

TAMIL NADU GENERATION AND DISTRIBUTION CORPORATION LIMITED

SPECIFICATION FOR PROCUREMENT
THROUGH E-TENDERING.

SPECIFICATION NO. CE/MTPS-I / SE / P&A / S&I / AEE 4 / O.T.No: 83/ 2021 - 22

OFFICE OF THE CHIEF ENGINEER
METTURE THERMAL POWER STATION – I
METTUR DAM - 636406
TAMIL NADU.

**Service Provider : The Tamil Nadu Government e-Procurement
System Website for online bid submission:**
<https://www.tntenders.gov.in/nicgep/app>



INSTRUCTION TO BIDDERS
FOR SUBMISSION OF ONLINE BIDS

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 System Requirement:

- i. Operating System: Windows XP-SP3 & above
- ii. Internet browser: IE7 and above.
- iii. Signing type: Digital Signature (class III)
- iv. JRE 7 update 79 (Preferred file- Windows X-86 Offline) and above to be downloaded and installed in the system.

To enable ALL active X controls and disable 'use pop up blocker' under Tools→Internet Options→ custom level. For detailed guidance about browser and Java configuration the bidders are advised to go through the video guide available under "Bidders Manual Kit" at

["https://www.tntenders.gov.in/nicgep/app?page=BiddersManualKit&service=page"](https://www.tntenders.gov.in/nicgep/app?page=BiddersManualKit&service=page)

5.0 Searching for Tender Document:

- 5.0 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.
- 5.1 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.
- 5.2 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.

6.0 Preparation Of Bids:

- 6.1 Bidder should take into account any corrigendum published on the tender document before submitting their bids.
- 6.2 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.
- 6.3 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.**
- 6.4 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.
- 6.5 The completed bid comprising scanned copy of the proof for the 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.

7.0 Electronic Submission of Bids:

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.

- 7.1 Bidder should log into the site well in advance for bid submission so that they 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 Bidder has to select the payment option as "offline" to pay the EMD amount through RTGS/NEFT or by way of account transfer as applicable and enter details of the instrument.
- 7.4 The scanned copy of payment made through RTGS/NEFT or by way of Account Transfer towards EMD amount has to be uploaded. TANGEDCO shall not be responsible for any delay in uploading the proof of EMD by any mode.
- 7.5 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.
- 7.6 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.**
- 7.7 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.
- 7.8 The uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- 7.9 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.
- 7.10 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.

- 7.11 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.

8.0 Late Bid:

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

9.0 Modification and withdrawal of bids:

- 9.1 Bidders may modify their bids online before the deadline for submission of bids.
- 9.2 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.
- 9.3 No bid may be modified after the deadline for submission of Bids.

10.0 ASSISTANCE TO BIDDERS:

- 10.1 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.
- 10.2 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 a 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.

TAMIL NADU GENERATION AND DISTRIBUTION CORPORATION LTD

1) Tender Specification No.	CE / MTPS-I / SE / P&A / S&I / AEE 4 / O.T. No.: 83 / 2021 - 22.
2) Name of the work	Design, Supply, Erection, Testing and Commissioning of new 48V DC/60A Float charger and 48V DC/84A Boost charger (Separate Panel for Float & Boost Charger) Keltron / ICD / DUBAS or equivalent make suitable for charging 1 set of 48V/600AH Lead Acid Tubular Batteries comprising of 24 cells with suitable accessories and all mandatory spares for Unit III & IV.
3) Quantity	2 Sets.
4) Method of Tender	Open 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. 12,620 /- (Rupees Twelve Thousand Six Hundred and Twenty Only) to TANGEDCO's Account. Account No. : 550518752 Name of Bank : Indian Bank Mettur Dam- 636401 IFSC Code : IDIB 000M034

6) URL for online bid submission for e-tender	https://www.tntenders.gov.in/nicgep/app
7) Last date for submission of EMD	20 . 04 . 2022 before 12.00 hrs. (The EMD amount has to be received in TNEB/TANGEDCO account <u>through e payment, by 2 hours before closing time of tender</u>)
8) Date of closing of online e-tender for submission of Techno Commercial Bid & Price Bid	20 . 04 . 2022 @ 14:00 hrs.
9) Date & time of opening of tender electronically	21 . 04 . 2022 @ 14:30 hrs.
10) Specification at website	The tender specification will be placed at TANGEDCO website (www.tangedco.gov.in) & NIC website https://www.tntenders.gov.in/nicgep/app ; The prospective bidders may download the same at free of cost.
11) Documents to be uploaded by the Tenderers during e-submission	Schedules B to G and Annexure II to IV and other documents whichever is applicable.
12) Clarification to be sought for from	Superintending Engineer, Purchase & Administration, Mettur Thermal Power Station – I, Mettur Dam – 636406.
13) Place at which tenders will be Opened	Office of the Executive Engineer, Spares & Inventory, Mettur Thermal Power Station – I, Mettur Dam – 636406

SD XXX 22.03.22.
CHIEF ENGINEER / MTPS I.

TANGEDCO LTD
METTUR THERMAL POWER STATION-I / METTUR DAM-6
ANNEXURE – I

SPECIFICATION No. CE / MTPS-I / SE / P&A / S&I/ AEE 4 / O T No. 83 / 2021-22

Sub: MTPS I – S&I - Enquiry for the Design, Supply, Erection, Testing and Commissioning of new 48V DC/60A Float charger and 48V DC/84A Boost charger (Separate Panel for Float & Boost Charger) Keltron / ICD / DUBAS or equivalent make suitable for charging 1 set of 48V/600AH Lead Acid Tubular Batteries comprising of 24 cells with suitable accessories and all mandatory Spares for Unit III & IV to Mettur Thermal Power Station I – Reg.

I. Please quote your lowest price for supply of the following materials as per the specification furnished hereunder.

Sl. No.	Description of the articles	Qty
	MATERIALS	
1.	Design and Supply of new 48V DC/60 A Float charger and 48V DC/84 A Boost charger (Separate Panel for Float & Boost Charger) suitable for charging 1 set of 48V/600AH Lead Acid Tubular Batteries comprising of 24 cells with suitable accessories.	2 Sets.
2.	Supply of Mandatory spares listed in Clause No. 15 Spares Management under Annexure-III (Technical Specification)	1 Set.
	WORKS	
3.	Dismantling of existing charger and erection, testing and commissioning of 48V DC/60 A Float charger and 48V DC/84 A Boost charger (Separate Panel for Float & Boost Charger)	2 Sets.

TECHNICAL SPECIFICATIONS

- 1.**
- Name of work** : MTPS-I-ES Circle-MRT Division – Design, Supply, Erection and Commissioning of 2 sets of new 48V DC/60 A Float charger and 48V DC/84 A Boost charger (Separate Panel for Float & Boost Charger) for replacing existing 48V DC battery charger in Unit – III & IV, suitable for charging 48V/600AH Lead Acid Tubular Batteries comprising of 24 cells.
- Environment Location** : Mettur Thermal Power Station –I (4 X 210 MW), Mettur Dam, Salem Dt., TamilNadu.
- Nearest Airport Road Approach** : Salem
50 KM from Salem
55 KM from Erode
150 KM from Coimbatore.
- Nearest Railway Station** : Salem
- Ambient Temp** : Max:45 Deg C
Min:20 Deg C
- Altitude above MSL** : 213 M

2. SCOPE OF WORK:

1. Design, Engineering, Manufacturing, Assembly, Testing at works, Supply, Transportation to site, Storage, Erection, Testing at site, Commissioning and Performance testing.
2. Dismantling of the existing Battery Charger (Float and Boost) and storage of dismantled materials at customer identified location.

2.1 Supply Portion:

SI No	Description	Quantity
1.	Supply of new 48V DC/60 A Float charger and 48V DC/84 A Boost charger (Separate Panel for Float & Boost Charger) suitable for charging 1 set of 48V/600AH Lead Acid Tubular Batteries comprising of 24 cells with suitable accessories.	2 Sets.
2.	Supply of Mandatory spares listed in Clause No. 15, Spares Management	1 Set.

IMPORTANT NOTE:

- a) The bidder shall have a site visit to MTPS-I before furnishing their offer.
- b) The bidder shall furnish dimensions of the offered panels and the quantity of panels needed and system architecture diagram with the offer.
- c) The bidder shall quote separately a list of mandatory spares (as listed in Clause No. 15, Spares Management) required for their design for trouble free operation of the offered system for a period of 15 years. The validity of the spares price shall be clearly mentioned.
- d) It is to be noted that L1 firm shall be decided based on the total price quoted for basic system.
- e) Bought out third party items of this system shall be got approved from TANGEDCO.
- f) The bidder shall ensure the availability of all types of spares, and shall extend their service required after sales, for trouble free operation of the system supplied at least for a minimum period of 15 years.

2.2 Work Portion:

De-termination & de-glanding of existing power and control cables, dismantling of the existing Battery Charger panels, transportation of existing panels from field area to stores, transportation of new panels from stores to field area, erection of new Battery Charger panels, inter panel wiring, required control cable laying, re-glanding of power and control cables (Old & New), termination of power and control cables, testing and commissioning of new Float charger and Boost Charger panels. All the works associated with the dismantling of the existing system and erection of the offered system shall be fully in the scope of the successful tenderer. The erection and commissioning work shall be carried out with the following aspects.

- 2.2.1 The replacement work shall be carried out in 2 sets of 48V DC Battery charger in Unit-III & IV of MTPS-I as per the instruction of the TANGEDCO Engineer.
- 2.2.2 The works shall be managed by vendor's engineers experienced in the erection and commissioning of the 48V DC/60A or above capacity battery chargers.
- 2.2.3 The entire erection and commissioning work shall be completed within 7 days from the date of handing over of the site for each set of charger. The commissioning engineer shall have both hardware and software capability to bring the system on line quickly and efficiently without interference to the other equipment. Bidder must either initiate the remedial measure or compensate, if any loss or damage caused to the TANGEDCO's property during the

commissioning. The commissioning engineer shall be available for 3 days at site after commissioning for attending the teething problems if any.

