



GUJARAT ENERGY TRANSMISSION CORPORATION LIMITED

Transmission Circle Office, Navsari – 396 427. Telephone No. (02637)236232/236274 F
No. (02637) 236104 Email: setrnavasari@gebmail.com



TENDER SPECIFICATION FOR

Sub: - Survey, Design, Supply, Installation, Commission and maintenance of Solar PV System for 5 years as a rooftop at Control Room terrace of various Substation of Vyara AM Division - Pkg II under Navsari Circle.

Estimated Cost – ₹ 73,57,711.20

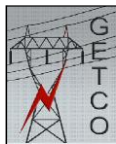
Tender fee – ₹ 5900.00 (Including 18% GST)

EMD – ₹ 73,577.00

Time limit- 02 Month

TECHNICAL BID

TENDER NO. TCNS/TR/ET-99/26-27



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Corporate Identity No.U40100GJ1999SGCO36018

E - TENDER NOTICE

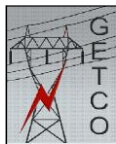
SE (TR) invites “On line Tenders” (e-tendering) for the “**Survey, Design, Supply, Installation, Commission and maintenance of Solar PV System for 5 years as a rooftop at Control Room terrace of various Substation of Vyara AM Division - Pkg II under Navsari Circle.**” From registered Contractors in appropriate class with GETCO / Central / State Government / Railway/Semi. Govt. and who has executed civil works successfully as mentioned in Qualification requirement criteria given in the tender document. Bidders should fulfill the all the qualification criteria. Otherwise their bids will not be considered & price bid will not be opened. All the bidders should have valid e-tender vender registration.

Tender Papers & Specifications may be downloaded from Web site as <https://getco.nprocure.com> (For view, download and on-line submission) and GUVNL / GETCO web sites www.gseb.com & www.getcogujarat.com (For view & download only).

All tender documents are to be upload (Notarized / self-attested copies of original – as specified in tender document) including scanned copy of duly attested Tender fee receipt, EMD receipt, Integrity Pact, attested tender documents with technical specification & other mentioned documents in qualification requirement through online only (mandatory) on (n) procure portal.

NO PHYSICAL DOCUMENTS TO BE SUBMITTED BY BIDDER

1	Tender Notice No.:	TCNS/TR/ET-99/26-27
2	Name of work	Survey, Design, Supply, Installation, Commission and maintenance of Solar PV System for 5 years as a rooftop at Control Room terrace of various Substation of Vyara AM Division - Pkg II under Navsari Circle.
3	Tender Fee (non-refundable)	₹ 5900.00 (Including GST @ 18%) <u>Payment of Tender fee will be accepted through RTGS / NEFT mode only</u>
4	Estimated Tender cost Including GST	₹ 73,57,711.20
5	Earnest Money Deposit (EMD) amount	₹ 73,577.00 <u>Payment of EMD will be accepted through RTGS / NEFT mode only</u>
6	Time Limit	02 Month
7	Required Class of Contractor	As per QR
8	Type of Tender (Works)	Percentage Basis on FIRM PRICE
9	On line (E-tendering) tender/ offer submission last date up to 16.00 hours only (This is mandatory)	As per Tender Notice Schedule
10	Date of opening of Preliminary & Technical stage (on-line Opening)	As per Tender Notice Schedule
11	Tentative Date of on – line opening of Price bid, (if possible),	Shall be intimated separately



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IMPORTANT:

- (A) **All the online Annexures i.e. Annexure - 1 to 8 and price bid, other tender documents (refer Table-A) must be submitted/attached through online form only.**
- (B) Bidder has to upload scanned copies of original (Notarized / self-attested copies of original – as specified in tender document) documents with bid and **no physical documents to be submitted by bidder.**
- (C) All such documents should be strictly submitted through online uploading. Otherwise the offer will not be considered and no any further communication in the matter will be entertained on or before due date of submission. **However, of anywhere in tender documents submission of other than this document or physical submission mentioned to be overlooked.**
- (D) Tender fees & EMD amount should be paid by **Online-payment mode only. Payment of Tender Fees & EMD by RTGS/NEFT/on line shall be encouraged. After the payment through RTGS/NEFT bidder has to mail following details:**

Sr. No	Required Details
1	Name & Address of the bidder
2	Bidder GST No
3	Tender No with due date
4	Mode of Transfer
5	Ref. ID with Bank Details
6	Paid Amount
7	Payment against (Tender Fee / EMD)

To:

- a. setrnavasari.getco@gebmail.com
b. decmgtrnavasari.getco@gebmail.com
c. aotr.navsari@gebmail.com

Bidder has to provide all above details on the same date of payment so that receipt can be generated.

❖ **GETCO Beneficiary Bank detail is as under:**

1	Name of Account Holder	Gujarat Energy Transmission Corporation Ltd.
2	Account No.	08200200000194
3	Name of Bank	Bank of Baroda
4	Branch Code	012
5	Address of Bank	Bank of Baroda, Khatrivad, Navsari
6	IFSC Code	BARB0KHATRI
7	PAN No	AABCG4029R
8	TAN No	SRTG01134A
9	GST No	24AABCG4029R2ZC

The transection slip of payment made by RTGS/NEFT is to be uploaded in N-procure with tender documents

- (E) In case short submission of documents with bid and / or clarification if any required from the bidder, the required details / documents may be asked from bidder in physical form.
- (F) It shall be sole responsibility of the bidder that the uploaded scanned documents (in PDF form) remain legible and should not be password protected.
- (G) All the relevant scanned documents as per requirement of the tender are to be upload through online only on n-procure portal including Tender fee, EMD and Integrity Pact.
- (H) Tender will be evaluated on basis of Data / Details / Documents submitted by online form only.
- (I) It is mandatory for all the bidders to upload their tender documents by on line only (E-tendering) in scheduled time.

