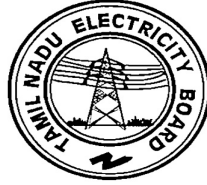


CORRIGENDUM

Tender Ref. No.	CE/TTPS/SE/M.II/No.70 / 2024-2025
Tender ID:	2024_EB_425544_1
CORRIGENDUM	Extension of due date of Opening
Bid submission closing date Extended to	02.05.2024
Technical bid opening date Extended to	03.05.2024



TAMIL NADU GENERATION AND DISTRIBUTION CORPORATION LIMITED

TENDER SPECIFICATION

FOR

TTPS – Mech.II – TM I - Unit-II - Capital overhaul of 210 MW LMW TG set and Re RLA study on Turbine components

THROUGH E-TENDERING

(Through NIC Platform)

SPECIFICATION NO. CE / TTPS /SE/M.II/ Specn.70/2024-2025

OPEN TENDER / TWO PART SYSTEM

Due date and time for submission of Tender: 02.05.2024 @14.00 hrs.

**OFFICE OF THE
CHIEF ENGINEER,
TUTICORIN THERMAL POWER STATION,
TUTICORIN – 628 004.**

TAMIL NADU GENERATION AND DISTRIBUTION CORPORATION LIMITED
FOREWORD FOR SPECIFICATION NO. CE / TTPS /SE/M.II/ Specn.70/2024-2025

1	Tender Specification No.	CE/TTPS/SE/M.II/Specn.70/2024-2025				
2	Name of Work	e-Tender for TTPS – Mech.II – TM I - Unit-II - Capital overhaul of 210 MW LMW TG set and Re RLA study on Turbine components				
3	Quantity	As Per Schedule				
4	Method of Tender	Open Tender / Two part - e-Tender System (Online submission of Part-I – Techno Commercial Bid and Part-II – Price Bid, through Website: https://www.tntenders.gov.in/nicgep/app of NIC.)				
5	a) Earnest Money Deposit (EMD)	Rs.2,04,100/- (Rupees Two lakh four thousand and one hundred only) to be paid through online payment gateway. The online payment Gateway has been enabled for TANGEDCO in TN Tenders portal (www.tntenders.gov.in). The payment for EMD will be carried out by the Bidders only through online payment mode.				
	b) Permanent EMD	PEMD holders of Rs.20 lakhs and above at TANGEDCO headquarters or at TTPS held under revised slab are exempted from payment of EMD.				
	c) EMD Exemption Categories	The exempted categories of tenderers as given in Section-II Micro and Small Enterprises located inside the state of Tamil Nadu are eligible for exemption of EMD against submission of documents as detailed in Section-II.				
6	URL for online bid submission for e-tender	https://www.tntenders.gov.in/nicgep/app				
7	Last date for submission of EMD	02.05.2024 @ 12.00 HRS				
8	Date of closing of online e-tender for submission of Techno Commercial Bid & Price Bid.	02.05.2024 @ 14.00 HRS				
9	Pre Bid Meeting	On 04.03.2024 through E-mail only (E-mail ID: sem2ttps@tnebn.net) from 10.00 Hrs to 17.00 Hrs.				
10	Date & time of opening of tender electronically	03.05.2024 @ 14.00 HRS				
11	Specification at website	The tender specification will be placed at the following Web sites. The prospective bidders may download the same. <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>TANGEDCO</td> <td>www.tangedco.gov.in</td> </tr> <tr> <td>NIC</td> <td>https://www.tntenders.gov.in</td> </tr> </table>	TANGEDCO	www.tangedco.gov.in	NIC	https://www.tntenders.gov.in
TANGEDCO	www.tangedco.gov.in					
NIC	https://www.tntenders.gov.in					
12	Documents to be uploaded by the Tenderers during e-submission	Schedules “B” to “J” and other required formats and documents whichever is applicable.				
13	Clarification to be sought for from	Superintending Engineer Mechanical –II, TTPS, Tuticorin-628004. Phone: 0461-2352363 & E-Mail: sem2ttps@tnebn.net				
14	Place at which tenders will be opened electronically	Office of the Superintending Engineer Mechanical –II TTPS, Tuticorin-628004.				

SECTION-I

INSTRUCTION TO BIDDERS FOR SUBMISSION OF ONLINE BIDS IN E-TENDER

- 1.0** The bidding under this contract is electronic bid submission through website <https://tntenders.gov.in/nicgep/app> only. Detailed guidelines for viewing bids and submission of online bids are given on the website. Any citizens or prospective bidders can logon to this website and view the invitation for Bids and can view the details of works for which bids are invited.
- 2.0 Registration:**
- 2.1 The prospective bidders can submit bids online, however, the bidders are required to have enrolment/registration in the website by clicking on the link "Online bidder enrolment" which is free of charge.
- 2.2 As part of the enrolment process, the bidders are required to choose a unique username and assign a password for their accounts.
- 2.3 Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These details would be used for any communication from the e-Portal.
- 2.4 Upon enrolment, the bidders are required to **register their valid Digital Signature Certificate (DSC)** (Class II or Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / nCode / eMudhra etc.), with their profile.
- 2.5 Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC's to others which may lead to misuse.
- 2.6 Bidder then can login to the site through the secured login by entering their user ID / password and the password of the DSC / e-Token.
- 3.0 Contact persons:**
For queries related to registration and online bidding (NIC):
 e-mail : support.etender@nic.in
 Contact No. : 044 - 24466495
 24902580 Extn:332
 24917850
- 4.0 Searching for Tender Document:**
- 4.0 There are various search options built in the Website, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, organization name, location, date, value, etc.
- 4.1 Once the bidders have selected the tenders they are interested in, they may download the required documents/tender schedules. These tenders can be moved to the respective 'My Tenders' folder. This would enable the Tamil Nadu Govt. e-Procurement Portal, to intimate the bidders through SMS / e-mail in case there is any corrigendum issued to the tender document.
- 4.2 The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification / help from the Helpdesk.
- 5.0 Preparation Of Bids**
- 6.0** Bidder should take into account any corrigendum published on the tender document before submitting their bids.
- 6.1** Bidders are requested to go through the NIT and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of

documents including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.

6.1.1 Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document and generally, they can be in PDF / XLS / RAR / DWF/JPG formats. **Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.** Since the uploaded documents shall be downloaded for evaluation of bid, bidders are advised to upload clear scanned copies. **One hard copy of the electronically submitted bid documents except the price schedule shall have to be submitted upon intimation by TANGEDCO after opening of the e-tender.**

6.2 To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use "My space or "Other Important Documents" area available to them to upload such documents. These documents may be directly submitted from the "My Space" area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

6.3 The completed bid comprising payment of EMD or exemption from payment of EMD and necessary technical and commercial documents should be uploaded on the website along with signed and scanned copies of requisite certificates as are mentioned in the different sections in the tender document.

7 **Electronic Submission Of Bids: (OPEN TENDER – TWO PART SYSTEM)**

The bidder shall submit online the requirements under qualification criteria and Technical Documents required and Price Schedule/BOQ. All the documents are required to be signed digitally by the bidder. After electronic online bid submission, the system generates a unique bid reference number which is time stamped. This shall be treated as acknowledgement of bid submission.

Procedure for submission of bids:

7.1 Bidder should log into the site well in advance for bid submission so that he/she can upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.

7.2 The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.

7.3 i. The online payment Gateway has been enabled for TANGEDCO in TN Tenders portal (www.tntenders.gov.in). The payment for EMD will be carried out by the Bidders only through online payment mode.

ii. The EMD amount should be the exact amount and no excess or less amount should be transferred through **online payment gateway**. If excess or short, the tender status will be shown as invalid.

iii. If submitting EMD as BG/PEMD/Udayam(SS1) (as mentioned in the specification), then select the exempted from EMD payment as "YES". Then upload the EMD exemption documents only in "pdf" files.

iv. The bidder has to submit the tender document online well in advance before the Prescribed time to avoid any delay or problem during the submission process. If there is any delay, due to other issues, bidder only is responsible.

Bidder should prepare the EMD as per the instructions specified in the tender document.

7.4 A BOQ format for the price bid has been provided with the tender document to be filled by all the bidders. Bidders are requested to note that they should necessarily submit their financial

bids in the BOQ format provided and no other format is acceptable. Bidders are required to download the BOQ file, open it and complete the coloured (Unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, **without changing the file name**. If the BOQ file is found to be modified by the bidder, the bid will be rejected.

7.5 The server time (which is displayed on the bidders' dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.

7.6 All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128 bit encryption technology. Data storage encryption of sensitive fields is done. Any bid document that is uploaded to the server is subjected to symmetric encryption using a system generated symmetric key. Further this key is subjected to asymmetric encryption using buyers/bid openers' public keys.

7.7 The uploaded tender documents become readable only after the tender opening by the authorized bid openers.

7.8 Upon the successful and timely submission of bids, (i.e. after clicking "Freeze Bid submission" in the portal) the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.

7.9 Department or Service Provider is not responsible for any failure such as a bad internet connection or power failure outside of their control. The bidder is responsible to ensure they have sufficient time to submit an electronic bid prior to closing date and time including the payment of any fees including the Bid security and getting e-receipt. In case of a failure in the system within the control of the service provider that may affect a bidding process, the contracting authority on his sole discretion will postpone the closing time at least 24 hours from the time of system recovery to allow bidders sufficient time to submit their bids.

7.10 The TANGEDCO may, at its discretion, extend the deadline for the submission of bids by amending the bidding document, in which case all rights and obligations of TANGEDCO and bidders subject to the previous deadline shall thereafter be subject to the deadline extended.

8 Late Bid

The Electronic bidding system would not allow any late submission of bids after due date and time as per server time.

9 Modification and withdrawal of bids:

9.0 Bidders may modify their bids online before the deadline for submission of bids.

9.1 In case a bidder intends to modify his bid online before the deadline, the bidder need not make any additional payment towards the cost of bid processing. For bid modification and consequential re-submission, the bidder is not required to withdraw his bid submitted earlier. Modification and consequential re-submission of bids is allowed any number of times. The last modified bid submitted by the bidder within the bid submission time shall be considered as the bid. For this purpose, modification/withdrawal by other means will not be accepted. The bidder may withdraw his bid by uploading his request before the deadline for submission of bids, however, if the bid is withdrawn, the re-submission of the bid is not allowed.

9.2 No bid may be modified after the deadline for submission of Bids.

10. ASSISTANCE TO BIDDERS

10.0 Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.

10.1 Any queries relating to the process of online bid submission or queries in general may be directed to the 24x7 Central Public Procurement Portal Helpdesk.

It may be noted by the bidders that NIC is only service provider for conducting the online bidding process against this tender and shall not be a party to any contract between TANGEDCO and the successful bidder(s) subsequent to the bidding process.

TENDER SPECIFICATION No. CE/TTPS/SE/MII/NO.70/2024-25

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SECTION-I

EARNEST MONEY DEPOSIT

1.Earnest Money Deposit:

i. Tenderer should pay the specified amount towards Earnest Money Deposit as follows:-
EMD: **Rs.2,04,100/- (Rupees Two lakh four thousand and one hundred only)**

ii. The Earnest Money Deposit specified above **to be paid through online payment Gateway mode.**

Scanned copy of the E-receipt duly reflecting the EMD Transaction shall be uploaded.

iii. If submitting Earnest Money Deposit as BG/PEMD/Udyam(SS1) (as mentioned in the specification), then select the exempted from EMD payment as "YES". Then upload the EMD exemption documents only in "pdf" files.

In case EMD is paid in the form of BG, original BG should be submitted within 3 working days after tender opening through speed post or courier or in person in addition to uploading of it in the portal. In the event of failing to submit original BG after tender opening within the prescribed period, offer shall be summarily rejected.

PEMD holders of Rs.20 lakhs and above at TANGEDCO headquarters or at TTPS held under revised slab are exempted from payment of EMD.

iv. After confirming the EMD paid amount / Exemption uploaded, then only the system /tender portal will allow to submit the technical and financial bids.

v. **Mode of Payment:**

a) The online payment Gateway has been enabled for TANGEDCO in TN Tenders portal (www.tntenders.gov.in). All the payments for the tenders like Earnest Money Deposit will be carried out by the Tenderer only through online payment mode. The Earnest Money Deposit amount should be the exact amount and no excess or less amount should be transferred through online payment gateway services of State Bank of India (SBI). If excess or short, the tender status will be shown as invalid. The Earnest Money Deposit payment to be made only single payment.

vi. The Tenderers who are having valid Permanent EMD with TNEB/TANGEDCO for an amount as mentioned below are exempted from payment of Earnest Money Deposit and are eligible to participate in the tender.

PEMD holders of Rs.20 lakhs and above at TANGEDCO headquarters or at TTPS held under revised slab are exempted from payment of EMD.

If the Tenderer desires to become a Permanent E.M.D. holder, he is advised to deposit the required amount with the TANGEDCO as Permanent E.M.D. well in advance, obtain a certificate from the Financial Controller/Purchase and upload copy of the same along with the tender.

vii. The EMD will not carry any interest.

viii. The Earnest Money Deposit will be auto refunded to the unsuccessful tenderers after intimation of the rejection / non-acceptance of their tender.

ix. In respect of the successful tenderer, the EMD remitted by the firm will be carried over as part of the Security Deposit payable by the tenderer.

- x. Any other mode of payment of EMD shall not be accepted towards EMD and the tenders shall be rejected if EMD is not paid in the Government portal.
- xi. If the offer is found to be bogus or false during evaluation, TANGEDCO could invoke the Bank Guarantee to recover the EMD on forfeiture.
Any other mode of payment of EMD other than on line payment/BG/PEMD shall not be accepted and the tenders shall be rejected if EMD is not paid in the prescribed manner.

PEMD holders of Rs.20 lakhs and above at TANGEDCO headquarters or at TTPS held under revised slab are exempted from payment of EMD.

In case EMD is paid in the form of BG, original BG should be submitted within 3 working days after tender opening through speed post or courier or in person in addition to uploading of it in the portal. In the event of failing to submit original BG after tender opening within the prescribed period, offer shall be summarily rejected.

xii. **Exemption for payment of Earnest Money Deposit.**

The following categories of Industries are exempted from payment of EMD subject to ensuring that the tendered item should be covered in their registration certificate showing the materials/services permitted to manufacture/carry out.

- a. **“Micro and Small Enterprises located within the state of Tamil Nadu are exempted from payment of Earnest Money Deposit against the production of a Copy of Udyam Registration certificate or any other valid registration certificate / proof as notified by the Government of India in respect of the items manufactured by them for participation in this tender and whenever it is deemed necessary, the TANGEDCO may inspect the unit and satisfy themselves with regard to verifying the credentials of the applicants on the line of activity pursued by such manufacturers, quality and production capacity and other relevant factors”.**
- b. Departments of the Government of Tamil Nadu.
- c. Undertakings and Corporations owned by the Government of Tamil Nadu.
- d. Labour Contract Co-operative Societies registered within Tamil Nadu.
- e. **The Micro & Small Enterprises having provisional registration certificate are not eligible for exemption.**
- f. **Bidders shall submit an undertaking in the form as per Format-II that they would pay penalty an amount equivalent to Earnest Money Deposit in the event of non – fulfillment or non – observance of any of the conditions stipulated.**

Note:

1. **Central and other State Government Departments/ Undertakings and Corporations other than those in Tamil Nadu shall have to pay Earnest Money Deposit.**
2. The industries who are exempted from payment of EMD, subject to the enterprise registered under the ministry of MSME shall register itself under Udyam Registration.
3. **Only enterprises which comes under MICRO and SMALL categories are eligible for EMD exemption.**
4. **The SSI Units located outside the State of Tamilnadu are not eligible for exemption from payment of EMD in TANGEDCO tenders against Udyam Registration Certificate even though registered in Udyam portal for tendered items.**

REGISTRATION OF MICRO, SMALL & MEDIUM ENTERPRISES BY COMPOSITE CRITERIA IN UDYAM REGISTRATION & GUIDELINES:

Xiii(i) Classification of Enterprises:

As per the Ministry of Micro, Small and Medium Enterprises, GOI Notification No S.O 2119 (E) dt.26.06.2020 the enterprises are classified as:

- a) **A Micro Enterprise**, where the investment in Plant and Machinery or Equipment does not exceed Rs. 1 Crore (one crore Rupees) and turnover does not exceed Rs. 5 Cr. (Rupees five Crore);
- b) **A Small Enterprise**, where the investment in plant and machinery or equipment does not exceed Rs. 10 Cr. (Ten crore Rupees) and turnover does not exceed Rs. 50 Cr. (Rupees fifty Crore);
and
- c) **A Medium Enterprise**, where the investment in plant and machinery or equipment does not exceed Rs. 50 Cr. (Fifty crore Rupees) and turnover does not exceed Rs.250 Cr. (Rupees Two Hundred and Fifty crore).

xiii(ii) Calculation of Turnover:

In calculation of turnover of an enterprises, Exports of goods or services or both, shall be excluded while calculating the turnover of any enterprise whether micro, small or medium, for the purpose of classification.

The turn over details certified by Chartered Accountant, along with the bid from the bidders whose turnover includes export proceeds, for ascertaining the turnover achieved on export of goods or services or both and included in the total turnover to be uploaded.

xiii(iii) Calculation of Investment:

The Plant and machinery as assigned to the plant machinery in the Income Tax Rules, 1962 framed under the Income Tax Act, 1961 and shall include all tangible assets (other than land and building, furniture and fittings). The cost of certain items specified in the Explanation I to sub section (1) of section 7 of the Act shall be excluded from the calculation of the amount of Investment in Plant and Machinery.

The investment value in Plant and Machinery for the purpose has to be certified by a Chartered Accountant and the same is to be uploaded along with the bid in case the bidder claims EMD exemption.

- a) Central and the State Government Departments/ Undertakings and Corporations other than those in Tamil Nadu shall have to pay Earnest Money Deposit.

The Micro and Small Enterprises satisfying the composite criteria under reclassification notified by MSME with Udyam Registration Certificate for tendered item are only exempted from EMD payment.

Micro and Small Enterprises located outside Tamil Nadu are not eligible for exemption from payment of EMD in this tender against Udyam Registration certificate even though registered in Udyam portal for the tendered item.

xiv) DOCUMENTS TO BE UPLOADED AS A PROOF OF ELIGIBILITY FOR EXEMPTION FROM PAYMENT OF EARNEST MONEY DEPOSIT:

I. Copy of **Udyam Registration Certificate/NSIC**

II. (a) **Copy of turnover details certified by Chartered Accountant.**
and

(b) **Copy of Investment held in Plant & Machinery certified by Chartered accountant should be furnished for availing payment of EMD exemption.**

III. **Those tenderers under exempted category from payment of EMD shall upload an undertaking in a non judicial paper for a value of Rs.80/- in the form as per Schedule-G duly filled up and signed as token of acceptance to pay as penalty an amount equivalent to EMD,**

together with cost if any, in the event of non-fulfillment or non-observance of any of the conditions stipulated in the contract consequent to such breach of contract.

The Undertaking in lieu of EMD shall be submitted in original by the bidder after Tender Opening in addition to uploading of it in the Portal, failing which the offer is liable for rejection.

The State Government, Public Sector Undertakings who are exempted from payment of EMD /SD should also pay as penalty an amount equivalent to the amount fixed as Security Deposit in the event of non-fulfillment or non-observance of any of the conditions stipulated in the contract.

xv) CONDITIONS FOR REJECTION OF BIDS OF EXEMPTION CATEGORIES:-

- a) If the documentary evidences towards Exemption from payment of EMD are not uploaded.
- b) Exempted Tenderers are to produce copy of their Registration Certificate, showing the materials/services which they are permitted to manufacture/services and the PERIOD OF VALIDITY OF CERTIFICATE.
- c) Exemption of EMD is allowed to the units for those materials/services in their SSI Units. If the tendered items are not on their manufacturing/service range, the tenderer cannot claim exemption from payment of EMD and such tenders will be rejected straight away.
- d) If not furnished the details for investment held in Plant and Machinery or Equipment and Annual turnover value certified by Chartered Accountant.
- e) If not furnished the Undertaking in lieu of exemption of EMD specified under Sl.No.xiv (III).

xvi) The following should be uploaded by the Vendor during submission of Techno commercial bid for payment of EMD failing which the offer will be SUMMARILY REJECTED.

The proof of Permanent EMD certificate / details and undertaking in lieu of EMD in the format as per Schedule - G

(OR)

The proof for exemption of EMD and certificate towards Investment held in plant & machinery and certificate for Annual turnover certified by Chartered Accountant.

xvii) REFUND OF EMD:

- (i) The Earnest Money Deposit will be refunded automatically to the unsuccessful tenderers after intimation of the rejection / non-acceptance of their tender. i.e. after technical evaluation.
- (ii) The Earnest Money Deposit will be refunded automatically to the eligible tenderer who have not received the detailed Purchase order. i.e. after issue of Award Of Contract.
- (iii) The Earnest Money Deposit will be transferred to TANGEDCO account in the case of successful tenderer on receipt of detailed Purchase Order and will not carry any interest. The Earnest Money Deposit will be adjusted in the Security cum Performance Guarantee.
- (iv) The refund of EMD will be made to the bank account from which EMD is paid by the bidder through portal.

xviii) The Earnest Money Deposit / Permanent EMD made by Tenderer will be forfeited on the following conditions :

- a) If he withdraws his tender or backs out after acceptance of the tender or fails to remit the Security deposit.
- b) If he revises any of the terms quoted during the validity period.
- c) If he violates any of the conditions of the Tender specification.
- d) If, the documents furnished with the offer being found to be bogus or the documents contain false particulars.
- e) If, the successful tenderer failing to execute the order placed on them to the satisfaction of the TANGEDCO Limited.
- f) In case of tenderers participating on the strength of Exception Categories, an amount equivalent to the EMD for this specification will stand forfeited in the event of such tenderer committing any one of the acts listed above.
- g) If the Bid Qualification Requirements are found to be fraudulent/ non-genuine, the EMD paid will be forfeited in addition to black listing in future contracts with TANGEDCO.

xix) In respect of the successful tenderer, the EMD remitted by the bidder will be carried over as part of the security deposit payable by the tender. Successful tenderer who had participated in the tenders upon PEMD will have to remit the full amount of security Deposit required for individual contracts.