- 2.2.4 TANGEDCO will provide the crane facility to lift the supplied materials from ground floor to 13.5 M floor, and lower the dismantled material from 13.5 M floor to ground floor and at MTPS stores during the erection and after completing the work at site subject to the availability of the cranes. If not available then vendor has to arrange for the above on his own.
- 2.2.5 All safety measures shall be implemented for internal and external equipment's of Battery Charger according to the standard.
- 2.2.6 After completion of the work, the spare holes in the cabinet gland plates shall be properly closed.
- 2.2.7 Bidder shall take necessary workmen's compensation policy for their workers engaged during dismantling of the existing system and erection and commissioning of the supplied system.

3. CONSTRUCTION:

It will be indoor, freestanding, floor mounting and designed for continuous operation in the ambient temperature of 45°C with degree of protection IP31. Good ventilation shall be made through side louvers. Each charging equipment offered shall be housed in a sheet steel cubicle reinforced by angle iron frame and shall be mechanically strong. The cubicle shall be dust and vermin proof. The rear and front door cover of the cubicle shall be hinged and shall have locking arrangement. Thickness of CRCA sheet shall be minimum 2.5mm for load bearing members and 2mm for other sides. All the accessories and equipment shall be of adequate rating to suit the above requirements. Gland plate: CRCA Gland plate 2mm thickness for incoming / outgoing cables shall be provided. Earthing with two separate earthing terminals shall also be provided. **Dimensions of the each charger should not exceed the dimensions : Length 1400 mm x Breadth 1000 mm x Height 1900 mm(including base frame).** The entire door mounted equipment's as well as equipment mounted inside the cabinet shall be provided with individual riveted /life lasting adhered labels with equipment description engraved. Electrical indicating instruments shall be flush mounted on the Panel. Cooling fans shall be provided for each panel.

4. FINISH:

Each cubicle will undergo a thorough process of de-rusting, cleaning, application of red oxide primer paint followed by the coats of light grey synthetic enamel paint shade 631 of IS: 5.

5. BATTERY DETAILS:

48V DC battery consisting of 24 cells, Lead Acid battery set / 600 AH with tap at 20th cell.

6. DUTY:

One set of charger shall consist of 1 No. of Float charger and 1 No. of Boost charger in a separate panel. **Change over from Float charger to Boost charger and vice versa shall be in manual.** These chargers shall be required to cater the following requirements.

GENERAL:

1. The following existing 3 ϕ AC and 48 V DC power and looping cables between Float and Boost mode chargers can be retained, for which suitable terminal arrangements shall be provided.

Power Cable Size Details:-

Battery Terminals cable	: 3 X 1C X 70 sq.mm
Load Terminal Cables	: 2 X 1C X 70 sq.mm
3 ϕ A.C. Supply Cables	: 3 Core X 35 sq.mm.

2. A single DC Voltmeter (0-75V) with selector switch & HRC fuse protection should measure DC voltages across float, battery and tap cell.
3. Float/Boost mode selector switch of rated capacity shall be provided in Float mode Charger panel.

6.1. FLOAT CHARGER: (Constant Voltage mode)

6.1.1. The float charger shall supply the DC loads of the power station and trickle charge the battery simultaneously. For this condition, the float charger shall be designed to meet the above demand at constant voltage.

6.1.2. Float Charger Control: Voltage control shall be stepless, smooth and continuous having soft start features for rectifier output voltage buildup with walk-in time of around 15 seconds. Voltage control shall be possible both in "**Auto**" mode and in "**Manual**" mode. An "Auto – Manual" selector switch shall be provided for this purpose.

6.1.3. The float charger shall be 3 phase full wave thyristor controlled bridge rectifier (SCR) fully automatic type voltage control with R-C surge suppressor network and suitable heat sink along with freewheeling diodes, current limiting circuitry, smoothing filter circuit and soft-start feature with Under/ Over voltage protection. The charger shall be self-protecting against all AC and DC transients and steady state abnormal currents and voltages. Charger AC input and DC output shall be electrically isolated from each other and also from panel ground. Isolation shall also be provided between power & control circuits and comprising of input mains transformers, control transformers, rectifiers, filters, shunts, composite electronic control cards, indications/alarms, protective and input/output isolating devices etc., with all accessories to meet the specified performance and operational requirements as detailed below:

- Equalize/Trickle charging of 48V DC Lead Acid battery set / 600 AH.
- To keep the battery in float mode and supply the load.
- Suitable filter circuit comprising filter choke, filter capacitor with HRC fuse protection and bleeder resistor. Bleeder resistor shall be automatically isolated from the circuit when Float charger current reaches to a value which is sufficient to keep the SCRs ON and it comes back into circuit when float charger current decreases to a value just above the hold ON current of the SCR.
- Semiconductor fuse protection with fuse fail detector.
- Three phase AC input ON / OFF main switch with HRC fuses of rated capacity.
- Double pole DC output ON / OFF switch with HRC fuses of rated capacity.
- Auto / manual mode selector switch.
- Potentiometer for controlling DC output voltage for both auto and manual modes.
- Ammeter (with external shunt) for measuring DC output current of float charger (0–100 Amps).
- Blocking diode with suitable heat sink.
- Separate ON/OFF toggle switch is to be provided for annunciation circuit.
- Status of the equipment shall be indicated in front of the panel using suitable indicating lamp, meters etc.
- Battery charger shall be provided with one no. voltage transducer and one no. current transducer for monitoring the D.C. output voltage and current. These transducers shall have twin-channel output of 4-20 mA and shall be used for analog inputs to DCS.
- Suitable shrouding arrangements should be provided in power circuits for ensuring the safety aspects and trouble free maintenance.

NOTE:

Any item not specifically mentioned, but which is needed basically for efficient working of the equipment should be incorporated & supplied.

DETAILED TECHNICAL SPECIFICATION ON FLOAT CHARGER

Sl.No.	Description	Float Charger
1.	AC Input Voltage	3 phase,3 wire,415V \pm 10% ,50 HZ \pm 3.0%
2.	DC Output voltage/current	Float Charger: 48 V / 60 Amps (Max)
3.	Charger Characteristics	Constant voltage with current limit.

4.	Meters(Analog) (All meters should be flush mounting type with size 96mmx96mm, Accuracy Class: 0.5)	<ol style="list-style-type: none"> 1) AC Input Voltage (0-500V) 2) AC Input Current (0-30A) 3) DC Output Voltage (0-75V), 4) DC Output Current (0-100A) 5) Center Zero DC Ammeter (75A - 0 - 75A) (Charge/Discharge current)
5.	Protections	<ol style="list-style-type: none"> 1) Soft Start. 2) Current Limit protection 3) Short Circuit protection. 4) Thermal Over load protection.
6.	Alarms	<ol style="list-style-type: none"> 1) Mains Fail. 2) Charger Fail. 3) DC Under Voltage (User adjustable) 4) DC Over Voltage (User adjustable) 5) Rectifier Fuse Fail. 6) Charger Overload. 7) Battery current limit exceeds. 8) Equipment over temperature. 9) Thyristor Cooling fan fail 10) Spare- 2 No.
7.	LED Indications	<ol style="list-style-type: none"> 1) Mains ON (R,Y,B phases) 2) Charger DC ON(RED) 3) Charger DC OFF(GREEN) 4) AUTO ON 5) MANUAL ON
8.	Output Voltage Regulation	$\pm 1\%$ of set value.
9.	Ripple Voltage	$\pm 1\%$ RMS without Battery
10.	Ambient Temperature	0 – 45° C
11.	Type of Cooling	Single phase 230V AC, 50Hz Forced Air Cooling 2 No. continuous running heavy duty cooling fan (Minimum axial fan speed 2550 RPM).
12.	Enclosure Construction	CRCA sheet Construction, IP 31
13.	Paint Shade	Epoxy Powder coated
14.	Type & Application	Fully controlled Three Phase Full wave Thyristor based rectifier bridge in Float mode suitable for 48V / 600 AH Lead Acid Battery consisting of 24 cells and Load.
15.	Selector Switches (Should be located in the front side of the panel)	<ol style="list-style-type: none"> 1) Auto / Manual selector switch. 2) Annunciation ON/OFF switch. 3) AC Voltmeter selector switch (RY, YB, BR). 4) AC Ammeter selector switch 5) DC Voltmeter Selector switch (Float, Battery and Tap cell) 6) Float/Boost mode selector switch.
16.	Push Buttons (Should be located in the front side of the panel)	<ol style="list-style-type: none"> 1) Charger Start Push button 2) Charger Stop Push button 3) Test, Accept & Reset Push buttons
17.	Special Features	<ol style="list-style-type: none"> 1. All magnetic circuits should be Class F Insulation. 2. Filter circuit to limit the ripple (Less than 2% RMS at Full Load). 3. Panel Illumination, Space heater, 15A & 5A AC socket.

6.2. BOOST CHARGER: (Constant current mode)

6.2.1 The Boost charger shall be 3 phase full wave thyristor controlled fully automatic rectifier bridge with R-C surge suppressor network and suitable heat sink along with freewheeling diodes type comprising of input mains transformers, control transformers, rectifiers, filters, shunts, electronic controller cards, indications/alarms, protective and input/output isolating devices etc., with all accessories to meet the specified performance and operational requirements as detailed below:

- **Initial charging of 48V DC battery Lead Acid battery set / 600 AH with tap at 20th cell.**
- **Boost charging of above battery bank after deep discharge.**
- Three phase AC input ON / OFF main switch with HRC fuses of rated capacity.
- Double pole DC output ON / OFF switch with HRC fuses of rated capacity.
- Suitable filter circuit comprising filter choke, filter capacitor with HRC fuse protection and bleeder resistor. Bleeder resistor shall be automatically isolated from the circuit when Boost charger current reaches to a value which is sufficient to keep the SCRs ON and it comes back into circuit when Boost charger current decreases to a value just above the hold ON current of the SCR.
- Semi-conductor fuse protection with fuse fail detector.
- Blocking diode with suitable heat sink.
- Potentiometer for current adjustment.
- Ammeter (with external shunt) for measuring DC output current of Boost charger (0 – 75 Amps).
- Separate ON/OFF toggle switch is to be provided for annunciation circuit.
- Status of the equipment shall be indicated in front of the panel using suitable indicating lamp, meters etc.
- Suitable shrouding arrangements shall be provided in power circuits for ensuring the safety aspects and trouble free maintenance.