Seal & Signature of Bidder



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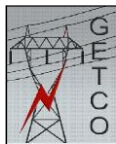
- (J) ~~No documents shall be considered physically which are mentioned for on-line submission only.~~
- (K) The bidders are required to fill up all the online annexure / forms (word file attached) and shall be uploaded invariably. This is intended for transparency and speedy evaluation of the bids. Instead of simply confirming / attached in bid / refer physical offer, the Bidder shall fill in the particulars against appropriate place in respect of each line appearing in each online annexure. Wherever required, bidder shall invariably have to upload supporting authentic documents in the online bid. (In the absence of required details in the online annexure, the purchaser has every right to evaluate the bids accordingly and bidder cannot raise any objection against any point during evaluation.)
- (L) Bidders are requested to remain in touch with the web-site for any amendment / corrigendum or extension of due date etc
- (M) The Earnest Money Deposit and tender fee will be accepted through online payment mode NEFT/RTGS only and Tender Fee payment through NEFT/RTGS with different purchaser or agency shall not be accepted. Tender without EMD and tender fee shall be rejected. Two separate transection for Tender fee and EMD should be submitted.
- (N) The GETCO reserves the right to award the work to one or more bidders, considering their technical and financial capacity OR to reject any or all tenders or accept any tender without assigning any reason thereof.

Any technical questions, information and clarifications that may be required pertaining to this enquiry should be referred to: **The Superintending Engineer (TR), Gujarat Energy Transmission Corporation Limited, Transmission Circle Office, Kabilpore, Navsari - 396427**

GETCO reserves the right to reject any OR all tenders without assigning any reasons thereof.

**Yours faithfully,
Superintending Engineer (TR)
Navsari**

To view the PDF file please use “Acrobat Reader” software which can be downloaded from “Adobe” website.



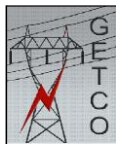
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Sr.No.	Document	Document Code	Part	Page No.
1.	Tender Notice	-	I	1-4
2.	Instructions to Tenderers	ITB	I	5-15
3.	General Conditions of Contract	GCC	I	
4.	Scope of Work		I	
5.	General Information	SCC	I	58-70
6.	Special Conditions of Contract with Declaration Form	SCC	I	70-80
7.	Bid Form and Price Schedules	BF/PS	IV	80-83



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GUJARAT ENERGY TRANSMISSION CORPORATION LIMITED BARODA

Date :

I N T E G R I T Y P A C T

OUR ENEAVOUR

To create environment where Business Confidence is built through Best Business Practices and is fostered in an atmosphere of trust and respect between providers of goods and services and their users for the ultimate benefit of society a the nation.

GETCO COMMITMENT

- ☐ To maintain the highest ethical standards in business and professional
- ☐ Ensure maximum transparency to the Satisfaction of stakeholders.
- ☐ To ensure to fulfill the terms of agreement / contract and to consider objectively the viewpoint of parties.
- ☐ To ensure regular and timely release of payment on due dates for work done.
- ☐ To ensure that no improper demand is made by employees or by anyone on our behalf.
- ☐ To give maximum possible assistance to all the Vendors / Suppliers / Service provider and other to enable them to complete the contract in time.
- ☐ To provide all information to suppliers/ contractors relating to contract / Job which facilitate him to complete the contract / job successfully in time.
- ☐ To ensure minimum hurdles to Vendors/ suppliers / contractors in complete of agreement / contract / work order.

PARTY'S COMMITMENT

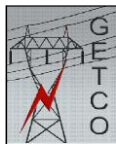
- ☐ Not to bring pressure / recommendations outside GETCO to influence its decision.
- ☐ Not to use intimidation, threat, inducement or Pressure of any kind on GETCO or any of it's employees under any circumstances.
- ☐ To be prompt and reasonable in fulfilling the contract, agreement, legal obligations.
- ☐ To provide goods and / or services timely as per agreed quality and specifications at minimum cost of GETCO.
- ☐ To abide by the general discipline to be maintained in our dealings.
- ☐ To be true and honest in furnishing information including payment to agents / sub-agent.
- ☐ Not to divulge any information, business details available during the course of business relationship to others without the written consent of GETCO.
- ☐ Not to enter into carter / syndicate / understanding whether formal / non-formal so as to influence the price.

Seal & Signature
(GETCO Authorized Signatory)

Seal & Signature
(Party's Authorized Person)

Name :
Designation :

Name :



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PART-I - ITB INSTRUCTIONS TO BIDDERS

A. INTRODUCTION

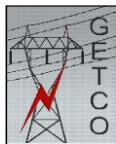
1.0 General Particulars

- 1.1 The Gujarat Energy Transmission Corporation Ltd., Baroda hereinafter called “/ ‘OWNER’ intends to receive bids for erection of structures and all equipments including earthing installation as detailed in the accompanying specifications in accordance with Terms and Conditions herein. The bids shall be prepared and furnished as per these Instructions.

2.0 Qualification Requirements of Bidders

- 1 **Registration:** The Bidder shall be strictly a Registered with GEDA.
- 2 **Experience:** The Bidder should have designed, supplied, installed & commissioned Grid connected Solar PV Power Projects having aggregate capacity not less than 50% of Tender quantity (in KW) in residential Sector during last three years in any Government department of Gujarat.
- 3 **Solvency:** Latest bank solvency certificate not older than 1 Year from any Nationalized/ Scheduled/Co-operative Bank of a sum of minimum 20 % of the estimated cost shown in the tender.
- 4 **Provident Fund Code:** Separate provident fund code number towards firm registered with Regional P. F. Commissioner.
- 5 **Financial Statement:** The Bidder should submit certified photocopy of audited financial statement i.e. Balance sheet with profit and loss account of last three Years. In case, audit is not mandatory, bidder should submit photocopy of financial statements i.e. Balance Sheet & Profit & Loss Account
- 6 **Nature of Firm:** Attested copy of **Partnership Deed, Power of Attorney**, if any, for signing the bid documents in case of **partnership firm** & **self-affidavit for proprietorship firm**. **MOA/AOA** shall be submitted in case it is **corporate entity**. All such documents shall have to be **NOTARISED**
- 7 **I.T.PAN CARD:** The bidder should submit the attested Photocopy of PAN Card of their firm.
- 8 **GST Registration:** The bidders should submit the certified copy of GST registration of their firm.
- 9 **Electrical contractor's license:** The bidders should submit the attested copy of GOG Electrical Contractor licenses of firm with latest validation.

