Specialist Level Certification
on

Regulatory Framework in Power Sector

February 2016

Contents

No.	Description	Page No.
1	Introduction	3
2	Framework for Specialist Level Certification Exam on Regulatory Framework	4
3	Pattern Of Examination	5
3.1	Payment Options	6
3.2	Registration	6
3.3	Examination Centres	7
3.4	Access to Examination Centre	7
3.5	Examination Centre Regulations	8
3.6	Withdrawal From the Examination	9
3.7	Examination Question paper	9
3.8	Awarding of Specialist level certificates	9
4.0	Maintaining 'Active' Certification status	10
4.1	Confirmation of Credential to third parties	10
4.2	Dispute resolution Process	10
4.3	Disciplinary Action	11

Annexures

1	Syllabus for the Certification examination on Regulatory Framework in Power Sector	13
2	Sample question Paper	15
3	Registration Form	16
4	Admit Card	17
5	Time lines for the Specialist Level System Operator Certification Examination- 2016	18

1. INTRODUCTION:

The committee set up by the Ministry of Power under the Chairmanship of Shri. G.B. Pradhan, the then Addl. Secretary, MoP recommended setting up of a system of certification of System Operators by an independent Central body and National Power Training Institute has been entrusted with the responsibility of conducting the certification exams. Thereafter, the combined committee for training and certification under the Chairmanship of Shri S. M. Dhiman, the then Member, Central Electricity Authority, suggested three levels of certification viz. 'BASIC LEVEL', 'SPECIALIST LEVEL' and 'MANAGEMENT LEVEL'. It recommended that the certification authority may conduct the online examination for all the three levels of certification on periodic basis.

In the last decade significant changes have taken place in the Indian Power Sector, these have evolved, catalysed by Policy and Regulatory reforms. Policies and regulations have played a pivotal role in promoting investment in the sector and have put the Indian Power Sector on the right trajectory towards promoting competition, economy and efficiency in the sector.

There have been several new regulatory and policy initiatives in the last five years which continue to define and shape the sector. Lead from the front by the Electricity Act 2003, these have been the winds of change. These are not only the framework, structure and guidelines for the sector but also the environment and the spirit. With increase in number of participants, complexities in the sector have also grown manifold. These are quintessential knowledge and skills for any professional in the sector.

Therefore, Capacity Building in Regulatory Framework is essential for all personnel in 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 Certification Exam has been planned on Regulatory Framework in Power Sector. The first specialist level exam on Regulatory Framework was organized on 17.3.2013. The second online exam on Regulatory Framework is planned for 28.02.2016.

The Certification Exam will be open to all System Operators from Load Despatch Centres who have cleared the basic level certification exam and have put up at least 05 years of service in Power Sector, OR System Operators having a valid Specialist Level Certificate.

2.0 FRAMEWORK FOR SPECIALIST LEVEL CERTIFICATION EXAM ON REGULATORY FRAMEWORK:

a. **Certifying Agency**- The National Power Training Institute will be the Certification Agency and to award Certificates to successful candidates.

b. **Examination Committee**- An Examination Committee comprising of experts in the various fields representing a balanced mix of industry and academia is to be constituted. The committee will be responsible for setting of Examination Paper, consolidating and moderating the same. The examination committee shall also fix the criteria for award of a particular grade on the basis of performance of the candidates in the examination. There would be total of five grades from A to E and grade C shall be the minimum benchmark for award of certification.

c. **Registering Agency**- Power Systems Training Institute, Bangalore a unit of NPTI will be the registering agency and will issue the admit cards to all Candidates.

d. **Eligibility-** The eligibility criteria is as follows:-

i). The Specialist Level Certification will be open to those who are Certified System Operators with a valid Basic Level Certificates and a minimum 05 years work experience in the Power Sector;

OR

System Operators with a valid Specialist Level Certificate (Regulatory Framework in Power Sector or Power System Reliability)

ii). The candidate is a resident citizen of India

iii). The candidate is a regular employee of any of the following- National Load Despatch Centre, Regional Load Despatch Centre, State Load Despatch Centre, Area Load Despatch Centre or Sub-Load Despatch Centre on the 1st day of the month in which the certification examination is scheduled to be conducted.

e. **Fees**- A fees of Rs. 6000+ST@14.5% per participant will be charged per participant.

f. **Syllabus**- The syllabus of the exam is given in Annexure-I.

g. **Pattern of the Examination in Brief**-

- In line with the recommendation of the committee the examination will be conducted online.

