagpur	4 days	24-11-2014

Who may attend

Operation Engineers with experience as Shift In-charge Engineers/ Operation Engineer.

52. BOILER TUBE FAILURE AND CASE STUDIES

Objective

To appraise the participants regarding the causes of boiler tube failure and to impart the knowledge of tube failure analysis, locating tube failure, job involvement after tube failure etc. to the Power Plant Engineers.

Program Profile

- Types of Boiler Tube Failure and their classification.
- Causes of different types of tube fails and their analysis.
- Understanding and locating tube failure by operational parameters at running condition.
- Job involvement for physically locating the tube failure at shut down condition.
- Tube failure rectification.
- Control of boiler tube failures.
- Different case studies.

Venue	Duration	Date
Durgapur	1 week	07-09-2015

Who may attend

Engineers working in Thermal Power Plant & other industries who deal with boiler (either operation or maintenance or both).

53. FAMILIARIZATION TRAINING PROGRAM ON 400 KV COLD LINES

Objective

The course is meant exclusively for the personnel working on cold lines from different power utilities; spreading awareness about general line maintenance techniques on uncharged lines amongst supervisors and technician involved in Line Maintenance. The training program has been organized with the objective of giving appreciation about EHV Lines, highlight importance of maintenance and give a brief introduction to live line maintenance techniques

Program Profile

- Electrical Safety, First Aid and Fire fighting
- Safety precaution at different working positions
- Tower climbing practices
- Use of different hardware used in maintenance works (Ropes, earthing equipment, load handling equipment etc)
- General Practice of Maintenance work on Transmission Line.
- Introduction to Live Line Maintenance Techniques

Venue	Duration	Date
HLTC Bengaluru	4 weeks	12-10-2015

Who may attend

Supervisors in the rank of Diploma/Junior Engineer and ITI qualified Technicians who had undergone their basic/Induction level course after recruitment.

54. MANAGEMENT OF ELECTRICAL CONTRACTS AND NEGOTIATIONS

Objective

To familiarize the young engineers with the nuances of the electrical industry and the contact involved.

Program Profile

- Types of Contracts.
- General & Special Conditions of Contracts
- Erection Conditions of Contracts.
- Project Managements & Erection.
- Measurement of works completion, Invoicing & Billing
- Market survey of electrical equipments.
- Estimation & bidding for electrical works
- Electricity: Generation, transmission & distribution.
- Principle of operation of electrical

equipment.
- Codes & practices in electrical equipments.
- Indian Electricity Act, IEEE codes & ISO standards.
- Design of electrical lay outs.
- Installation of electrical equipments.
- Procedure for availing electrical supply form Electric Supply Company.
- Statuary requirements from Electrical Inspectorate to carryout Business.
- Labour act, workmen compensation acts, Insurance & Provident Fund.
- Fire Fighting & Requirement of Fire Extingusishers.
- First aid & Artificial Respiration.

Venue	Duration	Date
PSTI Bengaluru	1 week	14-09-2015

Who may attend: Electrical graduates fresh as well as practicing who require exposure regarding electrical industry and contracts, in particular in distribution system.

55. DISTRIBUTION AUTOMATION

Objectives

To familiarize participants with the Customer and system level functions that are associated with distribution automation. Describe the equipment and software used to implement these functions.

Outline

- Customer Site automation functions: Load control
- Remote meter reading, Time-of-use rates,
- Remote connect/disconnect
- System level functions: Fault location, isolation, and service restoration
- Design of LT Distribution system
- Feeder reconfiguration & Transformer balancing
- Voltage/Var Control using: Capacitors, Regulators, and LTC; Distribution system monitoring
- Digital protection of substations and feeders
- Equipment for Feeder Automation & Customer Automation
- Implementing a DA Project
- Labs & Field Visits

Venue	Duration	Date
PSTI Bengaluru	1 week	27-07-2015

Who may attend

Engineers and Managers responsible for planning, cost-justifying, designing, implementing and working with Distribution automation systems.

56. POWER SYSTEM ENERGY LOSSES

Objective

To acquaint the participants with the sources of power system losses in transmission and distribution network and possible remedies.

Program Profile

- Growth of power system in India.
- Transmission Losses.
- Distribution losses/transformer losses.
- HT metering.
- Remedial measures to minimize various system losses.
- Energy management system, Flattening of load demand, Energy auditing and reporting techniques.
- Power System Planning, economic operation, maintenance to minimize losses.
- Computer application in power system.

Venue	Duration	Date
Neyveli	1 week	14-09-2015

Who may attend

Assistant Engineers/ Executive Engineers/ Superintending Engineers working in transmission & distribution.

57. ENERGY EFFICIENCY IN ELECTRICAL UTILITIES

Objective

To familiarize the engineers with the energy efficiency opportunities available in the various electrical equipments and to help them to prepare better for the BEE certified Energy.

Outline

- General Introduction- Electrical Systems
- Electric motor
- Compresses Air System
- HVAC & Refrigeration System
- Fans & Blowers
- Pumps & Pumping System
- cooling tower, Lighting system, Diesel Generating System
- Energy efficient technologies in Electrical Systems
- Tutorials and Technical Visits- This complies with the syllabus of BEE's Energy manager- Paper III

Venue	Duration	Date
PSTI Bengaluru	1 week	02-11-2015

Who may attend

Engineers form State Electricity Boards, Power Utilities/ Corporations, PSUs, R & D organizations, Academic institutions, entrepreneurs and consultants/ contractors involved in energy audit and energy conservation projects.

58. ISSUES RELATED TO SUPERCRITICAL TECHNOLOGY

Objective

To familiarize the participants with super critical boilers and related issues

Program Profile

- Introduction to supercritical technology, advantages-World scenario in super critical technology.
- Arrangement of super critical boilers.
- Comparison between spiral water wall circulating and vertical tubing.
- Special alloys for super critical boilers and welding techniques.

Venue	Duration	Date
Neyveli	2 days	18-02-2016

Who may attend

Engineers working in Power Stations.

59. BURNER MANAGEMENT SYSTEM/FSSS

Objective

To build up skills and knowledge required to maintain the Burner Management System of modern boilers with solid state relay logic control components.

Program Profile

- Flame sensors; their types, selection, application and installation techniques.
- Flame scanning intelligence.
- logics and logic circuit built around solid stat relay devices for working out permissive.
- Fuel sequencing, fuel cut off and boiler trip protections.
- Logics and logic circuits for sequential start up and shut off procedures.

Venue	Duration	Date
Neyveli	3days	14-10-2015

Who may attend

Fresh Engineers engaged in Control and Instrumentation.

60. POWER SYSTEM STUDIES & LOAD DESPATCH

Objective

To acquaint the participants with the various aspect of Pumps and the associated problems in their O&M.

Program Profile

- Growth of power system in India.
- Representation of power system components.
- Characteristics & performance of power transmission lines.
- Load flow studies and problems.
- Different types of faults and their analysis by computer methods.
- Power system protection devices.
- Power system stability
- Load Despatch and its computerization

Venue	Duration	Date
Neyveli	1 week	12-10-2015

Who may attend

Engineers of Power Sector engaged in power system and load dispatch centres.

61. BATTERY MAINTENANCE

Objective

To make the participants understand different types o storage batteries, their applications, maintenance procedures and requirements. They will also acquire the knowledge of battery testing and test equipment etc.

Program Profile

- Introduction and constructional details of batteries,
- D.C. supply system.
- Charging and discharging of batteries.
- Preparation of electrolytes.
- Battery plate assembly and dismantling practices.
- Care & maintenance of batteries.

Venue	Duration	Date
Neyveli	3 days	07-10-2015

Who may attend

Technicians working in Power Stations with 2-3 years experience

62. LARGE CAPACITY CFBC BOILERS

Objective

To familiarize the advantages of large capacity CFBC boilers

Program Profile

- Introduction to CFBC Technology Advantages, Scope, Fuel flexibity, etc.
- Description of various components of CFBC Boiler
- Environmental benefits
- Limitations, major concerns in the O&M of CFBC Boilers.
- Visit to CFBC Boilers.

Venue	Duration	Date
Neyveli	3 days	04-11-2015

Who may attend

Engineers working in Power Stations.

63. MOTOR MAINTENANCE

Objective

To acquaint the trainees with the correct and modern methods of maintenance of electrical motors. At the end of the course the trainees will be able to undertake maintenance of motors with confidence.

Program Profile

- Theory of different types of motors.
- Constructional details o different types of motors.
- Terminal connections and terminal box.
- Mounting/Enclosures, insulation material used in motors.

- Stripping down 7 inspections of motors.
- Cleaning and inspection.
- Bearings used in motors.
- Assembling, testing and commissioning.
- Problems of motor-case studies.

Venue	Duration	Date
Neyveli	1 week	16-11-2015

Who may attend

Maintenance technicians with 2-3 years experience with basic knowledge of electricity upto ITI Standard.

64. ENERGY CONSERVATION AND ENERGY AUDIT (FOR GENERATION SECTOR)

Objective

To infuse the energy saving consciousness of the participants highlighting the energy losses in the power industry that are usually unnoticed in the various areas of operations and acquainting them with the energy saving methods and the benefits achieved.

Program Profile

- Potential areas in the Power Industries for energy saving.
- Energy Saving methods with typical examples and exercises for power stations.
- Ways to minimise losses in power transmission & distribution system.
- Better use of electrical energy.
- Proper storage and use of fuel.
- Waste Heat areas and their utilization.
- Co-generation techniques for energy boosting.
- Energy Management System, energy Auditing and their implementation techniques for power industries.

Venue	Duration	Date
Neyveli	1 week	07-03-2015
Guwahati	3 Days	20-07-2015
Nagpur	3 Days	03-11-2015

Who may attend

Engineers with 3-4 years experience in Thermal Power Stations.

65. O&M OF TRANSFORMER (SUPERVISORS/ TECHNICIAN)

Objective

To update the knowledge of Plant technicians in the field of Transformers and its erection, testing/Commissioning, operation and maintenance.

Program Profile

- Standaristaion and Specification of Transformers used in the Power station
- Commissioning of Transformers
- Types and Causes of Transformer failure
- Testing of Solid dielectric
- Transformer Oil-Its analysis, sampling and testing procedure
- Transformer Maintenance Practices
- Dissolved gas Analysis Techniques
- Case Studies

Venue	Duration	Date
Guwahati	1 week	08-02-2016

Who may attend

This course is meant for operation and Maintenance Technicians with 2-3 years experience in relevant field.

66. HVDC TRANSMISSION SYSTEMS

Objective

To familiarize the engineers with the HVDC technology and its importance in system operation

Program Profile

- Introduction to HVDC.
- Principles of HVDC Conversion.
- HVDC Lines.

- HVDC Sub Stations.
- Reactive Power Management in HVDC Stations.
- AC & DC harmonics and filtering.
- HVDC System operation, Insulation Coordination, Emergencies and case studies.
- Visit to Kolar HVDC station

Venue	Duration	Date
PSTI Bengaluru	1 week	26-10-2015

Who may attend

Practicing engineers from generation, transmission, distributed systems, industrial and other consumers of electricity, electrical inspectors and electrical consultants.

67. WELDING PRACTICES

Objective

To improve the skill of the personnel engaged in the field of welding both in construction and maintenance areas.

Program Profile

- Different types of welding and their processes.
- Gas welding – techniques, equipments used, choice of flames, flux & filler metals, gas welding joints.
- Oxy-fuel Gas Cutting-Process, techniques and equipments used.
- Shielded (Coated) Metal Arc Welding (SMAW) techniques machines & equipments used, joints design, classification and proper selection of electrodes.
- High Pressure Welding-TIG welding and its techniques, power sources & equipments used.
- MIG/MAG Welding—Techniques, equipments, accessories, shielding gases, filler rods.
- Welding Techniques for ferrous and nonferrous metals.
- Welding Defects, NDT, Heat Treatments

Venue	Duration	Date
Durgapur	1 week	16-11-2015

Who may attend

Operator working in Thermal Power Station with 3-4 years experience.

68. TROUBLE SHOOTING OF STEAM TURBINE

Objective

To impart latest information about the techniques of trouble shooting of turbine and its remedial action

Program Profile

- Details of Steam Turbine, bearing and its Lubrication
- Turbine dynamics and vibration theory
- Causes of Vibration in Turbine and Case Studies
- Measurement and interpretation of vibration signatures
- Condition Monitoring and Performance Monitoring.
- Types of turbine Failure and its remedy

Venue	Duration	Date
Durgapur	3 days	09-11-2015

Who may attend

Engineers from SEBs/Power Utilities/ corporations with 2-3 years of experience

69. SMALL, MINI AND MICRO HYDRO POWER GENERATION

Objective

To provide in-depth approach and technical know-how for different Hydro Power Generations

Program Profile

- General Principles & Theory
- Introduction of small, mini and hydro power generations

- Hydrology and estimation of water potential
- Basic features of hydro Turbines
- Plant visit

Venue	Duration	Date
HPTC Nangal	3 Days	16-12-2015

Who may attend

Engineers working in Hydro Power Plants

70. FAN & AIR HEATERS MAINTENANCE

Objective

To expose the technicians to various maintenance requirements and procedures, develop necessary skill to carry out the maintenance and the safe use of special tools and tackles.

Program Profile

- Classification of Fans and Air heaters and their applications in thermal power stations.
- Constructional details, operation and maintenance techniques of different Fans & Air Heaters.
- Causes of erosion, corrosion, vibration and their remedies. Load regulating system of Fans.
- Problems of Fan & Air heaters – Case Studies.

Venue	Duration	Date
Badarpur	1 week	08-06-2015

Who may attend

Technicians working in power station with 2-3 years experience.

71. FIRE PREVENTION, PROTECTION & SAFETY

Objective

To make the trainees aware of the causes of fire hazards in Power Station industry and the prevention/protection system necessary to be installed.

Program Profile

- Different types of fire hazards in Power Plant and Industry.
- Plant design & layout with respect to fire hazards and prevention.
- Classification of fire and various methods to combat fire.
- Fire fighting arrangement in different areas of Power Plant and Industry.
- Safety connected with fire hazards in Electrical Installations.
- Application of different safety rules in Industry.
- Management of fire fighting & First Aids.

Venue	Duration	Date
Nagpur	3 days	08-12-2015

Who may attend

Engineers and Senior Supervisor of Thermal Power Station and process industries.

72. BEARING MAINTENANCE AND SHAFT ALIGNMENT

Objective

To enable the participants to carry out maintenance of bearings and shaft alignment with modern techniques using tools and procedures correctly. After completion of course, trainees will be in a position to carry out their maintenance jobs independently.

Program Profile

- Classification of Bearings.
- Inspection of Bearings.
- Bearing materials.
- Friction and its effect on bearing performance.
- Top side gaps adjustments of sleeve/ bearings/ journal grooving on plain bearings, scrapping of journal bearings selection of bearing lubrications and their purification.

- Handling and Storage of bearings.
- Care and maintenance of plain bearings, Anti friction bearings.
- Types of coupling and their uses.

Venue	Duration	Date
Badarpur	1 week	04-05-2015
Neyveli	1 week	09-03-2016
Nagpur	4 days	15-12-2015

Who may attend

Maintenance technicians with 2-3 years experience in the relevant field

73. SWITCHGEAR MAINTENANCE

Objective

To update knowledge of plant technicians in the field of switchgear and its erection, testing/commissioning, operation and maintenance.

Program profile

- Introduction to circuit breakers, Arc formation, Arc quenching etc. Constructional details of different types and makes of circuit breakers like air circuit breakers, minimum oil circuit breakers, air blast circuit breakers, vacuum circuit breakers, SF6 breakers etc.
- Selection Criteria for switchgear.
- Design & Construction Data.
- Erection/Commissioning
- Check-list and precautions.
- Maintenance & Testing procedures & Equipments.
- Case studies.

Venue	Duration	Date
Neyveli	2 days	03-12-2015

Who may attend

This course is meant for maintenance technicians with 2-3 years experience in Switchgear maintenance

74.TRANSFORMER MAINTENANCE

Objective

To update knowledge of plant technicians in the field of Transformers and its erection, testing/commissioning, operation and maintenance

Program Profile

- Standardization & specifications of transformers used in Power Station
- Selection of transformer, erection/ commissioning
- Testing & causes Transformers failures
- Testing of solid dielectric
- Insulating oil, indentification, sampling and testing procedures.
- Transformers maintenance procedures.
- Dissolved gas analysis techniques
- Case studies.
- Drying of Transformer

Venue	Duration	Date
Neyveli	3 days	09-12-2015

Who may attend

This course is meant for maintenance technicians with 2-3 years experience in Transformer maintenance.

75. TRANSFORMERS

Objective

To acquaint the participants with various problems faced in transformer failures, prediction failure analysis with case studies.

Program Profile

- Standardization & Specifications of transformers used in Power station.
- Selection of transformer, protection & schemes of protection and testing.
- Types & causes of Transformer failures
- Testing of solid dielectric
- Testing of liquid dielectric, standards
- Predictive maintenance of failures
- Dissolved gas analysis techniques.

- Case studies on transformer breakdown
- Drying of Transformers.

Venue	Duration	Date
Neyveli	1 week	19-01-2016

Who may attend

Engineers with 3-4 years experience in the relevant field.