The bidders must be submitted all above documents scanned copy on n-procure and certified/self-verified copy of all documents submit with physical Technical bid.



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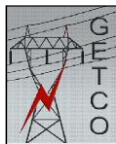
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CHECK LIST OF DOCUMENTS SUBMISSION

TABLE-A		
Mandatory to upload on-line only (pdf file)		
No.	Particulars	Check Mark
1	Scan of Demand Draft of Tender Fee Amount / Online payment receipt	
2	Scan of Demand Draft of EMD Amount / Online payment receipt	
3	Registration document as Approved Contractor –of GEDA	
4	Work completion certificate in Form No.3A (Experience Certificate as main contractor) only as Per Qualification Requirement	
5	Bank Solvency Certificate	
6	GST Registration Number Documents	
7	Nature of Firm: Partnership deed/Latest Form-G/ POA/Authorized Signatory Certificate for Partnership	
	Self-Affidavit/POA/Authorized Signatory Certificate for Proprietorship	
8	Provident Fund Code Number Documents	
9	PAN Number Document	
10	Income Tax Return, Profit Loss Accounts and Balance sheet of Last Three Financial Years	
11	Electrical Contractor License	
13	Filling Annexure 1 to 8	
14	Duly signed and stamped tender copy	



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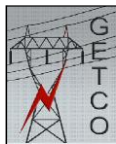
Technical Specification

Survey, Design, Supply, Installation, Commission and maintenance of Solar PV System for 5 years as a rooftop at Control Room terrace of various Substation of Vyara AM Division - Pkg II under Navsari Circle..

The assorted rating of the solar rooftop system for which the rates shall be discovered are as follows.

SR No.	Division	Substation Name	Capacity (kW)
1	Vyara	66KV Bhinar	12
2	Vyara	66KV Borikuva	12
3	Vyara	66KV Gamdi	12
4	Vyara	66KV Hathoda	12
5	Vyara	66KV Hingani	12
6	Vyara	66KV Kukarmunda	12
7	Vyara	66KV Naranpur	12
8	Vyara	66KV Nimbhora	12
9	Vyara	66KV Nizar	12
10	Vyara	66KV Rumkitalav	12
11	Vyara	66KV Kharsi	12
12	Vyara	66KV Kumkuva	12

Seal & Signature of Bidder



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SR No.	Division	Substation Name	Capacity (kW)
13	Vyara	66KV Tokarva	12
14	Vyara	66KV Vadpada	12

Note:- (Project capacity will be considered in AC. Payment to Bidder will be done on AC Capacity Registered, DC Capacity Installed, and Invertor Installed, whichever will be less.)

The broad specifications of the system (Detailed Specifications are given in the Tender elsewhere) shall be as follows:

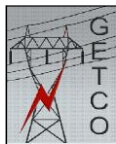
- 1) **Solar PV Modules:** - Poly Crystalline make solar module not less than 300 Wp each and having valid IEC certificate. (Certificate to be submitted on shortlisting of successful Tenders). **The PV Cell and the modules shall be of INDIAN MAKE.** Necessary documents in this regards must be provided to GEDA/GETCO.

The bidder shall be required to submit the Self declaration, regarding the Modules and Solar cells used under this supply are “**Made in India**”, from the concerned manufacturer of Solar Modules, before commissioning of the System. Such firm and Shortlisted bidder, those violate the requirement of Indian Make Solar Cell and Module shall be put under the black list, and or stop deal list as may be decided by the GEDA/GETCO.

Violation of norms of Domestic Content Requirement (DCR) Under Solar PV projects will lead to penalties and action as mentioned in office memorandum of MNRE GOI vide letter no. 283/2018-GRID SOLAR dated 20th February, 2018.

The ALMM list is published by the MNRE vide Notification No. 283/54/2018-Grid Solar-Part(1) Dated 30-12-2021 and the notification for the same is also published by the MNRE vide Notification No. 283/54/2018-Grid Solar-Part(2) Dated 13-01-2022. The Model and Manufactures of the Module and Cell shall be from the ALMM only used in the SPV System in this project.

- 2) **Invertor:** - IEC certified invertor with in-built anti-islanding facility of Rated capacity plus minus 10% of the aggregate capacity of the modules.
- 3) **Mounting structure:** - The mounting (Rectangle pipe/square pipe / circular pipe) with requisite cross bars, nuts and bolts etc. shall be pre-galvanized or galvanized. The Rectangular /square / circular hollows pipe section used for the structures should have a minimum 2.5 mm. A certificate of a structural engineer certifying the strength and stability of the mounting structure to withstand the weight and wind speed of 150 km/hour throughout the life span of 25 years of the system, shall be submitted by the vendors. The ground clearance of the bottom most edge of solar panel shall not be less than 1200 mm.