- The certification exam question paper shall comprise of total One Hundred Twenty (120) objective-type multiple-choice questions spread over four sections. The total time allowed for answering would be One Hundred and Twenty (120) Minutes .

- There shall be equal number of questions in all the four sections and all the questions shall carry equal marks without any negative marking.

- Given the nature of the Course Content, it is contemplated that the exam be an open book exam. Candidates are allowed to keep NPTI supplied specialist level training material hard / Soft copy with them for reference.

h. **Locations**- The specialist level certification exam is proposed to be conducted in twelve centres across India with at least one centre in each region.

i. **Timelines**

i.	Registration open	:	4th Jan. 2016
ii.	Last date for receipt of completed registration form at PSTI:		8th Feb. 2016
iii.	Certification Exam	:	28th Feb. 2016
iv.	Declaration of result	:	12th Mar. 2016

j. **Validity**- the Certificate will be valid for three years from the date of award of the certificate. The duration of validity of the certificate will be clearly mentioned on the certificate

k. **Other Terms and Conditions** – Remain the same as those applicable for Basic Level System Operator Certification Exam.

3.0 PATTERN OF EXAMINATION:

The exam shall be conducted in a paperless mode. Each candidate would be provided with a separate computer terminal at the designated test centre. The candidate would appear in the exam through the interface provide on the respective computer screens. A fifteen-minute tutorial on operating instructions for the computer-based examination will be provided before the start of each examination. The tutorial would be self-explanatory, and no prior computer knowledge is needed.

The certification exam question paper shall comprise of total 120 (120) objective-type multiple-choice questions spread over four sections. The total time allowed for answering would be Hundred and Twenty (120) Minutes . There shall be equal number of questions in all the four sections and all the questions shall carry equal marks without any negative marking. Computer-based testing would allow candidates to skip questions, mark, and return to them at a later time. During the examination, candidates may change their answer to any question. A clock would be displayed on

the screen at all times indicating the time remaining. Before exiting the examination, the computer will indicate any question(s) that the candidate might have marked for review or those that remain unanswered.

The candidate may keep the hard copy or soft copy of the material supplied by NPTI for reference purpose.

3.1 PAYMENT OPTIONS:

(a) Through Demand draft/pay order payable to Power Systems Training Institute payable at Bangalore

(b) Direct Credit through Electronic Clearing System to

Bank Name: State Bank of India

A/C Number: 10031210203

IFSC: SBIN0006767

MICR: 560002008

Account Type: Current

Name of Beneficiary: Power Systems Training Institute

Pan No:AAALN0083C

Tan No: BLRP00338C

3.2 REGISTRATION :

i). Download blank registration form from the website of NPTI or take a photocopy of the blank registration attached with this document.

ii). Fill the necessary details and paste your recent photograph.

iii). Get the completed registration form endorsed by the head of the respective Load Despatch Centre.

iv). Send the endorsed registration form along with the demand draft/pay order for registration fee. In case the fee has been paid through ECS, then the copy of the confirmation receipt obtained from the bank may be sent along with the registration form.

v). Post the completed registration form along with the enclosures to Principal Director, Power Systems Training Institute, Banashankari II Stage, Bangalore 560070.