SECTION - II

BID QUALIFICATION REQUIREMENTS

1. The bidder should be a manufacturer of Steam Turbo Generator of rating 200 MW or above by themselves or by their principals

Valid evidence such as copy of License to manufacture/ ISO certification or any valid evidences of manufacturer or for having supplied Steam Turbo Generator of rating 200 MW or above should be scanned and uploaded. Memorandum and Articles of Association shall not be considered towards proof of manufacture.

(or)

The bidder should have carried out capital overhauling works in 200 MW or above capacity Steam Turbine-Generator set directly by themselves in India.

2.(i) The Bidder should have carried out at least **THREE** Capital Overhauls (COH) for Steam Turbo-Generators of rating 200 MW or higher, in India, within the last TEN years as on the date of Notice Inviting Tender.

The date of the purchase order/ work order will be reckoned for ascertaining the eligibility of the tender.

After the Capital Overhaul the Turbo-Generator should be in satisfactory operation for a minimum period of one year as on the date of Notice Inviting Tender. End user certificate for satisfactory performance containing the date of commissioning should be obtained and uploaded for the above **THREE COH** carried out.

2. (ii) The bidder should have carried out at least **ONE** RLA study in Steam Turbine of rating 200 MW or above, in any one of the Thermal Station in India, within the last TEN years as on the date of tender opening.

The date of the purchase order/work order will be reckoned for ascertaining the eligibility of the tender.

The bidder shall scan and upload the copy of the orders for having executed the above works and End user certificate for the satisfactory performance of the above works.

Offers from the bidders having done the above works on sub-contract basis are not eligible to participate in the tender.

In case of the Bidder who has executed the order in TNEB/ TANGEDCO, the End user Report shall be obtained by the Tender Inviting Authority, if concerned PO reference/copy is furnished.

However in case of other Organizations, the End user certificate for the supply/work executed should be obtained, scanned and uploaded by the bidder during e-Tender.

Financial requirements:

3. Annual Turnover:

The annual turnover of Bidder should be more than Rs.68.05 Lakhs during any one of the previous three financial years (i.e.) 2020-21, 2021-22 and 2022-23.

The bidders should upload the evidences for annual turnover for all the three said financial years.

In case of companies registered under Companies Act 1956, the copy of the Audited Financial Statements like, P & L Account and Balance Sheet for all the above three years may be scanned and uploaded.

In case of others, the attested copy of Annual Turn Over certified by practicing Chartered Accountant for all the above 3 years should be scanned and uploaded as documentary proof to ensure the turnover criteria.

NOTE TO BQR:

- (i) The required BQR evidences shall be scanned and uploaded along with the tender.
- (ii) In the event of documents uploaded against the above tender being found to be bogus or the documents contain false particulars; the EMD paid by the Bidder will be forfeited in addition to blacklisting them for future tenders / contracts in TANGEDCO, TANTRANSCO & TNEB LIMITED.
- (iii) The offer of the bidders who have furnished details of previous similar order in TANGEDCO/ TANTRANSCO/TNEB will be considered for further evaluation, even though they have not uploaded copies of Purchase Orders or End user certificate etc., after ensuring with concerned Purchase Order placing authorities.
- (iv) Joint Ventures/Consortium/Associate/ Collaborator are not permitted.

SECTION – III
REJECTION OF TENDERS

I. Tenders will be SUMMARILY rejected if:

- a). The EMD requirements are not complied with.
- b). If the bids are received through Consortium or Joint venture, the same will not be considered and the bids will be rejected.
- c). The Bid Qualification Requirements as per Section-II of this Specification are not satisfied.
- d) The offers received from bidder who had not registered themselves with GST and not submitted GSTIN will be summarily rejected.
- e) GST is not active at the time of opening the tender.

II. Tender is LIABLE to be rejected, if it is:

- a) Not covering the entire scope of supply of materials.
- b) If the declaration as specified in Schedule E & I is not signed and enclosed.
- c) With validity period less than that stipulated in this specification.
- d) Not in conformity with TANGEDCO's Commercial terms and Technical Specifications (Section V and VII)
- e) Not properly signed by the tenderer.
- f) Received after the expiry of the due date and time.
- g) Received from a tenderer who is directly or indirectly connected with Government service or Board Service or services of local authority.
- h) Received with insufficient quality assurance plan.
- i) From any black listed Firm or Contractor.
- j) Received by Telex / Telegram / E-Mail/ Fax /Post.
- k) From a tenderer whose past performance / Vendor rating is not satisfactory
- l) Not containing all required particulars as per Schedule A to J.
- m) Documents furnished by the Tenderers along with their offer being found to be bogus or contain false particulars.
- n) The offer of bidders who have not furnished the GSTIN Number in the offers.
- o) Offers giving lumpsum price, without giving their breakup as per details required in the attached Schedule-A.
- p) Tender, which is incomplete, obscure or irregular
- q) Bidder should produce EPF & ESI code number for having registered in the respective statutory bodies and the evidence for the same should be uploaded or otherwise their tender will be liable for rejection. (Implementation of EPF & Misc. Prov. Act 1952).

SECTION – IV

INSTRUCTION TO BIDDERS

1.0. THE TAMIL NADU TRANSPARENCY IN TENDERS ACT 1998:

- 1.1 The Tamil Nadu Transparency in Tenders Act 1998 and the Tamil Nadu Transparency in Tender Rules 2000 and subsequent amendments thereof are applicable to this tender.
- 1.2. THE TENDERERS WHO DO NOT FULLFILL THE "BID QUALIFICATION REQUIREMENT" AS PER SECTION-II NEED NOT PARTICIPATE IN THE TENDER. OFFERS NOT SATISFYING THIS "BID QUALIFICATION REQUIREMENTS" WILL NOT BE CONSIDERED AND WILL BE SUMMARILY REJECTED.
- 1.3 The terms 'tenderer', 'supplier', 'contractor' refer to Bidder. The terms 'Purchaser', 'Board' 'TNEB' refer to TANGEDCO.

2.0 GENERAL:

e-Tenders are invited against the "Tender Specification NO. CE / TTPS / SE/M.II/ Spec.No.70/2024-2025" for "**TTPS – Mech.II – TM I – Unit-II - Capital overhaul of 210 MW LMW TG set and Re RLA study on Turbine components**".

3.0 SUBMISSION OF TENDER OFFER:

- 3.1 The tenderer is expected to examine all instructions, Schedules and Annexure detailed in the Specification and submit the Schedule of Prices and other required particulars in the Schedules and Annexures called for in this Specification, only as per the formats prescribed herein.

4.1 SUBMISSION OF TENDERS:

- 4.1.1. The Tender Offer consisting of Schedules-B to I should be filled up and signed by the Tenderer or any person holding Power of Attorney authorizing him/ her to sign on behalf of the Tenderer before submission of the Tender. The date of signature should invariably be indicated.
- 4.1.2. In the event of tender being submitted by other than a firm, it must be signed by a partner (copy of partnership deed should be enclosed) and in the event of the absence of any Partner, it shall be signed on his behalf by a person holding a Power of Attorney authorising him/her to do so, Certified copies of which shall be enclosed.
- 4.1.3. Tender submitted on behalf of companies registered under the Indian Companies Act, shall be signed by person duly authorised to submit the tender on behalf of the company and shall be accompanied by certified true copies of the resolutions, extracts of the Articles of Association, special or general Power of Attorney etc. to show clearly the title, authority and designation of persons signing the tender on behalf of the company.
- 4.1.4. The tenderer should furnish the GSTIN numbers in the offer.

4.2 MODIFICATIONS / CLARIFICATIONS TO TENDER DOCUMENTS

- 4.2.1 At any time after the commencement of e-Tender and before the closing of the event, TANGEDCO may make any changes, modifications or amendments to the tender documents and the same will be uploaded as corrigendum which can be downloaded from the Vendor login .

- 4.2.2 The offer shall be furnished in the <https://tntenders.gov.in/nicgep/app> as per the price schedule enclosed to this specification only. Offers furnished in the other formats are liable for rejection.
- 4.2.3 Tenderers are advised to peruse all the clauses in the specification and Instructions to tenderers before quoting.
- 4.2.4 If a tenderer has any doubt in the meaning of any of the clauses in the specification, he is advised to seek clarification on the same from **The Superintending Engineer/Mechanical - II, Tuticorin Thermal Power Station, Tuticorin-4**. The clarification if any sought for by the tenderer before 48 Hrs. of the opening of the tender will be replied to.
- 4.2.5 If any tenderer raises clarifications after the opening of the tender, the clarified reply issued by the Chief Engineer/Tuticorin Thermal Power Station/TANGEDCO/ Tuticorin-628004 on the clarifications will be final and binding on the Tender.
- 4.2.6 Schedule A to I and other required formats and documents shall be prepared by typing or printing in the formats enclosed with this specification.
- 4.2.7 All information in the documents shall be in ENGLISH only. It shall not contain interlineations, erasures or overwriting except as necessary to correct errors made by the tenderer. Such erasures or other changes in the tender documents shall be attested by the persons signing the tender offer.
- 4.3. **QUOTATION OF RATES:**
- 4.3.1. Rates should be quoted in integers.
- 4.3.2. Offers giving lumpsum price, without giving their breakup as per details required in the attached Price Schedule-A shall be liable for rejection.
- 4.4. **PRINTED TERMS AND CONDITIONS IN TENDERS:**
- Supplier's printed terms and conditions will not be considered as forming part of the tender under any circumstances.
- 4.5. **INCOMPLETE TENDERS:**
- Tender, which is incomplete, obscure or irregular is liable for rejection.
- 4.6. **AMBIGUITIES IN CONDITIONS OF TENDERS:**
- 4.6.1 In the case of ambiguous or contradictory terms / conditions mentioned in the bid, interpretation as may be advantageous to the purchaser may be taken without any reference to the Tenderer.
- 4.6.2. The tender offer shall contain full information asked for in the accompanying schedules and elsewhere in the specification.
- 4.6.3.. Tenderers shall bear all costs associated with the participation in the e- Tender and the purchaser will in no case be responsible or liable for these costs.
- 4.6.4 .No offer shall be withdrawn by the Tenderer in the interval between the deadline for submission and the expiry of the period of validity specified / extended validity of the tender offer.
- 4.6.5. The Tenderers are requested to furnish the exact location of their factories with detailed postal address and pin code, telephone and Fax Nos. etc. in their tenders so as to

arrange inspection by the TANGEDCO, if considered necessary.

5.0 OPENING OF TENDER:

5.1 OPENING OF COMMERCIAL & TECHNICAL BIDS AND PRICE BIDS :

The Tender offers Commercial & Technical Bid and price Bid will be opened electronically at 14.00 Hrs. on the date notified at the Office of the Superintending Engineer, Mechanical-II/ Tuticorin Thermal Power Station, Tuticorin-628004, through <https://tntenders.gov.in/nicgp/app>. Tenderers need not to visit TTPS office during tender opening, whereas tenderers can witness the tender opening event through their login.

If the date of opening of tender is declared as holiday or if there is any Technical difficulty due to internet connectivity, the tender will be opened on the next working day.

5.2. ANALYSIS OF TENDERS:

- 5.2.1 GST will be included for the purpose of comparison of prices. As the price is all inclusive, no increase in levies will be considered. The evaluation shall include all Taxes wherever applicable. However the percentage and amount applicable towards GST shall also be indicated in the tender separately in Schedule – A.
- 5.2.2 The stipulation 'no increase in price will be considered' is not applicable to decrease/increase in taxes due to statutory variation on taxes. The increase in Taxes due to statutory variation beyond the prescribed time schedule shall be to the account of Contractor.
- 5.2.3 The Tenderers are therefore requested to give break up for all taxes adopted by them in the offer or their quoted rate and these rates will form the basis for regulating the variation in statutory levies subsequent to the opening of the tender.

6.0. INFORMATION REQUIRED AND CLARIFICATIONS:

- 6.1. In the process of examination, evaluation and comparison of tender offers, the TANGEDCO may at its discretion, ask the Tenderer for a clarification of their offers. All responses to requests for clarifications shall be in writing to the point only. No change in the price or substance of the offer shall be permitted.
- 6.2. The TANGEDCO will examine the tender offers to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed and whether the offers are generally in order.
- 6.3. The Tender offers shall be deemed to be under consideration immediately after they are opened and until such time official intimation of award / rejection is made by the Tender Accepting Authority to the tenderers. The Tenderers shall not make attempts to establish unsolicited and unauthorized contact with the Tender Inviting Authority, Tender Accepting Authority or Tender Scrutiny Committee after the opening of the tender and prior to the notification of the award and any attempt by any tenderers to bring to bear extraneous pressures on the Tender Accepting Authority shall be sufficient reason to disqualify the tenderer.
- 6.4 Mere submission of any Tender offer connected with these documents and Specification shall not constitute any agreement. The tenderer shall have no cause of action or claim, against the TANGEDCO for rejection of their offer. The TANGEDCO shall always be at liberty to reject or accept any offer or offers at its sole discretion and any such

action will not be called into question and the Tenderer shall have no claim in that regard against the TANGEDCO.

7.0 EVALUATION AND COMPARISON OF TENDER OFFERS:

- 7.1 The bid evaluation shall be done as per Tamil Nadu Transparency in Tender Act 1998 and Tamil Nadu Transparency in Tender Rules 2000.
- 7.2 The evaluation will be done based on the GST rates quoted by the bidders.
- 7.3 This being a Turnkey contract the L1 tenderer will be decided for the total contract value not for the individual item.

7.4 NEGOTIATION:

Negotiation will be carried out with the L1 tenderer after opening of tenders **through online only**. The L1 bidder has been given time slot for resubmission of Financial Bid (Negotiation) through Online within the due date and time provided.

7.5 Tie Breaker:

When more than one bidder have quoted same value during bid submission and accepted in Finance Evaluation, Evaluator is allowed to select any one combination of bidder value (i.e.the L1 bidder) to initiate for Financial bid resubmission for Tie break.

8.0. VALIDITY:

- 8.1. The tender offer shall be kept valid for acceptance for a period of 180 days from the date of opening of offers. The offers with lower validity period are liable for rejection.
- 8.2. Further, the tenderer shall agree to extend the validity of the Bids without altering the substance and prices of their Bid for further periods, if any, required by the TANGEDCO.

9.0 RIGHTS OF THE BOARD:

9.1 Rights to reject the tenders:

- 9.1.1. After negotiation with the Tenderer and before passing the order accepting a tender, if the Tender Accepting Authority decides that the price quoted by such tenderer is higher by the percentage as may be prescribed over the schedule of rates or prevailing market rates, the tender shall be rejected.
- 9.1.2. The Tender Accepting Authority before passing the order accepting a tender, may also reject all the tenders for the reasons such as changes in the scope of procurement, lack of anticipated financial resources, court orders, accidents or calamities and other unforeseen circumstances.

Notwithstanding anything contained in this Specification, the TANGEDCO reserves the rights:

- a). To recover losses, if any, sustained by TANGEDCO, from the supplier who pleads his inability to supply and backs out of his obligation after award of contract. The security deposit paid shall, be forfeited.

- b). To cancel the orders for not keeping up the delivery schedule.
- c). To vary the delivery period based on the requirement and contingencies at the time of placing the order.
- d). To accept the lowest eligible tender.
- e). To reject any or all the tenders or cancel without assigning any reasons there of.
- f). To relax or waive or amend any of the conditions stipulated in the tender Specification wherever deemed necessary in the best interest of the TANGEDCO.

9.2. The purchaser reserves the right to request for any additional information and also reserves the right to reject or accept the proposal of any tenderer, if in the opinion of the purchaser, the qualification data is incomplete or in the opinion of the TANGEDCO the bidder is found not qualified to satisfactorily perform the contract.

10.0 DEVIATIONS:

Offers from tenderers conforming to this tender specification will be preferred. Any deviations either in the technical terms or in the commercial terms of the tender specification shall be indicated in the schedule "B & C" only. Any other deviation mentioned elsewhere other than the schedule "B & C" will be ignored and it will be construed that the offer is as per specification.

The tenderers are requested to furnish the exact locations of their Office with details of address in their tenders to enable inspection by the corporation, if considered necessary.

11.0 MOST RESPONSIVE OFFER:

The Tender offers accepting all commercial Terms of the specification will be treated as most responsive offer. Technical deviations adopting latest technology and which will upgrade the working conditions of the system only are acceptable.

12.0 SCHEDULES AND FORMATS:

The following Schedules and Annexures are enclosed with the specification for reference and fill up wherever necessary. The tenderer shall furnish all the required details without fail as per the schedules enclosed.

a) SCHEDULES:

- Schedule A : Price
- Schedule B : Deviation from Technical Specification
- Schedule C : Deviation from Commercial Terms
- Schedule D : Past Performance Details.
- Schedule E : Declaration Form
- Schedule F : Undertaking for payment of Dues to TNEB.
- Schedule G : Undertaking in Lieu of E.M.D.

- Schedule H : Undertaking for legal Proceedings Jurisdiction.
 Schedule I : (e-Tender) Tender Acceptance Letter
 Schedule J : Declaration to be submitted by evaluated Bidders

- b) **Format - I.** Bank Guarantee for EMD
Format - II : Bank Guarantee for Security Deposit cum Performance Guarantee

13.0 PRE-BID MEETING:

The Bidders can raise their technical / commercial queries and get clarified at specified date and time mentioned in the NIT Sl.No.9 through E-mail only (E-mail ID: sem2ttps@tnebnnet.org).

14.0 POTENTIALLY SICK UNIT:

The Tenderer may clearly indicate in their offer whether the company is a potentially sick industrial company or a sick industrial company in terms of Sec.23 or Sec.15 of sick industrial company's special provision Act 1985. Failure to supply this information will make the Tender liable for rejection.

15.0 BAR OF JURISDICTION:

Save as otherwise provided in the Tamil Nadu Transparency in Tenders Act 1998, no action taken by any officer or authority under this Act shall be called in question in any court, and no interim injunction shall be granted by any court in respect of any action taken or to be taken by such officer or authority in pursuance of any power conferred by or under this Act.

16.0 APPEAL:

Any Tenderer aggrieved by the order passed by the Tender accepting authority under Sec.10 of the Tamil Nadu Transparency in Tender Act 1998 may appeal to the Government within Ten days from the date of receipt of the order.

17.0 TENDER DOCUMENT:

- 17.1. "All the intending e-tenderers are informed that in the event of the documents furnished with the offer being found to be bogus or the documents contain false particulars, the EMD paid by such tenderers will be forfeited in addition to blacklisting them for future tenders/ contracts in TANGEDCO" and also cancelling the award of contract issued to them."

18.0 Registration of Vendors in the IMS online portal:

The vendors shall register in the IMS online portal for online Bill processing system.

The Digital based Statutory Compliance Service Audit will be integrated with the online Bill processing system. All the contract bills which consist of the work portion will be processed only after the Statutory Compliance Clearance Certificate of the Online Compliance Service Providers.

The bidder should obtain the labour license so as to comply with the Contract Labour (Regulation & Abolition) Act 1970 and Rules 1975 and Inter-State Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979 & Rules 1983 for registration of vendors in the IMS online portal.

19.0 IMPORTANT NOTE:

- i) The tenderers shall fill up the Schedules – A to J enclosed with the specification and furnish them along with the tender, failing which the tender is liable for rejection.

- ii) Please note that NO ALTERNATE OFFER WILL BE ACCEPTED.

SECTION – V

COMMERCIAL TERMS AND CONDITIONS

1.0. GENERAL:

The scope of present work involve **Unit-II - Capital overhaul of 210 MW LMW TG set and Re RLA study on Turbine components.**

1.1 This specification is intended to cover:

TURBINE

1	Capital Overhauling of HP , IP & LP Turbine
2	Renewal of HPC nozzle segment including the cost of transporting and machining and allied works.
3	Renewal of IPC nozzle segment including the cost of transporting and machining and allied works.
4	Renewal of HP diaphragms all stages including the cost of transporting and machining and allied works.
5	Renewal of IP diaphragms all stages including the cost of transporting and machining and allied works.
6	Renewal of LP diaphragms including the cost of transporting and machining and allied works.
7	Renewal of Tip Seals in existing HP Diaphragms
8	Renewal of Tip Seals in existing IP Diaphragms
9	RLA/LE Study on Turbine & its auxiliaries as per scope of work.
10. a.	<u>OPTIONAL – IF NECESSARY</u> Machining of Thrust collar of IP Rotor
b.	Renewal of HP Rotor
c.	Renewal of IP Rotor
d.	Renewal of LP Rotor
e.	Re – Blading of IP Rotor
f.	Re – Blading of LP Rotor
g.	Slow speed balancing of IP Rotor including cost of arrangements of balancing machine, transporting & fixing etc.,
h.	Slow speed balancing of LP Rotor including cost of arrangements of balancing machine, transporting & fixing etc.,
i.	Deputation of Balancing team along with Equipment and study, Vibration Analysis
j.	Trim Balancing Activities

11.	<u>PART-II GENETATOR</u> Capital Overhauling of Generator.
12.	Supply of Consumables and Chemicals required for assembling of the TG Terminal bushing and Stator water bushing.