76. PUMP MAINTENANCE

Objective

To acquaint the trainees with correct and modern methods of operations & maintenance of pumps so that at the end of course the trainees will be able to undertake maintenance of pumps independently.

Program Profile

- Description of different types of pumps, their construction, operation and applications.
- Single stage horizontal.
- Double stage vertical, Multi stage horizontal.
- Gear pump: Description of associated parts (fixed and movable)
- To acquaint the trainees with essential maintenance procedures like: Gland packing.
- Bearing removal and inspection, coupling design.
- Clearance and renovation of wear-rings impellers.
- Correct use of tools.
- Inspection of parts for wear and tear.
- Inspection of parts for wear and tear.
- Use of measuring instruments.
- Producing a joint for replacement.

Venue	Duration	Date
Neyveli	1 week	04-01-2016

Who may attend

Maintenance Technicians with 2-3 years experience in the relevant field.

77. O&M OF POWER & DISTRIBUTION TRANSFORMERS

Objectives

To discuss maintenance aspects of power and distribution transformers

Outline

- State of the art of Transformers
- Tests to check the adequacy of Transformers
- Insulation co-ordination of Transformers
- Earthing, Loading, Maintenance & protection of Transformers
- Failure, Failure analysis & condition monitoring of Transformers
- Condition Monitoring of Transformer Oil
- Diagnostic Monitoring by DGA with case histories
- RLA of Paper Insulation by Furan analysis
- Field visits

Venue	Duration	Date
PSTI Bengaluru	1 week	14-12-2015

Who may attend

Engineers involved in the Operation, Maintenance and Testing of Transformer from state Electricity Boards, Power Utilities, R & D organizations, Academic Institutions, Transformer manufactures transformer Oil processors and servicing organizations etc.

78. DATA ACQUISITION & DISTRIBUTED DIGITAL CONTROL SYSTEM IN THERMAL POWER STATION

Objective

To familiarize the power station personnel on the new technology of plant control, monitoring and management which will soon replace the old conventional system and will apply in new units.

Program Profile

- Introduction to Data Acquisition system Hardware & Software configuration.
- Introduction to Distributed Digital Control.
- Hardware & Software Configuration.
- Advantages of Distributed Control System.
- Configuration of single loop and multi loop Controller.

Venue	Duration	Date
Nagpur	3 days	05-01-2016

Who may attend

Engineers working in Power station with 3-7 years experience.

79. PROTECTION OF INDUSTRIAL POWER SYSTEM

Objectives

To give an insight of typical installation with transformers, captive power plant and HT motors

Outline

- Protection schemes of Captive Generators, Transformers, Motors, Power capacitor banks and Power Cables.
- Protection Coordination of Industrial Grids.
- LV Switchgear – selection, testing and performance analysis.

Venue	Duration	Date
PSTI Bengaluru	4 Days	01-12-2015

Who may attend

Engineers involved in operation, maintenance, protection and testing of industrial power systems.

80. CONDITION BASED MAINTENANCE

Objective

To appraise of the participants about the predictive means of maintenance for optimum and reliable equipment performance.

Program Profile

- Requirement of CBM
- Statistical techniques of trouble shooting
- Concepts of predictive and reliability based equipment monitoring.
- Condition monitoring equipments and application

Venue	Duration	Date
Durgapur	1 week	18-01-2016

81. ENERGY AUDIT & DEMAND SIDE MANAGEMENT IN POWER UTILITIES

Objective

To acquaint the participants with techniques and methodologies of energy audit & Demand Side Management in Power Utilities.

Program Profile

- Energy Scenario in the country and scope of energy conservation.
- Energy Losses—An Integrated optimal strategy for reduction of T&D Losses.
- Demand forecasting techniques
- EMS & LMS and Role of Energy Managers
- DSM Techniques
- DSM Methodologies
- DSM through Loss Reduction in Primary and Secondary Distribution System.
- Need for Energy Audit and Audit Procedures.
- Energy Audit – Macro Level & Micro Level
- HT - Metering & Metering Technique.

Venue	Duration	Date
Neyveli	1 week	02-02-2016

Who may attend

Engineers with 3-4 years experience in Thermal Power Station.

82. ENVIRONMENTAL POLLUTION & POLLUTION CONTROL RELATED WITH THERMAL POWER PLANTS

Objective

To give concise ideas about various Pollutants in power stations and measurement & control of pollution.

Program Profile

- General description of different types of Industrial Pollution.
- Introduction to air, Water and Noise Pollution.
- Nature of Air Pollutants.
- Water quality and health.
- Role of air and Noise Pollution control in modern society.
- Pollution control theory.
- Noise & Air Pollution Measurement & Equipment, the role of waste water treatment and the removal of Toxic Pollutants.
- Sewage and sludge treatment.
- Effects of pollutants in the Acquatic environment.
- Evaluation Pollution Effects on Plant Productivity.
- Legislation and the control of Air, Noise and Water Pollution.

Venue	Duration	Date
Nagpur	3 days	16-02-2016
Badarpur	1 week	13-07-2015

Dignitries at dias during the inaugration of 5 weeks Induction-Cum-Orientation Training Program for Trainee Engineers of NHPC Ltd. at NPTI (CO), Faridabad

Who may attend

Engineers/Chemists working in process Industry/Power Stations.

83. POWER PLANT INSTRUMENTATION

Objective

To acquaint the Power Plant Professionals with theory and working principles of different types of instruments used in the power plant and their applications.

Program Profile

- General Description of Power Plant Instrumentation and control and their layout details
- Working principles of Instruments
- Temperature/Flow/Level and Pressure measurement
- Control valves and actuators.
- Programmable Logic Controllers(PLC), their applications
- Introduction to Distributed digital control system Hardware and Software configuration

Venue	Duration	Date
Durgapur	1 week	18-01-2016

Who may attend

Engineers from SEBs/Power Utilities/ corporations with 2-3 years of experience

84. MANAGEMENT DEVELOPMENT PROGRAM

Objective

To provide basic know-how of management

Program profile

- Introduction of Management Skills
- Effective Communication
- Motivation
- Quality Leadership
- Team Building
- Case Studies

Venue	Duration	Date
Nangal	1week	22-06-2015

Who may attend

Officers/Engineers working in Power Sectors and allied industries with 2- 3 years of experience

85. RENEWABLE ENERGY SOURCES & GRID INTEGRATION

Objective

To investigate the impact of Renewable Sourse & their integration with the grid.

Outline

- Overview of power scenario and important of renewable energy
- Solar energy
- Wind energy
- Bio-Mass Energy
- CDM
- Renewable energy and its grid integration
- Field Visits

Venue	Duration	Date
PSTI Bengaluru	3 days	21-12-2015

Who may attend

Engineers from State Electricity Boards/ Power Utilities/ Distribution Systems, R&D organizations, involved in implementation of renewable source and their integration.

86. ADVANCES C&I IN THERMAL POWER STATION

Objectives

To acquaint the engineers working in C&I areas with advanced Technologies in C&I with relative process/plant behaviors

Program Profile

- General description of Power Station Instrumentation
- Advanced Technologies in C&I
- Temperature Measurement
- Flow Measurement
- On-Line Analytical Instrument
- Turbovisory Instruments & Vibration Analysis
- Various Protection and Interlocks
- Automatic Control Loops

Venue	Duration	Date
Durgapur	3 Days	02-03-2015

Who may attend

Engineers with 2-3 years experience in the relevant field.

87. RENEWABLE ENERGY TECHNOLOGIES

Objectives

Renewable energy Technologies are now fundamental to the growing global effort to combat damaging climate change. The objective of course is to understand the domain of Renewable energy in a relevant manner.

Program Profile

- Introduction to JNNSM
- Solar PV
- Solar Thermal
- Wind Power
- Bio-Mass Power
- Waste to Energy
- Small Hydro

Venue	Duration	Date
Durgapur	3 Days	29-02-2016

Who may attend

Engineers with 2-3 years experience

88. CHANGE MANAGEMENT

Objectives

To familiarize the participants with change management concept which is an approach to shifting/transitioning individuals, teams and organization from a current state to a desired future state.

Program Profile

- Change management process
- Readiness assessments
- Communication and communication planning
- Training and employee training development
- Resistance management
- Data collection, feedback analysis and corrective action
- Celebrating and recognizing success
- Changing the attitudes and behaviors of personnel

Venue	Duration	Date
Durgapur	3 Days	06-01-2016

Who may attend

Executives with 2-3 years experience

89. SAFETY IN HYDRO POWER STATION

Objectives

To acquint the participants with the safety aspects of Hydro Power Station

Program Profile

Safety: General safety precaution, treatment of electrical or acid/alkali burns, permit to work, first aid, protective gear/clothing, safety in movement and storage of materials, safety aspects of switchyard. Fire safety procedure. Fire protection of generator. Firefighting and emulsifier type protection.

Venue	Duration	Date
Nangal	3 day	20.5.2015

Who may attend

Engineers/Shift Engineers/Operators working in Hydro Power Plant

90. HYDRO POWER PLANT OPERATION

Objective

To Provide in-depth knowledge in Hydro Power Plant Operation

Program Profile

General principals of Hydro machine start and stop procedure and sequence. Operation of modern Hydro power station & features of pumps storage plant. Generator-Synchronizing, loading, parallel operation, active and reactive power sharing and frequency control, operation during emergency conditions. Declared capacity, scheduling & ABT based system UI, CI etc.

Venue	Duration	Date
Nangal	1 week	08.06.2015

Who may attend

Engineers/Shift Engineers/Operators working in Hydro Power Plant

91. VALVES & PUMPS IN THERMAL POWER PLANTS

Objective

To acquaint in trainees with modern methods of operation and maintenance of Pumps and Valves at Thermal Power Plant, so that at the end the course the trainees will be able to understand the importance of Pumps ant Valves.

Programme Profile

Description of different types of Pumps and their construction, Selection & Operational aspect.

Venue	Duration	Date
Nangal	3 days	17.06.2015

Who may attend

Operators/Technicians working in Thermal Power Plant

92. HYDRO GENERATOR & ITS EXCITATION SYSTEMS

Objective

To provide the in-depth knowledge of Hydro Generator & its Excitation systems.

Programe Profile

Constructional details and working principles of Generator and excitation systems. Types of Excitation systems and their components main and iplot exciters, Thyristor, FCB & AVR

Venue	Duration	Date
Nangal	1 week	13.07.2015

Who may attend

Engineers/Sr. Engineers working in Hydro Power Plant.

93. VALVES & PUMPS IN HYDRO POWER PLANTS

Objective

To give acquaint the trainees in-depth knowledge of operation and maintenance of Pumps and Valves at Hydro Power Plant.

Programme Profile

Hydro plant valves: Constructional details and features of valves and their types (Butterfly, Spherical, Needle etc).

Hydro plant Pumps: Constructional details and working principals of various types of pumps used in H.E. stations and their

operation & control system.

Venue	Duration	Date
Nangal	3 days	17.08.2015

Who may attend

Working professionals from hydro power station.

94. AUXILIARIES IN HYDRO POWER PLANTS

Objective

To acquaint the trainees with the hydro power station auxiliaries & equipments.

Program Profile

Electrical auxillaies: station lighting and automatic changeover. Station batteries and charging methods. Station emergency lighting arrangements, Elevator/lifts, Ventilation system, EOT cranes and hoists, Compressed air system, Dewatering and drainage system, Communication systems etc.

Mechanical auxillaries: Oil pressure units, Lubrication principles and their characteristics, HP lubrication system, Braking and jacking system, Central release lubrication system, Carbon dust collection system for slip rings, exciters and brake pads, Cooling water system etc.

Venue	Duration	Date
Nangal	3 days	16.09.2015

Who may attend

Engineers/Shift Engineers/Operators working in hydro power plant.

Inauguration of PGDC Program at
NPTI (NR), Badarpur, New Delhi

95. HYDRO TURBINES, GOVERNING & ITS PROTECTION SYSTEMS.

Objective

To provide in-depth technical know-how for governing system and its protections for safe ladling & operation of HE plant.

Program Profile

General Principles and description of different type of governing systems

Speed control devices and wicket gate operation

Venue	Duration	Date
Nangal	1week	16.11.2015

Who may attend

Engineers working in Hydro Power plants.

96. ROLE OF SMART GRIDS IN THE INDIAN POWER SECTOR : CURRENT DEVELOPMENTS, CHALLENGES AND WAY FORWARD

Objective

To acquaint the participants with the current development in the field of smart grid and the challenges in the field.

Program Profile

- India's energy realities and emerging needs
- Smart Grids- Concept and application areas
- Global developments
- Developments in India
- One model of mini grid
- Integration of mini gird to smart grid
- How to make mini grid to smart grid
- Challenges to accelerated deployment
- Case study
- Way forward

Venue	Duration	Date
Badarpur	02 days	08-02-2016

Who may attend

Engineers working in Transmission & Distribution sector.

97. TRANSMISSION LINE MAINTENANCE AND INTRODUCTION TO LIVE LINE MAINTENANCE TECHNIQUES.

Program Profile

- Substation maintenance philosophy and guidelines
- Work permits, line clear procedure, maintenance of log books, records etc.
- Maintenance schedules : Routine, prerventive, predictive, breakdown and emergency maintenance schedules.
- Transformer, switchgear and reactor maintenance
- Transformer oil testing and dissolved gas analysis
- Introduction Live line maintenance techniques
- Type of tools used in live line maintenance
- Live insulator testing methods & introduction to hotline washing (wet & dry)
- Case study
- Audio visual shows on hot stick-methods and bare hand techniques

Venue	Duration	Date
Badarpur	01 week	07-03-2016

Who may attend

Executives in the rank of Jr. Engineers and above working in transmission line maintenance.

98. OPERATION AND MAINTENANCE OF SUB-STATION.

Objective

To impart knowledge to the trainees about installation, commisssinoning, operation and maintenance of subatations.

Program Profile

- Introduction to Substation.
- Types of Substation, Layout etc.
- Selection of Equipments and inspection Procedures.
- Civil foundation for main equipments,tower, grounds work etc.
- Earthing, cable trench and cable tray.
- Transformers, isolators specification & their characteristics.
- Safety aspects of Substations & Equipment Protection.
- Swtchyard compressors, lightning arrester DC supply system
- General practices of EHV/HV/LV substation operation & maintenance.

Venue	Duration	Date
NPTI-NER	01 week	08-06-2015
Guwahati		23-11-2015
Nagpur		

Who may attend

Engineers with 2-3 years of experience in operation and maintenance of subatations.

99. LIVE LINE PUNCTURED INSULATOR DETECTION (PID) ON EHV LINES

Objective

The course is meant for training on Testing of Insulator String of Suspension, Tension and 'V' String configuration on Live Condition of EHV Transmission Lines.

Program Profile

- Testing of Live Insulator string using software based Positron PID kit
- Downloading of stored result from Memory of kit to PC.
- Analysis of results (Graphical & Analytical Method).
- Preparing Test Report.

Venue	Duration	Date
HLTC-Bengaluru	1 week	13-07-2015
		14-12-2015

Who may attend

Supervisors in the rank of Jr. Engineers and ITI qualified technicians who had undergone their basic/induction level course after recruitment.

100. AUTOMATION SYSTEM (PLC & SCADA) FOR POWER PLANT

Objective

To enhance the knowledge of automation system in power plant

Program Profile

- Interactive course with hands on practice with automation
- Systems (PLC & SCADA) & issues faced on working with
- Automation system

Venue	Duration	Date
Nagpur	3 days	12-01-2016

Who may attend

Working professionals, Engineers, Supervisors and Technicians associated/ engaged with power plant.

101. POWER SYSTEM & LOAD DESPATCH

Objective

To make participants understand the function and responsibilities of load dispatch centre

Program Profile

- Growth of power system in India
- Objectives & functions of LD Centre
- Organization of LD centre
- Reactive power management
- Power quality
- Computerization of load dispatch

Venue	Duration	Date
Nagpur	3 days	08.09.2015

Who may attend

Engineers engaged in power sector and local load dispatch centre

102. AWARENESS PROGRAM ON GIS & RS

Objective

To make the professionals & technical aware of GIS, RS and IT applications

Description

- Brief Introduction of mapping & GIS
- Data modeling
- Spatial analysis
- Role and use of GIS & RS software
- Arc GIS & ERDAS
- Visualizing & Styling data

Venue	Duration	Date
Faridabad	1Week	07-07-2015 27-10-2015

Who may attend

All professional who wants to apply GIS principles & technology to solve their business problem, and the individuals who are part of the of the Professional teams holding position of responsibility within function departments of medium to large public, private power sector organization, educational institutes, etc.

103. TRAINING PROGRAM ON PROTECTION OF CONSUMER INTEREST

Objective

The Electricity Act, 2003 makes elaborate provisions which seek to protect

The of consumers. The national electricity policy and the tariff policy framed under the act reinforce its provisions. They stipulate a road map and action plant for various stakeholders in ensuring protection of consumers interests.

Program profile

Increasing consumer awareness, transformation of the sector, unequal bargaining power, enabling legislations, emergence of regulator bodies

Description

- Information
- Consultation
- Participation
- Decision Making
- Empowerment
- In-house consumer affairs bureau Consumer representatives in the Regulatory Commission
- External Advisory Bodies

Venue	Duration	Date
Faridabad	2 days	01-02-2015

Who may attend

Senior officials of regulatory commission & CGRFS

104. TRAINING FOR TRAINERS

Objective

To enable the trainers in Power Sector to increase their knowledge and skill to impart training in operation and maintenance of power station.