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- 4) AC, DC cable shall be of ISI mark and reputed make.
- 5) Lightning arrestor shall be provided for each of the Solar Rooftop installations. It shall be of ISI mark and reputed make.
- 6) The system cost shall be inclusive of supply of solar modules, invertors, mounting structure, AC DC cables in RPVC conduit as per requirement on location (Rate include supply of minimum AC Cable length Upto 30 Meter/Building), AC - DB, DC – DB, earthing, LA, Bidirectional meter, Solar AC Meter and its installation. No any differential/additional Charges for LT Bidirectional meter will be reimbursed.
The rate quoted per kW for each project should be inclusive of all taxes. No rate revision under this tender will be allowed in any circumstances.
- 7) The scope of regular cleaning of the modules for five years shall also be in the scope of Bidder. The arrangement of required water etc for regular cleaning of the modules shall be in the scope of the Bidder.
- 8) The payment terms towards the supply, Installation, commissioning and 5 years CMC shall be as follows:
 - a) 100% of the order value upon certification of GEDA/third party approved by GEDA and commissioning of the system upon installation of the bidirectional and solar meter and complete the installation process with uploading of all documents on GEDA online portal., or as may be specified.
1. bills
2. Installation certificate duly signed by beneficiary/GEDA official/third party showing its commissioning date (date of bi-directional meter installation)

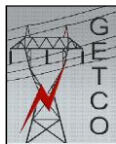
Note : Performance Guarantee for 5 years –CMC :

You have to Submit 20% of the order value against the equivalent amount of performance bank guarantee/ Demand draft valid for a period of 5 years from the date of commissioning of the system. (date of meter Installation).

Completion period:

The Project completion period shall be 90 days from the date of placement of order, completion should mean, commissioning of the system, meaning commencement of injection of power to grid. The delay if any in the specific completion period shall be dealt with on the basis of the certified documentary evidence of the single line diagram (SLD) drawing, submission and approval to CEI, estimate generation and payment to DISCOM and application submission and approval of CEI for charging of system.

For Two different site location you have to provide Two separate gang. Within 90 days time limit you have to complete work of Both 400KV Kasor+ 400KV Charal SS.



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TECHNICAL SPECIFICATIONS FOR GRID CONNECTED SPV SYSTEMS

The specifications of SPV systems, for which EOI are invited, are as under. The self-certified Test Report(s) of each of the components/ systems mentioned shall be submitted before starting System installation. To ensure optimum performance of the solar installation and its related safety aspects, the provisions of the publication of GERMI on “Best Practices in Operation and Maintenance of Roof Top Solar PV systems in India” published in May, 2018 be followed.

The proposed projects shall be commissioned as per the technical specifications given below. Any short comings will lead to cancelation of Empanelment as may be decided by GETCO. The specifications, in the GERC Regulation on Net Metering shall also be applicable.

1. DEFINITION:

A Grid Tied Solar Rooftop Photo Voltaic (SPV) power plant consists of SPV array, Module Mounting Structure, Power Conditioning Unit (PCU) consisting of Maximum Power Point Tracker (MPPT), Inverter, and Controls & Protections, interconnect cables, solar meter, bi-directional energy meter and switches. PV Array is mounted on a suitable structure. Grid tied SPV system is without battery and should be designed with necessary features to supplement the grid power during daytime. Components and parts used in the SPV power plants including the PV modules, metallic structures, cables, junction box, switches, PCUs etc., should confirm to the BIS, IEC, or international specifications, wherever such specifications are available and applicable.

Solar PV system shall consist of following equipment/components.

1. Solar Photo Voltaic (SPV) modules consisting of required number of Crystalline PV modules.
2. Inverter and Remote Monitoring System.
3. Module mounting structures.
4. Energy Meter.
5. Array Junction Boxes.
6. DC Distribution Box.
7. AC Distribution Box.
8. Protections – Earthing, Lightning, Surge.
9. Cables.
10. Drawing & Manuals.
11. Miscellaneous.

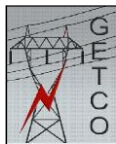
a. SOLAR PHOTOVOLTAIC MODULES:

- 1.1.1 The PV modules and Solar Cell used should be made in India. Necessary documents in this regards must be provided to GETCO.

Violation of norms of Domestic Content Requirement (DCR) UNDER Solar PV projects will lead to penalties and actions as mentioned in office memorandum of MNRE GOI vide letter no. 283/2018-GRID SOLAR dated 20th February, 2018 as under:

- a) Filing of criminal case under IPC 420 and related Sec.

Seal & Signature of Bidder



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b) Blacklisting Developers for period of 10 years
Corporate Identity No. U104100G11999SGCO36018

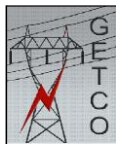
- c) Forfeiting of relevant bank guarantee(s)
- d) Disciplinary case against the Officers of concerned CPSU/ State Govt.
- e) Any other action , in addition to those above

SPV Modules and Solar Cells must be used for this Scheme shall be domestically manufactured as per MNRE's requirement. The Empanelled Agencies shall require to submit the Self declaration, regarding the Modules and Solar cells used under the Scheme are "Made in India", from the concerned manufacturer of Solar Modules, supplied for this scheme of GoG/GOI, before commissioning of the System. Violation of this condition will be reported to the MNRE and GoG for taking actions against the Manufacturer of the Solar Modules and Empanelled Agency. Such firm and Empanelled Agency may be put under the black list or stop deal list as may be decided by the DISCOM Authority.

In absence of the ALMM, the Empanelled Agencies shall have to submit self-declaration regarding domestically manufactured Cell and Modules used in the SPV System in this project. Whenever, the ALMM list published by the MNRE, the Model and Manufactures of the Module and Cell shall be from the ALMM only used in the SPV System in this project.

The PV modules used must qualify to the latest edition of IEC standards or equivalent BIS standards, i.e. IEC 61215/IS14286, IEC 61853-Part I/IS 16170-Part I, IEC 61730 Part-1 & Part 2. For the PV modules to be used in a highly corrosive atmosphere throughout their lifetime, they must qualify to IEC 61701/IS 61701.