NOTE: Any item not specifically mentioned, but which is needed basically for efficient working of the equipment should be incorporated & supplied.

DETAILED TECHNICAL SPECIFICATION ON BOOST CHARGER

Sl.No.	Description	Boost Charger
1.	AC Input Voltage	3 phase,3 wire,415V \pm 10% ,50 HZ \pm 3.0%
2.	DC Output voltage/current	Up to 62 V DC variable. 100 amps max. at 60 V(Normal Charge) 100 amps Max. at 62 V DC.(extended Boost charging)
3.	Charger Characteristics	Constant Current.
4.	Meters(Analog) (All meters should be flush mounting type with size 96mmx96mm, Accuracy Class: 0.5)	AC Voltmeter (0-500V), AC Ammeter (0-30A), DC Output Voltage (0-75V), DC Output Current (0-75A)
5.	Protections	1) Current Limit protection 2) Soft Start. 3) Short Circuit protection. 4) Thermal relay for overload protection
6.	Alarms	1) Mains Fail 2) Charger Fail 3) Rectifier Fuse Fail. 4) Charger Overload 5) Equipment over temperature. 6) Thyristor Cooling fan fail 7) Spare – 2 Nos.

7.	LED Indications	1) Mains ON (R,Y,B phases) 2) Charger DC ON (RED). 3) Charger DC OFF (GREEN). 4) Auto ON 5) Manual ON
8.	Output current Regulation	$\pm 1\%$ of set value.
9.	Ripple Voltage	$\pm 1\%$ RMS without Battery.
10.	Ambient Temperature	0 - 45° C.
11.	Type of Cooling	Single phase 230V AC, 50Hz Forced Air Cooling 2 Nos. Continuous running heavy duty cooling fan (Minimum axial fan speed 2550 RPM).
12.	Enclosure Construction	CRCA Construction, IP 31.
13.	Paint Shade	Epoxy Powder coated.
14.	Type & Application	Full wave thyristor controlled fully automatic Rectifier Bridge Boost mode Battery Charger suitable for 48 V / 600 AH Lead Acid Battery consisting of 24 Cells and Load.
15.	Selector Switch (Should be located in the front side of the panel)	1) Auto / Manual selector switch. 2) Annunciation ON/OFF switch. 3) AC Voltmeter selector switch (RY, YB, BR). 4) AC Ammeter selector switch 5) Float/Boost mode selector switch.
16.	Push Buttons (Should be located in the front side of the panel)	1) Charger Start Push button 2) Charger Stop Push button 3) Test, Accept & Reset Push buttons
17.	Special Features	1. All magnetic circuits should be Class F Insulation. 2. Filter circuit to limit the ripple (Less than 2% RMS at Full Load). 3. Panel Illumination, Space heater, 15A & 5A AC socket.

7. PROTECTION SCHEMES AND INTERLOCKS:

- 7.1 Over voltage protection.
- 7.2 Under voltage Protection.
- 7.3 Thermal over load protection on AC side.
- 7.4 Electronic over load Protection on DC side
- 7.5 Short circuit Protection. (The charger should be protected against short circuit across the load terminals and Battery charger terminals).
- 7.6 Any other protections which are essential to safeguard the system shall be provided.

8. LABELING:

- 8.1 Name plates of approved design shall be provided for each panel.
- 8.2 Warning message plates as per rules shall be provided outside each door.
- 8.3 The components and devices shall be labeled legibly.
- 8.4 Provision to keep documents inside panel shall be made possible.

9. PACKING AND MARKING:

The equipment shall be dispatched securely packed in wooden crates suitable for handling during transit by rail / road, so as to avoid any loss or damage during transit. The crate should be marked with the legible details like Make, Sl.No., Type of Charger and purchase order no. etc.

10. GROUNDING & CABLING:

- 10.1 Two separate grounding pads shall be provided for each panel for connection of 50x6mm GI flat earthing strips.

- 10.2 Station earth will be arranged by the TANGEDCO.
- 10.3 The existing AC power cables between the 415V Switchgear and the charger panels would be retained. The bidder has to provide at the charger panel suitable terminals to connect the 3 Nos. of input supply cables.
- 10.4 The existing DC power cables between the charger and the Battery & Load also would be retained. The bidder has to provide suitable terminals to connect the 5 Nos. output cables.
- 10.5 All the control cable wiring shall be of tinned annealed copper wire of 2.5 Sq mm.
- 10.6 The panel wiring shall be of the grouped type laid in wire rack channels, wiring shall run straight and given right angle bends whenever necessary.
- 10.7 All the cable entries shall be from bottom.
- 10.8 Cable glands, lugs, Ferrules and other items necessary for cable termination shall be provided by the supplier.
- 10.9 Removable bottom cover plates for cable terminations shall be provided with panels.
- 10.10 All the panel wiring cables shall be properly numbered with Ferrules and the same will be updated in the technical drawings book.

11. PANEL MOUNTING:

- 11.1 Before preparation of layout drawings, the supplier shall visit the MTPS and assess the actual area available in the existing battery charger panel room.
- 11.2 MS frames/channels/angles/plates etc., suitable to mount the Charger panels along with necessary fixing holes and arrangements shall be supplied or fabricated at site in addition to the base frames of the panels.
- 11.3 The base frame shall be engineered to accommodate the existing floor openings for the cable entries.
- 11.4 Special Anti vibration pads shall be provided for the panel bedding.

12. TERMINALS AND I/O

- 12.1 All the terminals shall be properly numbered with PVC inscriptions.
- 12.2 20% spare terminals shall be provided in the panel for future use. All the terminal blocks shall be shrouded by easily removable shrouds, molded of transparent dielectric materials.
- 12.3 All the inter panel wiring shall be made by good quality suitable terminal blocks.

13. DOCUMENTATION

- 13.1. The bidder shall submit general arrangement drawings for approval to the TANGEDCO after award of purchase order and prior to the commencement of detailed engineering.
- 13.2. The bidder shall submit for approval of the drawings, testing & commissioning procedures, bill of materials, technical data and information of the proposed charger minimum one month prior to the commencement of assembling the panels at the works.
- 13.3. At site, the modifications done during erection, testing and commissioning shall be marked comprehensively and kept as 'marked up copy'. This marked up copy shall be used for submitting the 'as built' documents.
- 13.4. Five set of instruction manuals shall be supplied in printed form. Five sets of the detailed Dimensional, Power and Control circuits drawings (A3 size), commissioning, operating instructions, maintenance & trouble shooting manual, literature shall be supplied with each of the battery charger. All instruction manuals, documents and drawings shall be supplied in soft copy also.
- 13.5. Bill of Materials
 - a) Complete part list with technical specification and ordering information for all replaceable parts shall be listed.
 - b) The identification details of equipment or alternative make for the spare parts, which are not bidders, own products shall also be listed.
- 13.6. The manuals of the subassemblies and bought out items shall form part of this bill of materials.
- 13.7. Commissioning test reports, filled up and signed both by the bidder who shall conduct the tests, and the purchaser who shall witness the test shall be provided.

- 13.8. Documentation of all the parameters recorded during testing and commissioning shall be provided.
- 13.9. All drawings prepared by the bidder shall be of relevant standards and sufficient reference notes on the drawing to permit identification of all the drawings.
- 13.10. The following documents are required for each category.
- Preliminary drawings.
 - Construction drawings.
 - Erection & Commissioning procedures.
 - Test procedures.
 - Performance and acceptance test report.
 - Final as built drawings with 1 set of reproducible tracing/Sepia/CD.
 - Operation and maintenance manuals.
 - Complete Power and Control circuit drawings.
 - Part list details.
 - All other documents.

14. ELECTRICAL TESTS

TYPE TESTS:

Battery chargers shall conform to all type tests as per relevant Indian Standard/IEC standard. The following type test reports from NABL approved laboratory shall be submitted with the offer.

- Voltage regulation test.
- Load limiter characteristics test.
- Efficiency tests.
- High voltage tests.
- Temperature rise test.
- Short circuit withstand test.
- Degree of protection test.
- Measurement of ripple by Oscilloscope.
- Type test reports of Transformers.

14.1. ELECTRICAL TEST AT WORKS (FAT):

The factory acceptance test will be programmed and intimated to the customer as soon as the manufacturing is over and the systems are ready for testing. The successful bidder shall give the purchaser at least 20 days before written notice of the system being ready for the FAT. Apart from FAT, minimum of one inspection may be carried out by the purchaser at any stage of manufacture. The successful bidder shall grant free access to the TANGEDCO representative at a reasonable time when the work is in progress.

The following tests shall be conducted on the Charger at works.

- Visual inspection and dimensions.
- Checking of wiring & continuity of circuits.
- Insulation resistance.
- HV test
- Ripple content measurement
- No load test
- Load Test
- Efficiency tests
- Operational tests for protection, alarm, indication.
- Auto/Manual operation test.
- Any other special tests recommended by the bidder shall be specially brought out in the tender.
- TANGEDCO reserves the right to insist on any other tests required for the offered system.
- Type and routine test certificate shall be furnished to the purchaser for review and approval.

14.2. ELECTRICAL TEST AT SITE:

- 1) Insulation resistance.
- 2) Ripple content measurement.
- 3) No load test.
- 4) Load Test.
- 5) Operational tests for protection, alarm, indication.
- 6) Auto/Manual operation test.
- 7) Output wave form analysis.
- 8) Total harmonic distortion measurements.
- 9) All integrated functional tests.
- 10) Any other special tests recommended by the bidder shall be specially brought out in the tender.

15. SPARES MANAGEMENT:

The OEM of equipment shall accept to provide spares and services support for a minimum period of 15 years from the date of commissioning for trouble free operation of equipment. Below are the list of Mandatory spares should be included in the offered 48 V DC Battery Charger system.