Program Profile

- Fundamentals of learning process
- Group communication
- Motivation and transactional analysis
- Identification of training program
- Design of training program
- Training resource development
- Training programs co-ordination technique
- Instructional techniques
- New techniques
- On-job, On-site methodologies
- Evaluation, validation and record keeping
- Feed-back technique

Venue	Duration	Date
Badarpur	1 week	06-07-2015

Who may attend

Engineers as well as non technical managers involved in human resource development

(E) SIMULATOR TRAINING PROGRAMS

1. 210 MW FOSSIL FUEL POWER PLANT SIMULATOR TRAINING

Objective

To train fresh engineers on a full scope replica simulator in all aspects of operation as well as for developing suitable response to malfunctions and emergency situations by Hands-on-Practice in all the phase of operation from start-up to shut-down.

Hot Line Training Activities at HLTC, Bengaluru

Program Profile

- Cold start, up to 100% load.
- Partial load to full load and back to partial load.
- Manoeuvering of different auxiliaries.
- Hot start/warm start to full load.
- Planned shut down.
- Over-rides and alarms during different exercises.
- A few malfunctions.

Venue	Duration
Nagpur	2 weeks

Date of Commencement

13-07-2015	27-04-2015	11-05-2015
25-05-2015	15-06-2015	29-06-2015
13-07-2015	27-07-2015	17-08-2015
31-08-2015	14-09-2015	28-09-2015
12-10-2015	26-10-2015	16-11-2015
30-11-2015	14-12-2015	28-12-2015
11-01-2016	25-01-2016	08-02-2016
22-02-2016	07-03-2016	21-03-2016

Who may attend

Shift Charge Engineers/ Operation Engineers/Desk Controllers engaged in operation of Thermal Power Station and also fresh graduate engineers who had undergone training in O&M of power station/ posted in Thermal Power Stations.

2. 500 MW FOSSIL FUEL POWER PLANT SIMULATOR TRAINING

Objective

To train engineers on full scope replica simulator of 500 MW thermal power station, in all aspects of operation and helping them to make better judgement calls/responses to malfunctions and emergent situations by imparting them hands on practice in:

a) Full Scope/Conventional Panel Operation Mode

b) CRT –Keyboard Based Operation Mode

Program profile

- Cold start and up to 100% load
- Partial to full load and back
- Hot start / Warm start to full load
- Planned Shutdown
- Maneuvering of different auxiliaries
- Operation under emergency conditions

Venue	Duration
Faridabad	2 weeks

Date of Commencement

06-04-2015	20-04-2015	04-05-2015
18-05-2015	01-06-2015	15-06-2015
29-06-2015	13-07-2015	27-07-2015
10-08-2015	24-08-2015	07-09-2015
21-09-2015	05-10-2015	19-10-2015
02-11-2015	23-11-2015	07-12-2015
04-01-2016	18-01-2016	01-02-2016
15-02-2016	07-03-2016	21-03-2016

Who may attend

Shift charge Engineers/ Operation Engineers/ Desk controllers working in Thermal Power Station and also fresh Engineers posted in Thermal power stations.

3. COMBINED CYCLE GAS TURBINE POWER PLANT SIMULATOR TRAINING

Objective

To train engineers on full scope replica simulator of 2x143+1x44 MW CCGT power station, in all aspects of operation and helping them to make better judgement calls/ responses to malfunctions and emergent situations by imparting them hands on practice.

Program Profile

- Cold start and up to 100% load
- Partial to full load and back
- Hot start / Warm start to full load
- Planned Shutdown
- Manoeuvring of different auxiliaries
- Stand aline Operation of Gas Turbine
- Operation under emergency conditions
- Operation of Gas turbine in open Cycle mode

Venue	Duration
Faridabad	2 weeks

Date of Commencement

06-04-2015	20-04-2015	04-05-2015
18-05-2015	01-06-2015	15-06-2015
29-06-2015	13-07-2015	27-07-2015
10-08-2015	24-08-2015	07-09-2015
21-09-2015	05-10-2015	19-10-2015
02-11-2015	23-11-2015	07-12-2015
04-01-2016	18-01-2016	01-02-2016
15-02-2016	07-03-2016	21-03-2016

Who may attend

Shift charge Engineers / Operation Engineers / Desk controllers working in Combined Cycle Gas Turbine Power Station and also fresh Engineers posted in Combined Cycle Gas Turbine Power Station.

4. 250 MW HYDRO SIMULATOR TRAINING

Objective

To train the engineers on a full scope replica simulator in all aspects of operation as well as for developing suitable response to malfunctions and emergency situations by Hands-on –Practice in all the phase of operation from start-up to shut-down.

Program Profile

- Start-up of M/c &load up to 100% .
- Partial load to full load and back to partial load.
- Maneuvering of different auxiliaries.
- Planned shutdown.
- Operation under emergency
- Over-rides and alarms during different exercises.
- Few malfunctions & its trends.

Venue	Duration
HPTC,Nangal	1 week

Date of Commencement

06-04-2015	27-04-2015	11-05-2015
25-05-2015	08-06-2015	06-07-2015
03-08-2015	24-08-2015	07-09-2015
05-10-2015	02-11-2015	07-12-2015
04-01-2016	18-01-2016	15-02-2016
14-03-2016		

Who may attend

Shift charge Engineers / Operation Engineers / Desk controllers engaged in operation of Hydro power station & also fresh graduates engineers who had undergone training in O&M of Hydro power station / posted in Hydro power stations

5. DISPATCHER TRAINING SIMULATOR

Objective

To practice the Normal and emergency Operation of Power System, Active and Reactive Power Control and Advanced Applications using Dispatcher Training Simulator (DTS)

Program Profile

- Dispatcher training Simulator Overview
- Active and Reactive Power Control
- Indian National Network including HVDC Lines
- Prime mover Dynamics (Hydro, Thermal, Gas and Pumped Storage units)
- Load Shedding schemes

- Islanding schemes
- SCADA Operation
- Automatic Generation Control
- Islanding and Integrated Operation
- System Occurrence and Restoration
- System Stability
- Voltage Control and Voltage Collapse simulation
- Prevention of Grid Disturbance

Venue **Duration**

PSTI, Bengaluru 2 Weeks

Dates of Commencement

20-07-2015 16-11-2015 11-01-2016

Who May Attend

Persons involved in System Operation and Control i.e. Generating Station, Transmission, Load Dispatch Centre, Sub-Station and Distribution Personnel

Methodology

Lectures, Video session, Hands on and Demo Session on Simulator and Case Studies

Following program can be conducted/ offered to National as well as International organi-zation on request /demand basis on applicable terms and conditions at different NPTI Institutes

(F) MEDIUM TERM COURSES FOR ENGINEERS (5 WEEKS TO 16 WEEKS)

1. DISTRIBUTION ENGINEERING

Objective

To familiarize the participants with various aspects of electricity distribution engineering.

Shri Subodh Garg, Director General, NPTI has been selected for the '25 Most Talented Global Training & Development Leaders' award by World HRD Congress. This was announced at a glittering ceremony held at Mumbai on 15th February, 2014. This award is for his extraordinary work and proven track record of his achievements in the area of Training and Development. The above award was decided by an International Jury of World HRD Congress.

Program Profile

- Distribution engineering—Growth, Developments, Equipment, Standards specification, construction Practice and guidelines, design aspects—testing and installation of Distribution equipment—Lay out of Sub-Station.
- Safety, Protection, DSM and energy Audit/ Metering— Safety Aspects, I.E. Rules and Regulation, Compliance, First Aid, Fire Safety.
- Energy Audit and DSM application in Distribution /Engineering—Energy Audit—need, Objective and Methodology, types, application & techniques, DSM—Methodology and Techniques, Loss reduction—Voltage control, Var control, Reactive Power Compensation.
- Metering— Metering techniques, various types—LT meters and its application, Installation Testing and Commissioning of LT meters, defects and remedies—HT metering techniques.
- Billing, Power System Study, Distribution Planning Trends and Development—Billing system, Computer application in billing system, Distribution planning, Optimization of capacity and location of Distribution Transformers— Power System study flow, fault analysis, relay co-ordination, Reactive Power compensation—Load Forecast techniques, recent trends & developments in Distribution Automation, Automatic Meter Reading.

Who may attend

Engineers engaged in distribution of electricity with 2-3 years experience. The course can be conducted at New Delhi, Nagpur, Durgapur, Neyveli or Bengaluru Institute

Duration **6 weeks**

Shri Subodh Garg, Director General, NPTI addressing the students during the Inaugration of 13th batch of MBA Power Management at NPTI Corporate Office, Faridabad

Award to MBA students in "Business Idea Competion" at the National InterUniversity Cultural & Management Fest-2014 at Jamia Millia Islamia, New Delhi

2. CONTROL & INSTRUMENTATION FOR SUPERVISORS / TECHNICIANS

Objective

To impart knowledge of theory and working principles of instruments and improve the skill of Instrumentation Supervisors Technicians in the field of Instrument Maintenance.

Program Profile

- Concept of instrumentation in Thermal Power Station
- Instrumentation layout
- Basic Science, Basic electricity and Basic Electronics
- Pressure, Level, Low and Temperature measurement
- Air supplies, pneumatic Instruments and drives
- Telemetry
- Introduction to Automatic Control System
- DAS / DDC
- Turbovisory instruments and Analytical Instruments
- Practicals / Demonstrations.

Duration **6 weeks**

Who may attend

Instrumentation Supervisors / Technicians working in Thermal Power Station / process Industry.

3. TRAINING PROGRAME FOR SUPERVISOR/MANAGERIAL PERSON DEPLOYED IN POWER INDUSTRY

Objective

To impart Supervisory/Managerial skills to Middle level persons who are working in Power supply Industry

Program Profile

- Personality Development – Skills, Attitudinal Development, Leadership, Team Building, Value & Ethics.
- Business Communication skills, Negotiation
- Man Power Planning (MPP)
- Quality of work Life (QWL)
- Career Planning & Quality Circles
- Financial Management & Overview
- Performance Appraisal
- Man Power Audit
- Human Resource Development
- Case Studies

Venue	Duration
Faridabad	6 weeks

Who may attend the program

Staff deployed in power station/Industry with experience of 5 to 10 years.

4. NEW AND RENEWABLE SOURCES AND GRID INTEGRATION IN INDIA

Objective

To renewable energy program gives the participant a solid foundation in the theory, sign, installation and grid interfacing techniques required to work with new and

Inauguration of Reliance Certified Power Engineers batch at NPTI (WR), Durgapur

renewable energy systems and technologies.

Program Profile

- Energy Sector Reforms, Regulations Environment and RE.
- Wind Energy Systems
- Solar thermal power systems
- Direct energy Conversation – Solar Photovoltaic, Fuel Cells.
- Waste to Energy.
- Solar passive Architecture.
- Biomass Energy Systems.
- Bio-Fuels
- RE and Grids Integration
- Economic Viabilty
- Case studies

Duration **6 weeks**

Who may attend

Graduate engineers having 3-4 years experience in Thermal Power Stations.

5. EXECUTIVE DEVELOPMENT PROGRAM FOR THE SUPERVISORY STAFF WORKING IN FINANCE & ACCOUNTS DEPARTMENT

Objective

To impart knowledge of Supervisory Finance personnel working in Power Supply Industry.

Program Profile

- Status & Responsibilities of Financial Executives: Development of Managerial Skills
- Personality Development, Business Communication Skills, Negotiation Skills, Leadership, Team Building, Values & Ethics etc.
- Financial Management & Planning
- Computer Awareness for finance personnel
- Capital Budgeting, Costing & decisions
- Operating & Financial Leverage Analysis
- Dividend issues, policy & Decisions
- Budgeting & Accounting
- Foreign Exchange, Taxation Rules & Regulations
- Financial Performance Evaluation & Risk Management
- Cash Flow Management

Venue	Duration
Faridabad	6 weeks

Who may attend the program

Supervisory staff working in Power Stations/ Industry with to 10 year of experience.

(G) SHORT-TERM COURSE FOR ENGINEERS (1 DAY TO 4 WEEKS)

6. GIS IN DISTRIBUTION PLANNING

Objective

To acquaint the participants with basic fundamentals of GIS, GIS software basics and applications with Cyme Distribution Software.

Program Profile

- Basic of GIS
- Features of GIS
- Digitization, Data base Creation, Editing Arc GIS software
- Elementary electric utility features Arc FM
- Image Processing using Eardas Imaging Software
- Cyme Dist. Application Software
- Network Models, Data Synthesis, Capacitor Placement, Load Balancing
- Distribution Planning
- Consumer Indexing

Venue	Duration
Faridabad	4 weeks

Who may attend

Sr. Engineers /Engineers with 2-3 year experience

7. GIS APPLICATION IN NETWORK PLANNING & ASSEST MANAGEMENT

Objective

To acquaint the participants with basic fundamentals of GIS with different software input.

Program Profile

- Introduction to GIS
- Introduction to Arc GIS with software Application
- GIS elementary land based features
- Elementary Electric utility features editing
- Introduction to Arc Fm
- Network Model
- GPS Instrument
- CME Dist. Software

Venue	Duration
Faridabad	1 week

Who may attend

Sr. Engineers with 2-3 year experience.

8. MAINTENANCE PLANNING & COST CONTROL

Objective

To enable the participants to understand and apply the modern planning and cost control techniques in maintenance programs.

Program Profile

- Aims and objective of maintenance efficient, service, high plant availability, maintenance and planning engineer's duties.
- Integration of maintenance with operational requirements, plant reliability,plant outages and daily work programs.
- Preventive maintenance of running units.
- Planning of major plant overhauls during shut downs.
- Planning techniques-critical path analysis, charting systems etc.
- Purchasing and stores control-standards, cost codes, control of stores and store records.
- Cost control, Direct costs, indirect costs, outage costs, budgeting and costing works, budgetory control.
- Contract procedures, Conditions of contract, project evaluation, interest and depreciation charges.
- use of computers in maintenance planning.

Duration **1 week**

Who may attend:

Engineers / Officers working in Power Stations / Industries with 5-10 years experience.

9. TRAINING OF TRAINERS

Objective

To enable the trainers in Power Sector to increase their knowledge and skill to impart training in operation and maintenance of power station.

Program Profile

- Fundamentals of learning process.
- Group communication.
- Motivation and transactional analysis.
- Identification of training program.
- Design of Training Program.
- Training Resource Development.
- Training Programs co-ordination technique
- Instructional techniques.
- New techniques.
- On-job, On-site methodologies.
- Evaluation, validation and record keeping.
- Feed-back techniques.

Duration **1 week**

Who may attend

Engineers as well as nontechnical managers involved in human resource development

10. OPERATION & MAINTENANCE OF EHV SUB-STATION

Objective

To impart knowledge to the trainees about the installation, commissioning, operation and maintenance of Sub-Station.

Program Profile

- Introduction to sub-station
- Types of layout etc.
- Soil testing and site selection.
- Equipment inspection & selection aspects.
- Civil foundation for main equipments, tower, ground work.
- Structure and tower erection and fabrication alignment.
- Earthing, cable trench, cable tray.
- Protection system & its equipment.
- Design and erection.
- Switchyard HV equipments erection.
- Switchyard, compressor, lightening arrestors.
- Different safety aspects, fire protection devices, erection and commissioning

Duration **2 weeks**

Who may attend

Engineers with 2-3 years experience in electrical operation and maintenance of Power Station and transmission & Distribution.

11. MICRO PROCESSORS

Objective

To acquaint the participants with microprocessors and their applications in Thermal Power Station.

Program Profile

- Microprocessor structure and organization
- Information Representation

Cultural Program

- Microprocessor Instruction set
- Assembly Language Programming
- Peripherals input/output units
- Microprocessor interfacing with other devices
- Application programs and case studies.

Duration **1 week/2 weeks**

Who may attend

Graduate Engineers having sufficient knowledge in Control system of Thermal Power Stations.

12. VIBRATION ANALYSIS

Objective

To impart expertise and to give latest information regarding different methods of vibration measurement, their analysis, diagnosis and recommended remedial actions.

Program Profile

- Definition and description of vibration.
- Terms and Units in vibration measurement.
- Characteristics of vibration.
- Basic vibration modes of measurement.
- Vibration transducers-different types and selection criteria.
- Selection criteria of vibration mode for measurement.
- Vibration diagnostics and fault analysis.
- Dynamic Balancing using portable Vibration Analysers.
- Scheduling of condition monitoring and condition based maintenance.

Venue	Duration
Durgapur	3 days

Who may attend

Engineers with at least 5 years experience in operation and maintenance of Power Station Industry.

17th PGDC batch for T&D system at NPTI, PSTI, Bengaluru

13. RENOVATION & MODERNIZATION OF THERMAL POWER PLANT/ STATION

Objective

To familiarize and spread awareness amongst the Working Managers Engineers of Thermal Power Stations to enable them to take timely action for renovation & Modernization of their Thermal Power Station for further life extension.