3.3 EXAMINATION CENTRES:

The certification exam shall be conducted at the following centres subject to a minimum of 15 participants.

i). Guwahati/Shillong (North-eastern region)
ii). Bhubaneswar (Eastern region)
iii). Kolkata (Eastern Region)
iv). Chandigarh (Northern Region)
v). New Delhi (Northern Region)
vi). Lucknow (Northern Region)
vii). Jabalpur (Western Region)
viii). Mumbai (Western Region)
ix). Baroda (Western Region)
x). Bangalore (Southern Region)
xi). Chennai (Southern Region)
xii). Hyderabad(Southern Region)

3.4 ACCESS TO EXAMINATION CENTRE:

The access to the examination centre shall be through a valid photo admit-card for the certification exam issued by the Examination Coordinator (a designated officer of NPTI). The admit card should be duly endorsed by the stamp and signature of the Examination Coordinator. In case an applicant had received the admit card but is not carrying the admit card at the examination centre designated to the applicant due to some reason then he/she would be allowed to take the exam only if he/she shows the photocopy of the exam registration form along with the valid photo identity card issued to the candidate from the respective organization. A duplicate admit card shall be issued to such candidates at the examination centre by the examination centre in-charge.

Identification(s) that have been altered or damaged will not be accepted at the test centre. If there is any discrepancy between the name on the identification presented to the test centre staff and the examination registration form, the candidate will not be admitted to test and will be marked as a 'no-show'. A report of list of no-show candidates shall be forwarded to the concerned organizations. No refunds shall be provided in case of no-show.

A photograph and finger printing of all the candidates reporting for the exam shall be taken at the test centre for the purpose of record. The candidates are therefore advised to reach the respective test centre at the scheduled reporting time.

After completion of the exam proceedings, an acknowledgement slip will be issued to all the candidates. The slip shall state that the candidate has appeared for the certification exam at the designated centre at the allotted date/time. The applicants are also advised to get their admit card's endorsed by the in charge of the respective examination centre.

3.5 EXAMINATION CENTRE REGULATIONS:

The candidates shall comply with the following examination centre regulations:

1. Candidates who arrive late (Half an hour after the beginning of the exam) shall not be allowed access. Late arrivals that are not permitted to take the examination will be considered a no-show and must reapply. No refunds shall be allowed.
2. No reference materials other than the prescribed ones, calculators, cell phones, or recording equipment may be taken into the examination.
3. No test materials, documents, notes, or scratch paper of any sort may be taken from the examination.
4. Visitors are not permitted during the examination.
5. Testing centre staff is instructed to answer questions about testing procedures only. They cannot respond to inquiries regarding the examination's content.
6. During the examination, candidates may use the rest rooms for a biological break; however, the examination clock will continue running during such times.
7. Candidates may not leave the testing centre until they have finished the examination.
8. Smoking is not permitted in any testing centre.
9. Any candidate giving or receiving assistance, or making a disturbance, will be required to turn in their examination materials, exit the examination room, and leave the testing centre. The test would be scored as is whether they have completed it or not. A report of such candidates shall be sent to their respective organizations and such candidates shall be barred from appearing in the certification exam for one year.
10. Any instances of cheating or attempts to impersonate another candidate, will be reported to the respective organization where the candidate is employed and such candidates shall be barred from appearing in the certification exam for one year.

3.6 WITHDRAWAL FROM THE EXAM:

A candidate may cancel and reschedule an examination appointment either by submitting a written request to the Principal Director, Power Systems Training Institute at least five working days before the designated examination date. The candidate is allowed to re-appear in the next certification examination without paying an additional fee. If a candidate is late in withdrawing from the certification exam, does not appear for it, or arrive late, the candidate will be considered as no-show. All no-shows and candidates who have withdrawn will have to reapply to take the examination. No refunds shall be allowed.

3.7 EXAMINATION QUESTION PAPER:

As recommended in the combined committee for training and certification of system operators the examination paper will be set after taking input from experts in various fields and then consolidating and moderating the same. Experts of the exam committee shall be selected in such a manner that they represent a good mix of the industry and academia. The questions will be of multiple choice and the candidate would be expected to mark the most appropriate choice in his/her judgment. A set of sample questions are enclosed in Annexure-II.