1.2 The scope of the contract shall be as detailed in SECTION -VI of this Specification.

2.0. Location:

The Power Generation Units - I, II, III, IV & V, each of 210 MW Capacity, are in Tuticorin Thermal Power Station complex, situated in Tuticorin. The site is located at a distance of about 8 km from the Tuticorin town, Tuticorin district, in the state of Tamil Nadu and very near to Tuticorin Port. Tuticorin is further located about 700 km south of Chennai city. It is well connected by rail (Broad Gauge) and by road (NH - 7A). Nearest Airport, is Madurai (140 Km away) and Tuticorin (25Kms).

2.1 Completeness of Tender:

The tender should be complete in all respects.

In order that the tenders may receive full consideration, the whole information called for in the accompanying schedule and elsewhere together with relative leaflets, literature etc., must be supplied by the tenderer. The tenders not containing the complete details as above are liable for rejection.

3.1. PRICE:

The Tenderer's are requested to quote FIRM price only.

The tenderers can inspect the TG set at TTPS site and quote as per scope of work at FIRM price in **Indian Rupees only** as per Schedule-A. after detailed examination of the **Unit-II - Capital overhaul of 210 MW LMW TG set and Re RLA study on Turbine components.**

No increase in price will be admissible on any grounds. The quoted price shall include cost of works & GST furnished separately.

3.2 PERMANENT ACCOUNT NUMBER AND GSTIN NUMBER:

The Tenderer shall indicate the Permanent Account Number (PAN) issued by Government of India, Income Tax Department and GSTIN number of the firm and the copy of the same should be enclosed with the tender.

3.2.i. "The tenderer should quote their rates taking into account the Input Tax Credit (ITC) relief available to them on account of GST already paid.

3.2.ii. The bidder shall furnish the declaration in respect of passing of ITC benefit as per sec 171 of CGST Act as rebate in the price offered. In the event of bidder, specifying the ITC benefit as Nil, the same shall be supported with certificate from chartered accountant. A format of declaration will be as stipulated by TANGEDCO.

4.0 Goods and Service Tax (GST):

Tenderers must upload the proof of their valid GSTIN registration. If the GST is not valid on the date of tender opening the tender is liable of rejection. Further, the GST number should be active till the time of work award and for the entire tenure of work.

The GST Details in respect of TTPS / TANGEDCO are as under:

Billing Address	The Superintending Engineer Purchase and Administration TTPS / Tuticorin
Provisional GSTIN Registration No.	33AADCT4784E1ZC
ARN	AA330617106413K
Type of Customer	Company
Name & Address as Registered in GSTIN –Place of Business	Tamil Nadu Generation and Distribution Corporation Ltd, 144 Anna Salai, NPKRR Maaligai, Chennai-600002
State of Registration of GSTIN	Tamil Nadu

The TDS under GST will be recovered at applicable rate on each and every invoice of contract as per GST Act.

- i). *Goods and Services Tax [GST] as a modern law, has been brought after Article 366(12A) of the Constitution as amended by 101st Constitutional Amendment Act, 2016. GST is an indirect tax system, commonly used by both the Central Government and the State/UT to final consumption with credit of taxes paid at previous stages available as set off. In a nutshell, only value addition will be taxed and burden of tax Governments on goods and services. GST is a destination based tax on consumption of goods and services. It is proposed to be levied at all stages right from manufacture up is to be borne by the final consumer. GST has been rolled out w.e.f. 01.07.2017, across India.*
- ii). *The GST to be levied by the Centre on intra-State supply of goods and / or services would be called the Central GST (CGST) and that to be levied by the States/ Union territory would be called the State GST (SGST)/ UTGST. Similarly, Integrated GST (IGST) will be levied and administered by Centre on every inter-state supply of goods and services.*
- iii). *Any supplier of goods and service Provider of services who makes a taxable supply with an aggregate turnover of over Rs.20 lakhs in a financial year is required to obtain GST registration. In special category states, the aggregate turnover criteria are set at Rs.10 lakhs. In simple words every business whose taxable supply of goods or services under GST (Goods and Service Tax) and whose turnover exceeds the threshold limit of Rs. 20 lakhs / 10 Lakhs as applicable will be required to register as a normal taxable person.*
- iv). *GST Registration Number: TANGEDCO has migrated into GST regime on 15.06.2017 by duly uploading various mandatory data as required by the GST portal. The provisional ID issued to TANGEDCO is 33AADCT4784E1ZC. The details are also posted in TANGEDCO web portal.*
- v). *GST Registration Number or GSTIN is 15 Digit identification number which is allotted to each applicant who applied for GST Registration. GST Number is*

completely based on the Pan Number and State code. First two digits represent the state code and another 10 digit represent the PAN number of the client, one digit represent the entity code (Like proprietorship or partnership etc), one digit is blank and last one is representing check digit.

- vi). Transaction Value: The value of supply of goods or services or both shall be the transaction value, which is the price actually paid or payable for the said supply of goods or services or both where the supplier and the recipient of the supply are not related and the price is the sole consideration for the supply. Sec 15(1) states that value of supply of goods and service shall be the transaction value i.e. the price actually paid or payable.

The conditions for accepting the transaction value are-

- a) Supplier and the recipient of the supply are not related.
 - b) Price is the sole consideration for the supply.
- vii). Composition Scheme: Composition scheme specifies that registered person whose turnover in the preceding financial year is below certain specified limit (Currently RS.75 lakhs) may intimate the proper officer to pay in lieu of tax payable by him an amount calculated at such rate may be specified.

Eligibility for composition scheme: Sec10(2) of the central Goods and Services Tax Act, 2017 states that the registered person shall be eligible to opt under sub- section (1), if-

- * He is not engaged in the supply of services other than supplies referred to in clause (b) of paragraph 6 of Schedule II;
 - * He is not engaged in making any supply of goods which are not leviable to tax under this Act;
 - * He is not engaged in making any inter-State outward supplies of goods;
 - * He is not engaged in making any supply of goods through an electronic commerce operator who is required to collect tax at source under section 52; and
 - * He is not a manufacturer of such goods as may be notified by the Government on the recommendations of the Council.
- viii). Supply of Service and Goods: When there is a combined supply of many goods / services, it has to be determined whether it is a Composite supply or mixed supply of goods or services
- (a) COMPOSITE SUPPLY: A composite supply is one where all the goods or services or a combination has to be supplied together i.e., naturally bundled and there would be a Principal Supply that could be identified (Ex. Supply of Machinery with packaging, insurance and freight – the principal supply is machinery). In this case, the rate of principal supply will be applied on entire value.
 - (b) MIXED SUPPLY: A mixed supply is one where the goods or services or a combination thereof which could be individually supplied (like Pizza and Coke) but sold together at a single price. In this case, the highest rate to the good in that mix is applied on all the goods. The GST shall be applicable at appropriate prevailing rates as notified by GST Act. In the event of delay in execution of contract, the GST rate prevailing on the scheduled period or on the actual date of execution, whichever is less only will be admitted.

The bidders should have registered under GST Act and furnish GSTIN. In the event of contractor is within TN, SGST & CGST shall apply and if the contractor is outside TN, IGST shall apply.

Tenderers must upload the proof of their valid GSTIN registration. If the GST is not valid on the date of tender opening the tender is liable for rejection. Further, the GST number should be active till the time of work award and the entire tenure of work. The provisional GSTIN Registration No. of TANGEDCO is 33AADCT4784E1ZC.

4.1. GOODS AND SERVICES TAX:

The Goods and Services Tax will be paid extra as applicable. The amount of CGST, SGST, and IGST as applicable shall be indicated in percentage payable and amount separately in the tender offer.

4.2. The TANGEDCO has been registered as a dealer under GST Act 2017 (Registration No. 33AADCT4784E1ZC)

In case of delayed delivery/work, the GST prevailing on the date of despatch or on the last day of the contractual delivery period /completion of work whichever is LESS will be admitted. For both the cases, the contractor shall furnish documentary evidence while submitting the bills for payment.

It is the responsibility of the tenderer to make sure about the correct rates of duty leviable on the material at the time of tendering. If the rates assumed by the Tenderer are less than the current rates prevailing at the time of tendering, the TANGEDCO Ltd will not be responsible for the mistake. If the rates assumed by the tenderer are higher than the current rates prevailing at the time of tendering, the GST prevailing at the time of tendering will only be paid.

4.3. Any increase in GST consequent to the suppliers/contractors coming into different duty slab during the execution of the contract shall have to be taken into account and the all inclusive firm price shall be quoted accordingly by the Tenderers. Any Variation in GST due to statutory Variation within the contract delivery date /completion of work shall be considered by the TANGEDCO Ltd.

4.4. In case of delayed delivery /completion of work, the GST prevailed on the date of actual delivery applicable on the date of contractual date of delivery/completion of work whichever is less shall be admitted.

The suppliers/ contractors whose annual turnover exceeds Rs.10 crores, should raise an e-invoice or e-invoiced debit note or e-invoiced credit note, so that TANGEDCO could avail input tax credit under GST. E-Invoice is a system in which B2B invoices are authenticated electronically by GSTN for further use on the common GST portal. Under the electronic invoicing system, an identification number will be issued against every invoice by the Invoice Registration Portal (IRP) to be managed by the GST Network (GSTN).

4.5 Compliance of EPF& MP Act, 1952

1. The Contractor who take up works contract for TANGEDCO/TANTRANSCO is required

- to comply with all the relevant provisions stipulated in the EPF & MP Act
2. The Contractor should have a separate EPF main code number
 3. The Contractor should be responsible for the payment of necessary EPF contributions both Employer's and Employee's contribution as per the provisions of the EPF Act in respect of the actual workers engaged for the specified works
 4. The contractor should submit necessary returns to EPF Organisation within the stipulated time as required under the said EPF & MP Act
 5. The Contractor should produce the proof of payment of contribution – both Employer's and Employee's contributions made to EPF Organisation in order to claim the Bills for the respective works
 6. The contractor should be fully liable to meet and fulfill all the relevant provisions of the EPF act in the respect of the execution of the Tendered work
 7. In case the Contractor fails to fulfill any of the statutory provisions of the EPF & MP Act and consequently it happens that TANGEDCO/TANTRANSCO Ltd has to meet such requirements of the said Act or Statutory provisions in the capacity of Principal Employer, TANGEDCO/TANTRANSCO shall make good such requirements out of the money due and payable to the said Contractor and further the performance of the said Contractor in this regard will be noted for all future Contracts of TANGEDCO/TANTRANSCO
 8. In respect of the category of employee for whom the wages are fixed at the rate of Rs.500/- and above in the current PWD Schedule rates (or) say the monthly wages of Rs.15,000/- above, the EPF employer contribution will be restricted upto Rs.15,000/- only
 9. **TANGEDCO will not reimburse the Employer contribution towards EPF under any circumstances.**

Note:

1. **Employer contribution towards ESI & EPF will not be reimbursed by the TANGEDCO to the contractor, if any such claims made by the contractor towards the employer contribution it will not be accepted.**
2. **The bidder should produce EPF & ESI code number for having registered in the respective statutory bodies and the evidence for the same should be uploaded or otherwise their tender will be liable for rejection.**
3. **The bidder should comply with CLRA Act 1970, ESI, EPF & Misc. Prov. Act 1952 etc. TANGEDCO under any circumstances will not be held responsible for not complying with any statutory violation.**
4. **The successful contractor has to submit a declaration for having remitted the EPF / ESI Employee and Employer contribution for this work while claiming the bill as per annexure B**

4.6 Compliance of ESI Act 1948

1. The contractor who take up the works contract for TANGEDCO & TANTRANSCO is required to comply with all the provisions stipulated to ESI Act 1948
2. The contractor should have a separate ESI main code number
3. The contractor should be responsible for the payment of necessary ESI contributions – both Employer's and Employee's contributions as per the provisions of the ESI Act in respect of the actual workers engaged for the specified works.
4. The contractor should submit necessary returns to the ESI Organization within the stipulated time as required under the said ESI Act

5. The contractor should produce the proof of payment of contributions - both Employer's and Employee's contributions made to ESI Organization in order to claim the Bills for the respective work
6. The contractor should be fully liable to meet and fulfill all the relevant provisions of the ESI Act in respect of the execution of the Tendered work
7. In case the Contractor fails to fulfill any of the statutory provisions of the ESI Act and consequently it happens that TANGEDCO & TANTRANSCO has to meet such requirements of the said Act or Statutory provisions in the capacity of Principal Employer, TANGEDCO & TANTRANSCO shall make good such requirements out of money due and payable to the said Contractor and further the performance of the said Contractor in this regard will be noted for all future Contracts of TANGEDCO & TANTRANSCO.
8. a) The contractor who claims exemption under the ESI Act should produce the exemption order obtained from the Government/ESI organization.
 b) The contractor who claims exemption for those areas that are not covered under the purview of the ESI Act, necessary evidences should be submitted by the contractor to ensure that the revenue village where the work is being carried out has not been covered under the implemented area of ESI.
 c) The category of employees (Technical Assistant II Grade) and above for whom the wages are fixed at the rate of Rs.700/- and above in the PWD Schedule rates (or) the monthly wages of Rs.21,000/- above. Such employees will not be covered under the ESI Act. In all such conditions, the Contractor has "to ensure the medical benefits for the Workers engaged by the Contractors for the works and has to take relevant group insurance policies with the applicability for giving compensation to the workers" under the Employee's Compensation Act
- 9. TANGEDCO will not reimburse the Employer contribution towards ESI under any circumstances.**

5.0. PAYMENT TERMS:

The payment for the actual works completed as per schedule and scope of work will be made to the contractor on successful completion of work normally.

- i) 95% payment will be made after completion of works satisfactorily in all respect and successful commissioning of the unit, within 90 days from the date of commissioning of the unit and submission of invoice along with required documents.
- ii) The balance 5% payment will be made after completion of guarantee period, within 90 days from the date of submission of invoice along with required documents.
- iii) In case of delay in completion of works, 95% payment shall be released after recovery of LD and other dues if any.
- iv) When there are complaints from the labours department about non-payment of wages to the labourers employed by the contractor for the execution of work under agreement, the Engineers shall have full powers to withhold the bills claimed by the contractor pending clearance certification from the labour department and act as per direction given by the labour department.

- v) It shall be accepted as a condition on contract that the payment of final bill to the contractor less the withheld amount and his acceptance thereof shall constitute a full and absolute release of the corporation from all further claims by the contractor under the contract.
- vi) Payment for any additional work shall be payable against separate orders after completion of such works and after obtaining the approval of Competent authority.
- vii) In the event of TANGEDCO failing to keep the stipulated time frame for releasing payment, simple interest for the delayed payment shall be paid by TANGEDCO to the bidder at the SBI three months MCLR rate on the date of P.O for the delayed period beyond 90 days.
- viii) The simple interest shall be calculated for the delayed period by adopting the 3 months MCLR of SBI prevailed at the time of signing of agreement and in the cases where no agreement is signed, only P.O/WCT is issued, the date of the P.O/WCT shall be taken as base date to ascertain the interest rate.
- ix) Exchange commission for the issue of Bank Draft and other Bank charges will be to your accounts.

6.0. Force Majeure:

- 6.1. If at any time, during the continuance of the contract, the performance in whole or in part, in any obligation under this contract, shall be prevented or delayed by reasons of any war, hostility, acts of public enemy, acts of civil commotion, strikes, lockouts, sabotages, fires, floods, explosions, epidemics, quarantine restrictions or other acts of God (herein after referred to as eventualities) then, provided notice of the happening of any such eventuality is given by the tenderer to the corporation within 15 days from the date of occurrence thereof, neither party shall, by reasons of such eventuality, be entitled to such non-performance or delay in performance and deliveries under this contract, shall be resumed as soon as practicable after such eventuality has come to an end or ceased to exit.
- 6.2. Provided that if the performance in whole or part by the contractor on any obligation under this contract is prevented or delayed by reasons of any eventuality for a period exceeding 60 days, the corporation may at its option terminate this contract by a notice in writing.

7.0 Period of work:

35 days from barring gear stoppage to its resumption.

8.0. LIQUIDATED DAMAGES:

The work completion period as specified in clause (7.0) should be guaranteed by the contractor under the liquidated damages clause given below:-

If the contractor fails to complete the work within the time specified in the contract or any extension thereof, the purchaser shall recover from the contractor as liquidated damages, a sum of HALF PERCENT (0.5%) of the total contract price for each completed week of delay. The total liquidated damages shall not exceed TEN PERCENT (10%) of the contract price of the work portion so delayed. Only the date of satisfactory completion for the work portion will be taken for this purpose, and

If works to be rendered are made by the contractor beyond the period of completion and if they are accepted by the corporation, such acceptance is without prejudice to corporation's right to levy liquidated damages for the delay in works.

The contractors are liable to pay the amount of loss sustained by the corporation in the event of non-execution of works, if any placed on them either in full or part to the satisfaction of the corporation under the terms of conditions of contract and in the event of placing orders for such works on some others at a higher price.

9.0. SECURITY DEPOSIT CUM PERFORMANCE GUARANTEE:

- 9.1. The successful tenderer will have to furnish 5% of Contract value as Security Deposit cum Performance Guarantee by means of electronic mode of payment or D.D./Bankers Cheque /irrevocable Bank guarantee as detailed below:
- 9.2. Electronic mode of payment or Banker's Cheque or Demand Draft or Irrevocable Bank Guarantee will be accepted towards payment of Security Deposit cum Performance Guarantee for the value of Purchase order. In case of irrevocable Bank Guarantee, it should be a single Bank Guarantee to 5% of the Contract value.
- 9.3. The Security Deposit cum Performance Bank Guarantee Shall be returned to the supplier after the expiry of guarantee period ensuring that defects/ damages during the guarantee period are rectified/ replaced. If the purchaser incurs any loss or damages on account of breach of any of the clauses or any other amount arising out of the contract becomes payable by the supplier to the purchaser, then the purchaser will in addition to such other dues that he shall have under the law, appropriate the whole or part of the security deposit cum Performance bank guarantee and such amount that is appropriated will not be refunded to the supplier.
- 9.4. The successful tenderer will have to furnish the Security Deposit cum Performance Bank Guarantee within 30 days from the date of receipt of P.O. The security deposit cum Performance Bank Guarantee will not carry any interest..

Belated payment of Security Deposit will not be accepted.

- 9.5. Failure to comply with the terms regarding security deposit cum Performance Guarantee set out in the purchase order within the stipulated time of the successful tenderer will entail in the cancellation of the purchase order without any further reference to the supplier.

10.0. Jurisdiction For Legal Proceedings:

No suit or any proceedings in regard to any matter arising in respect of this contract shall be instituted in any court, save in Madras the High Court, Madurai Bench or District Court at Tuticorin or Sub-Court at Tuticorin or at the District Munsif Court at Tuticorin. It is agreed that no other court shall have jurisdiction to entertain any suit or proceedings even though, part of the cause of action might arise within the jurisdiction. In case any part of the cause of action might arise within the jurisdiction of any other courts in Tamil Nadu and rest within the jurisdiction of courts outside the state of Tamil Nadu, then it is agreed to between the parties that such suits or proceedings shall be instituted in a court within the state of Tamil Nadu and no other court outside the state of Tamil Nadu shall have jurisdiction even though any part of the cause of action might arise within the jurisdiction of such courts. The successful tenderer shall furnish an undertaking as per schedule in non-judicial stamp paper of Rs.80/- agreeing to the above condition.

11.0. Arbitration:

The corporation will not accept arbitration in case of disputes arising in any respect under this contract. Any dispute arising out of this contract shall not be subject to arbitration under the provision of Arbitration & Conciliation Act 1996 or any other enactment in replacement there of in the event of any dispute between the parties.

12.0 Failure To Execute The Contract:

Contractors failing to execute the work order placed on them to the satisfaction of the corporation under the terms and conditions set forth therein, will be liable to make good the loss sustained by the corporation, consequent to the placing of fresh orders elsewhere at higher rate, i.e. the difference between the price accepted in the contract already entered into and the price at which fresh orders have been placed this is without prejudice to the imposition of Liquidated Damages and forfeiture of Security Deposit for the breach of contract.

13.0 GUARANTEE:

The entire work carried out shall be guaranteed for satisfactory operation of **Turbine and Generator set of Unit II** at least for a period of 12 months from the date of attaining the Full Load. Any defect noticed during this period shall be rectified by the successful tenderer free of cost immediately or during the next available opportunity (shutdown)

14.0. Accident

The work should be done carefully by observing all safety precautions. The Contractor is advised to take utmost care for the protection of their men and materials. No compensation (or) extra amount over and above the contract value would not be payable on account of accidents to men (or) loss of materials. Any accident must be reported to the officer incharge immediately.