Program Profile

- Norms for renovation & Thermal Power Station & Funds allocation.
- Scope of renovation & area of renovation.
- Renewal life Assessment Techniques for Turbine, Boilers and generator.
- Life extension studies and techniques for Thermal Power Station auxilliary.
- Stress Analysis and data interpretation
- Case Studies

Duration **1 week**

Who may attend

Middle Level Managers / Working Engineers with 2 to 3 years experience.

14. REGENERATIVE FEED HEATING SYSTEM

Objective

To familiarize and impart knowledge regarding operational procedure system with confidence and safety.

Program Profile

- Different types of heater – H.P. & L.P.
- Theory of heating, construction of HP & LP heaters
- System of steam extraction.
- layout of system – various considerations.
- Operation of the individual components.
- Cutting in and cutting out procedures of heaters.
- Performance monitoring of heaters and identification in the system.
- Various interlocks and protections and Automatic systems.

Duration **1 week**

Who may attend

Operators working in Thermal Power Station with 3-4 years experience.

15. TRANSMISSION DISTRIBUTION EQUIPMENT MAINTENANCE

Objective

To improve the skill of personnel engaged in the field of Transmission & Distribution equipment maintenance.

Program Profile

- Transmission and distribution system familiarisation.
- Maintenance involved during erection and commissioning of T&D equipment
- Transmission and distribution system and equipment maintenance procedure.
- Preventive and predictive maintenance program & schedule.

Venue	Duration
Badarpur	1 week

Who may attend

Maintenance technicians with 2-3 years experience in the field.

16. BALANCING AND ALIGNMENT TECHNIQUES

Objective

Trainees will learn about practical procedure of balancing and alignment techniques of heavy duty rotary machines, relevant

toThermal Power Plants.

Program Profile

- Causes of vibrations and types of balancing requirements.
- Static and dynamic balancing techniques.
- Identification technique of misalignment
- Hot alignment and tolerance in alignment for various applications.

Duration **3 days**

17.ELECTRICITY ACT AND REGULATION

Objective

To appraise of the participants about the conceptual reorientation in IEA-2003 related to generation, transmission, distribution along commercial implication.

Program Profile

- Over view of IEA-2003
- Electricity Grid code
- Status of deregulation and power tariff
- Open access and ABT

Duration **3 days**

18. BASIC ELECTRONICS

Objective

To impart knowledge of basic concept of semiconductors, their properties and application in various fields.

Program Profile

- Basic theoretical knowledge of semi conductor materials diodes, transistors, rectifiers, transformers, amplifiers, oscillators, introduction to IC's.
- Digital Electronics - logic gates, Flip Flops & their applications.
- Practical session:
- Making circuits and their testing, Fault finding techniques of electronics circuits.

Duration **1week**

Who may attend

Power station technicians working in electricals and C&I maintenance sections.

19.TRAINING FOR ASSISTANT LEVEL PERSONS/ PERSONNEL STAFF

Objective

To impart skills to personnel staff working in Power Supply Industry

Program Profile

- General Administration Rules & Regulations
- Office Procedure, Etiquettes, Management of official records, Noting & Drafting
- Practice of stenography and test at qualifying speed of 80 WPM
- Basic of computers, typing on computers with a qualifying speed of 40 WPM
- Hands-on practice on computers with Word, Excel and other basics
- Communication and Communication skills
- Time Management and Stress Management

Venue	Duration
Faridabad	1 weeks

Who may attend the program

Personnel staff working in Power Stations/ Industry with 2 to 6 years of experience.

20. HUMAN RESOURCE DEVELOPMENT PROGRAM FOR FINANCE OFFICER/ MANAGER

Objective

To develop Human resources deployed in finance wing who are working in Power supply Industry

Program Profile

- Personality Development – Skills,

- Attitudinal Development, Leadership, Team Building, Value & Ethics
- Business Communication skills, Negotiation
- Man Power Planning (MPP)
- Beyond the Present Role: Potential Systems
- Quality of work Life (QWL)

Venue	Duration
Faridabad	1 week

Who may attend the program

Finance persons working in Power Stations/ Industry with 5 to 10 years of experience.

21. DEVELOPMENT OF FINANCE MANAGERS

Objective

To impart in-depth knowledge to Finance Officers in Budgeting & Financial Statement Analysis Industry working in Power Supply Industry

Program Profile

- Status & Responsibilities of Finance Executives – Development of Managerial Skills.
- Capital Investment decisions; strategic Considerations.
- Budgeting & Accounting (Accounting Statements and records).
- Financial Statement Analysis.
- Taxation – Rules & Regulations.

Venue	Duration
Faridabad	1 week

Who may attend the program

Finance Officer working in Power Stations/ Industry with 5 to 10 years of experience.

22. TRAINING MIND FOR EXCELLENCY

23. EXECUTIVE/MANAGEMENT DEVELOPMENT PROGRAMS FOR EXECUTIVES & SUPERVISORS

24. EXECUTIVE DEVELOPMENT PROGRAM FOR LAW STREAM

25. SUPERVISORY DEVELOPMENT PROGRAMS

26. HR FOR NON-HR EXECUTIVES

27. EXECUTIVE DEVELOPMENT FOR SUPERVISORY STAFF WORKING IN FINANCE AND ACCOUNTS

28. ENVIRONMENTAL MANAGEMENT

29. BUSINESS COMMUNICATIONS & PRESENTATIONS SKILLS

30. GENERAL INTRODUCTION TO HYDRO POWER PLANT

31. HYDRO POWER PLANT SCHEMES & SYSTEMS DISCUSSIONS

32. HYDRO POWER PLANT OPERATION & PUMP STORAGE OPTIONS TO GOVERNING

33. HYDROPOWER PLANT PROTECTIONS
34. MAINTENANCE (ON-JOB) IN HYDEL PLANT
35. PLANNING AND COST CONTROL OF HYDRO ELECTRIC POWER STATION
36. CONTROL & INSTRUMENTATION OF HYDRO ELECTRIC POWER STATION
37. SITE SELECTIONS OF HYDRO ELECTRIC PLANTS, GEOLOGY, HYDROLOGY
38. TUNNELS & CHANNELS, PENSTOCKS, SURGE SHAFT, SPILLWAYS
39. VALVES IN HYDRO POWER PLANTS
40. CONSTRUCTION EQUIPMENT OF HYDRO ELECTRIC PLANTS
41. ENVIRONMENTAL IMPACT ASSESSMENTS
42. MATERIAL HANDLING AND TRANSPORTATION
43. SAFETY IN HYDRO POWER PLANTS
44. PUMPS IN HYDRO POWER PLANTS
45. TRANSFORMERS & ELECTRICAL EQUIPMENT IN HYDROPOWER PLANTS
46. CONSTRUCTIONAL DETAILS OF HYDRO TURBINES &GENERATORS
47. ELECTRICAL AUXILIARIES OF HYDRO POWER PLANTS
48. ERECTIONS OF HYDRO TURBINES, GENERATORS AND AUXILIARIES
49. TYPES OF DAMS & THEIR CONSTRUCTIONAL DETAILS
50. LEAD AUDITORS PROGRAM ON ISO-14001
51. HR ISSUES IN POWER SECTOR
52. TIME MANAGEMENT
53. STRESS MANAGEMENT
54. LEAD AUDITORS PROGRAM ON ISO 9000
55. LEADERSHIP SKILLS
56. PROJECT MANAGEMENT
57. CUSTOMER RELATIONSHIP MANAGEMENT
58. FINANCE FOR NON-FINANCE EXECUTIVES
59. ABT, POWER TRADING

60. ELECTRICITY ACT 2003 & CERC, SERC
61. FINANCIAL MANAGEMENT IN POWER SECTOR
62. CURRENT HR PROBLEMS IN POWER SECTOR
63. FIRST – AID FOR TECHNICAL PERSONS
64. TOTAL PRODUCTIVE MAINTENANCE
65. RETIREMENT MANAGEMENT
66. CHANGE IN ATTITUDE
67. CUSTOMER ORIENTATION
68. CONTRACT MANAGEMENT
69. COMPUTER APPRECIATION PROGRAM
70. O & M OF MOTORS
71. POWER SYSTEM STUDIES & LOAD DISPATCH
72. VALVE MAINTENANCE
73. MAINTENANCE OF PUMPS
74. IT APPLICATION IN POWER SYSTEM
75. PUMP STORAGE HYDRO POWER STATION
76. MANAGEMENT DEVELOPMENT PROGRAM
77. PERFORMANCE IN TESTING OF HYDRO POWER SYSTEM
78. GIS/GPS FOR POWER UTILITIES
79. MANAGING CARBON CREDIT OF TPS THROUGH CDM ROUTE
80. ENERGY EFFICIENCY IN THERMAL UTILITIES
81. IT APPLICATION IN POWER UTILITIES
82. ENERGY EFFICIENCY IN ELECTRICAL UTILITIES
83. POWER DISTRIBUTION MANAGEMENT
84. STEAM TURBINE ITS AUXILIARIES OPERATION
85. ADVANCE MECHANICAL MAINTENANCE PRACTICES
86. O & M OF GENERATORS & EXCITATION SYSTEM FOR SUPERVISORS
87. FUEL (COAL & OIL) HANDLING SYSTEM OPERATION
88. MATERIAL MANAGEMENT
89. FLUIDISED BED COMBUSTION BOILERS

90. REVIEWABLE ENERGY SOURCE & GRID INTEGRATION
91. SYSTEM OPERATOR TRAINING
92. ADVANCES IN POWER PLANT CHEMISTRY FOR CHEMISTS
93. BOILER & AUXILIARIES
94. ELECTRICAL MOTORS FOR POWER PLANTS
95. SWITCHGEAR FOR POWER PLANT
96. HIGH VOLTAGE DIRECT CURRENT (HVDC) TRANSMISSION
97. HYDRO POWER PLANT ENGINEERING
98. INSULATOR WASHING TECHNIQUE (ON-SITE)
99. DISTRIBUTION FRANCHISE
100. GRID MANAGEMENT
101. MAINTENANCE PUMPS AND VALVES
102. POWER EXCHANGE AND POWER TRAINING
103. POWER BUSINESS TARRIF AND REGULATIONS
104. INDIAN ELECTRICITY ACT AND RULES & DE-REGULATION
105. O&M EHV TRANSMISSION LINES
106. GOVERNING SYSTEM & HYDRO POWER GENERATION
107. PROJECT MANAGEMENT FOR POWER SYSTEM ENGINEERS
108. POWER AND TELE-COMMUNICATION (PTCC)
109. ADVANCE POWER GENERATION PROTECTION & CONTROL
110. POWER MARKET REGULATIONS
111. CONTROL & INSTRUMENTATION
112. SMART GRID
113. REGULATORY FRAMEWORK IN POWER SECTOR
114. COAL MILL/ MILLING SYSTEM MAINTENANCE (CASE STUDIES)
115. MAINTAINANCE OF BOILER ROTATARY MACHINE
116. INDUSTRIAL SAFETY

FACULTIES BIODATA
NPTI-CORPORATE OFFICE, FARIDABAD

Name/Designation

Shri Subodh Garg
Director General

Shri Subodh Garg Director General, NPTI has more than three decades of experience in the Power Sector. He has done his Electrical Engineering from Delhi College of Engineering. Prior to joining NPTI, he has worked for more than three years in Rural Electrification Corpn. Ltd. and in Power Grid for about 17 years and in NTPC for about 10 years.

While working in REC, he was Chief Executive Officer of REC Transmission Projects Company Limited, which is a fully owned subsidiary of REC Ltd. In his capacity as CEO of REC Transmission Projects Limited, he was responsible for selection of developers for implementation of two transmission projects on tariff based bidding based on the guidelines issued by the Ministry of Power. He was also responsible for appraisal, sanction and financing of Renewable Energy Projects and large generation projects. He was nominee Director on the Board of Teesta Urja Ltd. In addition to the above, he was also in-charge of HR Deptt of REC.

He has visited Bhutan, Singapore, Germany and Spain.

Name/Designation	Educational Qualification	Experience & Specialization	Member/ Association/ Training
 **Sh. J. S. S. Rao** *Principal Director (CP&M/ BDD/ Purchase)*	B. Tech. (Electrical) JNTU, Kakinada M.E. (Power System) Andhra University Visakhapatnam, 1982	More than 32 years of work experience in various positions in NPTI. Integrated Unit Operations Faculty on 210 MW & 500 MW Thermal Power Plant Control Room Simulators. Active team member of Concept to Commissioning of 500 MW Thermal Power Plant Control Room Operation area Simulator. Program Director for the 2-year full-time MBA program in Power Management for nearly a decade.	1) Simulator instructors course in CEGB-UK in 1985 2) Simulator Modelling GSE Systems INC., USA 3) Simulator Instructor GSE Systems INC., USA
 **Dr. S. K. Choudhary** *Principal (MS/ IT)/ ER/ NER*	B.Sc. (Engg.) 1979, Electronics & Communication, Ph.D.(Managment Stream-2014), MHRM – 2002, MBA(Fin). – 2006	More than 31 years of work experience in Power Plant O&M **Specialization:** Distribution Reforms, Consultancy Services in, HRM, Finance Management, Corporate Planning & Restructuring	CEGB, UK. – 12 Weeks, Lead Auditor ISO 9001;, Neuro Linguistic, Programming; Business, Process Re-engineering

NPTI-CORPORATE OFFICE, FARIDABAD

Name/Designation	Educational Qualification	Experience & Specialization	Member/ Association/ Training
 **Sh. R. K. Mishra** *Director (Training/ Project/ F&A)*	B.Sc. Engg.(Elect.) from U.C.E. BURLA Sambalpur University Odisha.(Now VSSUT) in 1985 MBA, PGDIM PGDHRM from IGNOU, New Delhi in 2003.	More than 28 years of experience in the fields of Teaching, Power Industry and Training in REC (Now NIT) Rourkela, Talcher Thermal Power Station and NPTI respectively.	**Specialization:** Operation & Mtce. of Thermal Power Station, Power Plant Automation 24 weeks training on Control& Instrumentation at POWERGEN, U.K 1991.
 **Mrs. Manju Mam** *Director (MS/ IT)*	B.E. (E & C) from NIT Srinagar, M.S. (Software Systems) from BITS Pilani, MBA (HR) from IGNOU, New Delhi	25 years experience in the field of Teaching **Specialization:** HR, IT	Member of Institute of Electronics and Telecommunication Engineers.

Additional Training Infrastructure are being added

NPTI (NR), BADARPUR

Name/Designation	Educational Qualification	Experience & Specialization	Member/ Association/ Training
 **Sh. Vijay Kumar Gupta** *Head of the Institute*	B.Sc. (Engg.) (Mechanical) from Delhi College of Engg. Delhi in 1977.	**Specialization:** Operation & Efficiency aspect of large Thermal Power Plants 36½ Years in DVC & NTPI:- • 6 Years in Design & Operation of large Thermal Plants • 28 years in Training of Power Engineers as faculty , Design and Conduct of Training Programs including On-site & On-Job Program. **Training** 1. 12 weeks Operation of large plants (DCPL Calcutta 1980 2. 22 weeks Senior Operation Instructor's Training in CEGB, United Kingdom in 1986. 3. 2 weeks TPS Commissioning (NPTI-CEGB Delhi 1985 4. 2 weeks Power Plants Performance and Monitoring (NPTI-CEGB) Delhi 1985 5. 1 weeks Power Plants Performanance and Monito-ring (NPTI-CEGB) Nagpur 1988 6. 1 weeks Management of Training (ISTM) Delhi-1999 7. 3 Days Finance Management in Govt. with Financial & Administrative Power (CTSR) Delhi 2010 8. 1 week Finance for Non-Finance Executive (NPTI) Faridabad-2011	
 **Sh. M. V. Pande** *Director*	B.E. Mechanical Engg. from Shivaji University Koulapur (M.S), Diploma in Bussiness Management, Nagpur University M. Tech Nagpur University. Energy Auditor B.E.E., New Delhi	Total 35 years experience in various position in MSEB & NPTI **Specialization:** Steam Turbine Governing & Protection TPS Operation hands on Training in 210 MW Simulator. Steam Turbine Operation. Power Plant Maintenance (Turbine, Pumps, Bearing, Valves)	Member Associates Training Energy Management at Audit Undergone simulator Instructor Training at S 3 Technologies USA in 1995 Undergone one month Training n Japan in the area Energy Conservation Techniques for India conducted by JICA.
 **Sh. Giriraj Kishore** *Director*	B.E. (Mechanical) from Aligarh Muslim University Diploma in PC, Networking, Director, 3D Max and VJ++	More than 32 years experience in different organization like Panchsheel Brothers, Delhi Administration, Ministry of Defence, Arya Bhatt Polytechnic, Central Electricity Authority and now in NPTI.	