Sl. No	Spares	Quantity
1	Control card for Float Charger	2 Nos.
2	Control card for Boost Charger	1 No.
3	AC Fail Module	2 Nos.
4	Fuse fail card	2 Nos.
5	92A/1600V SCR-SCR Mono block	3 Nos.
6	162A/1600V SCR-SCR Mono block	3 Nos.
7	Alarm Annunciator Card	2 Nos.
8	SMPS 24V DC, 35 watt	2 Nos.
9	32 Amps HRC fuses	8 Nos.
10	80 Amps Semiconductor Fuses	3 Nos.
11	160 Amps Semiconductor Fuse	3 Nos.
12	Capacitor 10000 μ F/100V DC	4 Nos.
13	Reverse Blocking diode 150 Amps	2 Nos.
14	24 V Indicator	6 Nos.
15	63 Amps Fuse	4 Nos.
16	125 Amps Fuse	4 Nos.
17	AC Voltmeter (0-500V)	2 Nos.
18	AC Ammeter (0-30A)	2 Nos.
19	DC Voltmeter (0-75V)	2 Nos.
20	DC Ammeter (0-100A)	2 Nos.
21	DC Ammeter (75-0-75A)	2 Nos.
22	24 V DC plug in relay	10 Nos.

Note: Any item not specifically mentioned above in spares list, but which is needed basically and not available in markets (like wire wound resistor, capacitors etc...) for efficient working of the equipment should be incorporated & supplied.

16. GUARANTEE:

The equipment offered shall be guaranteed for satisfactory performance for a period of 12 months from the date of commissioning or 18 months from the date of supply, whichever is later

subject to an overall guarantee period of 24 months from the date of supply under normal and proper conditions of service and maintenance.

17. TRAINING:

Training shall be arranged free of cost at the suppliers works for the TANGEDCO Engineers with an objective to familiarize with all the aspects of preventive, routine and breakdown maintenance activities including the tracing and rectification of the faults down to the PCB level, working principle, scheme/circuit familiarization, regular operation/emergency handling of the battery chargers. The duration of the course shall be for four working days for each batch. The training would be imparted for two batches of 3 engineers each.

18. APPLICABLE STANDARDS:

- 18.1. The design, manufacture and performance of the equipment shall comply with all currently applicable standards, regulations and safety codes. Nothing in this specification shall be construed to relieve the Bidder of their responsibility.
- 18.2. Unless otherwise specified, the battery charger shall confirm to the latest applicable Indian / IEC standards and in particulars to the following standards.

Sl.No.	CODE	TITLE
1	IS:5	Colours for ready mixed paints and enamels
2	IS:513	Cold rolled low carbon steel sheets and strips
3	IS:590	Fixed paper dielectric capacitors for DC
4	IS:613	Copper rods and bars for electrical purposes
5	IS:694	PVC insulated cables for working voltages upto and including 1100V
6	IS:1248	Direct acting indicating analogue electrical measuring instruments and their accessories.
7	IS:1271	Thermal evaluation and classification of electrical insulation.
8	IS:1554 (Part – 1)	PVC insulated (heavy duty) electric cables: For working voltages up to and including 1100V
9	IS:1897	Copper strip for electrical purposes
10	IS:1901	Visual indicator lamps
11	IS:2001	Fixed silvered mica capacitors
12	IS:2062	Hot rolled low, medium and high tensile structural steel
13	IS:2551	Danger Notice Plates
14	IS:2629	Recommended practice for hot dip galvanizing on iron and steel
15	IS:2633	Methods of testing uniformity of coating of zinc coated articles
16	IS:2705	Current Transformers
17	IS:2786	Ceramic dielectric capacitors
18	IS:3136	Polycrystalline semiconductor rectifier equipment
19	IS:3156	Voltage transformers
20	IS:3231	Electrical relays for power system protection
21	IS:3895	Mono crystalline semiconductor rectifier cells and stacks
22	IS:4007	Terminals for electronic equipment
23	IS:4317	Aluminium electrolytic capacitors with non-solid electrolyte
24	IS:4540	Mono crystalline semiconductor rectifier assemblies and equipment
25	IS:4633	Fixed metalized paper dielectric capacitors for direct current
26	IS:4794	Push button switches
27	IS:5469	Code of practice for use of semiconductor junction devices
28	IS:5475	Polystyrene film dielectric capacitors
29	IS:5786	Fixed resistor, general - purpose, low power
30	IS:5921	Metal clad base materials for printed circuits for use in electronic and telecommunication equipment

31	IS:6005	Code of practice for phosphate coating of iron and steel
32	IS:6297	Transformers and Inductors (Part – 4) (power, audio, pulse and switching) for electronic equipment: Pulse and switching transformers
33	IS:6553	Environmental requirements for semiconductor devices and integrated circuits
34	IS:6619	Safety code for semiconductor rectifier equipment
35	IS:7305	Fixed capacitors used in electronic equipment
36	IS:8507	Fixed insulated hermitically sealed tantalum capacitors with solid electrolyte
37	IS:9000	Basic environmental testing procedures for electronic and electrical items
38	IS:13703	Low voltages fuses for voltages not exceeding 1000V AC or 1500V DC
39	IS/IEC:60947	Low voltage switchgear and control gear: Electromechanical control circuit devices
40	IS:12063	Classification of degrees of protection provided by enclosures of electrical equipment
41	IEC:60146	Semiconductor converters: Semiconductor self - commutated converters
42	IEC:60326	Printed boards
43	IEC:60068	Basic environmental testing procedure
44	IEC-61000-6-5	Immunity for power station and substation environments
45	IEEE:428	IEEE Standard definitions and requirements for thyristorised AC Power Controllers
46	IEEE:650	IEEE Standard for qualification of Class -1E static battery chargers and inverters for Nuclear Power Generating stations
47	IEEE:946	IEEE recommended practice for the design of dc auxiliary power systems for Nuclear Power Generating stations
48	IEEE:519	IEEE Guide for Harmonic Control and Reactive Compensation of Static Power Converters
49		Indian Electricity Rules

SCHEDULE OF GUARANTEED TECHNICAL PARTICULARS
FOR BATTERY CHARGER

(To be filled up and furnished along with offer of Battery Charger)

- 1 Name of Manufacturer and Country :
- 2 Type of charger :
 - a) Float :
 - b) Boost :
- 3 a) Dimension (Length x Breadth x Height) :
 b) Thickness of sheet steel of cubicle (mm) :
- 4 Weight (kg) :
- 5 a) Rated AC Input supply :
 b) Variation in AC voltage & frequency :
- 6 Rated DC volts :
- 7 Rated output (Ampere) :
- 8 Range of DC voltage variation :
- 9 Range of current variation :

10	Maximum charging current that can be fed to battery		
	a) Float charging	:	
	b) Boost charging	:	
11	Float charging voltage (volts)	:	
12	Whether automatic voltage/current regulator is offered	:	Yes/No
13	Whether smoothing filter offered	:	Yes/No
14	Ripple content at rated load		
	i) With battery	:	
	ii) Without Battery	:	
15	Guaranteed Efficiency		
	i) At 20% load	:	
	ii) At 50% load	:	
	iii) At rated load.	:	
16	Control wiring		
	a) Voltage grade	:	
	b) Insulation	:	
	c) Conductor material	:	
	d) Minimum size of conductor	:	
	e) Power frequency voltage withstand value (KV rms)	:	
	f) Colour code	:	
17	Whether separate float charger, separate boost charger are offered for each set of charger	:	
18	Reference Standard	:	IS/IEC No:

Delivery Period : Within Three Months from the date of receipt of PO.

Manufacturer's Test certificate and guarantee / warranty certificate should be furnished along with supply for the 48V DC Float and Boost Battery charger along with the serial Nos.

Inspection: Yes. As per clause No. 17 (Section III)

NOTE :-

1. Complete Technical Pamphlet/Drawing shall be furnished on the date of tender opening.
2. Correct GST@% with Input tax credit/HSN code of above materials should be furnished with necessary documental proof.

SD XXX 22.03.22.
CHIEF ENGINEER / MTPS I.

SECTION - I

EARNEST MONEY DEPOSIT

- 1) Tenderer should pay the specified amount towards Earnest Money Deposit as follows :
Earnest Money Deposit (EMD) :- **Rs. 12,620 /-** (Rupees Twelve Thousand Six Hundred and Twenty only)
- 2) The Earnest Money Deposit specified above should be in the form of NEFT/ RTGS as mentioned above in 5(a) of Foreword for the above amount. Scanned copy of the E-receipt duly reflecting the UTR Number shall be uploaded. The EMD amount has to be received in TNEB / TANGEDCO account **through e-payment, 2 hours before closing time of tender**). EMD amount received beyond tender closing time will be summarily rejected.

Having examined the tender specification together with the schedules attached, the bidder is deemed to accept to pay the amount equivalent to EMD, together with costs if any, in the events of non-fulfilment of the conditions stipulated in the tender specification i.e. in all cases where EMD paid will be forfeited. The GST applicable for the above shall also be paid to TANGEDCO by the bidder.

The Tenderer is deemed to accept to pay the amount equivalent to EMD immediately when a demand is raised by Board against the Tenderer without any demur in the event of the following.

1. If he withdraws his tender or backs out after acceptance of the tender or fails to remit the Security Deposit.
2. If he revises any of the terms quoted during the validity period.
3. If he violates any of the conditions of the tender specification.

Now the condition is such that if the Tenderer shall duly and faithfully observe and perform the terms and conditions specified in terms of the above, then the above condition shall be void. Otherwise the same shall remain in full force.

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

- 2.1) In case the EMD remittance through same Bank, a copy of Bank account scroll of bidders duly exhibiting the transaction of EMD amount with details of name of the bank account number of the bidder, and IFSC Code shall be uploaded, so as to verify the credit of same in TANGEDCO bank account scroll for ensuring the EMD compliance of bidders.
- 3) Any other mode of payment of EMD other than NEFT/RTGS/Account transfer to TANGEDCO's Account shall not be accepted towards EMD and the tenders shall be rejected if EMD is not paid in the prescribed manner.
- 4) The Earnest Money Deposit will be refunded to the unsuccessful tenderers on application after intimation of rejection of tender is sent. The amount will not carry any interest.
- 5) The EMD of successful tenderer will be adjusted towards SD.
- 6) The EMD will not carry any interest.

7) 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 permitted to manufacture.