15.0 LIABILITY FOR ACCIDENT TO PERSONS

The contractor shall indemnify and save harm to the purchase against all actions, suits, claims, demands, cost of expenses arising in connection with injuries suffered, prior to the date when the works or plant shall have been taken over, the person employed by the contractor or his sub-contractor on the works whether under the General laws or under the workmen's compensation act 1923, or any other status in force at the date of the contract dealing with question of liability of employee for injuries suffered by employees and to have taken steps properly to insure against any claims hereunder.

On the occurrence of an accident which result in the death of the workmen employed by the contractor or which is due to the contract work and so serious as to be likely to result in the death of any such workmen the contractor shall within 24 Hrs. of happening of such accident intimate in writing to the concerned Engineer and such officer required by the provision of Workmen's Compensation Act the fact of such accident. The contractor shall indemnify the corporation resulting directly or indirectly from his failure to give intimation the manner aforesaid including the penalties or fines, if any payable by the corporation as a consequence, of the corporation failure to give notice under the provision of the said act in regard to such accident.

In the event of accident in respect of which compensation may become payable under Workmen's Compensation Act III of 1923 and any subsequent amendment thereof whether by the contractor or by the corporation, as principal, it shall be lawful for the Engineer to retain out of money due and payable to the contractor such sum or sums of money as may, in the opinion of the said Engineer be sufficient to meet such liability. The opinion of the Engineer shall be final in regard to all matters arising under clause and will not subject to any arbitration.

Liability for damage or loss to third party including inspection of officers due to act of the contractor or his plant or sub-contractor connected with the execution of this contract shall be fully borne by the contractor. The contractor shall maintain such detailed records to furnish information regarding entertaining and discharge of all workmen employed under this contract as to be adequate for the timely and full settlement of claims under the workmen compensation act. All cases of accidents or injuries shall be reported to the Engineer with all workmen's compensation act.

The contractor should report above all accidents within 24 hrs. to the Engineer of the corporation in the preliminary accident form. He should furnish other particulars such as medical certificates, wages particulars, fines certificates, proof of having paid the compensation fixed by the corporation etc. in due course without delay.

16.0. LIABILITY FOR DAMAGE TO WORKS (or) PLANTS

The contractor shall, during the progress of the work, properly cover up and protect the work and plant from injury by exposure to the weather and shall take every reasonable proper timely and useful precaution against accident or injury to the same, from any cause and shall be and remain answerable and liable for all accidents of injuries there to which until the same, of occasioned by the acts or commissions or the contractor or his workmen or his sub-contractor and all the losses and damages to the works or plant arising from such accident or injuries as aforesaid shall be made good in the most complete and sub-spatial manner by the and at the sole cost of the contractor and to the reasonable satisfaction of the Engineer should such loss or damage happen to units or works or plant or materials falling outside the scope of this contract and due to the contract, these shall be replaced or compensated for by the contractor to the satisfaction of the Engineer.

17.0 LABOUR LICENCE

The contractor should obtain labour licence if he is engaging more than 20 labourer for one (or) more number of works. The labour licence should be produced to the labour welfare officer after obtaining the same.

18.0. Subletting:

The Contract is not transferable. No part of contract shall be sublet without prior approval of the CE/TTPS/TUTICORIN nor shall transfer be made by Power of attorney authorizing other, to receive payment on Contractor's behalf.

19.0. Loss or Damages:

In the event of supplies being received damaged or short at the destination station, the cost of such materials, Excise duty and Sales tax (if payable) and other charges payable thereof will be paid only proportionate to the value of the materials received in good condition unless the damaged goods or short supplies are made good free of cost by the contractors.

20.0. Powers To Terminate The Contract:

In the event of non-performance and lack of diligence, the contract will be terminated and the SD will be forfeited. In that circumstances, the corporation deserves the right, to arrange for some other agency for the execution of this contract.

21.0. Effecting Of Recoveries:

Any loss, arising incident to non-fulfillment of this contract or any other contract, will be recovered from the Security Deposit held and or any other amount due to the contractor from the corporation.

22.0. Royalties For Patents:

All royalties for patents or charges for the use of infringements thereof that may be involved in the construction or use of any equipments or appliance to be supplied against this specification are included in the above prices. The contractor shall protect the purchase against all claims, actions, suits and proceedings for the infringement or alleged infringement of any patent, design or copy right protected either in the country of origin or in India by the use of any equipment supplied by the contractor other than for the purpose indicated by or reasonably to be inferred from the specification.

23.0. Recoveries Of Dues:

The corporation is empowered;

- a) To recover any dues against this contract in the Bills/Security Deposit/Earnest Money Deposit due to the contractors either in this contract or any other contracts with corporation.
- b) To recover any dues against any other contract of the contractors with corporation, with the available amount due to the contractors against this contract.

24.0 ADVANCE PAYMENT:

No advance payment will be given. Tenders insisting on advance payment are liable for rejection.

25.0 " PAN " NUMBER

The tenderer should mention their PAN numbers allotted by Income Tax Authorities in their offer.

26.0 PAST PERFORMANCE:

26.1 The intending tenderers shall furnish the details of various orders executed by them during the past years as on the date of tendering in the proforma enclosed to the Tender

Specification and also proof for having executed the tendered item and for their satisfactory performance. The details furnished by the tenderers shall be in complete shape and if it is found that any information is found omitted, suppressed, incomplete or incorrect, the same will be taken note of while dealing with the tenderers in future. Tenders furnished by the tenderers without these accompanying details of their past performance are liable for rejection.

26.2 The purchaser reserves the right to request for any additional information and also reserves the right to reject the proposal of any bidder, if in the opinion of the purchaser, the qualification data is incomplete or the bidder is found not qualified to satisfactorily perform the contract.

27.0 DOCUMENTS CONFIDENTIAL:

The tenderer (Whether his tender is considered or not) shall treat the details of the tender specification and other documents attached hereto as private and confidential.

28.0 CONTRACT QUALITY ASSURANCE :

The BIDDER shall include in his proposal the Quality Assurance Programme containing the overall quality, management and procedures which he proposes to follow in the performance of the: "Contract" during various places.

At the time of award of "Contract" the detailed Quality Assurance Programme to be followed for the execution of the "Contract" will be mutually discussed and agreed and such agreed programme shall form a part of the "Contract".

29.0 DOCUMENTS CONTAIN FALSE PARTICULAR CLAUSE.

"In the event of documents furnished with the offer being found to be bogus or the documents contain false particulars; the EMD paid by the tenderers will be forfeited in addition to blacklisting them for future tenders / contracts in Tamil Nadu electricity corporation."

30.0 ELECTRICITY RULES:

All works shall be carried out in accordance with the latest provisions of the Indian Electricity Act/ Electricity Supply Act and the Indian Electricity rules there under unless modified by this specification.

31.0 EXECUTION OF AGREEMENT AND FORM OF CONTRACT

The successful tenderer shall required to execute an agreement in a non judicial stamp paper to a value of Rs.80/-. The agreement is governed by K2 contract of prevailing TANGEDCO specifications.

32.0 GENERAL:

1. The tenderer shall list out his experience with documentary proof and shall be uploaded along with the offer.
2. The corporation will not accept any other terms and conditions, which are not specifically incorporated in the specification.

3. All the Bank Guarantee that are to be furnished by the supplier have to be furnished in the prescribed format on non-judicial stamp paper of value Rs.80/-. Bank Guarantee issued by the Scheduled Bank/ Nationalised Bank / Foreign Banks with branches in India will only be accepted.
4. Prior approval of the corporation shall be obtained for engaging of sub - contractors if any.
5. Specific concurrence or otherwise to all the terms noted herein should be furnished in the tender. Failure to do so will be taken as concurrence to the terms.
6. Board reserve the right to terminate or short close the work without assigning any reasons by giving one week notice. The contract will be terminated at any time due to Administrative reasons and according to site condition.
7. The tenderer who are having separate ESI code and EPF code only are eligible to participate in the tender.
8. The tenderer should have valid GSTIN registration and GST should be active at the time of opening the tender.

SECTION – VI - FORMATS**SCHEDULE-A****PRICE****SPECIFICATION NO. CE/TTPS/SE/M.II/Specn.No.70/2024-25**

Name of work: TTPS - Mech.II - TM.I – Unit-II - Capital overhaul of 210 MW LMW TG set and Re RLA study on Turbine components

Period of work: 35 days from barring gear stoppage to its resumption.

Sl. No.	Description of work	Qty	Unit Price in INR	GST	Total Including GST
1	Capital Overhauling of HP , IP & LP Turbine	1 Unit			
2	Renewal of HPC nozzle segment including the cost of transporting and machining and allied works.	1 No			
3	Renewal of IPC nozzle segment including the cost of transporting and machining and allied works.	1 No			
4	Renewal of HP diaphragms all stages including the cost of transporting and machining and allied works.	LS			
5	Renewal of IP diaphragms all stages including the cost of transporting and machining and allied works.	LS			
6	Renewal of LP diaphragms including the cost of transporting and machining and allied works.	2 Nos			
7	Renewal of Tip Seals in existing HP Diaphragms	1 Unit			
8	Renewal of Tip Seals in existing IP Diaphragms	1 Unit			
9	RLA/LE Study on Turbine & its auxiliaries as per scope of work.	1 Activity			
10.a	<u>OPTIONAL – IF NECESSARY</u> Machining of Thrust collar of IP Rotor	1 No			
b.	Renewal of HP Rotor	1 No			
c.	Renewal of IP Rotor	1 No			
d.	Renewal of LP Rotor	1 No			

e.	Re – Blading of IP Rotor	5 Nos			
f.	Re – Blading of LP Rotor	10 Nos			
g.	Slow speed balancing of IP Rotor including cost of arrangements of balancing machine, transporting & fixing etc.,	1 No			
h.	Slow speed balancing of LP Rotor including cost of arrangements of balancing machine, transporting & fixing etc.,	1 No			
i.	Deputation of Balancing team along with Equipment and study, Vibration Analysis	1 Activity			
j.	Trim Balancing Activities	1 Activity			
11.	<u>PART-II GENETATOR</u> Capital Overhauling of Generator.	1 Unit			
12.	Supply of Consumables and Chemicals required for assembling of the TG Terminal bushing and Stator water bushing.	1 Unit			

- GST Extra as applicable
- TANGEDCO will not reimburse the Employer contribution towards EPF/ESI under any circumstances.

Note

1. The prices quoted shall be **FIRM & in Indian Rupees only** and as per the scope of work detailed in the Technical Specification Section.
2. The tenderers may inspect the site at TTPS and quote as per technical specification
3. This being a Turnkey contract, the L1 tenderer will be decided for the total contract value, not for the individual items.

SIGNATURE:
NAME AND FULL ADDRESS:

DATE;
PLACE:

(SEAL)

SCHEDULE – B.**SPECIFICATION NO. CE/TTPS/SE/M.II/ Specn.No.70/2024-25****DEVIATION FROM TECHNICAL SPECIFICATION.**

All technical deviations from the specification shall be filled in by the tenderer, clause wise, in the schedule.

SL. NO.	SECTION NO.	CLAUSE NO.	DEVIATION

The tenderer hereby certifies that the above mentioned are the only deviations from the technical specification and the tender conforms to the specification in all other respects.

COMPANY SEAL SIGNATURE:

NAME:

DESIGNATION:

DATE:

SCHEDULE – C.**SPECIFICATION NO. CE/TTPS/SE/M.II/ Specn.No.70/2024-25****DEVIATION FROM COMMERCIAL TERMS**

All deviations from the commercial terms shall be filled in by the tenderer, clause wise, in this schedule.

SL. NO.	SECTION NO.	CLAUSE NO.	DEVIATION

The tenderer hereby certifies that the above mentioned are the only deviations from the commercial terms and the tender conforms to the specification in all other respects.

COMPANY SEAL SIGNATURE:

NAME:

DESIGNATION:

DATE:

SCHEDULE – D.**SPECIFICATION NO. CE/TTPS/SE/M.II/ Specn.No.70/2024-25****STATEMENT OF SUPPLY / ORDERS EXECUTED / UNDER EXECUTION SO FAR****DURING THE PAST YEARS AS ON THE TENDER OPENING DATE:**

Sl. No.	Name & Address of the Organization	PO No. & Date and whether copy Enclosed	Qty	Value of Order in Rs. Lakhs	Schedule Date of Completion of Order.	Actual Date of Completion of Order.	Date of Successful commissioning	Whether End User Certificate enclosed yes/No If yes Date of issue of End user certificate	Period of satisfactory Performance as per End User Certificate
1	2	3	4	5	6	7	8	9	10

NOTE: 1) Split up details such as price, may be enclosed separately.
2) Attested Copies of orders received shall be enclosed.

COMPANY SEAL SIGNATURE:

NAME:

DESIGNATION:

DATE:

SCHEDULE – E**DECLARATION FORM****(To be signed by the tenderer)****Strike off, whichever is not applicable:**

To
 The Chief Engineer,
 Tuticorin Thermal Power Station,
 Tamil Nadu Generation and Distribution Corporation Ltd.,
 Tuticorin - 628004, Tamil Nadu

Dear Sir,

Having examined the above specification together with the accompanying schedules etc., we hereby offer to manufacture and supply the equipments/ materials covered in this Specification at the rates entered in the attached schedule of prices.

We hereby guarantee the particulars entered in the schedules attached to the Specification.

In accordance with the Security cum Performance guarantee clause-15 .0, Section-V, of the specification, we agree to furnish security cum performance in the form of DD/Bankers Cheque/Bank Guarantee to the extent of 5% of the Contract value (All-inclusive price) of each and every indent issued during the contract period till the expiry of the Guarantee.

Our company is not a potentially Sick Industrial Company or a Sick Industrial Company in terms of Section-23 of Section-15 of the Sick Industrial Companies (Special Provisions) Act, 1985.

Yours faithfully,

PLACE	:	SIGNATURE	:
DATE	:	DESIGNATION	:
COMPANY SEAL	:	COMPANY	:

SCHEDULE-F

UNDERTAKING FOR PAYMENT OF DUES TO TANGEDCO LTD

THIS DEED OF UNDERTAKING EXECUTED AT..... ON THIS
THE.....DAY OF..... (MONTH) (YEAR) BY
M/s.

Hereinafter called the "TENDERER" (Which expression where the context so admits mean and include their agents, representatives, Successors – in – office and Assigns)

TO AND IN FAVOUR OF..... THE TAMIL NADU GENERATION AND DISTRIBUTION CORPORATION LIMITED, a Body Corporate, incorporated under Companies Act 1956, having its office at TTPS, Tuticorin-628004, herein called the "TANGEDCO" (which expression shall where the context so admits mean and include its successors in office and Assigns.)

WHEREAS the Board has called for an undertaking from the Tenderer empowering the Board to recover the dues if any.

NOW THIS UNDERTAKING WITNESSETH that the Board is empowered to recover any dues against this contract in any bills/Security Deposit/E.M.D. due to the Tenderer either in this contract or any other contracts with the Board. Further, the Tenderer hereby authorizes the Board to recover, any dues against any other contract of the Tenderer with the Board with the available amount due to the Tenderer against this contract.

IN WITNESS WHERE OF Thiru._____ Acting for and behalf of the Tenderer has signed this deed on the day, month and year herein before first mentioned.

SIGNATURE OF THE TENDERER.

NAME :
DESIGNATION :
DATE :
COMPANY SEAL :

SCHEDULE-G**UNDERTAKING IN LIEU OF E.M.D.****To be submitted by the bidder in Non Judicial Stamp Paper of value not less than Rs.80/-**

(To be furnished along with the offer)

THIS DEED OF UNDERTAKING EXECUTED AT..... ON THIS THE.....DAY OF..... (MONTH) (YEAR) BY M/s. Hereafter called "Tenderer" (Which expression shall where the context so admits mean and include their Agents, Representatives, Successors-in-office and Assigns).

TO AND IN FAVOUR OF THE TAMIL NADU GENERATION AND DISTRIBUTION CORPORATION LIMITED, a Body Corporate, incorporated under Companies Act 1956, having its office at Tuticorin TPS, Tuticorin-628004, herein called the "TANGEDCO" (which expression shall where the context so admits mean and include its successors in office and Assigns.)

WHEREAS THE tenderer is required to pay Earnest Money Deposit of Rs..... for participation in the tender for in terms of Specification No.

AND WHEREAS the tenderer is exempted by the TANGEDCO from payment of EMD in the form of cash, subject to the tenderer executing an undertaking to the value of Rs..... (Rupees.....) representing the amount equivalent to the amount of EMD specified to be paid to the TANGEDCO in the event of non-fulfilment of breach of any of the conditions of the tender by the Tenderer as mentioned hereunder.

AND WHEREAS in consideration of the acceptance by the TANGEDCO of the above proposal, the Tenderer has agreed to pay to the TANGEDCO the said amount of Rs..... in the event of:

- 1) Withdrawing his tender before the expiry of validity Period (OR)
- 2) Withdrawing his tender after acceptance (OR)
- 3) Violating any of the conditions of the tender issued by the competent Authority

NOW THIS UNDERTAKING WITNESSES that in pursuance of the said agreement the Tenderer hereby doth convenient with the TANGEDCO that in consideration of the

"TANGEDCO" waiving the condition of payment of EMD in cash in terms of the said Specification, the Tenderer has agreed to pay to the TANGEDCO Rs..... (Rupeesonly) in the event of:

- i) Withdrawing his tender before the expiry of validity period.
- ii) Withdrawing his tender after acceptance
- iii) Violating any of the conditions of the tender issued by the Competent Authority.

NOW THE CONDITION OF THE above written undertaking is such that if the tenderer shall duly and faithfully observe and perform the conditions specified as above, then the above written undertaking shall be void, otherwise it shall remain in full force.

The tenderer undertakes not to revoke this guarantee till the contract is completed under the terms of contract.

The expression, `tenderer' and the ` TANGEDCO ' hereinafter before used shall include their respective successors and assign in office.

IN WITNESS WHEREOF THIRU..... acting for and on behalf of the Tenderer has signed this deed on the day, month and year herein before first mentioned.

SIGNATURE
 NAME IN BLOCK LETTERS
 SEAL OF THE COMPANY

IN THE PRESENCE OF WITNESSES:

1) Signature
 Name & Address

2) Signature
 Name & Address

*** **

SCHEDULE-H**UNDERTAKING TOWARDS JURISDICTION OF LEGAL PROCEEDINGS**

This undertaking executed at on this..... (Date)..... (Month) (YEAR) by M/s. Registered under Companies Act, 1956 having its registered office at hereinafter called the contractor (which expression shall where the context so admits mean and include its successors in office and in favour of Tamil Nadu Generation and Distribution Corporation Limited, a Body Corporate, incorporated under Companies Act 1956, having its registered Office at NPKRR Maaligai, No.144, Anna Salai, Chennai - 600 002 herein after called the Purchaser (Which expression shall where the context so admits means and includes its successors in Office and assigns).

WHEREAS a contract for the supply of..... has been awarded in favour of the contractor under the Purchase Order No. Dated.....

AND WHEREAS in accordance with terms of the above mentioned Purchase Order, the contractor has to furnish an undertaking to the effect that no suit or any proceedings in regard to any matter arising in any respect under this contract shall be instituted in any court other than in the Madras High Court, Madurai Bench or District Court at Tuticorin or Sub-court at Tuticorin or at the District Munsif Court at Tuticorin as the case may be.

IN CONSIDERATION of the TANGEDCO having agreed to accept the undertaking the contractor hereby undertakes that no suit or any proceedings in regard to any matter arising in respect of this contract shall be instituted in any Court, save in the Madras High Court, Madurai Bench or District Court at Tuticorin or Sub-Court at Tuticorin. Or at the District Munsif Court at TUTICORIN as the case may be. It is agreed that no other court shall have jurisdiction to entertain any suit or proceedings, even though, part of the cause of action might arise within their jurisdiction. In case any part of the cause of action might arise within the jurisdiction of any other Courts in Tamil Nadu, and rest within the jurisdiction of Courts outside the State of Tamil Nadu, then it is agreed to between the parties that such suits on proceedings shall be instituted in a Court within the State of Tamil Nadu and no other Court outside the State of Tamil Nadu shall have jurisdiction.

IN WITNESS WHEREOF Thiru..... of M/s..... hereby put his hand and seal for due observance of the Undertaking in the presence of the following witnesses.

COMPANY SEAL:

SIGNATURE :
DESIGNATION :
COMPANY :
DATE :

WITNESSES:

1)

2)

SCHEDULE-I
TENDER ACCEPTANCE LETTER (e-tender)

To be signed with company seal on letter head and uploaded in the technical Bid

TENDER ACCEPTANCE LETTER (To be given on Company Letter Head)

Date:

To

The Chief Engineer,
Tuticorin Thermal Power Station,
Tamil Nadu Generation and Distribution Corporation Ltd.,
Tuticorin - 628004, Tamil Nadu.

Dear Sir,

Sub: Acceptance of Terms & Conditions of Tender.