- a) The total solar PV array capacity should not be less than allocated capacity (kWp) and should comprise of solar crystalline modules of minimum 300 Wp. Module capacity less than 300 watts shall not be accepted
- b) Protective devices against surges (SPD) at the PV module shall be provided. Low voltage drop bypass diodes shall be provided. -Surge Protective Device (SPD) of appropriate capacity & type shall be provided either in the inverter or in DC Junction Box for protection against surges. Low voltage drop bypass diodes shall be provided.
- c) PV modules must be tested and approved by one of the NABL accredited and BIS Approved test centers.
- d) The module frame shall be made of corrosion resistant materials, preferably having anodized aluminum.
- e) The bidder shall carefully design & accommodate requisite numbers of the modules to achieve the rated power in his bid.
- f) The PV Module efficiency should be higher than 16 % .
Solar PV modules of minimum fill factor 75%, to be used..
- g) Other general requirement for the PV modules and sub systems shall be the following:
 - I. The rated power of solar PV module shall have maximum tolerance upto +3%.
 - II. The peak-power point current of any supplied module string (series connected modules) shall not vary by +1% from the respective arithmetic means for all modules and/or for all module strings (connected to the same MPPT), as the case may be.



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- The peak-power point voltage of any supplied module string (series connected modules) shall not vary by + 2% from the respective arithmetic means for all modules and/or for all module strings (connected to the same MPPT), as the case may be.
- III. All electrical parameters at STC shall have to be provided.
 - IV. Minimum certified PV module efficiency shall be +17 % for crystalline The temperature coefficient power of the PV module shall be equal to or better than -0.45%/°C
 - V. All PV modules should carry a performance warranty of >90% during the first 10 years, and >80% during the next 15 years. Further, module shall have performance warranty of >97% during the first year of installation. Degradation of module should not be more than 1 % per annum.

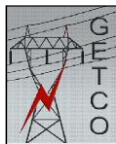
The PV modules shall be equipped with IP 65 or better protection level junction box with required numbers of bypass diodes of appropriate rating and appropriately sized output power cable of symmetric length with MC4 or equivalent solar connectors. The IP level for protection may be chosen based on following conditions:

- i. An IP 65 rated enclosure is suitable for most outdoor enclosures that won't encounter extreme weather such as flooding.
- ii. An IP 67 rated enclosure is suitable at locations which may encounter temporary submersion at depths of up to one meter.
- iii. An IP 68 enclosure is recommended if there may exist situations of submergence for extended periods of time and at substantial depths.
- iv.

1.1.3. Modules deployed must use a RF identification tag. The following information must be mentioned in the RFID used on each modules (This can be inside or outside the laminate, but must be able to withstand harsh environmental conditions).

- a) Name of the manufacturer of the PV module
- b) Name of the manufacturer of Solar Cells.
- c) Month & year of the manufacture (separate for solar cells and modules)
- d) Country of origin (separately for solar cells and module)
- e) I-V curve for the module Wattage, I_m , V_m and FF for the module
- f) Unique Serial No and Model No of the module
- g) Date and year of obtaining IEC PV module qualification certificate.
- h) Name of the test lab issuing IEC certificate.
- i) Other relevant information on traceability of solar cells and module as per ISO 9001 and ISO 14001
- j) Nominal wattage +3%.
- k) Brand Name, if applicable.

Other details as per IS/IEC 61730-1 clause 11 should be provided at appropriate place. The actual Power Output P_{max} shall be mentioned on the label pasted on the back side of PV Module. In addition to the above, the following information should also be provided:



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- i. Polarity of terminals or leads (color coding is permissible) on junction Box housing near cable entry or cable and connector.
- ii. The Maximum system voltage for which the module is suitable to be provided on the back sheet of the module.

1.1.4. Warranties:

a) Material Warranty:

- i. Material Warranty is defined as: The manufacturer should warrant the Solar Module(s) to be free from the defects and/or failures specified below for a period not less than five (05) years from the date of commissioning.
- ii. Defects and/or failures due to manufacturing
- iii. Defects and/or failures due to quality of materials
- iv. Non conformity to specifications due to faulty manufacturing and/or inspection processes. If the solar Module(s) fails to conform to this warranty, the manufacturer will repair or replace the solar module(s), at the Owners sole option.

b) Performance Warranty:

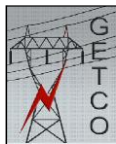
- i. The predicted electrical degradation of power generated not exceeding 20% of the minimum rated power over the 25 year period and not more than 10% after ten years period of the full rated original output.

2. **ARRAY STRUCTURE:**

The mounting structure steel shall be as per latest IS 2062: 2011 and hot dip galvanization of the mounting structure shall be in compliance of latest IS 4759.

Module Mounting Structure (MMS):

- 3.1. Supply, installation, erection and acceptance of module mounting structure (MMS) with all necessary accessories, auxiliaries and spare part shall be in the scope of the work.
- 3.2. Module mounting structures can be made from two types of materials. They are Hot Dip Galvanized Iron or Hot Dip Galvanized Mild Steel (MS). However, MS will be preferred for raised structure.
- 3.3. MMS Steel shall be as per latest IS 2062:2011 and galvanization of the mounting structure shall be in compliance of latest IS 4759.
- 3.4. All bolts, nuts, fasteners shall be of stainless steel of grade SS 304 or hot dip galvanized, panel mounting clamps shall be of aluminum and must sustain the adverse climatic conditions. Structural material shall be corrosion resistant and electrolytically compatible with the materials used in the module frame, its fasteners, nuts and bolts.
- 3.5. The module mounting structures should have angle of inclination as per the site conditions to take maximum insolation and complete shadow-free operation during generation hours. However, to accommodate more capacity the angle of inclination may be reduced until the plant meets the specified performance ratio requirements.