NPTI (NR), BADARPUR

Name/Designation	Educational Qualification	Experience & Specialization	Member/ Association/ Training
 **Mrs. Meena Kumari** *Director*	B.E. (Elct.) Delhi College of Engineering, Delhi MBA (IT) - IASE Deemed University Rajasthan	26 years of service including number of years service in Bhutan. Worked in Royal Government of Bhutan as an Assistant Engineer for 4 years. Worked in CBT Section for Developing Multimedia CBTs. Worked in Combined Cycle Gas Turbine (CCGT) Simulator as instructor in-charge of CCGT. Worked as Nodal Officer (AMR) for implementing IONS at NPTI. Gained knowledge in 500 MW Simulator (Fossil Fuel Fired) as instructor.	Undergone 12 weeks training in UK on Tools for developing multimedia softwares, under Colombo plan. - Undergone 2 weeks training in USA for learning tools & techniques for development of CCGT Simulator. - Attended various training program in India. - Went to LAGU, Negeria as an expert faculty for conducting 2 weeks workshop. - Member - Institute of Engineers - Lifetime Membership - SESI, India (Solar Energy Society of India) - Developed many nos. of CBTs while working CBT section. - Coordinated / delivered lectures in short term & long term program.
 **Sh. Ravinder Singh** *Director*	B. E. (Electronics & Communications), MBA (IT), M. Phil. (Management), Pursuing Ph. D. (Management)	About 25 years of experience of working in ITI Ltd., and NPTI. **Specialization:** Design & Development of Multimedia Computer Based Training Packages, Procurement & Maintenance of IT hardwares & softwares, EPABX System, Wi-Fi and LAN Networks, Virtual Private Server (VPS), Projection Systems, Website development & updation etc.	Undergone 12 weeks training on development of "Computer Based Training" Packages at United Kingdom under Colombo plan and two weeks training on "Geographical Information System" at ESRI, Washington, USA.

NPTI-HYDRO POWER TRAINING CENTRE, NANGAL

Name/Designation	Educational Qualification	Experience & Specialization	Member/ Association/ Training
 **Sh. M. R. Chaubey** *Head of the Institute*	B.Sc. Lucknow University, 1973 B.E. (Mech.) - University of Roorkee , 1977	More than 34 years of work experience in different positions in Power Engineering comprising operation, maintenance, commissioning, procurement, performance monitoring, training etc. at Renusagar Power Co. Ltd., CTPS, DVC Corporate Centre and NPTI. **Specialization:** Commissioning, Operation & Maintenance of thermal power plants. 210 MW Simulator training at NPTI (NR). Launching of one year Post Graduate/Post Diploma Courses in TPPE at NPTI (NR) & B.Tech. (Power Engineering) including of establishment of Labs at NPTI (ER). Quality improvement of training programs, Upgradation and modernisation of infrastructure at NPTI Badarpur & Durgapur. Project monitoring & implementation work for establishment of Hydro Power Training Centre, Nangal. Conducting International and national Conferences/ Seminars in the area of Power Sector development.	1. 9 Weeks Senior Simulator Instructor's Course in C.E.G.B. - UK, 1987. 2. 6 Weeks training on Emission Upgradation Projects at Canada/ USA under CIDA
 **Sh. S. K. Sinha** *Associate Professor*	B.E. (Electrical) Bihar Institute of Technology, Sindri in 1980. M. Phill. Computer Science in 1982 JNU New Delhi	More than 30 years Experience in NPTI. **Specialization:** Computer & simulator	

NPTI-HYDRO POWER TRAINING CENTRE, NANGAL

Name/Designation	Educational Qualification	Experience & Specialization	Member/ Association/ Training
 **Sh. G. V. Harshe** *Director*	B.E. (Mech.), 1980 Walchand College of Engg. Sangli Shivaji University Kolhapur (M.S)	Total 33 years experience in Power Industry, Eight B.E. (Mech.), 1980 Walchand College of Engg. Sangli Shivaji University Kolhapur (M.S) Total 30 years experience in Power Industry, Eight years experience in O&M of Thermal Power Station. experience in O&M of Thermal Power Station. More than 22 years experience in Training & Development including faculty for B.E. (Power Engg.)	Member of Institute of Engineers India. 10 weeks Sr. Instructor Course in U.K. under B.E.I in the year 1990.

NPTI-PSTI BENGALURU

Name/Designation	Educational Qualification	Experience & Specialization	Member/ Association/ Training
 **Sh. M. N. Murthy** *Head of the Institute*	B. Tech. (EEE) JNT University A.P., 1979 M.E. (High Voltage Engg.) IIS, Bengaluru, 1981	More than 30 Years experience in various position in CEA & NPTI. **Specialization:** Power System Studies Operation, Simulation & Protection	12 Weeks simulator Software course training in Energy System Computer Application USA, 1990

HOT LINE TRAINING CENTRE, BENGALURU

Name/Designation	Educational Qualification	Experience & Specialization	Member/ Association/ Training
 **Sh. K. S. Venubabbu** *Deputy Director Head of the Institute*	B. Tech. (Mechanical), JNT University, AP, 1982. M. Tech (Prodn. Engg.), IIT, Delhi in 1989. M.B.A. (Marketing), IGNOU, New Delhi in 2000.	More than 31 years experience in Pressteels & Fabrications Pvt. Ltd., Hyderabad, CEA & NPTI. **Specialization:** Contracting, Engineering of Thermal Power Plant equipment, Teaching in Mechanical Maintenance of power plant equipment & Live Line Maintenance techniques up to 400 KV Lines & switch yards.	

NPTI-SR, NEYVELI

Name/Designation	Educational Qualification	Experience & Specialization	Member/ Association/ Training
 **Sh. S. Viswanathan** *Principal Director*	Director B.E. (Mechanical) Anna University Tamil Nadu 1978	More than 33 Years experience in various positions in M/s Jinda Aluminum Ltd., TNEB & NPTI **Specialization:** Mehnical power boilers O&M Power Plants	24 weeks welding instruction course in CEGB, U.K. 1984
 **Sh. J. Jayasamraj** *Director*	B.E. (Computer Technology & Information) from Government College of Technology, Coimbatore, Tamil Nadu, 1989.	More than 22 years of experience in various positions in ITI, Bangalore and NPTI.	Computer Technology & Control Systems

NPTI-ER, DURGAPUR

Name/Designation	Educational Qualification	Experience & Specialization	Member/ Association/ Training

Sh. Atar Singh
Director
Head of the Institute

A.M.I.E. (Elect. Engg.), M.B.A. (H.R.), Certified Energy Auditor, F.I.E. –IE (I)

Specialization:

31 years working experience in N.T.P.C. Ltd and N.P.T.I., O & M of 200 MW & 500 MW units of Thermal Power Station, Energy efficiency/ Energy auditing and Performance Monitoring / Improvement of Thermal Power Station, Power Transmission & Distribution Systeem under APDRP / DRUM Project, H.R.D activities

Energy- The Technology You Must Know in the 21st Century from National Chiao Tung University, Taiwan

Unlocking the Immunity to change: A New approach to Personal Improvement from Harvard University, USA

"Environment Impact Assessment and Audit" training program conducted by University of Bradford, U.K. under Colombo plan, Country Focused Training Course on "Energy Conservation Techniques for India" Organized by JICA, Govt. of Japan, Training course on "Preventive Maintenance/Life extension and Advanced Technology for Thermal & Hydro plant and Environmental Improvement System" conducted by AOTS, Japan at New Delhi, Life Member – SEEM, Thiruanantpuram (Kerala)

A Seminar organised by NPTI (ER), Durgapur

NPTI –NER, GUWAHATI

Name/Designation	Educational Qualification	Experience & Specialization	Member/ Association/ Training
 **Sh. Atish Banerjee** *Head of the Institute*	B.E. (Electrical) from Jadavpur University 1976 M.E. (Electrical) from Jadavpur University 1982 M.I.E. 1990	More than 34 Years experience in different positions in CEA and NPTI **Specialization:** Electrical machines and Systems of TPS	22 Weeks Sr. Instructor course CEG, UK, 1986
 **Sh. Sanjay. V. Malpe** *Director*	B.E. (Mechanical) Visivesvaraya National Instisitute of Technology in 1982, M.E. (Mechanical) from Victoria Jubilee Technical Institute Mumbai in 1985, Certified Energy Auditor.	**Specialization:** More than 32 years experience in various position in private sector and NPTI. About 24 years experience in training and development. Developed CBT Packages on 1. Steam Turbine Construction. 2. Gas Turbine for Power Generation. 3. Coal to Electricity for non technical Executives 4. Cooling towers.	Lead Faculty for Indo German seminars on "Draft Guidelines for Energy Audit of Thermal Power Station" 10 weeks simulator instructor training in CEGB UK in 1991. **Training:** Simulator Instructor course GSE Systems Inc USA in 1995, various training Programs in India in Power industry.

Trainee Engineers of HVPNL alongwith faculties of NPTI for training program on O&M of HT-LT Switchgear at NPTI (NER), Guwahati

NPTI-WR, NAGPUR

Name/Designation	Educational Qualification	Experience & Specialization	Member/ Association/ Training
 **Sh. A. G. Vinchurkar** *Principal Director*	B.E. (Mechanical)from Visveshwaraya National Institute of Technology in 1977. M.Tech. (Heat Power Engg.) from VNIT in 1985. PGDHRM from IGNOU in 1996.	**Experience:** More than 35 years experience in different positions in MSEB and NPTI **Specialization:** Thermal Power Plant Operation Performance & 210 MW Simulator Operation, Testing and Commissioning.	1. Member - Institution of Engineers, India. 2. Chairman - Board of Studies, ETM Nagpur University. 3. 12 wekks Sr. Instructor Course in CEGB, UK in 1989. 4. 2 weeks Training for Trainers in ISTM, New Delhi. 5. 2 weeks Energy Conservation in CIRE, Hydrabad. 6. 5 weeks Simulator course GSE Systems Inc., USA in 1994.
 **Sh. V. K. Sinha** *Associate Professor*	B.E. (Mechanical) from VNIT Nagpur, 1980. M.Tech. (Heat Power Engg.) from VNIT, Nagpur 2002	More than 33 Years of experience in various positions in Private Sector, MSEB and NPTI **Specialization:** Training in various areas of Power Sector. Worked in Operation, Maintenace and Commissioning of 210 MW TPS under MSEB, Koradi Thermal Power Station. Worked as I/C of Computer Based Training Section at NPTI Faridabad. Developed CBT Packages on 1. Drum & Drum internal 2. Super-heater, Re-heater & De-superheater Co-ordinated On-job training programs Co-ordinated and delivered lectures in long term and short programs.	1. 6 weeks training in Training Resource Unit conducted by CEGB, U.K. 2. 3 weeks study tour regarding "Development and implementation of Computer Based Training in Power Sector" in U.K.

NPTI-WR, NAGPUR

Name/Designation	Educational Qualification	Experience & Specialization	Member/ Association/ Training
 **Sh. D. M. Lokhande** *Director*	B.E. (Electrical) VRCE (VNIT) Nagpur Year 1980. MBA (Production & Personnel) Nagpur University 1984. Registered for Ph.D Studies in Management at RTM Nagpur University.	Total 33 years of experience in power industry. About 6 years experience in O&M of thermal power plant. About 24 years of experience in training & development including 210 MW simulator project & operation, training etc.	1. 10 weeks senior instructor training in CEGB UK in 1990 2. Simulator Modelling Training of GSE Systems INC USA in 1994 3. Simulator Instructor course GSE Systems INC USA (5 weeks) in 1995 4. Various trg programs in India in power industry areas.
 **Sh. P. K. Yadav** *Director*	B.E. (Electrical), Nagpur University M.Tech (Integrated Power System), Nagpur University	More than 32 years of work experience in various position in MSEB, Koradi & NPTI Operation maintenance, testing of 210MW thermal power plant equipments 210 MW thermal power plant control room / plant in-charge. To conduct & impart thermal power plant operation & maintenance training to different LT/ST training courses. To conduct regular 2 weeks 210 MW simulator training to different course trainees. To co-ordinate & conduct 26 weeks course in O&M of T&D system. To conduct theory & practical classes for B.E. (Power Engineering). Evaluation & paper setting work of RTM Nagpur University.	52 weeks course in Thermal Power Plant Engineering 2 weeks training for Model Development & Instructor Training for 210 MW Simulator Department of Electronics (DoE) Govt. of India "O" level certification course
 **Sh. N.C. Moharil** *Director*	B.E. (Mechanical), VRCE (VNIT) Nagpur, 1983 MBA, Department of Business Management, Nagpur University, 1986 Certified Energy Auditor	29 years experience: - 5 years experience in Thermal Power Plant Operation - 23 years at NPTIin Training and Teaching including Simulator Training	Simulator Instructor Course GSE Systems Inc. USA (2 weeks) in 1995 Various Training Programs in Power Sector India.

NPTI PUBLICATIONS

S.No.	Title	Price (₹)	Price (US$)
	A) THERMAL POWER PLANT		
1	Power Plant Familirisation (Vol.I)	400	20
2	Power Plant Familirisation (Vol.II)	600	30
3	Power Plant Familirisation (Vol.III)	425	21
4	Power Plant Familirisation (Vol.IV)	400	20
5	Power Plant Operation	600	30
6	Thermal Power Plant Metallurgy	175	9
7	Ash Handling System	250	13
8	Fuel Handling System Operation (Hindi)	250	13
9	Schematic Diagram (210 MW Thermal)	350	18
10	Fuel Handling System Operation	250	13
11	Environmental Management in Thermal Power Station	600	30
12	Thermal Power Plant Performance and Efficiency Monitoring	425	21
13	Thermal Power Plant Chemistry	350	18
14	500 MW Fossil Fuel Power Plant Simulator Operating Procedures	550	28
15	Atomspheric F B C Boilers	250	13
16	Boiler Feed Pump Design, Construction & Operation	250	13
17	Circulating F B C Technology	250	13
18	Power Station Safety	350	18
19	Safety in Power Station (Hindi)	200	10
20	210 MW Thermal Schematic Diagrams (Combustion Engineering Boiler & KWU Turbine)	200	10
21	HP - LP Bypass System	350	18
22	Pulverisers and Feeder	200	10
23	Pulverised Fuel Fired Boilers	350	18
24	KWU Steam Turbine Governing and Protection System	425	21
25	210 MW Turbo generator Operation and Stability	200	10
26	Lubrication System for Power Station	300	15
27	210 MW Simulator Training	550	28

28	Steam Turbine for Power Generation	650	33
29	Vibration	200	10
	B) HYDRO POWER PLANT		
30	Hydro Power Plant Familiarisation	400	20
31	Hydro Power 2000: An Indian Perspective	1000	50
32	Sitting Problems in Hydro Power Plants & Their Possible Solutions	495	25
33	Up - rating and Refurbishment of hydro Power Plants	495	25
34	Hydro Environment Interface	950	48
35	Small Hydro	595	30
	C) COMBINED CYCLE GAS TURBINE POWER PLANT		
36	Gas Turbine and Combined Cycle Power Plant	400	20
	D) CONTROLS and INSTRUMENTATION		
37	Controls & Instrumentation (Vol. I)	600	30
38	Controls & Instrumentation (Vol. II)	425	21
39	Controls & Instrumentation (Vol. III)	350	18
40	Data Acquisition System & Distributed Digital Control	250	13
41	Condition Monitoring of Power Transformers	250	13
42	Programable Logic Controller & Fuzzy Logic Controller and their Applications in Instrumentation	250	13
43	Control Valves Selection and Siziling	300	15
44	Programable Logic Controls	350	18
	E) REGULATORY ISSUES		
45	Journal on ERC Orders-2nd Edition	595	30
	F) MAINTENANCE MANUALS		
46	Motor Maintenance	200	10
47	Battery Maintenance	250	13
48	Battery Maintenance (Hindi)	250	13
49	Valve Maintenance	350	18
50	Pump Maintenance	400	20
51	Pump Anurakshan (Hindi)	350	18
52	Relay Maintenance	200	10
53	Maintenance Planning & Cost Control	250	13
54	Maintenance of Power Transformers	350	18

	G) POWER PLANT AUXILIARIES		
55	Fan & Heater	425	21
56	Fan & Heater (Hindi)	425	21
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Dr. Prabha S. Kundur eminent faculty & author of "Power System Stabilty & Control" delivering lecture at NPTI Corporate Office, Faridabad

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Sl. No.	Name of the Multimedia CBT Package	Price of 1st copy	Price of 2nd 3rd & 4th	All other copies
	COAL THERMAL			
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Shri Raj Pal, Economic Advisor, Ministry of Power inaugurating NPTI stall, in the august presence of Shri Devendra Chaudhary, Special Secretary (Power) at India International Trade Fair 2014, New Delhi

Shri Subodh Garg, Director General, NPTI with Shri A.B. Agrawal, Chairman, BBMB

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TRAINING & ACADEMIC CALENDAR