Tender Ref. No: _____ **OPENING DUE ON** _____ **.2024**

Name of Tender/Work:

1. I/We have downloaded / obtained the tender document(s) for the above mentioned 'Tender/Work' from the web site(s) namely: **<https://tntenders.gov.in/nicgep/app>**
2. I/We hereby certify that I/We have read the entire terms and conditions of the tender documents (including all documents like annexure(s), schedule(s), etc.,) which form part of the contract agreement and I/We shall abide hereby the terms / conditions / clauses contained therein.
3. The corrigendum(s) issued from time to time by your department/ organization too has also been taken into consideration, while submitting this acceptance letter.
4. I/We hereby unconditionally accept the tender conditions of above mentioned tender document(s) corrigendum(s) in its totality / entirety.
5. We hereby guarantee the particulars entered in the schedules attached to the Specification.
6. In accordance with the Security deposit clause of the General Condition, we agree to furnish security deposit to the extent of 5% of the contract value (All-inclusive price) valid till the expiry of the Guarantee.
7. Our company is not a potentially Sick Industrial Company or a Sick Industrial Company in terms of Section-23 of Section-15 of the Sick Industrial Companies (Special Provisions) Act, 1985.

8. In case any provisions of this tender are found violated, then your department/organization shall without prejudice to any other right or remedy be at liberty to reject this tender/bid including the forfeiture of the full said Earnest Money Deposit absolutely.

9. I / we agree to the rules and regulations of TANGEDCO regarding the statutory tax etc. like GST.

Yours Faithfully,

(Signature of the bidder, with official Seal)

*** **

SCHEDULE-J**Declaration to be submitted by the bidder in Non Judicial Stamp Paper of value not less than Rs.80/-**

To

The Chief Engineer, TANGEDCO/TTPS.

We hereby declare and confirm that we are registered vendor under GST Act having GSTIN: _____ in State of _____ Our applicable GST% for the above reference job is under code _____ .

We hereby declare and confirm that we are unregistered vendor under GST Act being turnover is less than Rs. _____ lakhs (being threshold limit) per annum. (For unregistered vendor, the vendor has to submit an affidavit in the enclosed format).

We hereby declare and confirm that we are registered vendor under composite scheme having GSTIN.

We are aware that as per sec 171 of CGST Act, any reduction in rate of tax on any supply of goods or services or the benefit of input tax credit should be passed on to TANGEDCO by way of commensurate reduction in prices and as such we hereby declare that we are extending Rs. _____ /- of _____ % as rebate in my awarded price against input tax credit benefit.

We hereby declare that we do not have any input tax credit benefit on account of GST applicable against this job. If it is established that we have availed input tax credit benefit against this job, the differential tax benefit will be returned to TANGEDCO failing which TANGEDCO may take appropriate action.

Signature of bidder with Company Seal.

Note:

Bidder may strike out the para not applicable

ANNEXURE-A**DRAFT AGREEMENT**

Nature of the work :

(i) I/ we have registered a Firm/Establishment/Company/Contractor in the name of

_____ (with address).

Name of the Proprietor/
Partner/Director:

Father's Name :

Date of Birth/ Age :

Contact Number :

E-Mail ID :

PAN Number :

GST Number :

(ii) I/ we have obtained the EPF code number from the Employees Provident Fund Organization. The EPF number of our company is _____.

(iii) I/ we have obtained the ESI code number from the Employees State Insurance Corporation. The ESI number of our company is _____.

-2-

(iv) As a contractor of TANGEDCO/TANTRANSCO,

(a) I/we would comply with all the relevant provisions stipulated in the EPF & MP Act and ESI Act.

(b) I/we are responsible for the payment of necessary EPF & ESI contributions both Employer's and Employee's contribution as per the provisions of the EPF Act and ESI Act in respect of the actual workers engaged for the specified works.

(c) I/we shall submit the necessary returns to Employees Provident Fund Organization and Employees State Insurance Corporation within the stipulated time as prescribed under the said EPF Act and ESI Act.

(d) I/we shall produce the proof of payment of contribution – both Employer's and Employee's contributions made to Employees Provident Fund Organization and Employees State Insurance Corporation in order to claim the bills for the respective works.

(e) I/we shall be fully liable to meet and fulfil all the relevant provisions of the EPF Act and ESI Act in respect of the execution of the Tendered work.

(v) In case as the contractor if I/we fail to fulfil any of the statutory provisions of the EPF Act and ESI Act and consequently it happens that TANGEDCO/TANTRANSCO Ltd has to meet such requirements of the said Act or Statutory Provisions in the capacity of Principal Employer, TANGEDCO/TANTRANSCO shall make good such requirements out of the money due and payable to the me/us.

(vi) As the contractor if I/we claims exemption under the ESI Act, I/we shall produce the exemption order obtained from the Government/ESI organization and for those areas that are not covered under the purview of the ESI Act, necessary evidences will be submitted by me/us to ensure that the revenue village where the work is being carried out has not been covered under the implemented area of ESI Act.

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(vii) In such cases, where the revenue village in which work is being carried out has not been covered under the implemented area of ESI Act " I/we shall ensure that the medical benefits and the compensation for the Contract Workers engaged by me/us for the works and to take relevant group insurance policies with the applicability for giving compensation to the workers".

(viii) I/we agree to obtain the Labour Licence under the Contract Labour (Regulation & Abolition) Act 1970 and will intimate the TANGEDCO/TANTRANSKO. If migrant workers are to be engaged to carry out the works in such cases necessary Inter-State Migrant Workmen (Regulation of Employment and Conditions of Service) Act 1979 will also be obtained and produced. I/we also agree to obtain the registration certificate under the Building and Other Construction Workers (Regulation & Condition of services) Act 1996.

(ix) I/we hereby declare that, I/we are well aware of all the Statutory Provisions to be complied while engaging workers for the works. And I/we agree to follow all the Statutory Provisions and rules modified there under and maintain the register as per the provisions of the above Act and submit the returns to the authority concerned.

(x) In case if the contractor owes to pay any unpaid dues in statutory provisions like ESI, EPF and GST, I/we agree for the recovery from my/our pending bills to settle the dues.

(The Agreement should be executed with the contractors in 80 rupees stamp paper and additional green sheets).

Signature of the
Superintending Engineer.

Authorised Signatory
(Contractor)

ANNEXURE-B**Declaration towards EPF & ESI remittances**

Name of the Contractor :

EPF Main code number :

ESI Main code number :

Nature of the work :

Contract/K2 agreement No :

1. I/ we hereby state that (Name of the Contractor) has been duly registered under EPF Act and ESI Act vide main code number ----- and ----- respectively.
2. I/ we hereby declare that the EPF & ESI employee and employer contribution has been remitted for all the workers engaged for execution of the subject contract entered with TANGEDCO.
3. I/ we hereby certify that there are no EPF & ESI dues to be remitted in respect of the period of execution of the subject contract and in case, any shortfall of discharge the EPF & ESI obligations is found on our part (contractor) at later date, TANGEDCO shall not be responsible for the consequent legal/financial obligations.
4. In the event of EPF & ESI obligations are found on our part (contractor) in respect of subject contract, the wame will be duly discharged by me/us to the respective authorities.

Authorized Signatory of the Contractor
(with name, designation, seal and company
seal)

Date :

Place :

FORMAT – I
BANK GUARANTEE FOR EMD

(B.G for EMD shall be executed on Non judicial stamp paper of Rs. 100/-)

Beneficiary:-----

Date:-----

Bank Guarantee No:_____

We have been informed that _____(insert name of bidder) (herein after called „the bidder“) has submitted to you its bid dated_____ (insert date) (herein after called „the bid“) for the execution of "Spec. No.CE/TTPS/SE/M.II/No. _____ /2024-25 -

_____ at Tuticorin Thermal Power Station, Thoothukudi Dist., Tamil Nadu.

Furthermore, we understand that, according to your conditions, bids must be supported by a bid guarantee.

At the request of the bidder, we _____(name of the Bank) hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of (amount in figures)_____ (amount in words) _____ upon receipt by us of your first demand in writing accompanied by a written statement stating that the bidder is in breach of its obligation(s) under the bid conditions ,because the Bidder:

- a) has withdrawn its bid during the period of bid validity specified by the Bidder in the Form of Bid; (or)
- b) having been notified of the acceptance of its Bid by the Employer during the period of validity (i) fails or refuses to execute the Contract Form, if required, or ii) fails or refuses to furnish the Performance Security, in accordance with the Instructions to Bidders.

This guarantee will expire:(a) if the bidder is the successful Bidder, upon our receipt of copies of the contract signed by the Bidder and the Performance Security issued to upon the instruction of the Bidder and (b) if the bidder is not successful Bidder, upon the earlier of (i) our receipt of copy of your notification to the Bidder of the name of the successful Bidder; or (ii) twenty eight days after the expiration of the Bidder's Bid.

Consequently, any demand for payment under this guarantee must be received by us at the office on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC publication No 758.

Signature

With seal of the Bank
(Name in block letter)

In the presence of witness:

1 . (Name in capital and address)

2 . (Name in capital and address)

FORMAT-II**BANK GUARANTEE FOR SECURITY DEPOSIT CUM PERFORMANCE GUARANTEE.****Rs.80/- Non-Judicial Stamp paper**

THIS DEED OF GUARANTEE made this day of TWO THOUSAND AND TWENTY FOUR by the bank of (here in after called `the bank') to and in favour of TANGEDCO LIMITED a body corporate incorporated under the Companies act 1956 having its office at NPKRR Maaligai,144 Anna Salai / Chennai – 2, represented by the Chief Engineer (herein after called 'the purchaser').

WHEREAS M/s. (herein after called ' the contractor') have by virtue of the contract entered into with the purchaser as per W.A.O. No..... dated, the agreed with the purchaser to supply In accordance with the terms and conditions contained therein.

AND WHEREAS in accordance with the terms of the contract the Contractor has to furnish a Bank Guarantee From `a' nationalized bank for a sum of Rs.....(Rupeesonly) equivalent to 5% of the contract for the satisfactory performance of the materials in the said contract.

AND WHEREAS THE BANK has, at the request of the contractor, agreed to guarantee the payment of the said sum in case the contract is not performed in accordance with the specifications indicated in the terms and conditions contained in W.A.O.No..... dated or in the letter dated.

FOR THIS DEED WITNESS AS FOLLOWS

1) In consideration of the purchaser having agreed to accept the Bank guarantee from a nationalized Bank towards the satisfactory performance of the materials supplied for a sum equivalent to Rs.....(Rupees only) the Bank do hereby guarantee that if the materials supplied by the contractor fails in performance in accordance with the specifications and conditions of the contract as subsequently amended, the bank shall pay forth with merely on demand without any demur to the purchaser such amount or amounts, as the Bank may be called upon to pay by the purchaser.

Provided that the liability of the Bank under this deed shall not at any time exceed the said sum of Rs.....(Rupees..... only).

PROVIDED further that the guarantee hereunder furnished shall be released as soon as the materials supplied by the contractor has performed to the satisfaction of the purchaser in accordance with the terms of the contract and a certificate to that effect is issued by the purchaser.

2) The Bank further undertakes to indemnify the purchaser against any loss or damage that may be caused or suffered by the purchaser by reason of any breach of the terms and conditions in the said W.A.O.No. Dated.....

3) The guarantee here in contained shall remain in force will the terms and conditions of the W.A.O.No dated the have been fully and properly carried out by

the said contractor and in any case, the guarantee shall not hold good after the

4) The Bank further agrees with the purchaser that the purchaser shall have the fullest liberty (without the consent of the Bank and without affecting in any manner the obligations of the Bank here under) to vary any of the terms and conditions of the contract or to extend the time of performance by the said contractor from time to time or to postpone from time to time any of the powers exercisable by the purchaser against the said contractor and forbear or to enforce any of the terms and conditions relating to the said contract and the Bank shall not be relieved of their liability by the reason of any such variations or extension being granted to the said contractor or by reason of any forbearance act or omission on the part of the purchaser or by any indulgence by the purchaser to the said contractor or by any such matter or thing what-so-ever which under the law relating to sureties would but for these provision have the effect of so relieving the Bank.

Any account settled between the purchaser and the contractor shall be the conclusive evidence against the bank for the amount due and shall not be questioned by the Bank.

The expressions 'Bank' 'Contractor' and ' the purchaser' herein before used shall include their respective successors and assigns.

IN WITNESS WHERE OF THIRU.....
Acting for and on behalf of the Bank has signed this deed on the day, month and year first above written.

Witnesses:

1.

2.

(Name and address in Block letters)

Signature with seal of the Bank

(Name in Block letters)

CHECK LIST**"Check List" on specific documents to be furnished in tender/ "Questionnaire" on particulars****1. EMD: Rs.2,04,100/-**

- | | | |
|----|---|--------------------------|
| a. | The e-receipt of payment of EMD through Online/BG. | <input type="checkbox"/> |
| b. | The proof of exemption of EMD i.e SSI or NSIC/MSME/
Acknowledgment Part – II | <input type="checkbox"/> |
| c. | Undertaking in lieu of EMD along with two witnesses | <input type="checkbox"/> |
| d. | Bank Guarantee for EMD. | <input type="checkbox"/> |

2. For BQR Requirement:

- | | | |
|----|--|--------------------------|
| a. | Manufacturer proof i.e ISO certification / License to manufacture /
any other valid evidence for manufacturing. | <input type="checkbox"/> |
| b. | Experience proof i.e Order copies. | <input type="checkbox"/> |
| c. | End user certificate | <input type="checkbox"/> |
| d. | Copy of Profit and Loss account for the year 2020-21 | <input type="checkbox"/> |
| | Copy of Profit and Loss account for the year 2021-22 | <input type="checkbox"/> |
| | Copy of Profit and Loss account for the year 2022-23 | <input type="checkbox"/> |
| e. | Copy of Balance Sheet for the year 2020-21 | <input type="checkbox"/> |
| | Copy of Balance Sheet for the year 2021-22 | <input type="checkbox"/> |
| | Copy of Balance Sheet for the year 2022-23 | <input type="checkbox"/> |
| f. | Attested copy of Annual Turn Over certified by practicing
Chartered Accountant | <input type="checkbox"/> |

4. Technical Bid

5. Financial Bid

6. Furnishing of Schedule A to J (Relevant Schedules only)

Note: All the boxes should be marked

SECTION VII**TECHNICAL SPECIFICATIONS:**

Name of work: TTPS - Mech.II - TM.I – Unit-II - Capital overhaul of 210 MW LMW TG set and Re RLA study on Turbine components

- i) Technical Specification for Unit-II - Capital overhaul of 210 MW LMW TG set and Re RLA study on Turbine components during the forth coming overhaul as per scope of work and special conditions.

Period of work: 35 days from barring gear stoppage to its resumption.

Sl. No.	Description of work	Qty
1	Capital Overhauling of HP , IP & LP Turbine	1 Unit
2	Renewal of HPC nozzle segment including the cost of transporting and machining and allied works.	1 No
3	Renewal of IPC nozzle segment including the cost of transporting and machining and allied works.	1 No
4	Renewal of HP diaphragms all stages including the cost of transporting and machining and allied works.	LS
5	Renewal of IP diaphragms all stages including the cost of transporting and machining and allied works.	LS
6	Renewal of LP diaphragms including the cost of transporting and machining and allied works.	2 Nos
7	Renewal of Tip Seals in existing HP Diaphragms	1 Unit
8	Renewal of Tip Seals in existing IP Diaphragms	1 Unit
9	RLA/LE Study on Turbine & its auxiliaries as per scope of work.	1 Activity
10.a	<u>OPTIONAL – IF NECESSARY</u> Machining of Thrust collar of IP Rotor	1 No
b.	Renewal of HP Rotor	1 No
c.	Renewal of IP Rotor	1 No
d.	Renewal of LP Rotor	1 No
e.	Re – Blading of IP Rotor	5 Nos
f.	Re – Blading of LP Rotor	10 Nos

g.	Slow speed balancing of IP Rotor including cost of arrangements of balancing machine, transporting & fixing etc.,	1 No
h.	Slow speed balancing of LP Rotor including cost of arrangements of balancing machine, transporting & fixing etc.,	1 No
i.	Deputation of Balancing team along with Equipment and study, Vibration Analysis	1 Activity
j.	Trim Balancing Activities	1 Activity
11.	<u>PART-II GENETATOR</u> Capital Overhauling of Generator.	1 Unit
12.	Supply of Consumables and Chemicals required for assembling of the TG Terminal bushing and Stator water bushing.	1 Unit

II. Technical Terms

S.No.	Description	Type
1.	Unit-II - Capital overhaul of 210 MW LMW TG set and Re RLA study on Turbine components	

SCOPE OF WORK

Preliminary Study

The contractor should depute a Turbine expert Engineer during pre-overhaul period to study the behavior and performance of the unit at full load condition before a week and to assess the spares position in co-ordination with the TANGEDCO Engineers

TURBINE

- 1 The Contractor should depute a Turbine expert Engineer during pre-overhaul period to study the behaviour and performance of the unit at full load condition before a week and to assess the spares position in co-ordination with the TNEB Engineers.
- 2 The following readings have to be taken during dismantling
 - a. Alignment of all the TG rotors & MOP
 - b. Oil clearance of all the bearings
 - c. Measurement of bridge gauge readings at bearings, Rotor run outs & initial slope measurement at all the rotor journals of TG and its comparison with erection/last overhaul values.
 - d. Any other parameters as required by the vendor.
- 3 To improve the Turbine efficiency, the wornout Turbine HPT ,IPT diaphragms all stages and LPT two stages have to be replaced with new / re conditioned diaphragms provided by TTPS at free of cost. The devolution of retrieved diaphragms to central store TTPS and transporting of new / reconditioned diaphragms from the store have to be carried out by the contractor at their cost. All the vehicles / cranes / workforce required for the works are to be arranged and borne by the contractor.
- 4 The major & minor precision machining works connected with changing of new / reconditioned diaphragms in HPT,IPT and LP Turbine have to be carried out by the company. The company has to arrange all including of Transporting and locating the workshop for machining works in HPT,IPT& LPT diaphragms. The vehicles, cranes required for the above works have to be arranged by the contractor at their cost.
- 5 Dismantling, inspection, overhauling, revision, setting and assembly of all components like casing diaphragm, diaphragm carriers, inter-stage seals, rotor gland boxes, steam and oil labyrinth seals, explosion diaphragms etc. Parting plane matching of HP & IP casing and LPT cross over pipes should be undertaken. Studs and cap nuts of HP and IP casing should be renewed if necessary. Dismantling and assembling of Parting plane stud and cap nuts of HPT/IPT have to be carried out with induction heating equipment.
- 6 Dismantling and assembling of HPT / IPT parting plane components by using innovative method of induction heating equipment system.
- 7 All gland sealing rings, oil sealing strips and Stage sealing rings have to be renewed.

- 8 HPT and IPT flange heating boxes have to be inspected and tested and also renewal if required. Rectification works as per the requirement, have to be carried out. If any cracks noticed in the flange boxes have to be properly ground and welded adopting suitable welding techniques. All consumables and tools required for this work have to be arranged by the contractor.
- 9 Renewal of gland housing of HP/IP/LP, if the gland boxes found to be more elliptical including cost of machining and transporting charges wherever necessary.
- 10 To ensure trouble-free service, the oil clearances of TG bearings have to be set to design values. If any discrepancy in setting the clearance or healthiness of the bearings, the bearings may be renewed. Parting plane blue matching of all bearing covers and oil guard matching have to be carried out. For correct oil clearances TG bearings shall require ID machining. The machining and transporting of bearings to work shop are to be borne by the Contractor. All bearings white metal inspection by DPT, UT & MPI tests have to be carried out. Shim pad machining, adjusting ring machining, etc... have to be carried out by the Contractor.
- 11 Setting of clearances, interferences, matching of all bearings aligning of HP, IP and LP Turbine rotors and Generator have to be carried out. Reaming and honing of coupling holes in HP/IP/LP rotors have to be carried out if necessary.
- 12 The alignment of HP, IP, LP Turbines and Generator has to be carried out as per the stipulated guidelines of LMW Turbines manufacturer and the correction factor are to be furnished to Engineer incharge.
- 13 Main oil pump overhauling has to be carried out & oil clearances of MOP bearings have to be set to design values. Renewal of MOP bearings have to be carried out. Taking the usual precautions, dowel pins have to be machined, holes reamed and fitted in. Alignment of MOP with HP rotor is to be carried out.
- 14 Overhauling, assembly and setting of barring gear, all control valves, ESVs, IVs and their servo motors, revisioning of cam shaft carriers and renewal of cams, couplings and pinions, if warranted. HPT control valve studs and cap nuts have to be renewed if warranted.
- 15 CVSM has to be overhauled and assembled after replacing the defective parts.
- 16 Overhauling, assembling and setting of all governing elements, which includes inspection and checking of "H" gap setting. Follow pilot and summation pilot valves positions to be checked and reset to design values. Taking the usual precautions, dowel pins have to be machined, holes reamed and fitted in. EGPV, intermediate pilot, speed governor pilot block, over speed striker's differentiator etc. have to be overhauled or replaced as per the requirement.