- i. The Micro and Small Enterprises located within the State and Registered with the Government of Tamil Nadu, Department of Industries and Commerce, District Industries Centre.
- ii. The Small Scale Industries Units located within the State and registered with National Small Industries Corporation.

- iii. Departments of the Government of Tamil Nadu.
- iv. The SSI Units within the state, holding Acknowledgement issued for Entrepreneur Memorandum part-II obtained from District Industries Centre of Directorate of Industries and Commerce in respect of those items for which the Registration Certificate/ Acknowledgement has been issued.
- v. Undertakings and Corporations owned by the Government of Tamil Nadu.
- vi. Labour Contract Co-Operative Societies registered within Tamil Nadu
- vii. The Micro and Small Enterprises outside the State and registered with National Small
- viii. Central and the State Government Departments / Undertakings and Corporations other than those in Tamil Nadu shall have to pay Earnest Money Deposit

The industries are exempted from payment of EMD, subject to the enterprise registered under the Ministry of Micro, Small and Medium Enterprises **shall register itself under Udyam Registration. (Only enterprises which comes under micro and small categories are eligible for EMD exemption.)**

Other mode of registration or enterprises registered under EM-Part II or UAM Will not be valid for EMD exemption after 1st April 2021.

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

7.1 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:

- i) **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);
- ii) **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
- iii) **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).

7.2 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.

A certificate from 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.

7.3 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.

Updating and transition period in classification:

An enterprise having Udyam Registration Number shall update its information online in the Udyam Registration portal, including the details of the ITR and the GST Return for the previous financial year and such other additional information as may be required, on self-declaration basis. In case of an upward change in terms of investment in plant and machinery or equipment or turnover or both, and consequent re-classification, an enterprise will maintain its prevailing status till expiry of one

year from the close of the year of registration. In case of reverse-graduation of an enterprise, whether as a result of re-classification or due to actual changes in investment in plant and machinery or equipment or turnover or both, and whether the enterprise is registered under the Act or not, the enterprise will continue in its present category till the closure of the financial year and it will be given the benefit of the changed status only with effect from 1st April of the financial year following the year in which such change took place.

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

I. Attested copy of **Udyam Registration Certificate**

II. The tenderer shall upload a **Chartered accountant certificate towards annual turnover and another certificate for calculation of investment on Plant And Machinery** specified in the explanation I to sub – section (1) of section 7 of Income tax rules 1962 framed under the Income tax Act 1961, as per the recent MSME Notification No S.O 2119(E) dt. 26.06.2020. (Refer clause 8.3 & 8.4)

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

Those tenderers under exempted Category from payment of EMD shall upload an undertaking in lieu of EMD in a non-judicial Stamp paper of value not less than Rs.80/- (Rupees Eighty only) in the form as per Annexure-I.

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

- i) If the documentary evidences towards Exemption from payment of EMD are not uploaded
- ii) If the tendered items are not covered in the Registration Certificate uploaded as evidence for exemption from payment of EMD.
- iii) If not furnished the chartered accountant certificate for investment held in Plant and Machinery or Equipment and Annual turnover value.
- iv) If the documentary evidences produced for Exemption from payment of EMD not attested by the Gazetted Officer / Notary public.

10) The Earnest Money Deposit made by Tenderer will be forfeited on the following conditions :

- i) If he withdraws his tender or backs out after acceptance of the tender or fails to remit the Security deposit.
- ii) If he revises any of the terms quoted during the validity period.
- iii) If he violates any of the conditions of the Tender specification.
- iv) If, the documents furnished with the offer being found to be bogus or the documents contain false particulars.
- v) If, the successful tenderer failing to execute the order placed on them to the satisfaction of the TANGEDCO Limited.
- vi) 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.
- vii) 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.

SD XXX 22.03.22.
CHIEF ENGINEER / MTPS-I.

SECTION – IIO.T. No. 83 / 2021 - 22BID QUALIFICATION REQUIREMENTS (BQR)

The Bidders shall become eligible to bid on satisfying the following Bid Qualification Requirements and uploading of the required documentary evidences attested by a gazetted officer /Notary public.

1. The bidder should be a Manufacturer/ Authorised Dealer/Supplier of 48V DC / 60 A or above capacity Float charger (or) 48V DC / 84 A or above capacity Boost charger. In case of Manufacturer, valid evidence such as scanned originals of certificate of Registration (License)/ Memorandum & Articles of Association should be uploaded. In case of dealer, scanned originals of valid dealership certificate from the Manufacturer should be uploaded.
2. The bidder should have previously supplied and commissioned 48V DC / 60 A or above capacity Float charger (or) 48V DC / 84 A or above capacity Boost charger in a single order value of more than **Rs.3.16 lakhs** within the past 10 years as on the date of tender opening in any of the Thermal Power Stations of state or Central Government organization / Public Sector Undertaking/ State Electricity Boards in India and should have satisfactory performance for a minimum period of one year as on the date of tender opening. The date of purchase order will be reckoned for ascertaining the eligibility of the tender. The bidder shall upload scanned original of the purchase order in complete shape for the above during e- tender.
3. The bidder shall upload the scanned original of the End user's certificate for the satisfactory performance of the above. In case the above supply was made to TNEB / TANGEDCO, the End user certificate will be obtained by the Tender inviting authority directly from the concerned Organizations. However in case of other Organizations, the End user certificate for the supply executed should be obtained, scanned and uploaded by the bidder during e-tender.
4. The bidder should have an annual turnover of more than **Rs.3.16** lakhs in any one of the last three financial years (ie, 2018-2019, 2019-2020 and 2020-2021) and shall upload any one of the following statement in support of annual turnover for all the three financial years 2018-2019, 2019-2020 and 2020-2021.
 - i. Scanned original of Annual Audited Balance Sheet duly certified by a Chartered Accountant (or)
 - ii. Scanned original of Turnover Statement duly certified by a Chartered Accountant (or)
 - iii. Scanned original of Sales Tax return filed by the bidder (or)
 - iv. Scanned original of Income Tax return filed by the bidder (or)
 - v. Scanned original of Enlistment certificate issued by NSIC containing turnover details of the bidders as a proof of annual turnover.

Note: The Documentary proof for the above BQR shall be scanned and uploaded, failing which their bid will be summarily rejected. The successful bidder has to submit the attested copies of the documents satisfying BQR criteria after tender opening, in the office of the Tender Inviting Authority.

SD XXX 22.03.22.

CHIEF ENGINEER / MTPS-I.

SECTION – III
INSTRUCTION TO TENDERERS

1.0) SCOPE OF SUPPLY:

- 1.1) The Scope of supply (described in Annexure – I) includes packing, forwarding, insurance and delivery of the materials detailed herein, at Central Stores/MTPS-I/ Mettur Dam-6.
- 1.2) The quantity indicated in schedule of requirement is approximate. The quantity finally ordered may vary to the extent of 25% either way of the approximate quantity indicated in the Schedule of requirement.

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.

2.0) SUBMISSION OF TENDER OFFER:

- 2.1) The tenderer is expected to examine all instructions, Schedules and Annexures 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.
- 2.2) The Tender Offer consisting of Schedules – A to G, Annexure – I to VI should be filled up and signed by the Tenderer or any person holding Power of Attorney authorizing him to sign on behalf of the Tenderer before submission of the Tender. The date of signature should invariably be indicated.
- 2.3) 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 to do so, Certified copies of which shall be enclosed.
- 2.4) 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.

3.0) MODIFICATIONS/CLARIFICATIONS TO TENDER DOCUMENTS:

- 3.1) 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 same will be intimated to the concerned Vendors through corrigendum which can be downloaded from the Vendor login.
- 3.2) In case any tenderer asks for a clarification to the tender documents before 48 hours of opening of tenders, the Superintending Engineer / P&A / MTPS-I will clarify the same.
- 3.3) If any tenderer raises clarifications after the opening of the tender, the clarified reply

issued by the Superintending Engineer / P&A / MTPS-I on the clarifications will be final and binding on the Tender.

- 3.4) All tender offers shall be prepared by typing or printing in the formats enclosed with this specification.
- 3.5) **All information in the tender offer shall be in ENGLISH only.** It shall not contain interlineations, erasures or overwritings 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.

4.0) TENDER OPENING:

4.1) OPENING OF COMMERCIAL & TECHNICAL BIDS WITHOUT PRICE: (PART-I)

The Tender offers except price Bid will be opened electronically at 14.30Hrs. on the date notified at the Office of Executive Engineer/ MM/MTPS-I/MetturDam, through [https://www.tntenders.gov.in/ nicgep/app](https://www.tntenders.gov.in/nicgep/app) in the presence of tenderer's authorized representative who may wish to be present on the date of opening.

4.2) OPENING OF THE PRICE BIDS: (PART-II)

The date and time of opening of Price Bids shall be later notified through registered e-mail to the Bidders who fulfill the BQR criteria and whose bids are found to be commercially and technically acceptable.

- 4.3) If the due of the tender opening is declared as a holiday, the tender will be opened on the next working day at 14.30 hours.

5.0) INFORMATION REQUIRED AND CLARIFICATIONS:

- 5.1) In the process of examination, evaluation and comparison of tender offers, the TANGEDCO may at its discretion, ask the Tenderer for a clarification of his 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.
- 5.2) 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.
- 5.3) 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.

- 5.4) After acceptance of the tender by the Tender Accepting Authority, the details will be arranged to be published in the Tender Bulletin of Tamil Nadu Government.
- 5.5) 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 his offer, except as mentioned in Clause – 8.5 & 8.6. 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.