3.8 AWARDING OF SPECIALIST LEVEL CERTIFICATE:

In line with the recommendations of the combined committee for training and certification of System Operators, there would be a total of five grades from A to E and grade C shall be the minimum benchmark for award of certification. The examination committee shall fix the criteria for award of a particular grade on the basis of performance of the candidates in the examination. Results of the certification examination shall be declared by the National Power Training Institute after grading and analysis. The results will be displayed in the website www.psti.kar.nic.in. All candidates acquiring grade A or grade B or grade C shall be awarded Specialist Level certificate for Regulatory Framework in Power Sector signed by Director General, National Power Training Institute. The date on the certificate shall be considered as the reference date for the purpose of computing the validity period of the certificate.

Candidates awarded grades D and E in the examination may re-appear in the certification exams conducted subsequently. Such candidates would have to re-register for the exam by again paying registration fee applicable at the time of re-registration.

Disputes related to award of certificate, if any, shall be resolved through the dispute resolution process.

4.0 MAINTAINING 'ACTIVE' CERTIFICATION STATUS:

The Specialist level certificate will have to be renewed every three years. At the end of three years, the LDC executive will have to appear in the examination for re-certification.

4.1 CONFIRMATION OF CREDENTIAL TO THIRD PARTIES:

National Power Training Institute shall maintain a record of all the candidates who have appeared for the certification examination in a particular year along with their grades. It shall also maintain a record of the candidates possessing 'active' specialist level certificates for Regulatory Framework in Power Sector. National Power Training Institute (NPTI) will confirm to the sponsoring organization that an individual holds a valid/'active' system operator certificate (including releasing the certificate number and the issuance date) in response to a written request, on the employer's letterhead (or official e-mail), providing the name of the individual and the grade acquired. No further information will be provided. NPTI will forward the certificate numbers and issuance dates for individuals holding a current system operator certificate to the respective State/Central Electricity Regulatory Commissions if requested. NPTI will confirm to an employment search firm, or a potential employer, whether an individual holds a valid Specialist certificate (including releasing the certificate number and the issuance date) if the search firm has a release from the individual. No further information will be provided.

4.2 DISPUTE RESOLUTION PROCESS:

Any dispute arising under the System Operator Certification Program, or from the establishment of rules, policies, or procedures dealing with any segment of the certification process, or as a result of disciplinary action shall be subject to the System Operator Certification Dispute Resolution Process (hereafter called the "Process"). The Process is only for the use of persons who hold a system operator certification or persons wishing to be certified to dispute the validity of the examination, the content of the test, the content outlines, or the registration process. The dispute resolution process consists of two steps.

1. Write to the examination coordinator (a designated officer of NPTI) explaining the nature of dispute. The candidate shall attach the photocopy of the valid admit card along with the letter. It is expected that most of the disputes shall be resolved at this first step. If the issue (s) is not resolved to the satisfaction of the parties involved in the first step the matter may be brought to the notice of Director General, NPTI.

2. Director General, NPTI may constitute a committee to examine the dispute. The candidate shall be given an opportunity to present his/her case before the committee at a specified place, date and time. The committee shall give its recommendations to the DG, NPTI within fifteen days of the meeting with the candidate. DG, NPTI shall communicate the final decision to the concerned person within thirty days (30) of the meeting of the aggrieved person with the committee. The decision of the DG-NPTI shall be treated as final.

The committee set up for dispute resolution may use a simple majority vote of the committee members to decide all issues. The vote will be taken in a closed session.

4.3 DISCIPLINARY ACTION:

This disciplinary action procedure is necessary to protect the integrity of the system operator credential. Should an individual act in a manner that is inconsistent with expectations, this procedure describes the process to investigate and take action necessary to protect the credential. The following shall serve as grounds for disciplinary action:

1. Intentional misrepresentation of information provided on system operator certification exam registration form
2. Intentional misrepresentation of identification in the exam process. This includes, but is not limited to, a person identifying himself or herself as another person to obtain certification for the other person.
3. Violation of one or more examination centre regulations (as prescribed in this document) by a candidate.
4. Any form of cheating during a certification exam. This includes, but is not limited to, bringing unauthorized reference material in the form of notes, study material, or other methods of cheating into the examination centre.