- 17 Perfect and uniform tightness of HPT/IPT parting planes, critical flanges of control valves ESVs, IVs, bearing covers, etc guidelines of M/s BHEL/ Hardwar may be followed. Overhauling, assembly and hydraulic testing of tube systems and setting of main ejector, nozzles and diffusers, if the test results deviate from the design values, they have to be renewed.
- 18 Overhauling and assembly of HP cylinder amortiser have to be carried out.
- 19 Oil flushing, bearing inspection and resuming of all bearing after flushing have to be carried out.
- 20 Renewal of HP,IP & LP Rotors with the spare rotors have to be carried out subject to availability and if necessary.
- 21 All machining works such as HPC,IPC nozzle segment machining, coupling bolts machining, HP, IP, LP diaphragms machining, bearing machining, oil guard machining, control valve bush and liner machining, gland box machining, ESVs sealing ring and spacer plate machining, and fabrication of minor spares such as keys, pin bolts, studs and nuts etc have to be carried out by the Contractor for which raw materials shall be supplied by the Board at no cost.
- 22 Loading, unloading and transporting of materials to workshop inside & outside for machining and back to site necessary vehicle for the same have to be arranged , its expenditure shall be borne by the Contractor.
- 23 For all welding work & Gouging works, including the casing cracks if any, required welding electrodes, TIG filler rod, Argon gas, DA & O₂ gas & gouging electrodes etc... have to be brought by the Contractor and all the in pass to be submitted to the Engineer –in charge of the work.
- 24 Natural frequency of LP & IP rotor blades have to be measured and corrective measures have to be drawn and executed without any additional cost.
- 25 Sleeves have to be inserted in the coupling holes of HP / IP /LP rotor if necessary for matching the holes on rotors. Machining of sleeves have to be done by the contractor.
- 26 Replacement of LP rotor satellite strips and lacing wires in IP & LP rotors if necessary.
- 27 Emergency governor has to be renewed if necessary.
- 28 Alumina blasting of HP / IP / LP rotor and all internals of HP/IP/LP turbine has to be carried out. For alumina blasting, all allied materials have to be arranged by the contractor. A temporary separate shed has to be fabricated to perform the above work for which iron and steel materials shall be supplied by the Board at no cost subject to availability. On completion of the work the shed should be dismantled and the drawn materials should be devoluted and the area to be cleaned thoroughly.
- 29 Inspection and rectification of hanger supports of steam pipe line.
- 30 The discrepancies noted in the simultaneous study of RLA study should be attended then

& there and outcome of RLA study should be implemented in the capital O/H itself.

- 31 All the defects noticed through RLA Study in the welding joints of steam pipe lines connected to HP/IP Turbine casing and critical welding joints in CRH, HRH steam Pipe line steam in Turbine side should be rectified by the company by standard procedure and to be ensured for healthiness by rechecking the joints.

Valve seats of HP control valves are to be checked for its looseness and corrective
- 32 measures are to be taken and renewal of valve seat if required without additional charge. Replacement of Liners of steam chest of HPCV1, 2,3 & 4 with the spare liners, if the clearance has crossed the allowable limits. Co-axial test have to be conducted and the steam chests are located accordingly by drilling & providing dowel pins before assembly.
- 33 All the components after alumina blasting and cleaning have to be handed over to RLA team for their analysis in coordination with that team. Handling of the equipments, removal of the end plugs of the rotors to facilitate RLA study and fitting back the same with liquid Nitrogen and the same may be arranged by the company.
- 34 Out of 2Nos EOT cranes available at TTPS, one EOT crane would be exclusively allotted for capital overhauling of TG set. The crane operator, mechanic & electrician required for the allotted EOT crane are under the contractor's scope.
- 35 After completion of Capital Overhauling, the EOT Crane should be handed over to the Board Engineer in good condition in all respects.
- 36 The competency of crane operator deployed by the contractor should be got approved by Executive Engineer / Electrical Maintenance.
- 37 If any repair works arises in EOT crane during execution of COH, the repair works should be carried out by the contractor at their cost.
- 38 The machine should be in continuous watch in dismantling condition for misfalling of any foreign materials into the casing, opening of Extractions and open pipe lines to avoid any untoward incidents while commissioning.
- 39 Separate workforce should be engaged by the contractor and the work should be completed as per the target by engaging the workmen round the clock for each / equipment as per the direction of Board Engineer in charge.
- 40 Any other minor works required to complete the Capital Overhauling of TG set have to be carried out by the contractor at no extra cost.
- 41 Replacement of turbine blades in turbine rotor encountered due to the condition of turbine internals after dismantling should be carried out within the stipulated period.
- 42 HP,IP ROTORS have to be renewed if required including all allied works and machining if any required has to be done by the contractor.
- 43 Re-blading of IP& LP rotor blades and its allied all works have to be carried out if required.

- 44 Slow speed balancing of IP & LP rotor have to be carried out if required as per site condition.

The Contractor should take much care so that after overhaul there should not be any steam leak (or) oil leak (or) HPT/IPT/LPT parting plane leak. Also the vibration level should be well within the limits prescribed by OEM. Any steam / oil leak in turbine system after completion of capital overhauling will be accounted as non completion of overhauling.

- 45
- 46 The entire work as specified above should be completed in all respects with in 35 days from B/G to B/G.
- 47 All the consumables required for the work is coming under contractor scope.
- 48 Machining of Thrust collar of IP rotor if required including arranging all machineries such as lathe, special tools etc., is coming under contractor's scope.
- 49 Machinig of Rivets required for IP & LP rotors re blading works are coming under contractor's scope.
- 50 All the special tools and machineries required for IP & LP rotor re blading and slow speed balancing are coming under contractor's scope.
- 51 Deputation of balancing team along with special tools etc., is under contractor's scope.
- 52 Balancing weight required for trim balancing activities is coming under contractor's scope including all allied works.
- 53 Tip seals renewal in HP & IP diaphragm have to be carried out including all works and materials.
- 54 High tension Bolt/Stud with nuts of various sizes such as M6, M12, M16, M20 and M24 are required for the work is under contractor's scope.
- 55 Various sizes of cotter pin required for coupling bolts, valve stem etc., is coming under contractor's scope.
- 56 Overhauling of LP bypass valves (L & R) and Main steam stop and its bypass valves are coming under contractor's scope.

Generator

- 57 Dismantling cleaning and assembly of brush gear including determination and termination of field cables with standard clearance. Fixing of new carbon brushes properly.
- 58 Taking measurements of the slip rings; changing the slip rings if necessary. Slip rings groove cutting and polishing work.
- 59 Disassembly and assembly of seals and bearings with setting proper clearances. Changing seal liners and bearings if necessary.

- 60 Disassembly of 4 Nos Hydrogen gas coolers and connected pipe lines. Removal of all gaskets and changing new gaskets. Conduction hydraulic test with standard pressure and re – Erection in the generator.
- 61 Disassembly and assembly of end shields with proper clearance.
- 62 Disassembly and assembly of bearings pedestals with proper alignment and clearance.
- 63 Decoupling and coupling of generator with proper alignment and clearance with LP Turbine.
- 64 Threading out and threading in of rotor with standard setting air gap and alignment with L.P Turbine checking magnetic centre.
- 65 Opening the Generator bottom man hole, inspection and cleaning inside the generator
- 66 Conducting purge test on the rotor (purge test kit under contractor's scope).
- 67 Gas tightness test of rotor and stator.
- 68 Checking all CC bolts and replacing if necessary. (Tools for releasing and thread cleaning on CC bolts under contractor's scope).
- 69 De magnetizing of rotor and conducting rotor impedance test.(De magnetizing kit under contractor's scope).
- 70 Rectification of seal collar of rotor at both ends.
- 71 Checking the retaining rings, rotor shaft; conducting Dye penetrating test on UT test.
- 72 Complete varnishing of rotor and maintaining IR value of the rotor. Painting the stator externally.
- 73 Checking the 6th & 7th bearings and changing if necessary.
- 74
 - a. Conducting ELCID test on stator ; core rectification work if required; complete wedge tightness of stator ; cleaning & varnishing of stator ; Bed bolts tightness checking for stator. Hot air blowing and improving PI value of stator for testing the stator.
 - b. Conducting Stator & Rotor Windings IR Value, PI and Tan delta Test
 - c. Measuring resistance of Stator and Rotor windings.
 - d. Conducting HV Test on Stator bushings on Phases & Neutral Side, Stator water bushing side
- 75 Checking the condition of fasteners of the stator core and winding and to rectify any abnormality.
- 76 Changing the stator water bushing gaskets; Conducting Hydraulic test on stator; checking the Teflon tubes and replacing if necessary.
- 77 Changing of phase and neutral side bushing gaskets, changing of gaskets in Turbine end & Exciter end ILI lines and all gas lines connected at generator bottom.
- 78 Complete overhaul of stator water system valves, cleaning primary coolers, conducting Hydraulic test, cleaning and changing of gaskets in expansion tank, checking the float valve operation; cleaning of mechanical filters, magnetic filter , ejector.

- 79 Complete overhaul of seal oil system valves , Hydraulic seal tank; checking level regulator, cleaning of damper tank, DPR, POR filters and injector.
- 80 Seal oil flushing and checking seal liner movement.
- 81 Any other repair and machinery works in connection with overhaul of generator such as machining works of bearings, sealing half rings etc.
- 82 All the measuring and testing kits, tools for works comes under the contractor's scope.
- 83 The Contractor should arrange the following consumables:
- a. Anabond 666.
 - b. SS sim 0.5mm to 2 mm Size.
 - c. Nonmagnetic cotter pin for Generator Rotor Fan guard
 - d. Nitrogen Gas.
 - e. Hylam insulating sheet suitable for generator 7th bearing pedestal.
 - f. Dr.Beck Insulating red Varnish and Enamel paint.
 - g. 500 watts and 1000 watts Halogen lamp fittings.
 - h. Rotor lifting wooden piece
 - i. Insulating Mica Tap, Fiber Glass Tap, PGAM Tap, Polyster Tap, 3mm polyster cord.
 - j. Nitrile rubber gasket 3,5 &10mm sizes, champion oil line gaskets 3&5mm,champion water line gasket 5mm.
 - k. Gland ropes and square rubber cords 10,12mm
 - l. Round rubber cords 10mm and O ring 6mm.
 - m. Rubber cord all sizes required for generator capital overhauling.
 - n. Silicone round rubber cord, insulating washer and sleeve
 - o. Asbestos cloth, gasket for H2 cooler turbine and excitation end.
 - p. Stator phase side terminal bushing, nutral side bushing, stator water bushing gasket and sealing washers.
 - q. CC bolt sealing washer and all T&P's including special tools for TG set overhauling,
 - r. Seal half ring for oil catchers
 - s. Acrylic sheet 12 mm size as view glass suitable for Seal oil system and Hydraulic seal tank level indicator.
- 84 The company should depute separate manager to handle generator area independently.
- 85 Generator overhauling is to be completed within capital overhauling period from the date of stopping of barring gear and handing over of site.

RLA AND LE STUDIES ON TURBINE STATIC COMPONENTS & AUXILIARIES

1 Scope of study

The scope of study mentioned below is indicative and in case the contractor felt necessary to include test/work, may do so to complete the Life Extension study.

The scope of study shall cover the following equipment/area:

- *Turbine Static components
- * ESVs , IVs and control valves
- *Main steam, Reheat, HPT/IPT Transfer pipe , HP/LP by pass pipe boiler feed water lines, drip lines, extraction and auxiliary steam lines and hanger supports in turbine maintenance division area
- * All governing components
- * Steam path audit
- * HP / IP / LP Rotors
- *All the welding joints in the MSL, CRH,HRH ,HP bypass, LP bypass (Left & Right) in turbine area

2 Non-Destructive tests

The non-destructive examinations/tests, inspections, checks to be carried out are broadly indicated as below. The scope of the tests/inspection may not be limited to these tests/inspections. The Contractor is free to add other tests/inspections also to judge the actual condition of the plant/equipment/component and to arrive at root causes of the deficiencies detected and correctly predict the residual life.

Visual Examination (VE)

Dimensional Measurements (DIM)

Dye-penetrant Examination (DPT)

Magnetic Particle Inspection (MPI)

Ultrasonic Examination (UT)

Eddy Current Test (ET)

Metallographic Replication including MS & HRH pipeline (RPL)

Hardness Measurement (HB)

In situ Chemical Analysis (CA)

Borosopic test for turbine rotors

Borosonic test for turbine rotors

Natural Frequency Test on Turbine Blades

Additional Test

The Contractor may suggest any additional tests which in their opinion shall be essential/necessary or advantageous in assessment of condition of the Turbine, their auxiliaries including Root cause analysis and prediction of remaining life without claiming any extra cost.

3 Evaluation and Analysis of Test Results

The Contractor shall carry out detailed evaluation of various tests/inspections/check performed by him to quantify the following information:

- *Extent of damage/level of flaw currently in the equipment/component
- *The rate of damage accumulation/flaw propagation
- *The extent of damage required (additional operating hours, cycles) to cause failure of the equipment/component

4 Root cause analysis

The Contractor shall submit the detailed root cause analysis in respect of the deficiencies/flaws in various power plant equipments, systems covered under the scope of study, indicating the reasons for their appearance. This will include identification of the potential root causes, verification process adopted to establish the actual root cause and also problems identified in the upstream/downstream systems, equipments/components.

5 Steam path audit

The steam path audit for identification and quantification of degradation in heat rate/efficiency of the Turbine resulting from changes in steam seal clearances, changes in flow surface roughness, flow path deposits, solid particle erosion etc... on stage by stage basis and component by component basis.

6 Cost Benefit Analysis

The Contractor shall clearly indicate the methodology adopted to arrive at specific recommendations in respect of various equipments/components covered under the scope of study. The various alternative considered and methodology adopted for evaluation of cost benefits as well as feasibility of implementation in respect of each alternative shall be clearly specified.

7 Responsibilities of Contractor

- *Contractor shall organise to dismantle the equipment under study, clean the components to the extent required for inspection, take measurements and record, and to assemble back the equipment
- *Contractor shall submit a detailed testing and inspection plan for non-destructive tests proposed along with testing procedure evaluation/analysis criteria and clearance/preparations required from the owner for the study. As far as possible, these procedures shall be based on Indian Standard/International Standards.
- *Contractor shall ensure deployment of state-of-the art equipment most appropriate for testing and analysis technique being employed. The list of the various equipments proposed to be used by the Contractor shall be submitted to the owner. The list must give the name, make and sensitivity/accuracy of the equipment together with consumables to be used.
- *Contractor shall be responsible for arranging all the equipments and consumable required during study/tests.
- *Contractor shall ensure use of calibrated equipment/instruments only. The calibration procedure followed must ensure the accuracy and reproducibility as per the Original Manufacturers Certification and shall be done by the authorised test laboratories personal. The calibration certificates shall be submitted to the Owner.
- *The personal/operators employed for performing various tests, checks and examinations shall have adequate qualification, knowledge and experience in their respective fields.

The non-destructive testing personnel performing visual, dye penetrant, eddy current, magnetic particle, ultrasonic, radiographic examinations shall be qualified and certified as minimum level-II in their respective fields in accordance with American Society of Non-Destructive Testing qualification and certification of NDT personnel or SNT-TC-IA. The Contractor shall provide a list of personnel to be employed for the tests along with their qualification to the owner.

- *Contractor shall carry out non-destructive tests on all the components as per the approved testing and inspection plan and submit the test results along with the report
- *The test results are to be analysed and evaluated using proper tools/Computer software to estimate remnant residual life. The test results along with details of calculation should be submitted along with the report to the owner on Completion of the study.
- *Contractor shall organise to take photograph of abnormalities/defective components and submit the same along with the report.

8 Schedule of study

The RLA and LE Studies are required to be carried out/completed during the planned, annual, capital overhaul of the unit. It is therefore necessary that all the inspections/testing activities are completed within the specified period so that commissioning schedule of the unit is adhered to.

Non destructive tests

- *The schedule of the tests to be performed should be decided appropriately by the Contractor in consultation with the owner to ensure that it corresponds with the opening of the equipment and is completed within the available time frame.
- *Evaluation of the test results/Preliminary Reports Contractor shall clearly specify the time frame within which the evaluation of the test/inspection results shall be completed and preliminary reports submitted.
- *Test schedule with macro (system wise) and component/equipment wise schedule shall be submitted by the Contractor at least seven (7) days before start of test at site i.e., on or before stopping of barring gear along with list of testing and their calibration certificates.

9 Recommendation and Deliverables

Root Cause Analysis

Test Results and analytical predictions

Run/Repair/Replace Recommendations

The Contractor shall furnish the following details in support of each run, repair and replace recommendations made in respect of the various power plant equipments and critical components covered under the study:

RECOMMENDATIONS (IN RESPECT OF ALL MAJOR POWER PLANT EQUIPMENTS / COMPONENTS COVERED UNDER THE STUDY) WHETHER THE PLANT CAN RUN WITH THE COMPONENT IN ITS PRESENT CONDITION OR THE COMPONENT REQUIRE IMMEDIATE REPAIRS OR THE COMPONENT NEEDS TO BE REPLACED IMMEDIATELY / AFTER CERTAIN TIME PERIOD.

Back up information justifying the above information as stated below:

Analytical tools used for analysing the residual life/condition assessment and the report for same.

Source/methodology for generation of data in respect of material properties allowable stresses, material constants, excursions in temperatures and pressures etc...

Major assumptions made in the analysis

Conclusions based on the above analysis

Cost benefit Analysis

- 1.Improvement/change in O&M practices
- 2.The Contractor during the course of the study shall identify the deficiencies, if any, in the O&M practices that might have resulted in the initiation / propagation of flaws and deficiencies in equipment/components. Accordingly, necessary recommendations shall be given regarding improvement in operation and maintenance (preventive, predictive) practices and re-inspection intervals for various power plant components.
- 3.Up gradation in safety and environmental practices.
- 4.The Contractor, during the course of the study shall identify the deficiencies in prevailing environment and safety practices and suggest remedial action in case any deficiency is noticed.

Final Report

Contractor shall analyse the results of various tests conducted, findings and observations and submit 10 sets of final report to the owner.

The final report shall consist of:

- a. **RECOMMENDATIONS (WITH DETAILED SPECIFICATIONS) FOR UPGRADATION / REFURBISHMENT/ REPAIR/REPLACEMENT/RETROFIT ALONG WITH COST BENEFIT ANALYSIS, EQUIPMENT WISE AND EXPECTED IMPROVEMENT IN TERMS OF PLANT AVAILABILITY, PLANT LOAD FACTOR, MW GENERATION AND EFFICIENCY.**
- b. Examination reports of all Non-Destructive tests carried out in field as well as in Laboratory. These reports shall be properly identified so that these could be easily correlated to the component, location and stage of test, preferably all NDT reports shall be supplemented with location sketch and a colour photograph.
- c. Details of fundamental techniques, equations and tools/techniques used in evaluation and analysis of the test results for the purpose of residual life/condition assessment.
- d. All material properties, stress analysis results, fracture mechanics calculations, inputs and assumption used in the analysis.
- e. The report should contain recommendations for future inspection plan for critical components and its periodicity, suggestions for improvement on O&M practices.
- f. Justification of all assumptions made in the analysis.
- g.The final report should be formatted/presented in such a manner that all the data, back-up information could be easily correlated with the assessment / evaluation / predictions made.

- h.** Daily programme and progress report (3 copies) shall be submitted during testing at site to owner/retainer consultant. The minor defects noticed during RLA study shall be reported to the owner so as to rectify the same at the time of capital overhaul itself.
 - i.** Preliminary inspection and analysis results shall be provided to the owner within week after completion of the individual inspections/examinations. Original copies of all other data and records that are used or could be used for defect evaluation shall become the property of the owner and shall be included in the preliminary report and in the final report.
 - j.** Within 20 working days of the last test/examination on the Turbine and piping components, the Contractor shall submit 10 copies of a Quality Assurance reviewed draft report for review by the owner. Subsequent to the owner's review (20 working days), the Contractor shall submit 10 copies of final report within 10 working days.
 - k.** A summary of findings, recommendations, and results of analysis, description of current condition, and predicted remaining life of each component shall be submitted by the Contractor. The description shall contain the reason or justification for the recommendation for each component.
- l.** Visual Inspection (VE) results shall be described with location sketches and Photographs (original) in each report.