2015-2016

AT A GLANCE

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Life @ NPTI, Faridabad

विद्या है धनम्, विद्या है बलम्
Knowledge is Power Supreme

TRAINING AND ACADEMIC CALENDAR 2015-2016

S. No.	Name of Course	Duration (Years/ weeks/ days)	Faridabad	Badarpur	Nangal	PSTI Bengaluru	HLTC Bengaluru	Nayveli	Durgapur	Guwahati	Nagpur	Trg. Fee (₹)
	A. ACADEMIC COURSES											
1	MBA in Power Management	2 years	1-Aug-15									2,50,000 per annum non sponsored 5,00,000 per annum sponsored
2	B.Tech/ BE in Power Engineering	4 years		1-Aug-15					Jul-15		Jul-15	*refer to booklet
3	Post Graduate Diploma Course in Thermal Power Plant Engineering	52 weeks	19-Aug-15	19-Aug-15	19-Aug-15			19-Aug-15	19-Aug-15	19-Aug-15	19-Aug-15	2,30,000 per annum non sponsored 3,60,000 per annum sponsored
4	Post Graduate Diploma Course in Sub-Transmission & Distribution System	52 weeks				05-Oct-15						2,30,000 per annum non sponsored 3,60,000 per annum sponsored
		26 weeks								16-Nov-15		1,45,000 per annum non sponsored 1,90,000 per annum sponsored
5	Post Graduate Diploma Course in Hydro Power Plant Engineering	39 weeks			07-Sep-15							1,75,000 per annum non sponsored 2,00,000 per annum sponsored
6	Post Graduate Diploma Course in Transmission & Distribution System	26 weeks		16-Sep-15		01-Jun-15 04-Jan-16				6-July-15	01-Jun-15 07-Dec-15	1,45,000 per annum non sponsored 1,90,000 per annum sponsored
7	Post Diploma Course in Thermal Power Plant Engineering	52 weeks		16-Sep-15				30-Nov-15	01-Aug-15	24-Aug-15	23-Nov-15	1,45,000 per annum non sponsored 2,20,000 per annum sponsored
8	Post Diploma Course in Hydro Power Plant Engineering	26 weeks			3-Aug-15							80,000 per annum non sponsored 1,35,000 per annum sponsored
	B. LONG TERM COURSES (17 weeks and above)											
1	Graduate Engineers Course in Thermal Power Plant Engineering	52 weeks						22-Feb-16				2,30,000 per annum non sponsored 3,60,000 per annum sponsored
	C. MEDIUM TERM COURSES (5 weeks to 16 weeks)											
1	Live line maintenance Techniques (LLMT), using Hot Stick Method (HSM)	12 weeks					20-Jul-15 28-Dec-15					1,55,000
2	Live line maintenance Techniques (LLMT) using Bare and methods (BHM) up to 400 KV lines	5 weeks					9-Nov-15					1,15,000
3.	Post Graduate Certificate Course in Thermal Power Plant Engineering	12 weeks	29-Jun-15 19-Oct-15 22-Feb-16							04-Jan-16		
4.	Certificate Course for Hydro Power Plant Engineers and Supervisior	12 weeks			08-Jun-15							1,00,000
5.	Specialized Training for Hydro Power Plant working Engg. and Supervisior	6 weeks			15-Jun-15							65,000
	D. SHORT TERM COURSES (One Day to 4 weeks)											
1.	Faculty Development Program	1 week	9-Jun-2015									15,000
2	RLA & Life Extension of Sub-Station Equipment	1 week				07-Dec-15						15,000
3	Power Systems Communication SCADA & EMS	1 week				13-Apr-15						15,000

TRAINING AND ACADEMIC CALENDAR 2015-2016

S. No.	Name of Course	Duration (Years/ weeks/ days)	Faridabad	Badarpur	Nangal	PSTI Bengaluru	HLTC Bengaluru	Nayveli	Durgapur	Guwahati	Nagpur	Trg. Fee (₹)
4	Substation Planning & Engineering	1 week				06-Apr-15 04-Jan-16						15,000
5	Energy Efficiency Management in Power System	3 Days							07-Dec-15			11,000
6	Capsule Course for Executive in Hot Line activities	1 week					25-May-15 21-Sept-15 29-Feb-16					18,000
7	Valve and Pump Maintenance	1 week		23-Nov-15					20-Apr-15			15,000
8	Gas Turbine & CCPP (Refresher Course)	1 week		27-Apr-15				01-Feb-16				15,000
9	Pumps Operation, Maintenance and Performance Monitoring	1 week		07-Dec-15				06-Apr-15				15,000
		+ 3 Days									17-Nov-15	11,000
10	Valve Actuator Maintenance	3 Days						06-May-15				11,000
11	Thermal Power Station Operation	1 week		11-May-15				11-May-15	03-Aug-15			15,000
		+ 4 Days									08-Sep-15	13,500
12	Power Plant Auto Control	1 week						11-May-15 06-Jul-15				15,000
13	Valve Maintenance	1 week						11-May-15				15,000
14	Fans & Air Heaters	3 Days						03-Jun-15				11,000
15	Switchgear and Transformer Maintenance	1 week							25-May-15			15,000
16	Switchyard Maintenance Technique using LLMT for lineman supervisors	4 weeks					15-Jun-15					90,000
17	Electrical Safety and Inspection of Electrical Installation Under IE Rules 1956	1 week				18-May-15 01-Mar-16						15,000
18	Reactive Power Management	3 Days				27-Jan-16						11,000
19	Distribution Metering	1 week				25-May-15				18-May-15		15,000
20	O & M Transformer and circuit Breakers	1 week		12-Oct-15		01-Jun-15 01-Feb-16						15,000

TRAINING AND ACADEMIC CALENDAR 2015-2016

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21	Power Quality and Harmonics Mitigation	4 Days				20-Apr-15 07-Mar-16						13,500
22	Boiler Operation/ Boiler & its Auxiliaries Operations	1 week						06-Jul-15	04-Jan-16			15,000
		4 Days									05-May-15	13,500
23	HT/ LT Switchgear Operation & Maintenance	1 week								07-Sep-15		15,000
24	C & I in Power Station (for operation Engineers)	1 week		21-Sep-15								15,000
		+ 3 Days									16-Jun-15	11,000
25	Power System Studies	1 week				10-Aug-15						15,000
26	Power System Operation	2 weeks				11-May-15 06-Jul -15 07-Nov-15 15-Feb-16						27,500
27	Power System Protection	2 weeks				08-Jun-15 14-Mar-16						27,500
28	Advanced Power System Protection	1 week				15-Jun-15 21-Mar-16						15,000
29	Steam Turbine & Aux. Operation	1 week		8-Feb-16				08-Jun-15	08-Feb-16			15,000
		+ 4 Days									01-Mar-16	13,500
30	Electrostatic Precipitator	3 Days						24-Jun-15				11,000
31	Boiler Firing System & Equipments	1 week						13-Jul-15				15,000
32	Electrical Protection System	1 week		11-Jan-16				20-Jul-15	27-Jul-15			15,000
		+ 4 Days									19-Jan-16	13,500
33	Distribution Engineering	1 week								07-Mar-16		15,000
34	Reliability Centered maintenance of Rotary Equipment	1 week		03-Aug-15								15,000
35	O&M of coal mill Feeder	3 Days						18-Nov-15				11,000

TRAINING AND ACADEMIC CALENDAR 2015-2016

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36	Reduction in Power Distribution Losses	1 week							21-Jul-15			15,000
37	Flexible AC Transmission system (FACTS)	1 week		30-Nov-15		13-Jul-15						15,000
38	Power System Reliability	1 week				21-Jun-15 16-Aug-15 11-Oct-15 17-Jan-16						15,000
39	Low Voltage Power Distribution System Design	1 week				03-Aug-15						15,000
40	Generator & Auxiliaries including Excitation System	1 week		14-Dec-15				07-Dec-15	09-Nov-15			15,000
		+ 3 Days									07-Jul-15	11,000
41	Power Cables & Jointing Techniques	3 Days				01-Jul-15						11,000
		4 Days				28-Dec-15						13,500
42	High Voltage Testing of Power System Equipment	1 week				24-Aug-15 08-Feb-16						15,000
43	Transformer Oil	3 Days				28-Sept-15						11,000
44	Power Market Regulation	1 week				05-Oct-15						15,000
45	Distributed Generation & Grid Integration	4 Days				21-Sept-15						13,500
46	Non Destructive Testing & Welding Defects	1 week		31-Aug-15								15,000
47	Thermal PP Efficiency & Performance Monitoring	1 week						17-Aug-15	21-Sept-15			15,000
		+ 3 Days									09-Feb-16	11,000
48	O & M of Transmission lines & Sub-Station	1 week							17-Aug-15			15,000
49	Relay Maintenance	3 Days						19-Aug-15				11,000
50	Boiler operation refresher courses	1 week						14-Sep-15				15,000
51	Power Plant Chemistry for operation Engineers	1 week		07-Sep-15					14-Sept-15			15,000
		+ 4 Days									24-Nov-15	13,500
52	Boiler Tube Failure & Case Studies	1 week							07-Sept-15			15,000

TRAINING AND ACADEMIC CALENDAR 2015-2016

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53	Familiarization Training Program on 400Kv Cold Lines	4 weeks					12-Oct-15					72,000
54	Management of Electrical Contacts & Negotiations	1 week				14-Sep-15						15,000
55	Distribution Automation	1 week				27-Jul-15						15,000
56	Power System Energy Losses	1 week						14-Sep-15				15,000
57	Energy efficiency in electrical utility	1 week				02-Nov-15						15,000
58	Issues Related to Super-Critical Technology	2 Days						18-Feb-16				7,500
59	Burner Management System/ FSSS	3 Days						14-Oct-15				11,000
60	Power Systems Studies Load Dispatch	1 week						12-Oct-15				15,000
61	Battery Maintenance	3 Days						07-Oct-15				11,000
62	Large Capacity CFBC Boilers	3 Days						04-Nov-15				11,000
63	Motor Maintenance	1 week						16-Nov-15				15,000
64	Energy Conservation & Energy Audit Generation Sector	1 week						07-Mar-16				15,000
		3 Days								20-Jul-15	03-Nov-15	11,000
65	O & M of Transformer (Supervisor / Technician)	1 week								08-Feb-16		15,000
66	HVDC Transmission System	1 week				26-Oct-15						15,000
67	Welding Practices	1 week							16-Nov-15			15,000
68	Trouble shooting of Steam Turbines	3 Days							09-Nov-15			11,000
69	Small. Mini & Micro Hydro Power Generation	3 Days			16-Dec-15							11,000
70	Fan & Air Heaters Maintenance	1 week		08-Jun-15								15,000
71	Fire Prevention, Protection & Safety	3 Days									08-Dec-15	11,000
72	Bearing Maintenance and Shaft Alignment	1 week		04-May-15				09-Mar-16				15,000
		+ 4 Days									15-Dec-15	13,500
73	Switchgear Maintenance	2 Days						03-Dec-15				7,500
74	Transformer Maintenance	3 Days						09-Dec-15				11,000
75	Transformers	1 week						19-Jan-16				15,000

TRAINING AND ACADEMIC CALENDAR 2015-2016

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76	Pump Maintenance	1 week						04-Jan-16				15,000
77	O & M of Power & Distribution Transformers	1 week				14-Dec-15						15,000
78	Data Acquisition &Distributed Digital Control System in Thermal Power Station	3 Days									05-Jan-16	11,000
79	Protection of Industrial Power System	4 Days				01-Dec-15						13,500
80	Condition Bases Maintenance	1 week							18-Jan-16			15,000
81	Energy Audit & Demand side Management in power Utilities	1 week						02-Feb-16				15,000
82	Environment Pollution & Pollution Control Related with Thermal Power Plants	1 week		13-Jul-15							16-Feb-16	15,000
		+ 3 Days									16-Feb-16	11,000
83	Power Plant Instrumentation	1 week							18-Jan-16			15,000
84	Management Development Program	1 week			22-Jun-15							15,000
85	Renewable Energy Source & Grid Integration	1 week				21-Dec-15						15,000
86	Advance C&I in Thermal Power Station	3 Days							03-Feb-16			11,000
87	Renewable Energy Technology	3 Days							29-Feb-16			11,000
88	Change Management	3 Days							06-Jan-16			11,000
89	Safety in Hydro Power Station	3 Days			20-May-15							11,000
90	Hydro Power Plant Operation	1 week			08-Jun-15							15,000
91	Valve & Pumps in Thermal Power Plants	3 Days			17-Jun-15							11,000
92	Hydro Generator & its Excitation System	1 week			13-Jul-15							15,000
93	Valve & Pumps in Hydro Power Plant	3 Days			17-Aug-15							11,000
94	Auxiliaries in Hydro Power Plants	3 Days			16-Sep-15							11,000
95	Hydro Turbine Governing & its Protection System	1 week			16-Nov-15							15,000
96	Role of Smart Grids in the Indian Power Sector : Current Developments Challenges and Way Forward	2 Days		08-Feb-16								7,500
97	Transmission Line Maintenance & Introduction to Live Line Maintenance Tech.	1 week		07-Mar-16								15,000

TRAINING AND ACADEMIC CALENDAR 2015-2016

S. No.	Name of Course	Duration (Years/ weeks/ days)	Faridabad	Badarpur	Nangal	PSTI Bengaluru	HLTC Bengaluru	Nayveli	Durgapur	Guwahati	Nagpur	Trg. Fee (₹)
98	Operation and Maintenance of Sub-station.	1 week			16-Nov-15					08-Jun-15 23-Nov-15		15,000
99	Live Line Punctured Insulator Detection (PID) On Ehv Lines	1 week					13 -Jul-15 14-Dec-15					18,000
100	Automation System (PLC & SCADA) For Power Plant	3 Days									12-Jan-16	11,000
101	Power System & Load Despatch	3 Days									08-Sept-15	11,000
102	Awareness Program On GIS & RS	1 week	07-Jul-15 27-Oct-15									15,000
103	Training Program On Protection Of Consumer Interest	2 days	01-Feb-16									7,500
104	Training For Trainers	1 week		06-Jul-15								15,000

TRAINING AND ACADEMIC CALENDAR 2015-2016

	Duration (weeks)	Faridabad	HPTC Nangal	PSTI Bengaluru	Nagpur	Trg. Fees (₹)
E. SIMULATOR TRANING PROGRAM						
1 210 MW FOSSIL FUEL POWER PLANT SIMULATOR TRAINING	2 weeks				13-04-2015 17-04-2015 11-05-2015 25-05-2015 15-06-2015 29-06-2015 13-07-2015 27-07-2015 17-08-2015 31-08-2015 14-09-2015 28-09-2015 12-10-2015 26-10-2015 16-11-2015 30-11-2015 14-12-2015 28-12-2015 11-01-2016 25-01-2016 08-02-2016 22-02-2016 07-03-2016 21-03-2016	55,000
2 500 MW FOSSIL FUEL POWER PLANT SIMULATOR TRAINING	2 weeks	06-04-2015 20-04-2015 04-05-2015 18-05-2015 01-06-2015 15-06-2015 29-06-2015 13-07-2015 27-07-2015 10-08-2015 24-08-2015 07-09-2015 21-09-2015 05-10-2015 19-10-2015 02-11-2015 23-11-2015 07-12-2015 04-01-2016 18-01-2016 01-02-2016 15-02-2016 07-03-2016 21-03-2016				55,000
3 COMBINED CYCLE GAS TURBINE PLANT SIMULATOR TRAINING	2 weeks	06-04-2015 20-04-2015 04-05-2015 18-05-2015 01-06-2015 15-06-2015 29-06-2015 13-07-2015 27-07-2015 10-08-2015 24-08-2015 07-09-2015 21-09-2015 05-10-2015 19-10-2015 02-11-2015 23-11-2015 07-12-2015 04-01-2016 18-01-2016 01-02-2016 15-02-2016 07-03-2016 21-03-2016				55,000
4 250 MW HYDRO SIMULATOR TRAINING	1 week		06-04-2015 27-04-2015 11-05-2015 25-05-2015 08-06-2015 06-07-2015 03-08-2015 24-08-2015 07-09-2015 05-10-2015 02-11-2015 07-12-2015 04-01-2016 18-01-2016 15-02-2016 14-03-2016			20,000
5 DISPATCH TRAINING SIMULATOR	2 weeks			20-07-2015 16-11-2015 11-01-2016		40,000

TRAINING AND ACADEMIC CALENDAR 2015-2016

S. No	Name of Course	Duration (years/weeks /days)	Faridabad	Badarpur	Nangal	PSTI Bengluru	HLTC Bengluru	Neyveli	Durgapur	Guwahati	Nagpur	Trg. Fee (₹)
	Following program can be conducted/offered for national as well as international organization on request / demand basis at different Institutes of NPTI											
	A. MEDIUM TERMS COURSES FOR ENGINEERS TRAINING CALENDAR 2014-2015											
1	Distribution Engineering	6 weeks				*						
2	Control and Instrumentation for Supervisors/Technicians	6 weeks		*		*		*	*	*		
3	Training program for Supervisors/Managerial Person deployed in Power Plant	6 weeks	*									
4	New and Renewable sources and grid integration in India	6 weeks	*	*		*		*	*	*	*	
5	Executive Development Program the supervisory staff working in Finance and Accounts Department	6 weeks	*									
	B. SHORT TERM COURSES FOR ENGINEERS TRAINING CALENDER											
1	GIS in Distribution Planning	4 weeks	*									
2	GIS Application in Network Planning and Asset Management	1 week	*									
3	Maintenance Planning and Cost Control	1 week		*	*			*	*	*	*	
4	Training of Trainers	1 week	*	*	*			*	*	*	*	
5	Operation and Maintenance of EHV Sub Station	2 weeks					*					
6	Microprocessors	1 week/ 2 weeks				*						
7	Vibration Analysis	3 Days	*	*				*	*	*	*	
8	Renovation and modernisation of Thermal Power Plant/Station	1 week	*	*	*			*	*	*	*	
9	Regenerative Feed Heating System	1 week	*	*	*			*	*	*	*	
10	Transmission Distribution Equipment Maintenance	1 week					*					
11	Balancing and Alignment Techniques	3 Days		*	*			*	*	*	*	
12	Electricity Act and Regulation	3 Days	*	*	*	*		*	*	*	*	
13	Basic Electronics	1 week		/	/			/	/	/	/	
14	Training for Assistant Level Persons/Personal Staff	1 week	*									
15	Human Resources Development Program for Finance Officer/Manager	1 week	*									
16	Development of Finance Managers	1 week	*									
17	Training mind or Excellency		*									
18	Executive/Management Development Programs for Executives & Supervisors		*									
19	Executive Development Program for Law Stream		*									
20	Supervisory Development Programs		*									
21	HR for Non-HR Executive		*									