The in-charge of the examination centre shall report incidents fit for disciplinary action to the certification examination coordinator. The examination coordinator may discuss with the candidate involved and submit the preliminary findings and communicate the decision to the concerned candidate. The candidate may have the right to appeal through the dispute resolution process.

----------XXX----------

Annexures

Annexure – I

Syllabus – Specialist Level Certification on Regulatory Framework in Power Sector

1. Acts and Policies
   a) Legal Framework in India-philosophy, concept and Relevance with special Focus on Power Sector
   b) National Electricity Policy
   c) Tariff Policy
   d) National Electricity Plan
   e) Electricity Act 2003
   f) Report of the committee on Manpower, Certification and Incentives for System Operation and Ring fencing Load Despatch Centres, 2008
   g) Report of the Task Force on Capital Expenditure and Issues related to Emoluments of Personnel in Load Despatch Centre, 2009
   h) Report of the Task Force on Manpower Selection, Recruitment Procedure and Tenures for Personnel in State Load Despatch Centres, 2009
   i) Report of the Combined Committee for Training and Certification of System Operators, 2010
   j) Basic Micro and Macro Economic concepts for Power Sector
   k) Case I / Case 2 Bidding process
   l) Energy Conservation Act 2001

2. Grid Code, Standards and Case Studies
   a) Indian Electricity Grid Code Regulations, 2010
   b) Grid Standards Regulations 2010
   c) Technical Standards for Connectivity to the Grid
   d) Central Electricity Authority (Installation and Operation of meters) (Amendment) Regulations 2010
   e) Central Electricity Authority (Installation and Operation of meters) Regulations 2006
   f) Central Electricity Authority (Safety requirements for construction, operation and maintenance of electrical plants and electric lines) Regulations 2011
   g) Central Electricity Authority (Measures relating to Safety and Electricity Supply) Regulations, 2010
   h) Central Electricity Authority (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations 2010
   i) Central Electricity Authority (Procedure for Transaction of Business) Regulations 2006
   j) Drafting petitions, case Studies (Workshop, Assignments)/Case 1/ Case 2 Bidding

3. Transmission
   a) Short term Open Access in Inter-state Transmission Regulations, 2008
   b) Connectivity, Long-term Access and Medium-term Open Access in inter-State Transmission and related matters Regulations, 2009.
   c) Grant of Regulatory Approval for execution of Inter-State Transmission Scheme to Central Transmission Utility Regulations, 2010
   d) Procedure, Terms and Conditions for grant of Transmission License and other related matters Regulations, 2009
   e) Sharing of Revenue derived from utilization of transmission assets for other business, 2007.
   f) Open access Inter State Transmission Regulations, 2008
   g) Deviation Settlement Mechanism charges and related matters Regulations, 2014
   h) Measures to relieve congestion in real time operation Regulations, 2014
   i) Regulation of Power Supply, Regulation,2010
   j) Sharing of Inter state Transmission charges and Losses Regulations, 2010
   k) Deviation Settlement Mechanism – Regulations 2014
   l) Terms and Conditions of tariff regulations for 2014 – 19.

4. Power Markets
   a) Procedure, Terms and Conditions for grant of trading license and other related matters Regulations, 2009
   b) Fixation of Trading Margin Regulations, 2010
   c) Fees and charges of Regional Load Despatch Centre and other related matters Regulations, 2009
   d) Power Market Regulations, 2010
   e) Power system Development Fund Regulations, 2010.
   f) Procedures for calculating the expected revenue from tariffs and charge Regulations, 2010
   g) Furnishing of Technical Details by the Generating Companies Regulations, 2009
   h) Terms and Conditions for recognition and issuance of Renewable Energy Certificate for Renewable Energy Generation Regulations, 2010.
   i) Terms and Conditions for Tariff determination from Renewable Energy Sources, 2009.