6.0 REJECTION OF TENDERS:

- I. Tenders will be **SUMMARILY** rejected if
- The EMD requirements are not complied with.
 - If the bids are received through Consortium or Joint venture, the same will not be considered and the bids will be rejected.
 - Not satisfying any one of the Bid Qualification Requirement as stipulated in Section – II.
 - The tenderers should quote **minimum quantity of 10%** of tendered quantity. The offer of bidders who have quoted for lesser quantity than the minimum quantity prescribed shall be summarily rejected.
- II. Tender is **LIABLE** to be rejected, if it is:
- not covering the entire scope of supply of materials.
 - If the declaration as specified in Schedule – G is not signed and enclosed.**
 - With validity period less than that stipulated in this specification.
 - Not in conformity with TANGEDCO's Commercial terms and Technical Specifications.
 - Received from a tenderer who is directly or indirectly connected with Government service or Board Service or Services of local authority.
 - From any black listed Firm or Contractor.
 - Received by Telex / Telegram / E-Mail / Fax.
 - From a tenderer whose past performance / Vendor rating is not satisfactory.
 - Not containing all required particulars as per Schedule – A to G.
 - Documents furnished by the Tenderers along with their offer being found to be bogus or contain false particulars.
 - Received after tender opening.
 - The offer of bidders who have not furnished the TIN Number in the offers.
 - Correct GST / HSN code should be furnished.
 - The Bidder should scan and upload End User Certificate / Performance Certificate for the above work/ Purchase Order (One Year).

7.0) PRICE :

- The prices quoted shall be **firm on F.O.R. Destination giving breakup thereof for any levies, GST, P&F, Freight, Insurance etc. along with HSN code of materials.**
- The rates quoted should be furnished both in **figures** and as well as in **words**.
- The GST and other levies should be clearly furnished with percentage in the price. The Concessional GST if any should be mentioned.
- The Freight and Insurance charges, Packing & Forwarding charges should be shown separately. Packing & Forwarding, Freight and Insurance charges will be paid only at actuals on production of voucher and not on percentage basis.

- (v) Offers giving lumpsum price, without giving their breakup as per details required in the attached Price Schedule - A shall be liable for rejection.
- vi) Except Petrol, Diesel and Cement to the Board as per G.O. Ms. No. 31, Commercial Taxes (B2) dt.27.03.2002, if there is any refunds in GST it should be mentioned in detail.
- vii) DGS & D rates for the items mentioned in the enquiry may be furnished wherever applicable along with the copy of latest DGS & D rate contract for reference.

8.0) AMBIGUITIES IN CONDITIONS OF TENDERS:

- 8.1) 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.
- 8.2) The tender offer shall contain full information asked for in the accompanying schedules and elsewhere in the specification.
- 8.3) 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.
- 8.4) 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.
- 8.5) DEVIATIONS : Offers which conform to the Technical & Commercial specifications without deviations will be preferred. However the deviations, if any shall be indicated in the Schedules – B & C only. Any other deviations mentioned elsewhere other than the schedules – B & C of deviations will be ignored and it will be construed that the offer is as per specification.
- 8.6) The Offers of the Tenderers with Deviations in Commercial terms and Technical Terms of the Tender Document are liable for rejection.
- 8.7) No alternate offer will be accepted.
- 8.8) Board reserves the right not to accept the lowest or any tender.

9.0) DELIVERY:

- 9.1) i) PLACE OF DELIVERY: **The Stores Controller / M.T.P.S-I / Mettur Dam-6.**
 ii) The delivery period shall be as mentioned under Annexure – I of this specification.
 iii) The offer from ready stock is preferable.
- 9.2) TANGEDCO reserves the right to cancel the quantities not supplied as per delivery schedule.
- 9.3) TANGEDCO also reserves the right to cancel the order if the delivery schedule is not kept up, without any further notice to the supplier.
- 9.4) To ensure sustained supply without any interruption, TANGEDCO reserves the right to place orders among more than one tenderer.
- 9.5) The TANGEDCO will be at liberty to cancel the order if the supply is not made as per the delivery schedule specified in the order, notwithstanding its right to claim

liquidated damages for the belated supplies and the quantity outstanding to be supplied as on the date of cancellation. The defaulting contractors will be liable to pay to the TANGEDCO in addition to the liquidated damages for delay, the actual difference in price whenever the TANGEDCO orders the delayed quantity to be supplied / executed by other agencies at higher rate.

- 9.6) The actual date of receipt of each material with all accessories will be reckoned as the date of receipt at MTPS-1 Stores / Mettur Dam for the purpose of calculation of liquidated damages in respect of that material.
- 9.7) The delivery period will not normally be extended. Hence all efforts shall be taken to deliver the materials within the contractual delivery period.

10.0) PAYMENT: Payment for supplies against this order shall be made as follows: -

i) For the materials delivered within the delivery period:

100% payment of the all inclusive price (including GST) of the materials of each consignment shall be released to the vendors of SSI units and non-SSI units within a time frame of 45 days from the date of receipt and acceptance of materials at good condition at site and submission of bills with required documents after deducting the recoveries, if any.

In the event of TANGEDCO failing to up keep the stipulated time frame for releasing payment to SSI units and non-SSI units against satisfactory acceptance of materials, the simple interest will be paid for the delayed period at SBI three months MCLR.

ii) For materials delivered beyond the delivery period.

100% payment of the all inclusive price (including GST) of the materials of each consignment shall be released to the vendors of SSI units and non-SSI units within a time frame of 45 days from the date of receipt and acceptance of materials at good condition at site and submission of bills with required documents after deducting L.D. and other recoveries, if any.

In the event of TANGEDCO failing to up keep the stipulated time frame for releasing payment to SSI units and non-SSI units against satisfactory acceptance of materials, the simple interest will be paid for the delayed period at SBI three months MCLR.

- iii) No advance payment / payment thro' Bank or against Proforma invoice will be made.
Note: Payment for supplies will be made through Electronic fund transfer mode by NEFT / RTGS (or) Account transfer on any one of the commercial Bank or their branches in Tamil Nadu as may be decided by the Board from time to time.

11.0) SECURITY DEPOSIT / SECURITY DEPOSIT CUM PBG:

- 1) The successful tenderer will have to pay a Security Deposit of 5% of the value of the contract in the form of DD or Bankers Cheque payable at Mettur Dam and drawn in favour of SE/P&A/MTPS-I (or) NEFT/RTGS (or) by the way of Account transfer to TANGEDCO's Account.

Account No.: 550518752

Name of Bank : Indian Bank, Mettur Dam – 636 401

IFSC code : IDIB 000M034

You are requested to furnish immediately the E-payment receipt duly reflecting UTR number for having deposited the S.D. amount.

- 2) The combined Security Deposit cum Performance Bank Guarantee shall be in the form of Demand Draft / Banker's Cheque / Irrevocable Bank Guarantee only in case P.O. value Exceeds Rs.10 lakhs.
- 3) The contract will become effective only if the S.D/ S.D cum PBG is paid.
The S.D. / S.D cum PBG shall be paid within 30 days from the date of receipt of the P.O and in the event of failure to remit security deposit within the prescribed period, EMD shall be forfeited and order be cancelled. The belated payment of security deposit shall not be accepted.
- 4) The S.D/ S.D cum PBG will be refunded to the supplier after the expiry of the 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 law, appropriate the whole or part of the security deposit and such amount that is appropriated will not be refunded to the supplier.
- 5) When there is delay in supply, the Bank guarantee towards combined Security Deposit cum Performance Guarantee shall be got extended suitably.
- 6) No tenderer is exempted from payment of combined Security Deposit cum Performance Guarantee.

12.0) **LIQUIDATED DAMAGES:**

a) If the contractor fails to delivery the materials 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 percent) of the contract price of the delayed / undelivered materials for each completed week of delay. The total Liquidated Damages shall not exceed Ten percent (10 percent) of the contract price of the materials so delayed / undelivered. The date of receipt of materials at Stores will be reckoned as date of delivery for this purpose.

b) **Liquidated damages** will also be recovered for the **quantity not supplied** as is done for the belated supply.

c) If supplies to be rendered against this Purchase Order are made by the supplier beyond the period of delivery stipulated in the Purchase Order and they are accepted by the Board such acceptance is without prejudice to the Board's rights to levy liquidated damages for the delay in supply.

d) In respect of contracts where supply effected in part or works executed in part, could not be beneficially used by the TANGEDCO (due to such incomplete supply / execution), liquidated damages should be worked out on the basis of entire contract price only and not on the value of delayed portion.

13.0) GST Details

- 1) The latest GST registration details, applicable GST with input tax credit & HSN code No. etc., attested by a Gazetted Officer / Chartered Accountant / Notary Public valid for the current year shall be enclosed along with the quotation.

- 2) Appropriate rate of GST shall be admitted in lieu of (all taxes and levies replaced by GST) Excise Duty, CST and TNVAT Service Tax etc as per provisions of the rules.
- 3) Any increase due to statutory variation will be admitted only when the supplies are made within the delivery schedule.
- 4) In case of delayed delivery, the GST prevailing on the date of despatch or the GST on the last day of the contractual delivery period whichever is LESS will alone be admitted. For both the cases, the Supplier shall furnish documentary evidence while submitting the bills for payment.
- 5) IMPACT OF GST: Any downward variation in basic price while reworking due to GST and the benefit of input tax credit must be passed on to TANGEDCO.

14.0) GST TIN / IT PAN:

- 1) The latest GST Registration details / TIN details attested by a Gazetted Officer / Chartered Accountant / Notary Public valid for the current year shall be enclosed along with the quotation.
- 2) The Xerox copy of PAN Card issued by the IT department shall be enclosed along with the quotation.
- 3) The tenderer shall furnish the TIN Number of the firm along with the proof in the tender.

15.0) VALIDITY :

- 15.1) The tender offer shall be kept valid for acceptance for period of 180 days from the date of opening of offers. The offers with lower validity period are liable for rejection.
- 15.2) 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.

16.0) SAMPLE: **Not Applicable**

~~Samples are necessary before effecting the bulk supply. It will be tested for suitability. The materials will be rejected if it doesn't conform our specification, then the same has to be replaced at free of cost at own risk.~~

- ~~1) Samples are to be supplied wherever applicable. If the samples are not furnished within the stipulated period, the EMD 1% of P.O. value will be forfeited.~~
- ~~2) The delivery period for sample supply and bulk supply should be specified in your offer.~~
 - ~~1 no sample for each item is to be supplied within 15 days from the date of receipt of the P.O. for approval. The sample will be approved within 15 days on its receipt. The bulk supply to be made only after the approval of sample.~~

17.0) INSPECTION:

The materials covered in this order are subject to inspection in the presence of TANGEDCO Engineer at supplier's premises. The expenses connected with the deputation of such inspecting Engineers shall be borne by the Board. You shall provide necessary facilities for such inspection. You are requested to intimate the readiness of the materials for inspection at least 15 (Fifteen) days in advance for deputing our Engineer. Despatch Clearance will be given after inspection at your works. Inspection by Engineers shall not absolve you off the responsibility of supplying the materials confirming to the specification.