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- 3.6. The Mounting structure shall be so designed to withstand the speed for the wind zone of the location where a PV system is proposed to be installed. The PV array structure design shall be appropriate with a factor of safety of minimum 1.5.
- 3.7. The upper edge of the module must be covered with wind shield so as to avoid build air ingress below the module. Slight clearance must be provided on both edges (upper & lower) to allow air for cooling.
- 3.8. Suitable fastening arrangement such as grouting and calming should be provided to secure the installation against the specific wind speed. The Empanelled Agency shall be fully responsible for any damages to SPV System caused due to high wind velocity within guarantee period as per technical specification.
- 3.9. The structures shall be designed to allow easy replacement, repairing and cleaning of any module. The array structure shall be so designed that it will occupy minimum space without sacrificing the output from the SPV panels. Necessary testing provision for MMS to be made available at site.
- 3.10. Adequate spacing shall be provided between two panel frames and rows of panels to facilitate personnel protection, ease of installation, replacement, cleaning of panels and electrical maintenance.
- 3.11. The structure shall be designed to withstand operating environmental conditions for a period of minimum 25 years.
- 3.12. The Rooftop Structures maybe classified in three broad categories as follows (drawings at Annex-I):

i. Ballast structure

- The mounting structure must be Non-invasive ballast type and any sort of penetration of roof to be avoided.
- The minimum clearance of the structure from the roof level should be in between 70-150 mm to allow ventilation for cooling, also ease of cleaning and maintenance of panels as well as cleaning of terrace.
- The structures should be suitably loaded with reinforced concrete blocks of appropriate weight made out of M25 concrete mixture.

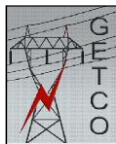
ii Tin shed

- The structure design should be as per the slope of the tin shed.
- The inclination angle of structure can be done in two ways-
 - Parallel to the tin shed (flat keeping zero-degree tiling angle), if the slope of shed in Proper south direction
 - With same tilt angle based on the slope of tin shed to get the maximum output.
- The minimum clearance of the lowest point from the tin shade should be more then 100mm.
- The base of structure should be connected on the Purlin of tin shed with the proper riveting.
- All structure member should be of minimum 2 mm thickness.

ii. RCC Elevated structure: It can be divided into further three categories:

A. Minimum Ground clearance (300MM – 1200 MM)

- The structure shall be designed to allow easy replacement of any module and shall be in line with site requirement. The gap between modules should be minimum 30MM.
- Base Plate – Base plate thickness of the Structure should be 5MM for this segment.



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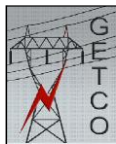
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- c. Column - Structure Column should be minimum 2MM in Lip section / 3MM in C-Channel section. The minimum section should be 70MM in Web side and 40MM in flange side in Lip section.
 - d. Rafter - Structure rafter should be minimum 2MM in Lip section / 3MM in C-Channel section. The minimum section should be 70MM in Web side (y-axis) and 40MM in flange side (x-axis).
 - e. Purlin - Structure purlin should be minimum 2MM in Lip section. The minimum section should be 60MM in Web side and 40MM in flange side in Lip section.
 - f. Front/back bracing – The section for bracing part should be minimum 2MM thickness.
 - g. Connection – The structure connection should be bolted/welded completely. Leg to rafter should be connected with minimum 12 diameter bolt. Rafter and purlin should be connected with minimum 10 diameter bolt. Module mounting fasteners should be SS-304 only and remaining fasteners either SS-304 or HDG 8.8 Grade.
 - h. For single portrait structure the minimum ground clearance should be 500MM.

3.13. Material standards:

- i. Design of foundation for mounting the structure should be as per defined standards which clearly states the Load Bearing Capacity & other relevant parameters for foundation design (As per IS 6403 / 456 / 4091 / 875).
- ii. Grade of raw material to be used for mounting the structures so that it complies the defined wind loading conditions (As per IS 875 - III) should be referred as follows (IS 2062 – for angles and channels, IS 1079 – for sheet, IS 1161 & 1239 for round pipes, IS 4923 for rectangular and square hollow section)
- iii. Test reports for the raw material should be as per IS 1852 / 808 / 2062 / 1079 / 811.
- iv. In process inspection report as per approved drawing & tolerance should be as per IS 7215.
- v. For ascertaining proper welding of structure part following should be referred:
 - a. D.P. Test (Pin Hole / Crack) (IS 822)
 - b. Weld wire grade should be of grade (ER 70 S - 6)
- vi. For ascertaining hot dip galvanizing of fabricated structure following should be referred: -
 - a. Min coating required should be as per IS 4759 & EN 1461.
 - b. Testing of galvanized material
 - Pierce Test (IS 2633)
 - Mass of Zinc (IS 6745)
 - Adhesion Test (IS 2629)
 - CuSO4 Test (IS 2633)
 - Superior High Grade Zinc Ingot should be of 99.999% purity (IS 209) (Preferably Hindustan Zinc Limited or Equivalent).
- vii. Foundation Hardware – If using foundation bolt in foundation then it should be as per IS 5624.



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- 3.14. Design Validation: The Structure design and drawing should be duly verified by a licensed Structural designer before installation for all types of structure arrangements including the extension made, as per specification.

3. JUNCTION BOXES (JBs):

- a) The junction boxes are to be provided in the PV array for termination of connecting cables. The Junction Boxes (JBs) shall be made of GRP/FRP/Powder Coated aluminium /cast aluminium alloy with full dust, water & vermin proof arrangement. All wires/cables must be terminated through cable lugs. The JB's shall be such that input & output termination can be made through suitable cable glands. **Suitable markings shall be** provided on the busbars for easy identification and cable ferrules will be fitted at the cable termination points for identification.
- b) Copper bus bars/terminal blocks housed in the junction box with suitable termination threads conforming to IP65 standard and IEC 62208 Hinged door with EPDM rubber gasket to prevent water entry. Single /double compression cable glands should be provided.
- c) For array junction box/ PV combiner box, Empanelled Agency may also provide polyamide glands and MC4 Connectors. The rating of the junction box shall be suitable with adequate safety factor to interconnect the Solar PV array
- d) Suitable markings shall be provided on the bus bar for easy identification and the cable ferrules must be fitted at the cable termination points for identification.
- e) Junction boxes shall be mounted on the MMS such that they are easily accessible and are protected from direct sunlight and harsh weather.