Annexure – 2

Sample Question Paper

1. With reference to CEA's Grid Connectivity Standards, the preferable switching scheme for a 400 kV substation is :

a) main and transfer scheme
b) double main and transfer scheme
c) one and half breaker scheme
d) double bus double breaker scheme

2. As per the CERC's Notification for RLDC Fees and Charges, Market Operation Charges are recovered from

a) Inter-State Transmission Licensees
b) Power Exchanges
c) Traders
d) Equally from all users except inter-state transmission licensees

3. Who is the authority above the orders of the Appellate Tribunal?

a) Central Govt
b) Competition Commission
c) High Court
d) Supreme Court

4. A central generating station or other generating station, in which two or more states have shares - is known as

a) ISTS
b) ISGS
c) UMPP
d) IPP/CPPS

5. Accuracy class of Consumer meters up to 650 volts is:

a) 0.5S
b) 0.2S
c) 1.0S
d) 2.0S

Annexure - 3

Specialist Level Certification Exam on Regulatory Framework in Power Sector 2016

REGISTRATION FORM

Paste your recent self attested passport size colour photograph

1. NAME OF THE CANDIDATE :
2. FATHER'S NAME :
3. DATE OF BIRTH(dd/mm/yyyy):
4. GENDER (Male / Female) :
5. HIGHEST QUALIFICATION :

Sr. No.	Diploma / Graduate / Postgraduate	Year	Name of Institute

6. CONTACT NUMBER :
7. EMAIL ADDRESS :
8. POSTAL ADDRESS :
9. EXAMINATION CENTRE :Please select from the twelve centres listed in the brochure
   Preference 1..... Preference 2.....

10. Details of earlier certification exams passed. Please tick (√) the earlier exams passed by you:
    a) Basic Level

Date	06.11.2011	16.12.2012	13.07.2014	01.11.2015
Tick the exam(s) cleared				

    b) Specialist Level

Date	17.03.2013	01.02.2015
Subject	Regulatory Framework in Power Sector	Power System Reliability
Tick the exam(s) cleared		

11. DETAILS OF THE REGISTRATION FEE

a) PAYMENT THROUGH DEMAND DRAFT/PAY ORDER
   i). Demand draft/pay order number :
   ii). Issuing bank :
   iii). Issued on date :
   iv). Amount :

b) PAYMENT THROUGH ECS :
   i). Issuing bank :
   ii). Transaction ID and date :

I agree to abide by the rules and regulations of the Specialist certification Exam.

(Signature of the Candidate)

c) Certified that the candidate is employed in ---------- Load dispatch.

PLACE: DATE: Signature of the LDC In-charge

Annexure - 4

Specialist Level Certification Exam on Regulatory Framework in Power Sector 2016

ADMIT CARD

NAME :

FATHER'S NAME :

DATE OF BIRTH :

GENDER : Male/Female

ADDRESS OF THE EXAMINATION CENTRE:

DATE OF EXAMINATION : 28/02/2016

REPORTING TIME : 09:30 am

(EXAMINATION COORDINATOR)

NAME:

ADDRESS:

It is certified that the above candidate appeared in the examination for Specialist level certification conducted on 28th February, 2016.

(EXAMINATION CENTRE-INCHARGE)

Annexure – 5

TIMELINES FOR THE SPECIALIST LEVEL SYSTEM OPERATOR CERTIFICATION EXAMINATION, 2016

Sr. No.	Target Date	Activity	Action by
1	21 Dec. 2015	Circulation of Brochure to all System Operators by NPTI, with request for participation	PSTI
2	28 Dec. 2015	Launch of "Specialist Level System Operator Certification Website" – Consolidated Electronic Portal	PSTI
3	4 Jan. 2016	Registration for the Specialist Level System Operator Certification Examination Commences	PSTI
4	8 Feb. 2016	Last date for Registration for the Specialist Level System Operator Certification Examination	PSTI
5	15 Feb. 2016	Last date for withdrawal from the Certification Examination	PSTI / Registered Participants
6	16 Feb. 2016	Completion of Processing of Registrations, dispatch (by email/post) of Examination Admit Cards to the Registered participants	PSTI
7	28 Feb. 2016	Specialist Level System Operator Certification Examination held across the Country	PSTI, TCS, POSOCO, Participants
8	12 Mar. 2016	Declaration of Results by PSTI	PSTI

****