TRAINING AND ACADEMIC CALENDAR 2015-2016

S. No	Name of Course	Duration (years/weeks /days)	Faridabad	Badarpur	Nangal	PSTI Bengluru	HLTC Bengluru	Neyveli	Durgapur	Guwahati	Nagpur	Trg. Fee (₹)
22	Executive Development for Supervisory Staff Working in Finance and Accounts		*									
23	Environment Management		*	*								
24	Business Communications & presentations skills		*									
25	General Introduction to Hydro Power Plant				*							
26	Hydro Power Plant Schemes & System Discussions				*							
27	Hydro Power Plant Operation & Pump Storage Options to Governing				*							
28	Hydro Power Plant Protection				*							
29	Maintenance (On-Job) in Hydel Plant				*							
30	Planning and Cost Control of Hydro Electric Power Station				*							
31	Control & Instrumentation of Hydro Electric Power Station				*							
32	Site Station of Hydro Electric Plants, Geology, Hydrology etc.				*							
33	Tunnels & Channels, Penstocks, Surge shaft, Spillways				*							
34	Valves in Hydro Power Plants				*							
35	Construction equipment of Hydro Electric Plants				*							
36	Environmental Impact Assessment				*							
37	Material Handling and Transportation				*							
38	Safety in Hydro Power Plants				*							
39	Pumps in Hydro Power Plants				*							
40	Transformers & Electrical Equipments in Hydro Power Plants				*							
41	Constructional Details of Hydro Turbines & Generators				*							
42	Electrical Auxiliaries of Hydro Power Plants				*							
43	Erection of Hydro Turbines, Generators and Auxiliaries				*							
44	Types of Dams & Their Constructional Details				*							
45	Lead Auditors Program on ISO-14001		*									
46	HR issues in Power Sector		*									
47	Time Management		*									
48	Stress Management		*									
49	Lead Auditors Program ISO 9000		*									
50	Leadership Skills		*									
51	Project Management		*									

TRAINING AND ACADEMIC CALENDAR 2015-2016

S. No	Name of Course	Duration (years/weeks /days)	Faridabad	Badarpur	Nangal	PSTI Bengluru	HLTC Bengluru	Neyveli	Durgapur	Guwahati	Nagpur	Trg. Fee (₹)
52	Customer Relationship Management		*									
53	Finance for Non-Finance Executive		*									
54	ABT, Power Trading		*									
55	Electricity Act 2003 & CERC, SERC		*									
56	Financial Management in Power Sector		*									
57	Current HR Problems in Power Sector		*									
58	First – Aid for Technical Persons		*									
59	Total Production Maintenance		*									
60	Retirement Management		*									
61	Change in Attitude		*									
62	Customer Orientation		*									
63	Contact Management		*									
64	Computer Appreciation Program											
65	O & M of Motors											
66	Power System Studies & Load Dispatch											
67	Valve Maintenance											
68	Maintenance of pumps											
69	IT Application in Power System											
70	Pump Storage Hydro Power Station											
71	Management Development Program											
72	Performance in Testing of Hydro Power System											
73	GIS/GPS for Power Utilities											
74	Managing Carbon Credit of TPS through CDM Route											
75	Energy Efficiency in Thermal Utilities											
76	IT Application in Power Utilities											
77	Energy Efficiency in Electrical Utilities											
78	Power Distribution Management											
79	Steam Turbine its Auxiliaries Operation											
80	Advance Mechanical Maintenance Practices											
81	O & M of Generators & Excitation System for Supervisors											

TRAINING AND ACADEMIC CALENDAR 2015-2016

S. No	Name of Course	Duration (years/weeks /days)	Faridabad	Badarpur	Nangal	PSTI Bengluru	HLTC Bengluru	Neyveli	Durgapur	Guwahati	Nagpur	Trg. Fee (₹)
82	Fuel (Coal & Oil) Handling System Operation											
83	Material Management											
84	Fluidised Bed Combustion Boilers											
85	Reviewable Energy Source & Grid Integration											
86	System Operator Training											
87	Advances in Power Plant Chemistry for Chemists											
88	Boiler & Auxiliaries											
89	Electrical Motors for Power Plants											
90	Switchgear for Power Plant											
91	High Voltage Direct Current (HVDC) Transmission											
97.	Hydro Power Plant Engineering											
98.	Insulator Washing Techniquwa (On-Site)											
99.	Distribution Franchise											
100.	Grid Management											
101.	Maintenance Pumps and Valves											
102.	Power Exchange and Power Training											
103.	Power Business Tarrif and Regulations											
104.	Indian Electricity Act and Rules & De-regulation											
105.	O&M EHV Transmission Lines											
106.	Governing System & Hydro Power Generation											
107.	Project Management for Power System Engineers											
108.	Power and Tele-Communication (PTCC)											
109.	Advance Power Generation Protection & Control											
110.	Power Market Regulations											
111.	Control & Instrumentation					*						
112.	Smart Grid					*						
113.	Regulatory Frame Work in Power Sector			*								
114.	Coal Mill/Milling System Maintenance (Case Study)											
115.	Maintenance of Boiler Rotary Machines			*								
116.	Industrial Safety									*		

*Indicates that the course can be conducted at the institute and the duration can be tailor made

TRAINING AND ACADEMIC CALENDAR 2015-2016

FARIDABAD

S. No.	Names of Course	Batch	Duration (years/ Weeks/ Days)	Dates	April	May	June	July	August	September	October	November	December	January	February	March
	A. ACADEMIC COURSES															
1	MBA IN POWER MANAGEMENT	2013-15	2 years		←	—	—	—								
		2014-16			←	—	—	—	—	—	—	—	—	—	—	→
		2015-17		01-08-2015					01-08-2015	→	→	→	→	→	→	→
2	Post Graduate Diploma Course in Thermal Power Plant Engg.	2014-15	52 weeks		←	—	—	—	—							
		2015-16		19-08-2015					19-08-2015	→	→	→	→	→	→	→

S. No.	Names of Course	Duration	Dates	April	May	June	July	August	September	October	November	December	January	February	March
3	POST GRADUATE CERTIFICATE COURSE IN THERMAL POWER PLANT ENGINEERING	12 weeks	29-06-15			29-06 -15 — 19-10-15									
			19-10-15							19-10-15 — 23-02-16					
			22-12-16											22-02-16—28-06-2016	
	B. SIMULATOR TRAINING														
1	500 MW FOSSIL FUEL POWER PLANT SIMULATOR TRAINING	2 weeks	06-04-15, 20-04-15 04-05-15, 18-05-15 01-06-15, 15-06-15 29-06-15, 13-07-15 27-07-15, 10-08-15 24-08-15, 07-09-15 21-09-15, 05-10-15 19-10-15, 02-11-15 23-11-15, 07-12-15 04-01-16, 18-01-16 01-02-16, 15-02-16 07-03-16, 21-03-16	06-04-15 20-04-15	04-05-15 18-05-15	01-06-15 15-06-15 29-06-15	13-07-15 27-07-15	10-08-15 24-08-15	07-09-15 21-09-15	05-10-15 19-10-15	02-11-15 23-11-15	07-12-15	04-01-16 18-01-16	01-02-16 15-02-16	07-03-16 21-03-16
2	COMBINED CYCLE GAS TURBINE POWER PLANT SIMULATOR TRAINING	2 weeks	06-04-15, 20-04-15 04-05-15, 18-05-15 01-06-15, 15-06-15 29-06-15, 13-07-15 27-07-15, 10-08-15 24-08-15, 07-09-15 21-09-15, 05-10-15 19-10-15, 02-11-15 23-11-15, 07-12-15 04-01-16, 18-01-16 01-02-16, 15-02-16 07-03-16, 21-03-16	06-04-15 20-04-15	04-05-15 18-05-15	01-06-15 15-06-15 30-06-15	13-07-15 27-07-15	10-08-15 24-08-15	07-09-15 21-09-15	05-10-15 19-10-15	02-11-15 23-11-15	07-12-15	04-01-16 18-01-16	01-02-16 15-02-16	07-03-16 21-03-16
	SHORT TERM COURSES (1 day to 4 weeks)														
1	FACULTY DEVELOPMENT PROGRAMME	1 week	09-06-15			09-13									
2	AWARENESS PROGRAMME ON GIS & RS	1 week	07-07-15 27-10-15				07-10			27-31					
3	TRAINING ON PROTECTION OF CONSUMER INTEREST	2 days	01-02-15											01-02	

TRAINING AND ACADEMIC CALENDAR 2015-2016

BADARPUR

S. No.	Names of Course	Batch	Duration (years/ Weeks/ Days)	Dates	April	May	June	July	August	September	October	November	December	January	February	March
	A . ACADEMIC COURSES															
1	B.Tech in Power Engineering	2011-15	4 years		←	—	—	—								
		2012-16			←	—	—	—	—	—	—	—	—	—	—	→
		2013-17			←	—	—	—	—	—	—	—	—	—	—	→
		2014-18			←	—	—	—	—	—	—	—	—	—	—	→
		2015-19		01-08-2015					01-08-2015	—	—	—	—	—	—	→
2	Post Graduate Diploma Course	2014-15	52 weeks		←	—	—	—								
	in Thermal Power Plant Engg.	2015-16		19-08-2015					19-08-2015	—	—	—	—	—	—	→
3	Post Diploma Course	2014-15	52 weeks		←	—	—	—	—							
	in Thermal Power Plant Engg.	2015-16		16-09-2015						16-09-2015	—	—	—	—	—	→
4	Post Graduate Diploma Course	2014-15	26 weeks		←	—	—	—	—							
	in Transmission &	2015-16		16-09-2015						16-09-2015	—	—	—	—	—	→
	Distribution System															
	B. SHORT TERM COURSES (One Day to 4 weeks)															
1	Gas Turbine & CCPP		1 week	27-04-2015	27-01											
2	Bearing Maintenance and Shaft Alignment		1 week	04-05-2015		04-08										
3	Thermal Power Station Operation		1 week	11-05-2015		11-15										
4	Fans and Air Heaters Maintenance		1 week	08-06-2015			08-12									
5	Training for Trainers		1 week	06-07-2015				06-10								
6	Environment pollution & pollution control related to thermal power plant		1 week	13-07-2015				13-17								

TRAINING AND ACADEMIC CALENDAR 2015-2016

BADARPUR

S. No.	Names of Course	Duration (years/ Weeks/ Days)	Dates	April	May	June	July	August	September	October	November	December	January	February	March
7	Reliability Centered Mainte--nance of Rotary Equipment	1 week	03-08-2015					03-07							
8	Non Destructive Testing & Welding Defects	1 week	31-08-2014					31-04							
9	Power Plant Chemistry for Engineers	1 week	07-09-2015						07-11						
10	C&I in Power Station (for Operation Engineers)	1 week	21-09-2015						21-25						
11	O & M Transformer and Circuit Breakers	1 week	12-10-2015							12-16					
12	Valve & Pump Maintenance	1 week	23-11-2015								23-27				
13	Flexible AC Transmission System (FACTS)	1 week	30-11-2015								30-04				
14	Pumps Operation Maintenance of Performance Monitoring	1 week	07-12-2015									07-11			
15	Generator & Auxiliaries including Excitation System	1 week	14-12-2015									14-18			
16	Electrical Protection System	1 week	11-01-2016										11-15		
17	Steam Turbine and its Auxiliaries Operation including Governing System	1 week	18-01-2016										18-22		
18	Role of Smart Grids with Indian power sector- Current developments and Challenges and way forward.	2 days	08-02-2016											08-09	
19	Transmission line maintenance and Introduction to live line Maintenance Techniques	1 week	07-03-2016												07-11

Legend :

Courses started in previous year(s).

Courses started in current year.

TRAINING AND ACADEMIC CALENDAR 2015-2016

HPTC NANGAL

S. No.	Names of Course	Batch	Duration (years/ Weeks/ Days)	Dates	April	May	June	July	August	September	October	November	December	January	February	March
	A. ACADEMIC COURSES															
1	Post Graduate Diploma Course	2014-2015	52 weeks		←											
	in Thermal Power Plant Engg.	2015-2016		19-08-2015					19-08-2015	→						
2	Post Graduate Diploma Course	2014-2015	39 weeks		←											
	in Hydro Power Plant Engg.	2015-2016		07-09-2015						07-09-2015	→					
3	Post Diploma Course	2014-2015	26 weeks		←											
	in Hydro Power Plant Engg.	2015-2016		03-08-2015					03-08-2015	→					→	
	B. MEDIUM TERM COURSES (5 Weeks to 16 Weeks)															
1	Certificate Course for Hydro		12 weeks													
	Power Plant Engg.& Supp.	2015-2016		08-06-2015			08-06-2015	→		→						
2	Specialised Training course for		6 weeks													
	Hydro Power Plant Engg.& Suo	2015-2016		15-06-2015			15-06-2015	→								
	C. SHORT TERM COURSES (One Day to 4 Weeks)															
1.	Safety in Hydro Power Station		3 Days	20-05-2015		20-22										
2.	Hydro Power Plant Operation		1 week	08-06-2015			08-12									
3.	Management Development Program		1 week	22-06-2015			22-26									
4.	Valves & Pumps in Thermal Power Plants		3 Days	17-06-2015			17-19									
5.	Hydro Generation & its Excitation Systems		1 week	13-07-2015				13-17								
6.	Valves & Pumps in Hydro Power Plants		3 Days	17-08-2015					17-19							
7.	Auxiliaries in Hydro Power Plants		3 Days	16-09-2015						16-18						
8.	Hydro Turbines, Governing & its Protection System		1 week	16-11-2015								16-20				
9.	Small, Mini & Micro Hydro Power Generation		3 Days	16-12-2015									16-18			

TRAINING AND ACADEMIC CALENDAR 2015-2016

HPTC NANGAL

S. No.	Names of Course	Batch	Duration (years/ Weeks/ Days)	Dates	April	May	June	July	August	September	October	November	December	January	February	March
	D. SIMULATOR TRAINING															
1	250 MW HYDRO SIMULATOR TRAINING		1 week	06-04-15 27-04-15 11-05-15 25-05-15 08-06-15 06-07-15 03-08-15 24-08-15 07-09-15 05-10-15 02-11-15 07-12-15 04-01-16 18-01-16 15-02-16 14-03-16	06-04-15 27-04-15	11-05-15 25-05-15	08-06-15	06-07-15	03-08-15 24-08-15	07-09-15	05-10-15	02-11-15	07-12-15	04-01-16 18-01-16	15-02-16	14-03-16

Legend :

Courses started in previous year(s).

Courses started in current year.

TRAINING AND ACADEMIC CALENDAR 2015-2016

PSTI Bengluru

S. No.	Names of Course	Batch	Duration (years/ Weeks/ Days)	Dates	April	May	June	July	August	September	October	November	December	January	February	March
	A. ACADEMIC COURSES															
1	Post Graduate Diploma Course in T&D System	2014-15	26 weeks		←											
		2015-16		01-06-2015			01-06-2015	→	→	→	→	27-11-15				
				04-01-2016										04-01-2016	→	→
2	PGDC in Sub-Transmission & Distribution System	2014-15	52 weeks		←	←	←	←	←	←						
		2015-16		05-10-2015							05-10-2015	→	→	→	→	→
	B. SHORT TERM COURSES (One Day to 4 Weeks)															
1	Substation Planning & Engineering		1 week	06-4-15	06-10											
2	Power System Communication, SCADA & EMS		1 week	13-4-15	13-17											
3	Power Quality and Harmonics Mitigation		1 week	20-4-15	20-24											
4	Power System Operation		2 weeks	11-5-15		11-23										
5	Electrical Safety & Inspection of Electrical Installations under IE, Rules		1 week	18-5-15		18-22										
6	Distribution Metering		1 week	25-05-15		25-29										
7	O&M of Transformers and Circuit Breakers		1 week	01-06-15			01-05									
8	Power System Protection		2 weeks	08-06-15			08-19									
9	Advanced Power System Protection		1 week	15-06-15			15-19									
10	Power System Reliability		1 week	21-06-15			21-26									
11	Power Cables and jointing techniques		3 days	01-07-15				01-03								
12	Power System Operation		2 weeks	06-07-15				06-18								
13	Flexible AC Transmission Systems (FACTS)		1 week	13-07-15				13-17								
14	Distribution Automation		1 week	27-07-15				27-31								
15	Low Voltage Power Distribution System Design		1 week	03-08-15					03-07							

TRAINING AND ACADEMIC CALENDAR 2015-2016

PSTI Bengluru

S. No.	Names of Course	Duration (years/ Weeks/ Days)	Dates	April	May	June	July	August	September	October	November	December	January	February	March
16	Power System Reliability	1 week	16-08-15					16-21							
17	Power System Studies	1 week	10-08-15					10-14							
18	High Voltage Testing of Power System Equipment	1 week	24-08-15					24-28							
19	Power System Operation	2 weeks	07-09-15						07-19						
20	Management of Electrical Contracts & Negotiation	1 week	14-09-15						14-18						
21	Distributed Generation & Grid Integration	4 days	21-09-15						21-24						
22	Transformer Oil	3 days	28-09-15						28-30						
23	Power Market Regulations	1 week	05-10-15							05-09					
24	Power System Reliability	1 week	11-10-15							11-16					
25	HVDC Transmission Systems	1 week	26-10-15							26-30					
26	Energy Efficiency in Electrical Utilities	1 week	02-11-15								02-06				
27	Protection of Industrial Power Systems	4 days	01-12-15									01-04			
28	RLA & Life extension of Sub-Station Equipment	1 week	07-12-15									07-11			
29	O&M of Power & Distribution Transformers	1 week	14-12-15									14-18			
30	Renewable Energy Sources & Grid Integration	3 days	21-12-15									21-23			
31	Power Cables and jointing techniques	4 days	28-12-15									28-31			
32	Substation Planning & Engineering	1 week	04-01-16										04-08		
33	Power System Reliability	1 week	17-01-16										17-22		
34	Reactive Power Management	3 days	27-01-16										27-29		
35	O&M of Transformers and Circuit Breakers	1 week	01-02-16											01-05	
36	High Voltage Testing of Power System Equipment	1 week	08-02-16											08-12	

TRAINING AND ACADEMIC CALENDAR 2015-2016

PSTI Bengluru

S. No.	Names of Course	Duration (years/ Weeks/ Days)	Dates	April	May	June	July	August	September	October	November	December	January	February	March
37	Power System Operation	2 weeks	15-02-16											15-27	
38	Electrical Safety and Inspection of Electrical Installations under IE, Rules	4 days	01-03-16												01-04
39	Power Quality and Harmonics	1 week	07-03-16												07-11
40	Power System Protection	2 weeks	14-03-16												23-27
41	Advanced Power System Protection	1 week	21-03-16												21-25
	C. SIMULATOR TRAINING														
1	Dispatcher Training Simulator	2 weeks	20-07-15 16-11-15 11-01-16				20-31				16-27		11-22		

Legend :

Courses started in previous year(s).