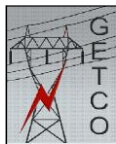
4. DC DISTRIBUTION BOX (DCDB):

May not be required for small plants, if suitable arrangement is available in the inverter.

- a) DC Distribution Box (DCDB) to receive the DC output from the PV array field.
- b) DC DBs shall be dust & vermin proof conform having. IP 65 or better protection, as per site conditions.
- C The bus bars are made of EC grade copper of required size. Suitable capacity MCBs/MCCB shall be provided for controlling the DC power output to the inverter along with necessary surge arrestors. MCB shall be used for currents up to 63 Amperes, and MCCB shall be used for currents greater than 63 Amperes

5. AC DISTRIBUTION BOX (ACDB):

- a) AC Distribution Panel Board (DPB) shall control the AC power from PCU/inverter, and should have necessary surge arrestors. Interconnection from ACDB to mains at LT Bus bar while in grid tied mode.
- b) All switches and the circuit breakers, connectors should conform to IEC60947:2019, part I, II and III/ IS60947 part I, II and III.
- c) The changeover switches, cabling work should be undertaken by the bidder as part of the project.
- d) All the Panel's shall be metal clad, totally enclosed, rigid, floor mounted, air -insulated, cubical type suitable for operation on three phase / single phase, 415 or 230 volts, 50 Hz
- e) The panels shall be designed for minimum expected ambient temperature of 45 degree Celsius, 80 percent humidity and dusty weather.
- f) All indoor panels will have protection of IP54 or better. All outdoor panels will have protection of IP65 or better as per site conditions.
- g) Should conform to Indian Electricity Act and CEA safety regulations (till last amendment).



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- h) All the 415 AC or 230 volts devices / equipment like bus support insulators, circuit breakers, SPDs, VTs etc., mounted inside the switchgear shall be suitable for continuous operation and satisfactory performance under the following supply conditions.

- Variation in supply voltage: $\pm 10\%$ as per CEA/State regulations.
- Variation in supply frequency ± 3 Hz as per CEA/State regulations.

- The inverter output shall have the necessary rated AC surge arrestors, if required and MCB/ MCCB. RCCB shall be used for successful operation of the PV system, if inverter does Not have required earth fault/residual current protection.

6. PCU/ARRAY SIZE RATIO:

The recommended the solar PV array capacity in KW shall be in a range of 100%-110% of inverter capacity. i.e if the Inverter Capacity is 5 KW, then the Solar PV array capacity should be from 5 KW to 5.5 KW.

7. Inverter and Remote Monitoring System :-

i. Marking:

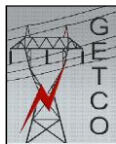
All the Inverters should contain the following clear and indelible Marking Label & Warning Label as per IS16221 Part II, clause 5. The equipment shall, as a minimum, be permanently marked with:

- The name or trade mark of the manufacturer or supplier;
- A model number, name or other means to identify the equipment,
A serial number, code or other marking allowing identification of manufacturing location and the manufacturing batch or date within a twelve month time period.
- Input voltage, type of voltage (a.c. or d.c.), frequency, and maximum continuous current for each input.
- Output voltage, type of voltage (a.c. or d.c.), frequency, maximum continuous current, and for a.c. outputs, either the power or power factor for each output
- The Ingress Protection (IP) rating
- As per IS 16221

Marking shall be located adjacent to each fuse or fuse holder, or on the fuse holder, or in another location provided that it is obvious to which fuse the marking applies, giving the fuse current rating and voltage rating for fuses that may be changed at the installed site.

Particulars	Details
Switching devices	IGBT/MOSFET
Control	Microprocessor /DSP
Nominal AC output voltage	For 3-phase/ 1phase :- 415V / 240 V
Output frequency	50 Hz
Grid Frequency Synchronization range	+ 3 Hz or more
Ambient temperature considered	-20° C to + 50° C
Humidity	95 % Non-condensing
Protection of Enclosure	IP-65(Minimum).
Grid Frequency Tolerance range	+ 3 or more
No-load losses	Less than 1% of rated power

Seal & Signature of Bidder



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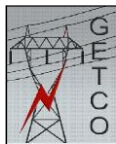
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Inverter Efficiency(minimum)	(Above 10 kW) Peak Efficiency At least 97%, measure as per IEC 61683 Euro Efficiency At least 96%, measure as per IEC 61683
	(Below 10 kW) Peak Efficiency At least 96%, measure as per IEC 61683 Euro Efficiency At least 95%, measure as per IEC 61683
THD	<3%
PF	>0.9
Communication interface	RS 485 with Modbus
Display type	LCD for data display. LCD / LED for status display
Protections	• Over voltage (both input and output) • Over current (both input and output) • Over/Under grid frequency • Over temperature • Short circuit • Lightening • Surge voltage induced at output due to external source • Anti-islanding
Recommended Alert/Indications	• Inverter ON • Grid ON • Inverter Under / Over Voltage • Inverter Overload • Inverter Over Temperature
Recommended LCD Display on Inverter	• Output power (W) • Daily Energy (Wh) • cumulative energy (Wh) • DC voltage (V) • DC current (A) • AC voltage (V) • AC frequency (Hz) • AC current (A) • Cumulative hours of operation (h).

a) The inverter shall have an RS-485 interface and support communication of its operational parameters and logs over Modbus protocol. The register mapping/memory mapping of the inverter data shall be made available by the Empanelled Agency from the inverter supplier to the DISCOMs/GUVNL.

b) Three phase PCU/ inverter shall be used with each power plant system above 6KW and In case of 6 KW or less Capacity single phase/3pahse inverter shall be used as per market availability. In case of

Seal & Signature of Bidder



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capacity addition of existing Solar plant, if the existing inverter is required to be replaced, the cost same is to be borne by consumer up on mutual agreement with Agency and consumer.