List of Tests/Inspections/Checks to be carried out on Turbine and its auxiliaries

SI No	Components/location	VE	DIM	DPT	MPI	UT	ET	RPL	CA	HB	BS	BSN
1	HP /IP /LP Rotors	X	X	X	X	X	X	X	X	X	X	X
1	MS / RH/HPT-IPT transfer pipe/HP-LP by pass Steam pipes & bends and hanger supports.	X		X	X	X		X	X	X		
1	M.S.Pipes (L)	X		X	X	X		X	X	X		
2	M.S.Pipes ®	X		X	X	X		X	X	X		
3	HRH Pipes (L)	X		X	X	X		X	X	X		
4	HRH Pipes ®	X		X	X	X		X	X	X		
5	CRH Pipes (L)	X		X	X	X		X	X	X		
6	CRH Pipes ®	X		X	X	X		X	X	X		
7	HPT Transfer pipe (L)	X		X	X	X		X	X	X		
8	HPT Transfer pipe ®	X		X	X	X		X	X	X		
9	IPT Transfer pipe (L)	X		X	X	X		X	X	X		
10	IPT Transfer pipe ®	X		X	X	X		X	X	X		
11	HP By pass pipe (L)	X		X	X	X		X	X	X		
12	HP By pass pipe ®	X		X	X	X		X	X	X		
13	LP By pass pipe (L)	X		X	X	X		X	X	X		
14	LP By pass pipe ®	X		X	X	X		X	X	X		

<u>List of Tests/Inspections/Checks to be carried out on Turbine and its auxiliaries</u>												
SI No	Components/location	VE	DIM	DPT	MPI	UT	ET	RPL	CA	HB	BS	BSN
II	ESV/IV (Steam side) – Body	X		X	X	X		X	X	X		
1	ESV (L)	X		X	X	X		X	X	X		
2	ESV I	X		X	X	X		X	X	X		
3	IV (L)	X		X	X	X		X	X	X		
4	IVI	X		X	X	X		X	X	X		
III	Stem & Bushing (ESV/IV)	X	X	X	X							
1	ESV (L)	X	X	X	X							
2	ESV I	X	X	X	X							
3	IV (L)	X	X	X	X							
4	IVI	X	X	X	X							
IV	Valve cone & seat (ESV/IV)	X		X	X							
1	ESV (L)	X		X	X							
2	ESV I	X		X	X							
3	IV (L)	X		X	X							
4	IVI	X		X	X							
V	Strainer body of ESV/IV/ HPT CV ₁	X		X	X	X		X				
1	ESV (L)	X		X	X	X		X				
2	ESV I	X		X	X	X		X				
3	IV (L)	X		X	X	X		X				

List of Tests/Inspections/Checks to be carried out on Turbine and its auxiliaries												
SI No	Components/location	VE	DIM	DPT	MPI	UT	ET	RPL	CA	HB	BS	BSN
4	IVI	X		X	X	X		X				
5	HPT CV ₁	X		X	X	X		X				
VI	Strainer element of ESV/IV/ HPT CV ₁	X		X								
1	ESV (L)	X		X								
2	ESV I	X		X								
3	IV (L)	X		X								
4	IVI	X		X								
5	HPT CV ₁	X		X								
VII	CV HP/IP (steam side)-Body	X		X	X	X		X	X	X		
1	HPT CV ₁	X		X	X	X		X	X	X		
2	HPT CV ₂	X		X	X	X		X	X	X		
3	HPT CV ₃	X		X	X	X		X	X	X		
4	HPT CV ₄	X		X	X	X		X	X	X		
5	IPT CV ₁	X		X	X	X		X	X	X		
6	IPT CV ₂	X		X	X	X		X	X	X		
7	IPT CV ₃	X		X	X	X		X	X	X		
8	IPT CV ₄	X		X	X	X		X	X	X		
VIII	Stem & Bushing CV HP/IP	X	X	X	X							
1	HPT CV ₁	X	X	X	X							

List of Tests/Inspections/Checks to be carried out on Turbine and its auxiliaries

SI No	Components/location	VE	DIM	DPT	MPI	UT	ET	RPL	CA	HB	BS	BSN
2	HPT CV ₂	X	X	X	X							
3	HPT CV ₃	X	X	X	X							
4	HPT CV ₄	X	X	X	X							
5	IPT CV ₁	X	X	X	X							
6	IPT CV ₂	X	X	X	X							
7	IPT CV ₃	X	X	X	X							
8	IPT CV ₄	X	X	X	X							
IX	Valve cone & seat CV HP/IP	X		X	X							
1	HPT CV ₁	X		X	X							
2	HPT CV ₂	X		X	X							
3	HPT CV ₃	X		X	X							
4	HPT CV ₄	X		X	X							
5	IPT CV ₁	X		X	X							
6	IPT CV ₂	X		X	X							
7	IPT CV ₃	X		X	X							
8	IPT CV ₄	X		X	X							
X	-Girth welds CV HP/IP	X		X	X			X				
1	HPT CV ₁	X		X	X			X				

List of Tests/Inspections/Checks to be carried out on Turbine and its auxiliaries

SI No	Components/location	VE	DIM	DPT	MPI	UT	ET	RPL	CA	HB	BS	BSN
2	HPT CV ₂	X		X	X			X				
3	HPT CV ₃	X		X	X			X				
4	HPT CV ₄	X		X	X			X				
5	IPT CV ₁	X		X	X			X				
6	IPT CV ₂	X		X	X			X				
7	IPT CV ₃	X		X	X			X				
8	IPT CV ₄	X		X	X			X				
9	Turbine casing L/H & U/H	X	X	X	X	X		X		X		
10	- casing welds	X		X	X			X				
11	- Inlet nozzles chamber & nozzle box	X		X	X			X		X		
12	- Flange Ligaments	X		X	X							
13	Lub oil holes in pedestals	X		X								
14	Turbine internals – Liner	X	X	X	X			X		X		
15	- Steam flow path audit	X	X									
16	- Diaphragm	X	X	X	X			X	X	X		
17	- Gland casing	X	X	X	X					X		
18	Cross over pipe	X		X								
19	Stationary blades of HP/IP/LP	X		X	X	X	X					

List of Tests/Inspections/Checks to be carried out on Turbine and its auxiliaries

SI No	Components/location	VE	DIM	DPT	MPI	UT	ET	RPL	CA	HB	BS	BSN
18	CV Servo Motor	X	X									
19	ESV/IV servomotor	X	X									
20	Emergency governor	X	X									
21	Emergency Gov. pilot valve	X	X									
XII	Journal Bearings & Thrust pads	X	X	X		X						
1	TG Bearing No: 1	X	X	X		X						
2	TG Bearing No: 2	X	X	X		X						
3	TG Bearing No: 3	X	X	X		X						
4	TG Bearing No: 4	X	X	X		X						
5	TG Bearing No: 5	X	X	X		X						
6	TG Bearing No: 6	X	X	X		X						
7	TG Bearing No: 7	X	X	X		X						
8	Working pads	X	X	X		X						
9	Surge pads	X	X	X		X						
10	Seal liner – TE	X	X	X		X						
11	Seal liner - EE	X	X	X		X						

" X " DENOTES THE TYPE OF TESTS TO BE CARRIED OUT ON THE COMPONENTS

List of Tests/Inspections/Checks to be carried out on Turbine Static Components and its auxiliaries												
List is indicative only and bidders/consultants need to substantiate it wherever necessary, to ascertain health of the component/equipment												
SI No	Components/location	VE	DIM	DPT	MPI	UT	ET	RPL	CA	HB	BS	BSN
(i)	HP / IP / LP Rotors	X	X	X	X	X	X	X	X	X	X	X
1	MS / RH/HPT-IPT transfer pipe/HP-LP by pass Steam pipes & bends and hanger supports.	X		X	X	X		X	X	X		
2	ESV/IV (Steam side) - Body	X		X	X	X		X	X	X		
3	-Stem & Bushing	X	X	X	X							
4	-Valve cone & seat	X		X	X							
5	Strainer body of ESV/IV/ HPT CV ₁	X		X	X	X		X				
6	-Strainer element	X		X								
7	CV HP/IP (steam side)-Body	X		X	X	X		X	X	X		
8	-Stem & Bushing	X	X	X	X							
9	- Valve cone & seat	X		X	X							
10	- Girth welds	X		X	X			X				
11	Turbine casing L/H & U/H	X	X	X	X	X		X		X		
12	- casing welds	X		X	X			X				
13	- Inlet nozzles chamber & nozzle box	X		X	X			X		X		
14	- Flange Ligaments	X		X	X							

Special Conditions

1 The Tenderer should visit the site and assess the volume and nature of work thoroughly and go through the specification in details before quoting the rate.

2 The Contractor who offers for Capital Maintenance of 210 MW TG set must possess the following infrastructure:

a. FIELD ENGINEERING SERVICE: A team of Engineers who are fully qualified with thorough knowledge in LMW Turbine should visit the site at the time of actual period of overhaul to have spot study of the TG set internals and to suggest suitable remedial measures to guarantee trouble-free performance of TG set for a minimum period of 1 year.

b. The Contractor should possess required R&D division to monitor the performance of the overhauled TG set.

c. The Contractor should have capacity to conduct pre-overhaul study and all deviated parameters from the design values like steam flow, vacuum etc. should be improved after overhaul.

d. The key personnel (site in charge) actually deputed for Capital Maintenance of TG set should have minimum ten years of experience in doing Capital maintenance of 210 MW LMW TG set.

e. The site in charge deployed by the contractor should have powers to take decision on Technical & Commercial aspects on the spot for execution of capital overhaul work and RLA study work within 3 hours on noticing the problem and site incharge should not be changed till the completion of work.

f. Adequate No. of personnel required round the clock for various works should be deployed as below:

Turbine : One engineer and two Technical supervisors

Turbine valves & ejectors : One engineer and two Technical supervisors

Governing system : One engineer and two Technical supervisors

Generator : One engineer and two Technical supervisors

Seal oil system & SW system : One Technical supervisor

g. Adequate No. of personnel should be deployed at site during the entire period of overhaul. If any one has to leave the site due to unforeseen circumstances he should be released only on deployment of suitable substitute in his place. Please note that the work should not slip at any cost.

3 The Contractor must be in a position to attend to defects that may be noticed after opening the Turbine.

4 The Contractor should possess experienced bracer and IBR welder to carry out the LP rotor blade stellite strip replacement and TIG welder for HP welding joints. (valid IBR welder certificate for carrying out Alloy Steel welding works issued by Director of Boiler Tamil Nadu have to be furnished to the engineer in charge of work).

- 5 Sleeves have to be inserted in the coupling holes of HP/IP/LP rotors if necessary.
- 6 The Contractor should carry out all the feed backs received from similar TG sets and M/sBHEL during the time of overhaul, if necessary.
- 7 The Contractor should engage sufficient skilled and experienced workmen in order to avoid any delay in the works and complete the works as per the planned schedule. The Executive Engineer, at his discretion, may turn down any person who is found unfit to work.
- 8 The Contractor should adhere to all safety precautions & statutory provisions for the workmen he engage & necessary insurance and labour licence should be taken. The Board cannot be responsible for any accidents due to carelessness of the Contractor/workers.
- 9 As per the safety regulation, LPG should never be used in place of DA gas. If LPG usage has been found, the awarded work will be suspended and penalty of Rs. 500/- will be recovered from the Contractor's bill and the contract is liable for cancellation.
- 10 For any damage to the installations or equipments during working the contractor should be solely responsible and the cost of damaged part is liable for recovery.
- 11 Electricity, water, air shall be made available to the contractor for Board works at free of cost. Arrangements for tapping at a single point near work spot should be made out of his own cost.
- 12 Only 24 V hand lamps should be used and 230V supply should not be used.
- 13 High temperature lubricating compounds and Anti seize compounds and high temperature jointing pastes for metal surfaces are under the scope of contractor.
- 14 All sizes of rubber cords and other consumables and facilities are to be arranged by the contractor
- 15 The contractor shall have to arrange the following consumables
 - 15.1 Cleaning agents, Dye – Penetrant test chemicals, rust remover, All special type and general purpose welding electrodes of D&H, L&T make etc, grinding wheels etc. for welding of spindle leak off line etc, gouging rods, lapping paste, liquid nitrogen, cutting gas, Organ gas, DA gas,O2 gas and TIG sets for welding of bosses at the unsoldered wires, silver brazing rods and sliver brazing foil for stellite strip brazing (stellite strips shall be supplied by board at free of cost) & brazing of lacing wires of 23 stage, Rupatem Flux, stag-B, alumina for alumina blasting, Holdite, Ananbond Jointing sheets - Compressed asbestos fibre Sheet, Metallic/Non metallic, Rubber, Neoprene, PVC gaskets etc.
 - 15.2 High temperature lubricating compounds, High temperature Anti seize Compounds.
 - 15.3 High temperature jointing compounds for the casings of HPT /IPT(stag-B).

- 16 All consumables including liquid nitrogen required for the work should be brought by the contractor.
- 17 The Contractor should guarantee for the better performance of TG set for a minimum period of 1 year.
- 18 If any defect has been noticed after overhaul, it should be attended by the Contractor at no cost.
- 19 The Contractor should bring all required tools and plants to do arc welding, TIG welding, gas cutting, grinding, drilling, reaming, honing etc... Necessary torque wrench, induction heating equipments, all measuring/testing instruments and other tools required for overhaul has to be brought by the Contractor. Facility such as EOT crane shall be extended by the Board at no cost. However operator and mechanic for EOT crane is to be provided by the contractor at their cost.
- 20 Drawal of materials from stores/sub stores and devolution of materials to stores/sub stores and necessary vehicle for the same should be arranged by the Contractor. Materials and spare required for the works for everyday programme should be infixed one day before the execution of work so as to arrange by the Board Engineer.
- 21 Cleaning waste, old gasket, scrap, food pockets, etc... should be collected in a separate dust bin and disposed off daily to the area indented for it.
- 22 **Time Schedule:** The work should be completed in all respects within 35 days from the date of stopping of barring gear to starting of barring gear.
- 23 The company should submit a micro plan with necessary pert / Bar chart to complete the work in all respects within 35 days from B/G to B/G before the commencement of works. The Bar chart shall be submitted to the Engineer well in advance before stopping of the Unit for Capital Overhauling.
- 24 All scaffolding materials & packing materials works have to be arranged by the Contractor. Scaffolding materials shall be arranged by the contractor.

The Contractor shall be responsible for the work of Capital Maintenance of 210 MW LMW Turbine of Unit-II. The omission of specific reference to any of the activity connected in the execution of the Work which is necessary for proper execution/completion of above work shall not relieve the contractor of his responsibility to complete the work at no extra cost.
- 25
- 26 For identification & rectification of any critical problem, the Contractor should arrange visit of experts without any extra cost and without affecting the overhaul schedule.
- 27 The quantities to be indicated in the acceptance letter will be tentative and quantities may vary based on site condition.
- 28 Payment will be made for the actual quantities of the work carried out.
- 29 The daily program and the labour report shall be furnished to TANGEDCO and daily progress shall be recorded and reviewed on daily basis.
- 30 Overhaul report in triplicate covering all works undertaken, modification/correction carried out, should be submitted at the time of commissioning itself. All the readings

recorded during dismantling and assembling should be recorded in the form of protocol signed by TANGEDCO and contractor and submitted to TANGEDCO.

- 31 The protocol shall contain the report of before and after the overhaul study of the unit, & improvement in performance of the turbine in terms of heat rate and Turbine efficiency.
- 32 The contractor should carry out all preliminary works such as matching of bearings with HP , IP & LP rotors, arrangement for alumina blasting, drawl and bearings with arranging of required spares etc... before commencement of overhaul.
- 33 Mobilizing all T & Ps especially induction heating equipment, torque wrenches, co.axiality testing kit, etc... in time to match the overhaul schedule.
- 34 Mobilization of full strength of labour shall be done at least 2 days before start of work.
- 35 All machining works have to be arranged then and there so as to avoid any delay in the overhaul schedule.
- 36 Highly skilled and experienced Engineers/Technicians have to be deployed for all works especially for renewal of HPC / IPC nozzle segment etc... for high accuracy and fitment.
- 37 No accommodation shall be provided for the Engineer, Technicians & workers, since vacant quarters are not available. The company has to arrange on its own for their stay and Boarding etc at Tuticorin.
- 38 The Contractor who offers for RLA of 210 MW TG set must possess the following infrastructure:
 - a. The key personnel actually deputed for RLA of TG set should have previous experience in doing RLA of 210 MW LMW TG set.
 - b. The minimum No. of personnel required round the clock for various works should be deployed as below:

RLA study of Turbine: Full fledged gang with sufficient Manpower complete the RLA study within 10 days.
- 39 The Contractor should bring all required testing instruments and other tools required for RLA study has to be brought by the Contractor
- 40 The Contractor can collect the necessary details for RLA study such as History of plant, O&M manual, operational records, plant layout, etc... from the owner.
- 41 Vehicles / cranes / loading and unloading of Turbine Spares from Central Stores to Work spot and devolution of Turbine Spares from Workspot to Central Stores will be borne by the contractor.
- 42 Conveyance facilities up to the work spot for Transport the labours round the clock should be arranged and borne by the contractor.
- 43 One vehicle with driver will be available round the clock at TTPS to meet out any emergencies.

- 44 The work should be carried out in a planned manner round the clock, so as to avoid the idling of labours etc.
- 45 Test certificate for all T&P's required for the works should be obtained from competitive authority before availing the gate inpass.
- 46 Vendor subletting should be approved by the competitive authority (ie from Chief Engineer / TTPS) well in advance before commencement of work and qualified sub vendors should be engaged.
- 47 All safety measures of TTPS should be followed by the contractor.
- 48 Sub contractors labour identity card should be issued by the concerned company and the copy of the pass should be submitted to the engineer in charge before availing the gate inpass.
- 49 Proper care should be taken while operating the crane, so as to avoid any untoward incidents.
- 50 The Contractor shall conduct survey of the various equipments while in operation to ascertain the condition of the machine and to identify problem area for detailed analysis.
- 51 The Contractor shall be responsible for the work of RLA study & LE works of 210 MW LMW Turbine of Unit-II. The omission of specific reference to any of the activity connected in the execution of the work which is necessary for proper execution/completion of above work shall not relieve the contractor of his responsibility to complete the work at no extra cost.
- 52 The RLA Study should be commenced immediately after the completion of all dismantling and alumina blasting, cleaning works, preliminary report should be submitted within 10days after starting the RLA Study.
- 53 The contractor should engage antecedent labours on the works. If the labours engaged in antecedent activities the company will be the whole responsibility.

The contractor is solely responsible for men and material engaged on the work. ie the
- 54 HP, IP & LP turbine spares, internals and externals any spares for materials found to be lost during the overhauling period the company will be whole responsible.
- 55 The work should not be stopped at any cause for want of any approval from the competitive authorities. In that case the work shall be continued without waiting.
- 56 For communication purpose the contractor should make their own arrangements.
- 57 Extreme care should be taken while dismantling the materials during overhauling so as to reuse all the materials, if damaged the same should be rectified by the contractor at free of cost.
- 58 If any major work arises at the time of overhauling will be treated as separate work, the contract for the work will be finalised as per TANGEDCO norms, the contractor should not relieved of their responsibility due to arrisal of extra work being carried out within the period of Overhaul.
- 59 Since, the overhauling works and RLA study works are being carried out by a single agency, both the works should be carried out parallely without idling time.

- 60 The sub vendor should possess valid ESI and EPF for the labours engaged in the work for the prescribed period.
- 61 The staff and labours engaged in the work should wear respective personnel protective element required for the work. The workers should be skilled, physically and mentally abled workers should only be employed and at any time Executive Engineer/Turbine Maintenance - I has the power to disapprove any worker seeing his quality.
- 62 The contractor should produce the list of workers along with designation and obtain labour license from the Inspectorate of Factories, Tuticorin as per clause 21.0.
- 63 Since the TTPS is come under ESI coverage area , the contractor should produce ESI code number, before commencing the work.
- 64 The contractor should produce evidence for the remittance of ESI contribution of both employees and employer and also the contractor should produce split up details of ESI contribution of workers engaged in TTPS as per the format below before claiming the bill.

STATUTORY COMPLIANCES

A) General

- 1) The Contractor shall employ labour in sufficient numbers to maintain the required rate of progress and of quality to ensure workmanship of the degree specified in the Contract and to the satisfaction of the Engineer-in-Charge. The Contractor shall not employ in connection with the Works any person who has not completed his eighteen years of age.
- 2) The Contractor shall pay to labour employed by him either directly or through digital transfer. The wages should not be less than fair wages as defined in the current PWD Schedule rates (or) Minimum Wages Act (if applicable).
- 3) The Contractor shall in respect of labour employed by him comply with or cause to be complied with the Contract Labour Regulations in regard to all matters provided therein.
- 4) The Contractor shall comply with the provisions of the payment of Wages Act, 1936, Minimum Wages Act, 1948, Employers' Liability Act, 1938, Workmen's Compensation Act, 1923, Industrial Disputes Act, 1947, Maternity Benefit Act, 1961, Employees Provident Fund & Miscellaneous Provisions Act, 1952, Employees State Insurance Act, 1948, Payment of Bonus Act, 1965 and Mines Act, 1952, Contract Labour Regulation & Abolition Act, 1970 or any modifications thereof or any other law relating thereto and rules made thereunder from time to time.
- 5) The Engineer-in-Charge shall on a report having been made by an Inspecting Officer as defined in the Contractors Labour Regulations have the power to deduct from the money due to the Contractor any sum required or estimated to be required for making good the loss suffered by a worker or workers by reason of non-fulfillment of the Conditions of the Contract for the benefit of workers, non-payment of wages or of deductions made from his or their wages which are not justified by the terms of the Contract or non-observance of the said Contractors Labour Regulations.
- 6) The Contractor shall indemnify the Corporation against any payments to be made under and for observance of the Regulations aforesaid without prejudice to his right to claim indemnity from his sub- contractors. (if permitted)
- 7) In the event of the Contractor committing a default or breach of any of the provisions of the aforesaid Contractors Labour Regulations as amended from time to time or furnishing any information or submitting or filling any Form/ Register/ Slip under the provisions of these

Regulations which is materially incorrect then on the Report of the Inspecting Officers as defined in the Contractors Labour Regulations the Contractor shall without prejudice to any other liability pay to the Corporation a sum not exceeding Rs. 50.00 as liquidated damages for every default, breach or furnishing, making, submitting, filling materially incorrect statement as may be fixed by the Engineer-in-Charge and in the event of the Contractor's default continuing in this respect, the liquidated damages may be enhanced to Rs. 50.00 per day for each day of default subject to a maximum of ten percent of the estimated cost of the Works put to tender. The Engineer-in-Charge shall deduct such amount from bills or security deposit of the Contractor and credit the same to the Welfare Fund constituted under Regulations. The decision of the Engineer-in-Charge in this respect shall be final and binding.