18.0) TEST CERTIFICATE:

Manufacturer's Test certificate and guarantee / warranty certificate should be furnished along with supply for the 48V DC Float and Boost Battery charger along with the serial Nos. The test certificate for the system manufactured shall be produced after the satisfactory completion of the FACTORY ACCEPTANCE TEST (FAT). The test certificates in triplicate for the materials furnishing the results of the tests as per latest issue of IS/IEC standard shall be forwarded and got approved before the materials are dispatched.

19.0) GUARANTEE:

The materials supplied shall be guaranteed for a period of 18 months from the date of receipt at site in good condition or 12 months from the date of commissioning whichever is later subject to an overall guarantee period of 24 months from the date of supply for satisfactory operation and good workmanship under normal and proper conditions of service & maintenance. Any defect noticed during this period should be rectified by the supplier free of charge to the TANGEDCO.

20.0) EVALUATION:

The evaluation shall include GST applicable as a part of the price, as detailed below and Packing & Forwarding and Freight & Insurance charges.

1. In a tender where the tenderers are both from the State of Tamilnadu as well as from outside the State of Tamilnadu, the evaluation will be done based on the GST.

21.0) PRICE PREFERENCE:

No price preference shall be given for Domestic small scale Industrial units and for the Public Sector undertaking of State Government (Viz. Govt. of Tamil Nadu) during evaluation.

22.0) LOSS OR DAMAGE:

- i) You are responsible for the safe delivery of the equipments / materials at destination.
- ii) You are responsible to assess the damages or shortages that occurred in transit and to pursue the claims with the insurers / carriers.
- iii) External damages and or shortages that are prima facie the results or rough handling in transit or due to defective packing will be intimated within 21 days (3 weeks) of the receipt of the materials at site. Internal defects, damages or shortages of any integral parts, which cannot ordinarily be detected on a superficial visual examination, due to bad handling in transit or defective packing would be intimated within one month from the date of receipt of materials at site. In any case the defective parts should be replaced by you free of cost.
- iv) In the event of supplies being received damaged or short at the destination station, the cost of such materials, Railway freight, Sales Tax (If payable) and insurance premium and other charges payable thereof will be paid only proportionate to the value of the materials received in good conditions, unless the damaged goods or short supplies are made good free of cost by you.
- v) Any defect of manufacture discovered after the first and before second payment should be rectified free of charge and all defective materials replaced.

23.0) REPLACEMENT OF DEFECTIVE / DAMAGED MATERIALS:

- (i) Notwithstanding anything contained in the above liquidated damages clause, when the whole or part of the materials supplied by the supplier are found to be defective/damaged or are not in conformity with the specification or sample, such defects or

damages in the materials supplied shall be rectified within two months from the date of intimation of defects/damages either at the point of destination or at the supplier's works, at the cost of supplier, against proper security and acknowledgement. In the alternative, the defective or damaged materials shall be replaced at free of cost within two months from the date of receipt of the intimation from the purchaser. If the Defects or Damages are not rectified or replaced within this period, the supplier shall pay a sum towards liquidated damages as per liquidated damages clause given above, for the delay in rectification / replacement of the defects or damages.

(ii) If even after such rectification or replacement of the damaged or defective part, if the equipment/materials ordered is not giving the satisfactory performance as per the contract, then it will be open to the purchaser either to reject the goods or repudiate the entire contract and claim such loss sustained by the Board.

(iii) "Notwithstanding any other remedies available, the Purchaser shall be entitled to dispose of the defective/damaged materials in 'as is where is condition' without further notice, if the contractor/supplier fails to rectify the defect and/or replace the damaged materials and/or fails to remove the defective/damaged materials within such period as may be notified by the Purchaser through notice and the sale proceeds of such disposal shall be appropriated towards the dues to the Board such as Liquidated Damages, ground rent, etc. as may be determined by the Purchaser".

24.0) FORCE MAJEURE:

If at any time during the continuance of this contract performance in whole or in part of any obligation under the contract shall be prevented or delayed by reasons of any war hostility Acts of Public, enemy acts or Civil commotion, strikes, lockouts, sabotages, fire, flood explosions, epidemics, quarantine restrictions or other acts of God (hereinafter referred to as eventualities) then provided notice of the happening of any such eventuality is given by the supplier to the Board within 15 days from the date of occurrence thereof neither party shall eventually be entitled to terminate this contract nor shall have any claim for damages against the order in respect of such non-performance of 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 exist.

Provided that if the performance in whole or part by the supplier or any obligation under this contract is prevented or delayed by reasons of any eventuality for a period not exceeding 60 days, the Board may at its option terminate this contract by notice in writing. The Board will also be at liberty to cancel the order if the supply is not completed within the above accepted delivery period notwithstanding the liquidated damages applicable for the belated supplies.

25.0) 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 the High Court, Chennai or District Court at Salem or sub-Court at Mettur Dam or at the District Munsif Court at Mettur Dam. 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 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- F in a non-judicial stamp paper of Rs.80/= agreeing to the above condition.

26.0) DUES TO THE BOARD:

The Board is empowered:

- a) To recover any dues against this contract in the Bills/Security deposit/Earnest Money Deposit due to the suppliers either in this contract or any other contracts with Board.
- b) To recover any dues against any other contract of the suppliers with Board, with the available amount due to the suppliers against this contract.
- c) To recover the difference in cost of the item, between the price offered by the failed tenderer and the Prospective new tenderer becoming lowest bidder in a fresh P.O issued for the same item subsequently.

27.0) RIGHTS OF THE BOARD:

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

- a) to vary the quantity finally ordered to the extent of 25% indicated in the Tender document.
- b) to split the Tendered Quantity and place orders on one or more than one firm as per the Tamil Nadu Transparency in Tender Rules 2000 since the tendered material is so vital in nature and the failure in supply would affect the public interest.
- c) 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.
- d) to cancel the orders for not keeping up the delivery schedule.
- e) to vary the delivery period based on the requirement and contingencies at the time of placing the Rate contract.
- f) to accept the lowest eligible tender.
- g) to reject any or all the tenders or cancel without assigning any reasons therefor.
- h) 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.

27.2) 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.

28.0) RESPONSIBILITY:

The Tenderer is responsible for delivery of the materials at the destination station in good condition. The tenderer shall include and provide for securely protecting and packing the materials as per relevant packing standards to avoid damages or loss in transit. All risks connected with the supply of these materials should be borne by the supplier.

29.0) FAILURE TO EXECUTE THE CONTRACT:

Contractors failing to execute the order placed on them to the satisfaction of the TANGEDCO under the terms and conditions set forth therein, will be liable to make good the loss sustained by the TANGEDCO, 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 penalty under the Liquidated Damages clause.

30.0) NON-ASSIGNMENT:

The supplier shall not assign or transfer the contract or any part thereof without the prior approval of the Purchaser.

31.0) EFFECTING OF RECOVERIES:

Any loss, arising due 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 supplier from the TANGEDCO/TANTRANSCO from this Contract as well as from other contracts.

32.0) ARBITRATION ACT NOT TO APPLY:

The TANGEDCO will not accept any 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 provisions of Arbitration and Conciliation Act 1996 in the event of any dispute between the parties.

33.0) QUANTITY ALLOCATION:

At the time of issuing P.O. for supply of materials, TANGEDCO reserves the right to allocate the quantity after ensuring the manufacturing capacity, ability of supply, quantity offered and past performance.

34.0) APPEAL:

Any tenderer aggrieved by the order of Tender Accepting Authority (Competent Authority), may prefer an appeal to the Govt. within 10 days from the date of receipt of order.

35.0) QUANTITY VARIATION: Not applicable

Variation in the quantity (+) or (-) 5 % of the ordered quantity will be accepted for good and sufficient reasons.

36.0) SUPPLY AT LOWER RATES: Not applicable

You shall accept for the condition that if the materials are supplied at lower rates to any other Customer within the period of one year from the date of PO, then the lower rates shall necessarily be passed on to the Board against this Purchase Order also.

37.0) GENERAL: All rules and provisions as per GST Act is applicable**38.0) CAUTION:**

1. 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.
2. 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 the tenderers will be forfeited or 1% of the P.O. value will be levied as penalty in addition to blacklisting them for future tenders / contracts in Tamilnadu Electricity Board.
3. The Guidelines issued in Tamil Nadu Transparency in Tenders Act 1998 and Tamil Nadu Transparency in Tender Rules 2000 will be followed.

SD XXX 17.03.22.

Superintending Engineer / P&A / MTPS - I

PART – II
SCHEDULE – A
PRICE BID

SPECIFICATION NO.:- CE / MTPS-I / SE / P&A / S&I / AEE 4 /O.T. NO. 83 /2021 – 22.

Name of Work : MTPS-I – S&I – Design, Supply, Erection, Testing and Commissioning of new 48V DC/60A Float charger and 48V DC/84A Boost charger (Separate Panel for Float & Boost Charger) Keltron / ICD / DUBAS or equivalent make suitable for charging 1 set of 48V/600AH Lead Acid Tubular Batteries comprising of 24 cells with suitable accessories and to Mettur Thermal Power Station - I.

Sl. No.	Item Description	HSN code	Qty.	Units	Basic rates in Figures to be entered by the Bidder Rs. P.	Applicable GST in %	GST per unit in Rs. P.	Freight charges per unit in Rs. P.	Packing & Forwarding charges per unit in Rs. P.	Insurance charges per unit in Rs. P.	Unit price without Taxes	Unit price with Taxes	Total amount in Words
													All inclusive Unit Price (3+4+5+6+7+8)
					3	4	5	6	7	8			
	As per Annexure-I enclosed				TO BE QUOTED IN BOQ FORMAT ONLY (ON LINE SUBMISSION)								
	NOTE 1 :	Rates quoted shall be both in Words & Figures.											
	NOTE 2 :	In case of discrepancy between prices quoted in words and in figures, lower of the two will be taken for evaluation.											
	NOTE 3 :	While quoting the rates the bidder shall indicate the HSN Code and Account Code for all the tendered items as per GST Act.											