Courses started in current year.

TRAINING AND ACADEMIC CALENDAR 2015-2016

HLTC Bengaluru

S. No.	Names of Course	Duration (years/ Weeks/ Days)	Dates	April	May	June	July	August	September	October	November	December	January	February	March
	A. MEDIUM TERM COURSES (5 weeks to 16 week)														
1	Live Line Maintenance Technique (LLMT) using Hot Stick Method (HSM)	12 weeks	20-07-2015 28-12-2015			20-07-15 to 09-10-15						28-12-15 to 18-03-16			
2	Live Line Maintenance Technique (LLMT) using bare Hand Methods (BHM) up to 400Kv lines	5weeks	09-11-2015								09-11 to 11-12				
	B. SHORT TERM COURSES (One Day to 4 Weeks)														
1	Capsule Course for Executive in Hot Line activities	1 week	25-05-2015		25-29										
2	Switchyard Maintenance Techniques using LLMT for Linemen/supervisors	4 weeks	15-06-2015			15-6-15 to 10-07-15									
3	Live Line Punctured Insulator Detector	1 week	13-07-2015				13-17								
4	Capsule Course for Executive in Hot Line activities	1 week	21-09-2015						21-25						
5	Familiarization Training Program on 400 kV on Cold Lines	4 week	12-10-2015							12-10-2015 to 06-11-2015					
6	Live Line Punctured Insulator Detector	1 week	14-12-2015									14-18			
7	Capsule Course for Executive in Hot Line activities	1 week	29-02-2016											29-04	

Legend :

Courses started in previous year(s).

Courses started in current year.

TRAINING AND ACADEMIC CALENDAR 2015-2016

NEYVELI

S. No.	Names of Course	Batch	Duration (years/ Weeks/ Days)	Dates	April	May	June	July	August	September	October	November	December	January	February	March
	A. ACADEMIC COURSES															
1	Post Graduate Diploma Course	2014-15	52 weeks	19-08-2015	←	—	—	—								
	Thermal Power Plant Engg.	2015-16							19-08-2015	—	—	—	—	—	—	→
2	Post Diploma Course in	2014-15	52 weeks	22-02-2016	←	—	—	—	—	—	—	—				
	Thermal Power Plant Engg.	2015-16													22-02-2016	→
	B. LONG TERM COURSES (16 week and above)															
1	Graduate Engineers Course	2014-15	52 weeks		←	—	—	—	—	—	—	—	—	—		
	(Thermal) [GEC]	2015-16		30-11-2015								30-11-2015	→			
	C. SHORT TERM COURSES (One Day to 4 weeks)															
1	Pumps-Operation Maintenance & Performance Monitoring		1 week	06-04-2015	06-10											
2	Valve Actuators		3 days	06-05-2015		06-08										
3	Thermal Power Station Operation		1 week	11-05-2015		11-15										
4	Power Plant Auto Control		1 week	11-05-2015		11-15										
5	Valve Maintenance		1 week	11-05-2015		11-15										
6	Fans and Air Heaters		3 days	03-06-2015			03-05									
7	Steam Turbine & Auxilliaries Operation		1 week	08-06-2015			08-12									
8	Electrostatic Precipitator		3 days	24-06-2015			24-26									
9	Boiler Operation		1 week	06-07-2015				06-10								
10	Power Plant Auto Control		1 week	06-07-2015				06-10								
11	Boiler Firing System & Equipment		1 week	13-07-2015				13-17								
12	Electrical Protection System		1 week	20-07-2015				20-24								
13	Efficiency & Performance Monitoring		1 week	17-08-2015					17-21							
14	Relay Maintenance		3 days	19-08-2015					19-21							

TRAINING AND ACADEMIC CALENDAR 2015-2016

NEYVELI

S. No.	Names of Course	Duration (years/ Weeks/ Days)	Dates	April	May	June	July	August	September	October	November	December	January	February	March
15	Boiler Operation – Refresher Course	1 week	14-09-2015						14-18						
16	Power System Energy Losses	1 week	14-09-2015						14-18						
17	Power System Studies Load Despatch	1 week	12-10-2015							12-16					
18	Battery Maintenance	3 days	07-10-2015							07-09					
19	Burner Management System/FSSS	3 days	14-10-2015							14-16					
20	Large Capacity CFBC Boiler	3 days	04-11-2015								04-06				
21	Motor Maintenance	1 week	16-11-2015								16-20				
22	O&M of Coal Mills & Feeder	3 days	18-11-2015								18-20				
23	Switchgear Maintenance	2 days	03-12-2015									03-04			
24	Generator & Auxiliaries including Excitation System	1 week	07-12-2015									07-11			
25	Transformer Maintenance	3 days	09-12-2015									09-11			
26	Pump Maintenance	1 week	04-01-2016										04-08		
27	Transformers	1 week	19-01-2016										19-23		
28	Gas Turbine Combined Cycle Power Plant Appreciation	1 week	01-02-2016											01-05	
29	Energy Audit & Demand Side Management in Power Utilities	1 week	02-02-2016											02-06	
30	Issues Related to Supercritical Technology	2 days	18-02-2016											18-19	
31	Energy Conservation and Energy Audit	1 week	07-03-2016												07-11
32	Bearing Maintenance & Shaft Alignment	1 week	09-03-2016												09-13

Legend :

Courses started in previous year(s).

Courses started in current year.

TRAINING AND ACADEMIC CALENDAR 2015-2016

DURGAPUR

S. No.	Names of Course	Batch	Duration (years/ Weeks/ Days)	Dates	April	May	June	July	August	September	October	November	December	January	February	March
	A. ACADEMIC COURSES															
1	B.Tech. in Power Engineering	2011-15	4 Years	July 2015	←											
		2012-16			←											→
		2013-17			←											→
		2014-18			←											→
		2015-19						July 2015								→
2	PGDC in Thermal Power Plant Engineering	2014-15	52 weeks	19-08-2015	←											
		2015-16							19-08-2015							→
3	PDC in Thermal Power Plant Engineering	2014-15	52 weeks	01-08-2015	←											
		2015-16							01-08-2015							→
	B. SHORT TERM COURSES (One Day to 4 weeks)															
1	Valve & Pump maintenance		1 week	20-04-2015	20-24											
2	Switchgear & Transformer Maintenance		1 week	25-05-2015		25-29										
3	Reduction in Power Distribution Losses		3 Days	21-07-2015				21-23								
4	Electrical protection system		1 week	27-07-2015				27-31								
5	Thermal Power Station Operation		1 week	03-08-2015					03-07							
6	O&M of Transmission Lines and Sub Station		1 week	17-08-2015					17-21							
7	Boiler Tube Failure and Case Study		1 week	07-09-2015						07-11						

TRAINING AND ACADEMIC CALENDAR 2015-2016

DURGAPUR

S. No.	Names of Course	Duration (years/ Weeks/ Days)	Dates	April	May	June	July	August	September	October	November	December	January	February	March
8	Power Plant Chemistry For Engineers	1 week	14-09-2015						14-18						
9	Thermal Power Plant Efficiency and Performance Monitoring	1 week	21-09-2015						21-25						
10	Generator & Auxiliaries including Excitation System and AVR	1 week	09-11-2015								09-13				
11	Trouble Shooting of Steam Turbine	3 Days	09-11-2015								09-11				
12	Welding Practice	1 week	16-11-2015								16-20				
13	Energy Efficiency Management in Power System	3 Days	07-12-2015									07-09			
14	Change Management	3 Days	06-01-2016										06-08		
15	Boiler and its Auxiliaries Operation	1 week	04-01-2016										04-08		
16	Condition bases Maintenance	1 week	18-01-2016										18-22		
17	Power Plant Instrumentation	1 week	18-01-2016										18-22		
18	Advanced C&I in Thermal Power Station	3 Days	03-02-2016											03-05	
19	Steam Turbine its Aux. Operation	1 week	08-02-2016											08-12	
20	Renewable Energy Technologies	3 Days	29-02-2016											29-02	

Legend :

Courses started in previous year(s).

Courses started in current year.

TRAINING AND ACADEMIC CALENDAR 2015-2016

NPTI- NER GUWAHATI

S. No.	Names of Course	Batch	Duration (years/ Weeks/ Days)	Dates	April	May	June	July	August	September	October	November	December	January	February	March
	A. ACADEMIC COURSES															
1	Post Graduate Diploma Course	2014-2015	52 week	19-08-2015	←											
	in Thermal Power Plant Engg.	2015-2016							19-08-2014 →							
2	Post Diploma Course	2014-2015	52 week	24-08-2015	←											
	in Thermal Power Plant Engg.	2015-2016							24-08-2015 →							
3	PGDC in Sub-Transmission &	2014-2015	26 week	16-11-2015	←											
	Distribustion System	2015-2016										16-11-2015 →				
4	PGDC in Transmission &	2015-2016	26 week	06-07-2015												
	Distribustion System							06-07-2015 →								
5	Post Graduate Certificate Course	2015-2016	12 week	04-01-2016												
	in Thermal Power Plant Engg													→		
	B. SHORT TERM COURSES (1 Day to 4 Weeks)															
1.	Distribution Metering		1 week	18-05-2015		18-22										
2.	Operation & Maintenance Sub-Station		1 week	08-06-2015			08-12									
3.	Energy Conservation & Energy Audit (For Generation Sector)		3 days	20-07-2015				20-22								
4.	Operation & Maintenance HT/LT Switchgear		1 week	07-09-2015						07-11						
5.	Operation & Maintenance Sub-Station		1 week	23-11-2015								23-27				
6.	Post Graduate Certificate Course in Thermal Power Plant Engineering		12 weeks	04-01-2016									04-01-16 to 25-03-16			
7.	Operation & Maintenance Transformers		1 week	08-02-2016											08-12	
8.	Distribution Engineering		1 week	07-03-2016												07-11

Legend :

Courses started in previous year(s).
Courses started in current year.

TRAINING AND ACADEMIC CALENDAR 2015-2016

NAGPUR

S. No.	Names of Course	Batch	Duration (years/ Weeks/ Days)	Dates	April	May	June	July	August	September	October	November	December	January	February	March
	A. ACADEMIC COURSES															
1	B.E. in Power Engineering	2011-15	4 Years	July 2015	←											
		2012-16			←											→
		2013-17			←											→
		2014-18			←											→
		2015-19							July 2015							→
2	Post Graduate Diploma Course	2014-15	52 weeks	19-08-2015	←											
	in Thermal Power Plant Engg.	2015-16							19-08-2015							→
3	Post Diploma Course	2014-15	52 weeks	23-11-2015	←											
	in Thermal Power Plant Engg.	2015-16										23-11-2015				→
4	PGDC in Transmission &	2014-15	26 weeks	01-06-2015												
	Distribution System	2015-16		07-12-2015			01-06-2015	→	→	→	→	→	07-12-15	→	→	→
	B. SHORT TERM COURSES (One Day to 4 weeks)															
1	Boiler & its Auxiliaries Operation		4 days	05-05-2015		05-08										
2	Control & Instrumentation for Operation Engineers		3 days	16-06-2015			16-20									
3	Generator Auxiliaries including Excitation System		3 days	07-07-2015				07-09								
4	Thermal Power Plant Operation		4 days	08-09-2015						08-11						
5	Power System Load Dispatch		3 days	08-09-2015						08-10						

TRAINING AND ACADEMIC CALENDAR 2015-2016

NAGPUR

S. No.	Names of Course	Duration (years/ Weeks/ Days)	Dates	April	May	June	July	August	September	October	November	December	January	February	March
6	Energy Conservation & Energy Audit for Generation Sector	3 days	03-11-2015								03-05				
7	Pumps Operation, Maintenance & Performance Monitoring	3 days	17-11-2015								17-19				
8	Power Plant Chemistry for Operation Engineers	4 days	24-11-2015								24-27				
9	Fire Prevention, Protection & Safety for Thermal Power Station	3 days	08-12-2015									08-10			
10	Bearing Maintenance & Shaft Alignment	4 days	15-12-2015									15-18			
11	Data Acquisition & Distributed Digital Control System in Thermal Power Station	3 days	05-01-2016										05-07		
12	Automation System for Power Plant (PLC & SCADA)	3 days	12-01-2016										12-14		
13	Electrical Protection System	4 days	19-01-2016										19-22		
14	Thermal Power Plant Efficiency & Performance Monitoring	3 days	09-02-2016											09-11	
15	Environmental Pollution & Pollution Control related with Thermal Power Plants	3 days	16-02-2016											16-18	
16	Steam Turbine & Its Auxiliaries Operation	4 days	01-03-2016												01-04

TRAINING AND ACADEMIC CALENDAR 2015-2016

NAGPUR

S. No.	Names of Course	Duration (years/ Weeks/ Days)	Dates	April	May	June	July	August	September	October	November	December	January	February	March
	C. SIMULATOR TRAINING														
1	210 MW Fossil Fuel Power Plant Simulator Training	2 week	13-04-2015 27-04-2015 11-05-2015 25-05-2015 15-06-2015 29-06-2015 13-07-2015 27-07-2015 17-08-2015 31-08-2015 14-09-2015 28-09-2015 12-10-2015 26-10-2015 16-11-2015 30-11-2015 14-12-2015 28-12-2015 11-01-2016 25-01-2016 08-02-2016 22-02-2016 07-03-2016 21-03-2016	13-04-2015 27-04-2015	11-05-2015 25-05-2015	15-06-2015 29-06-2015	13-07-2015 27-07-2015	17-08-2015 31-08-2015	14-09-2015 28-09-2015	12-10-2015 26-10-2015	16-11-2015 30-11-2015	14-12-2015 28-12-2015	11-01-2016 25-01-2016	08-02-2016 22-02-2016	07-03-2016 21-03-2016

Legend :

Courses started in previous year(s).

Courses started in current year.

Republic Day Celebration on 26th January, 2015 at NPTI (CO), Faridabad

National Power Training Institute

1. NPTI (CO) FARIDABAD
2. NPTI (NR) BADARPUR
3. NPTI (HTPC) NANGAL
4. NPTI (SR) NEYVELI
5. NPTI (PSTI) BENGALURU
6. NPTI (HTLC) BENGALURU
7. NPTI (ER) DURGAPUR
8. NPTI (NER) GUWAHATI
9. NPTI (WR) NAGPUR

तमसो मा ज्योतिर्गमय्

Four Decades of Service to the Power Sector

Shri Subodh Garg, Director General, NPTI has been selected for the "**Asia Pascific HRM Congress Awards 2014**" in the field of "**Contribution to the Training & Development**" by World HRD Congress. This award is for his outstanding contribution and proven track record of his achievements in the area of Training and Development.
The award was announced at a glittering ceremony held at Bengaluru on 11th September, 2014.

Signing of Contract Agreement with POWERGRID in the presence of Shri Subodh Garg, Director General, NPTI and Shri R.N. Nayak, CMD, POWERGRID

Shri Subodh Garg, Director General, NPTI and Shri I. J. Kapoor, Director (Commercial), NTPC and Senior officers of NPTI & NTPC during the Ceremony of Contract Agreement

TOGETHER IN PURSUIT OF EXCELLENCE









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Four Decades of Service to the Power Sector