B) Safety Condition

1. All the relevant personal protective equipments like safety helmets, safety shoes, safety belt, goggles, nose mask, face mask, dust respirator, asbestos sult, apron, leg guards, rubber gloves, face shield hand sleeves, ear plug, ear muff, fiber helmet, fall net etc., should be supplied by the contractors to their workmen and ensure for proper usage by their workers without fail. Non compliance of the above will invite penalty.
2. Proper welding machines with accessories such as ELCB/RLCB/RRB, good and sound construction of hand tools, power tools such as grinding machines, cutting machines, chipping tools, scaffolding materials, etc., should be used. Proper earthing to be provided wherever necessary.
3. The contractor shall not allow his workmen to wear loose garments, like lungies, dhotis, watches, loose jewels and bangles, etc., while at work and smoke cigarettes, beedies etc., inside the power house premises.
4. The contractor shall ensure that his workmen to wear tight full or half pant while at work inside the powerhouse premises.
5. Technically skilled and also safety-oriented supervisor should supervise the work at all time.
6. If any accident occurs, it should be informed to the concerned officer of TANGEDCO in writing by the concerned contractor immediately.
 - a) In case of any accidents/ injuries to the contract workers takes place due to non supply (or) Non –ISI standard safety equipments or due to careless working or due to improper handling of the equipment/ tools the same shall be at the risk and cost of the contractor only. TTPS will not be responsible in any way either legally or financially to the same and the contractor will have to pay compensation to his labourer in such cases.
7. For any safety violation and non-compliance of the statutory provisions and rules, the contractor is sole responsible and the contractor is liable for any prosecution and imposition of penalty as per the rules in force.
 - a) Every opening in floor of a building or in a working platform shall be provided with suitable means to prevent fall of persons or materials by providing suitable fencing or railing with a minimum height of 1 meter.
 - b) All practical steps shall be taken to prevent danger to persons employed, from risk or fire or explosion, or flooding. No floor, roof, or other part of a building shall be so overloaded with debris or materials as to render it unsafe.
8. All necessary personal safety equipment as considered adequate by the Engineer-in-Charge shall be available for use of persons employed on the Site and maintained in a condition suitable for immediate use; and the Contractor shall take adequate steps to ensure proper use of equipment by those concerned.
9. When workers are employed in sewers and manholes, which are in use the Contractor shall ensure that manhole covers are opened and manholes are ventilated at least for an hour before workers are allowed to get into them. Manholes so opened shall be cordoned off with suitable railing and provided with warning signals or boards to prevent accident to public.

10. No paint lead or lead products shall be used except in the form of paste or readymade paint. Suitable face masks shall be supplied for use by workers when paint is applied in the form of spray or a surface having lead paint dry rubbed and scrapped.
11. Use of hoisting machines and tackle including their attachments, anchorage and supports shall conform to the following :–
 - a) The load test certificate issued by the competent person should be produced to the concerned Field Engineer before commencement of work for contractors T&P like chain blocks, Wire ropes, slings and shackles.
 - b) These shall be of good mechanical construction, sound material and adequate strength and free from patent defects and shall be kept in good working order and properly maintained.
 - c) Every rope used in hoisting or lowering materials or as a means of suspension shall be of durable quality and adequate strength, and free from patent defects.
 - d) Crane/ JCB/ Tower Crane and other lifting machines should be used with fitness certificate issued by the competent person.
12. The Contractor shall at his own expense arrange for the safety provisions as appended to these conditions or as required by the Engineer-in-Charge, in respect of all labour directly employed for performance of the works and shall provide all facilities in connection therewith. In case the Contractor fails to make arrangements and provide necessary facilities as aforesaid, the Engineer-in-Charge shall be entitled to do so and recover the cost thereof from the Contractor.
13. Failure to comply with Safety Code shall make the Contractor liable to pay to the Corporation as liquidated damages an amount not exceeding Rs. 50.00 for each default or materially incorrect statement. The decision of the Engineer-in-Charge in such matters based on reports from the Inspecting Officers as defined in the Contract Labour Regulation as appended to these conditions shall be final and binding and deductions for recovery of such liquidated damages may be made from any amount payable to the Contractor.
14. All scaffolds, ladders and other safety devices mentioned or described herein shall be maintained in a safe condition and no scaffold, ladder or equipment shall be altered or removed while it is in use. Adequate washing facilities shall be provided at or near places of work.
15. These safety provisions shall be brought to the notice of all concerned by display on a notice board at a prominent place at the work spot. Persons responsible for ensuring compliance with the Safety Code shall be named therein by the Contractor.
16. To ensure effective enforcement of the rules and regulations relating to safety precautions, arrangements made by the Contractor shall be open to inspection by the Engineer-in-Charge or his representatives and the Inspecting Officers as defined in the Acts/Rules applicable.
17. The Contractor is not exempted from the operation of any other Act or Rule in force.
18. The contractor shall indemnify TANGEDCO against all actions, suit, claim, compensation towards accidents/ death, cost of expenses arising in connection with injuries suffered by persons employed by the contractor whether under the general law of ESI scheme & EPF scheme or any other statutory in force during the period of contract/ and to undertake steps properly to insure against any claims there under.
19. For any Safety violation and non-compliance of the statutory acts and rules prescribed respectively under Factories act 1948 and TNF Rules 1950 made there under the contractor is solely liable for the imposition of penalty. It is to be clearly understood by the contractor that as per the section 101 of the Factories Act, where the occupier and or the manager of TTPS is charged by the officials of the factories inspectorate with offence punishable under the factories act 1948 and TNF rules 1950 for any safety violation by the contractor and his workmen while working, the concerned contractor shall be charged as the actual offender and brought before the court at the time appointed for hearing the

charge and shall be convicted of the offence and the occupier and the manager of TTPS will be discharged from liability under this Act, in respect of such offence.

20. The contractor is fully responsible for any compensation arising during execution of works and safety precautions have to be taken to avoid any accidents. In case of accidents the compensation have to be borne by the contractor. Deductions as necessary will be made the rules and regulations bill until the contractor arranges to settle the claim for accidents as per the rules and regulations of the workmen's compensation act.
21. As per the safety regulations, domestic LPG should never be used in place of DA Gas. If domestic LPG usage has been found, the awarded work will be suspended and penalty of Rs.500/- will be recovered from the contractors bill and the contract is liable for cancellation.
22. For lighting up gas cutting torches, the contractor should use only gas lighter and should not use unscientific methods or rope burning or wood burning or welding arc method. Back Fire Arrester should be provided in the cutting set.

C) The Contract Labour (Regulation & Abolition) Act 1970 & Rules 1975 and Inter- State Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979 & Rules 1983.

1. The Contractor who take up works contract for TANGEDCO /TANTRANSCO should deploy sufficient number of workmen for the work and the contractor should deploy 20 or more workmen on a day of emergency (or) in necessity.
2. The Contractors should comply with all the provisions of the Contract Labour (Regulation & Abolition) Act, 1970 and Tamilnadu Contract Labour (Regulation & Abolition) Rules 1975 as modified from time to time and shall also indemnify TANGEDCO/TANTRANSCO from all and against any claims under the aforesaid Act and the Rules. The contractors should also submit the copy of the labour licence before executing the works.
3. The Contractors who desires to engage the migrant workmen (workmen from other states) for the works contracts of TANGEDCO/TANTRANSCO is required to comply with all the provisions of the Inter-State Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979 and Tamilnadu rules, 1983 as modified from time to time and shall also indemnify TANGEDCO/TANTRANSCO from all and against any claims under the aforesaid Act and the Rules, The contractors should also submit the copy of the migrant labour licence before executing the works.
4. Notice of commencement: The Contractor shall, within SEVEN days of commencement of the work, furnish in writing to the Inspecting Officer of the area concerned the following information :
 - i. Name and situation of the work.
 - ii. Contractor's name and address.
 - iii. Particulars of the Department for which the work is undertaken
 - iv. Name and address of sub-contractors as and when they are appointed.
 - v. Commencement and probable duration of the work.
 - vi. Number of workers employed and likely to be employed.
 - vii. 'fair wages' for different categories of workers.
 - viii. Number of hours of work which shall constitute a normal working day:-
 - ix. The number of hours which shall constitute a normal working day for an adult shall be NINE hours. The working day of an adult worker shall be so arranged that inclusive of intervals, if any, for rest it shall not spread over more than twelve hours on any day, when an adult worker is made to work for more than NINE hours on any day or for more than FORTY EIGHT hours

in any week he shall, in respect of overtime work, be paid wages at double the ordinary rate of wages

5. Weekly day of rest: Every worker shall be given a weekly day of rest which shall be fixed and notified at least TEN days in advance. A worker shall not be required or allowed to work on the weekly rest day unless he has or will have a substituted rest day, on one of the five days immediately before or after the rest day. Provided that no substitution shall be made which will result in the worker working for more than ten days consecutively without a rest day for a whole day.
 - a) Where in accordance with the foregoing provisions a worker works on the rest day and has been given a substituted rest day he shall be paid wages for the work done on the weekly rest day at the overtime rate of wages.
 - b) Note: The expression 'ordinary rate of wages' means the fair wage the worker is entitled to
 - c) Display of notice regarding Wages, Weekly Day of Rest etc. The Contractor shall before he commences his work on contract, display and correctly maintain and continue to display and correctly maintain in a clean and legible condition in conspicuous places on the works, notice in English and in the local Indian Language, spoken by majority of workers, giving the rate of fair wages, the hours of work for which such wages are payable, the weekly rest days workers are entitled to and name and address of the Inspecting Officer. The Contractor shall send a copy each of such notices to the Inspecting Officers.
6. Register of Workmen: A register of workmen shall be maintained in the Form appended to these regulations and kept at the work site or as near to it as possible, and the relevant particulars of every workman shall be entered therein within THREE days of his employment
7. Employment Card: The contractor shall issue an employment card in the Form appended to these regulations to each worker on the day of work or entry into his employment. If a worker already has any such card with him issued by the previous employer, the contractor shall merely endorse that Employment Card with relevant entries. On termination of employment the Employment Card shall again be endorsed by the Contractor and returned to the worker.
8. Register of Wages etc. : A Register of Wages-Cum-Muster Roll in the Form appended to these regulations shall be maintained and kept at the work site or as near to it as possible
9. Fines and deductions: Wages of a worker shall be paid to him without any deductions of any kind except the deduction for damage to or loss of goods expressly entrusted to the employed person for custody, or for loss of money which he is required to account for, where such damage or loss is directly attributable to his neglect or default;
 - a) No fine shall be imposed on a worker and no deductions for damage or loss shall be made from his wages until the worker has been given an opportunity of showing cause against such fines or deductions.
 - b) The Contractor shall maintain a register of fines and the register of deductions for damage or loss in the Forms appended to these regulations which should be kept at the place of work.
10. Register of Accidents : The Contractor shall maintain a register of accidents in such form as may be convenient at the work place but the same shall include the following particulars

- a) Full particulars of the labourers who met with accident.
- b) Rate of Wages.
- c) Sex.
- d) Age.
- e) EPF UAN number
- f) ESI number
- g) Aadhaar number
- h) Nature of accident and cause of accident.
- i) Time and date of accident.
- j) Date and time when admitted in hospital
- k) Date of discharge from the hospital
- l) Period of treatment and result of treatment.
- m) Percentage of loss of earning capacity and disability as assessed by Medical Officer.
- n) Claim required to be paid under Workmen's compensation Act.
- o) Date of payment of compensation.
- p) Amount paid with details of the person to whom the same was paid.
- q) Authority by whom the compensation was assessed
- r) Remarks

[Note: k,l,m,n for the workmen not covered under the ESI provisions]

11. Preservation of Registers: The Register of workmen and the Register of Wages-cum-Muster Roll required to be maintained under these Regulations shall be preserved for 3 years after the date on which the last entry is made therein.

12. Enforcement: The Inspecting Officer shall either on his own motion or on a complaint received by him carry out investigations, and send a report to the Engineer-in-Charge specifying the amounts representing Workers' dues and amount of penalty to be imposed on the Contractor for breach of these Regulations, that have to be recovered from the Contractor, indicating full details of the recoveries proposed and the reasons there for. It shall be obligatory on the part of the Engineer-in- Charge on receipt of such a report to deduct such amounts from payments due to the Contractor.

13. Disposal of amounts recovered from the Contractor : The Engineer-in- Charge shall arrange payment to workers concerned within FORTY FIVE days from receipt of a report from the Inspecting Officer except in cases where the Contractor had made an appeal under Regulation 16 of these Regulations. In cases where there is an appeal, payment of workers dues would be arranged by the Engineer-in-Charge, wherever such payments arise, within THIRTY days from the date of receipt of the decision of the competent authority.

14. Welfare Fund: All money that are recovered by the Engineer In- Charge by way of workers dues which could not be disbursed to workers within the time limit prescribed above, due to reasons such as whereabouts of workers not being known, death of a worker etc. and also amounts recovered as penalty, shall be credited to a Fund to be kept

under the custody of the Corporation for such benefit and welfare of workmen employed by Contractors.

15. Appeal against decision of Inspecting Officer: Any person aggrieved by a decision of the Inspecting Officer may appeal against such decision to the competent authority concerned within THIRTY days time stipulated from the date of the decision, forwarding simultaneously a copy of his appeal to the Engineer-in-Charge. The decision of the competent authority shall be final and binding upon the Contractor and the workmen.
16. Inspection of Books and other Documents : The Contractor shall allow inspection of the Registers and other documents prescribed under these Regulations by Inspecting Officers and the Engineer-in- Charge or his authorized representative at any time and by the worker or his agent on receipt of due notice at a convenient time
17. Interpretation, etc.: On any question as to the application interpretation or effect of these Regulations, the decision of the Commissioner of Labour (or) Director/ Industrial Safety and Health shall be final and binding
18. Amendments: Government may, from time to time, add to or amend these Regulation and issue such directions as it may consider necessary for the proper implementation of these Regulations or for the purpose of removing any difficulty which may arise in the administration thereof
19. The contractors should maintain the following records as per section 78 of Contract Labour (Regulation & Abolition) central rules 1971.
 - i) Muster Roll in Form – XXVI
 - ii) Register of Wages in Form – XXVII
 - iii) Register of overtime in Form – XVIII
 - iv) The contractor shall issue an photo identity card to his employees
20. Wages:-
 - a) The Wages prescribed for the contractor/ industry/ establishment as per rates of Minimum Wages notified by the Government of Tamil nadu under the Minimum Wages Act, 1948 or the current PWD rates of wages, whichever is higher is to be paid by the contractor to their employees.
 - b) The contractor should pay the wages before the expiry of seventh day as per section 65 and shall issue wage slip in Form – XXVIII to the workmen as per section 78(b) of The Tamil Nadu Contract Labour Rules, 1973. The copies of the wage slip so issued to the workmen should be maintained by the contractor and produced as when called for.

D) Compliance of ESI Act 1948

1. The contractor who take up the works contract for TANGEDCO & TANTRANSCO is required to comply with all the provisions stipulated to ESI Act 1948
2. The contractor should have a separate ESI main code number
3. The contractor should be responsible for the payment of necessary ESI contributions – both Employer's and Employee's contributions as per the provisions of the ESI Act in respect of the actual workers engaged for the specified works.
4. The contractor should submit necessary returns to the ESI Organization within the stipulated time as required under the said ESI Act
5. The contractor should produce the proof of payment of contributions - both Employer's and Employee's contributions made to ESI Organization in order to claim the Bills for the respective work
6. The contractor should be fully liable to meet and fulfill all the relevant provisions of the ESI Act in respect of the execution of the Tendered work
7. In case the Contractor fails to fulfill any of the statutory provisions of the ESI Act and consequently it happens that TANGEDCO & TANTRANSCO has to meet such requirements of the said Act or Statutory provisions in the capacity of Principal Employer, TANGEDCO & TANTRANSCO shall make good such requirements out of money due and payable to the said

Contractor and further the performance of the said Contractor in this regard will be noted for all future Contracts of TANGEDCO & TANTRANSCO.

8. a) The contractor who claims exemption under the ESI Act should produce the exemption order obtained from the Government/ESI organization.
- b) The contractor who claims exemption for those areas that are not covered under the purview of the ESI Act, necessary evidences should be submitted by the contractor to ensure that the revenue village where the work is being carried out has not been covered under the implemented area of ESI.
- c) The category of employees (Technical Assistant II Grade) and above for whom the wages are fixed at the rate of Rs.700/- and above in the PWD Schedule rates (or) the monthly wages of Rs.21,000/- above. Such employees will not be covered under the ESI Act. In all such conditions, the Contractor has "to ensure the medical benefits for the Workers engaged by the Contractors for the works and has to take relevant group insurance policies with the applicability for giving compensation to the workers" under the Employee's Compensation Act

9. TANGEDCO will not reimburse the Employer contribution towards ESI under any circumstances.

E) Compliance of EPF & MP Act, 1952

1. The Contractor who take up works contract for TANGEDCO/TANTRANSCO is required to comply with all the relevant provisions stipulated in the EPF & MP Act
2. The Contractor should have a separate EPF main code number
3. The Contractor should be responsible for the payment of necessary EPF contributions both Employer's and Employee's contribution as per the provisions of the EPF Act in respect of the actual workers engaged for the specified works
4. The contractor should submit necessary returns to EPF Organisation within the stipulated time as required under the said EPF & MP Act
5. The Contractor should produce the proof of payment of contribution – both Employer's and Employee's contributions made to EPF Organisation in order to claim the Bills for the respective works
6. The contractor should be fully liable to meet and fulfill all the relevant provisions of the EPF act in the respect of the execution of the Tendered work
7. In case the Contractor fails to fulfill any of the statutory provisions of the EPF & MP Act and consequently it happens that TANGEDCO/TANTRANSCO Ltd has to meet such requirements of the said Act or Statutory provisions in the capacity of Principal Employer, TANGEDCO/TANTRANSCO shall make good such requirements out of the money due and payable to the said Contractor and further the performance of the said Contractor in this regard will be noted for all future Contracts of TANGEDCO/TANTRANSCO
8. In respect of the category of employee for whom the wages are fixed at the rate of Rs.500/- and above in the current PWD Schedule rates (or) say the monthly wages of Rs.15,000/- above, the EPF employer contribution will be restricted upto Rs.15,000/- only
9. **TANGEDCO will not reimburse the Employer contribution towards EPF under any circumstances.**

Note:

1. **Employer contribution towards ESI & EPF will not be reimbursed by the TANGEDCO to the contractor, if any such claims made by the contractor towards the employer contribution it will not be accepted.**
2. **The bidder should produce EPF & ESI code number for having registered in the respective statutory bodies and the evidence for the same should be uploaded or otherwise their tender will be liable for rejection.**
3. **The bidder should comply with CLRA Act 1970, ESI, EPF & Misc. Prov. Act 1952 etc. TANGEDCO under any circumstances will not be held responsible for not complying with any statutory violation.**
4. **The successful contractor has to submit a declaration for having remitted the EPF / ESI Employee and Employer contribution for this work while claiming the bill as per annexure B**

F) Statutory Compliance Clearance Certificate:-

1. The Contractor executing the works contract in TANGEDCO/TANTRANSCO should obtain the Statutory Compliance Clearance Certification from the Online Compliance Service Providers engaged by TANGEDCO/ TANTRANSCO, the required documents should be submitted by the contractors to the respective Online Compliance Service Providers.
2. The charges for Statutory Compliance Clearance Certification will be at the rate of Rs.2.00/- per man day per month with minimum charges of Rs.400/- and maximum charges of Rs. 3200/- and Rs.300/- for re-audit due to reasons attributable to the contractor. The charges should be paid by the respective contractors to the service provider through online.

G) Agreement and Undertaking to be furnished by the contractors in respect of the Statutory Provisions:-

The registered contractor, who wants to execute the works in a circle shall be instructed to execute an agreement [Annexure-A] in a non-judicial stamp paper is a value of Rs.80/- with respective Superintending Engineer's of the circle.

H) Tamil Nadu Rationlisation of Forms and Reports under Certain Labour Laws Rules, 2020.

The contractor should comply/ maintain the applicable new combined forms introduced vide the following Acts/ Rules.

- a) The Tamil Nadu Contract Labour (Regulation and Abolition) Rules, 1975.
- b) The Inter-State Migrant Workmen (Regulation of Employment and Conditions of Service) (Tamil Nadu) Rules, 1983.
- c) The Tamil Nadu Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Rules, 2006.

INSTRUCTION TO BIDDERS

1. The bidder should quote the rates for the works and all other taxes separately instead of giving as a lumpsum price while quoting electronically.
2. Since this work has to be carried out as a 'TURNKEY' job, the vendor should visit the site and study the existing system and should take on extensive study with respect to the modification and requirement and should submit a write up (Micro plan) on the proposed execution of the works along with technical bid.
3. All the works shall be carried out to the entire satisfaction of the TANGEDCO.
4. The work shall be carried out in the next tentative capital overhaul programme of **unit II**. However the exact date may be confirmed from TANGEDCO / TTPS.

Sd*
Chief Engineer/TTPS**