COMPANY SEAL :

SIGNATURE :
NAME :
DESIGNATION :
COMPANY :
DATE :

PART – I

SCHEDULE- B

SPECIFICATION NO: CE / MTPS-I / SE/P&A/S&I / AEE.4 / O.T. 83 / 2021-2022

DEVIATIONS 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 aspects.

COMPANY SEAL

SIGNATURE :
NAME :
DESIGNATION :
DATE :

PART – I

SCHEDULE- C

SPECIFICATION NO: CE / MTPS-I / SE/P&A/S&I / AEE.4 / O.T. 83 / 2021 - 2022

DEVIATIONS 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 aspects.

COMPANY SEAL

SIGNATURE :
NAME :
DESIGNATION :
DATE :

PART – I

SCHEDULE- D

SPECIFICATION NO: CE / MTPS-I / SE / P&A /S&I / AEE.4 / O.T.No. 83 / 2021 - 2022

STATEMENT OF SUPPLY /ORDERS/EXECUTED /UNDER EXECUTION SO
FAR DURING THE PAST THREE YEARS AS ON THE TENDER OPENING

Sl No.	Name &Address Of The Organisation Inclding Other State EBs	Name Of The Work	P.O.No And Date	Value Of Order In Rs in Lakhs (*)	Scheduled Date Of Completion Of Order	Actual Date Of Completion Of Order

Note: 1) (*) Split up details such as price, may be enclosed separately.

2) Copies of orders received shall be enclosed.

COMPANY SEAL

SIGNATURE :
NAME :
DESIGNATION :
DATE :

PART – I**SCHEDULE – E****UNDERTAKING FOR PAYMENT OF DUES TO TNEB/TANGEDCO**

THIS DEED OF UNDERTAKING EXECUTED AT MTPS-I/METTUR DAM ON THIS THE
BY Messers.

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 TAMILNADU GENERATION AND DISTRIBUTION CORPORATION LIMITED, a
body corporate constituted the company registered under Companies Act 1956, having its
office at NPKRR Maaligai, 144, Anna Salai, Electricity Avenue, Chennai – 600 002,
hereinafter called the "TANGEDCO" (Which expression shall where the context so admits
mean and include the successors in – office and assigns).

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

NOW THIS UNDERTAKING WITNESSETH that the TANGEDCO 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 TANGEDCO. Further, the
Tenderer hereby authorizes the TANGEDCO to recover, any dues against any other
contract of the Tenderer with the TANGEDCO 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 :

PART – I**SCHEDULE – F****UNDERTAKING FOR LEGAL PROCEEDINGS JURISDICTION**

THIS DEED OF UNDERTAKING EXECUTED AT MTPS-1/METTUR DAM ON THIS THE

By Messers.

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 TAMILNADU GENERATION AND DISTRIBUTION CORPORATION LIMITED a body corporate constituted the company registered under Companies Act 1956, having its office at NPKRR Maaligai, 144, Anna Salai, Electricity Avenue, Chennai – 600 002, hereinafter called the "TANGEDCO" (Which expression shall where the context so admits mean and include the successors in – office and assigns).

WHEREAS the TANGEDCO has called for acceptance of jurisdiction of legal proceedings.

NOW THIS UNDERTAKING WITNESSETH that no suit are any proceedings in regard in any matter arising in any respect under this contract shall be instituted in any court, save in appropriate Civil Court of Chennai or the Court of small causes, Chennai. If is agreed that no other court shall have the jurisdiction to entertain any suit or proceedings, eventhough, part of the cause of action might arise within their jurisdiction. In case, any part of cause of action arises within the jurisdiction of any of the courts in Tamil Nadu and not in the courts in Chennai City, then it is agreed between parties that such suits or proceedings shall be instituted in court within Tamil Nadu and no other court outside Tamil Nadu shall have jurisdiction, eventhough any part of the cause of action might arise within the jurisdiction of such.

IN WITNESS WHERE OF acting for and on 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 :

PART – I**SCHEDULE – G**

SPECIFICATION NO.:- CE/MTPS-I/SE/P&A/ S&I/AEE4/O.T. NO. 83 /2021 - 2022

DECLARATION FORM

TO
The Chief Engineer,
Mettur Thermal Power Station – I,
Mettur Dam – 636 406.

Dear Sir,

- 1) Having examined the above specification together with the accompany schedules etc., we hereby offer to supply the materials covered in this specification at the rates entered in the attached schedule of prices.
- 2) We hereby guarantee the particulars entered in the schedules attached to the specification.
- 3) In accordance with Security Deposit clause under Section – II of the specification, we agree to furnish security to the extent of 5% of the total value of the contract.
- 4) 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 :
DATE :

SIGNATURE :
DESIGNATION :

COMPANY SEAL :

COMPANY :

***NOTE : Bidder may strike out the para not applicable.**

ANNEXURE – II**CERTIFICATE**

To

(Name and address of the selling Dealer)

.....

.....

TNGST NO.

It is hereby certified that the goods listed below are purchased by us for use in generation, transmission and distribution of electrical energy.

Sl. No.	Invoice No./ Date	Description of Goods	Qty.	Value (Rs.)

(Rupees

only).

Place :

Date :

(SIGNATURE)

Name :

Status :

Seal of Office :

ANNEXURE – III

UNDERTAKING IN LIEU OF PAYMENT OF EMD

THIS DEED OF UNDERTAKING executed at on this the _____ day of _____ 20____ By M/s _____ a company registered under companies Act 1956, having its registered office at _____ herein after called the Tenderer " TO AN IN FAVOUR OF M/s.TAMILNADU GENERATION AND DISTRIBUTION CORPORATION LIMITED" a body corporate constituted under the Companies Act 1956, having its office at NPKRR MAALIGAI, Electricity Avenue, 144, Anna Salai, Chennai – 600 002 represented by THE SUPERINTENDING ENGINEER/PURCHASE & ADMINISTRATION/ METTUR THERMAL POWER STATION-I, METTUR DAM (herein after called the "TANGEDCO")

WHEREAS the contract is for the work of

SPECIFICATION NO.:- CE/MTPS-I/SE/P&A/ S&I/AEE4/O.T. NO. 83 /2021-22,

Due on :

AND WHEREAS in accordance with clause 5 of the above said Tender specifications, the Tenderer has to furnish Earnest Money Deposit of Rs. _____ /-

(Rupees..... Only)

AND WHEREAS the Tenderer has requested the board to accept an undertaking in lieu of payment in cash of the EMD.

AND WHEREAS the TANGEDCO has accepted the request of the Tenderer subject to his executing an undertaking to pay to the Board not exceeding Rs. _____ /-

(Rupees..... only) representing the Earnest Money Deposit together with costs in case of non fulfillment of the conditions stipulated in the Tender specification or the conditions stipulated in the contract by the Tenderer.

IN CONSIDERATION of the TANGEDCO having agreed to accept an undertaking from the Tenderer in lieu of payment of Earnest Money Deposit in Cash, the Tenderer undertakes to pay the sum of Rs. _____ Only) immediately when a demand is raised by board against the Tenderer without any demur in the event of the following.

4. If he withdraws his tender or backs out after acceptance of the tender or fails to remit the Security Deposit.
5. If he revises any of the terms quoted during the validity period.
6. If he violates any of the conditions of the

Specification No.:- CE/MTPS-I/SE/P&A/ S&I/AEE4/O.T. NO. 83 /2021-22,

Due on :

NOW THE CONDITION OF THE ABOVE WRITTEN UNDERTAKING IS such that if the Tenderer shall duly and faithfully observe and perform the terms and conditions specified in terms of the above, then the above written undertaking shall be void. Otherwise the same 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" herein before used shall include their respective successors and assigns in office.

IN WITNESS WHERE OF THIRU _____ for and on behalf of the Tenderer has signed this undertaking on the day, the month and year first above written.

IN THE PRESENCE OF WITNESSES.

(Signature of Witnesses)

- 1) _____ Signature with company seal
- 2) _____

***Note :-**

Tenderer should sign in all pages of Undertaking bond paper with your Company seal as per TANGEDCO Format.

ANNEXURE – IV**TENDER ACCEPTANCE LETTER**

(To be given on Company Letter Head)

SPECIFICATION NO.:- CE/MTPS-I/SE/P&A/ S&I/AEE4/O.T. NO. 83 /2021 - 22

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

Date :

To,

Sub: Acceptance of Terms & Conditions of Tender.

Tender Reference No.:----- Name of Tender/Work

Dear Sir,

1. I/We have downloaded / obtained the tender document(s) for the above mentioned 'Tender/Work' from the web site(s) namely:

As per your advertisement, given in the above mentioned website(s).

2. I/We hereby certify that I/We have read the entire terms and conditions of the tender documents from page No.----- to -----(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. 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.

Yours Faithfully,

(Signature of the bidder, with official Seal)

ANNEXURE – V**(For Erection Portion only)****NOTE:**

(i) GST@ Extra as applicable on total value with 100% input tax credit. All acts and rules and provision of GST is applicable. GST will be reimbursed against production of documentary evidence for having paid the same for the above works.

(ii) The benefit of Input tax credit (ITC) if any available by the bidder shall be passed on to TANGEDCO.

GST DETAILS:

(i) GST Registration Number :

(ii) SAC Code :

SIGNATURE OF THE CONTRACTOR

NAME AND ADDRESS OF THE CONTRACTOR WITH SEAL

ANNEXURE – VI**Declaration to be submitted by the bidders
in Non-judicial stamp paper of value not less than Rs.80/-**

SPECIFICATION NO.:- CE/MTPS-I/SE/P&A/S&I/AEE4/O.T. NO. 83 /2021-22

To

The Chief Engineer,
Mettur Thermal Power Station – I,
Mettur Dam – 636 406.

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 :**

- 1. Bidder may strike out the para not applicable.**
- 2. Correct GST@% with Input tax credit/HSN code of materials should be furnished.**