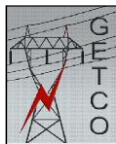
- c) The output of power factor of PCU/ inverter is suitable for all voltage ranges or sink of reactive power, inverter should have internal protection arrangement against any sustain fault in feeder line and against the lightning on feeder.
- d) Built-in meter and data logger to monitor plant performance through external computer shall be provided.
- e) The power conditioning units / inverters should comply with applicable IEC/equivalent BIS standard for efficiency measurements and environmental tests as per standard codes IEC 61683/IS 61683 and IEC 60068-2(1,2,14,30) /Equivalent BIS Std.
- f) The charge controller (if any) / MPPT units environmental testing should qualify IEC 60068-2(1, 2, 14, 30)/Equivalent BIS std. The junction boxes/enclosures should be IP 65(for outdoor)/ IP 54 (indoor) and as per IEC 529 Specifications.
- g) The PCU/ inverters should be tested from the MNRE approved test centers /NABL /BIS /IEC accredited testing- calibration laboratories. In case of imported power conditioning units, these should be approved by international test houses. Valid type test report shall be submitted by the empanelled agency before commissioning of the SPV System.
- h) All inverters shall be IEC 61000 compliant for electromagnetic compatibility, harmonics, Surge, etc.
- i) Maximum Power Point Tracker (MPPT) shall be integrated in the PCU/inverter to maximize energy drawn from the array.
- j) The PCU/ Inverter shall have overloading capacity of minimum 10%
- k) The allowable capacity of inverter shall be (+15/-10 %) of registered AC Capacity.

8. INTEGRATION OF PV POWER WITH GRID:

- The output power from SPV would be fed to the inverters which converts DC produced by SPV array to AC and feeds it into the main electricity grid after synchronization.
- In the event of a power failure on the electric grid, it is required that any independent power-producing inverters attached to the grid turn off in a short period of time. This prevents the DC-to-AC inverters from continuing to feed power into small sections of the grid, known as “islands.” Powered islands present a risk to workers who may expect the area to be unpowered, and they may also damage grid-tied equipment. The Rooftop PV system shall be equipped with islanding protection. In addition to disconnection from the grid (due to islanding protection) disconnection due to under and over voltage conditions shall also be provided.
- A manual disconnect 4 pole isolation switch beside automatic disconnection to grid would have to be provided at utility end to isolate the grid connection by the utility personnel to carry out any maintenance. This switch shall be locked by the utility personnel.

9. DATA ACQUISITION SYSTEM / PLANT MONITORING

- i. Data Acquisition System shall be provided for each of the solar PV plant.



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- ii. Remote Monitoring and data acquisition through Remote Monitoring System software at the GETCO location with latest software/hardware configuration and service connectivity for online / real time data monitoring/control complete to be supplied and operation and maintenance/control to be ensured by the Empanelled Agency. Provision for interfacing these data on GETCO server and portal in future shall be kept as per requirement.
- iii. Empanelled agency shall ensure that Inverter should have provision of remote monitoring of inverter data through sim card or through Wi-Fi. Required website/mobile app platform, where the user (Consumer) can access the data, should be provided/explained to consumer while installation by Empanelled Agency. The facility of in-built wifi module or communication through sim-card should also be explained to the consumer.
Recurring cost of sim card/Data pack for communication shall be borne by consumers. All the inverter data should be made available to GETCO for monitoring by giving web access by sharing the user ID and password. SIM-card cost, Periodic data charges towards data pack and Internet/Wifi connectivity for maintaining Remote Monitoring System shall be the responsibility of Beneficiary.

10. METERING:

- a) The bi-directional electronic energy meter (0.5S class) shall be installed for the measurement of Import/Export of energy in co-ordination with GETCO.
- b) Reverse power relay shall be provided by bidder (if necessary), as per the local DISCOM requirement.

A Roof Top Solar (RTS) Photo Voltaic (PV) system shall consist of following energy meters:

- i. Net meter: To record import and export units
 - ii. Generation meter: To keep record for total generation of the plant.
- 3.15. The installation of Generation meters including CTs & PTs, wherever applicable, shall be carried out by the Empanelled Vendor as per the terms, conditions and procedures laid down by the concerned GERC/GETCO.

11. POWER CONSUMPTION:

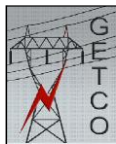
- a) Regarding the generated power consumption, priority need to give for internal consumption first and thereafter any surplus power can be injected in to the grid.

12. PROTECTIONS

The system should be provided with all necessary protections like earthing, Lightning, and grid islanding as follows:

12.1. LIGHTNING PROTECTION:

- i. The SPV power plants shall be provided with lightning & over voltage protection, if required. The main aim in this protection shall be to reduce the overvoltage to a tolerable value before it



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reaches the PV or other sub-system components. The source of over voltage can be lightning, atmosphere disturbances etc.

- ii. The entire space occupying the SPV array shall be suitably protected against Lightning by deploying required number of Lightning Arrestors (LAs). Lightning protection should be provided as per NFC17-102:2011/IEC 62305 standard.
- iii. The protection against induced high-voltages shall be provided by the use of Metal Oxide Varistors (MOVs)/Franklin Rod type LA/Early streamer type LA.
- iv. The current carrying cable from lightning arrestor to the earth pit should have sufficient current carrying capacity according to IEC 62305. According to standard, the minimum requirement for a lightning protection system designed for class of LPS III is a 6 mm² copper/ 16 mm² aluminum or GI strip bearing size 25*3 mm thick). Separate pipe for running earth wires of Lightning Arrestor shall be used.

12.2. SURGE PROTECTION

- i. Internal surge protection, wherever required, shall be provided.
- ii. It will consist of three SPD type-II/MOV type surge arrestors connected from +ve and –ve terminals to earth.

12.3. EARTHING PROTECTION

i The earthing shall be done in accordance with latest Standards.

- ii. Each array structure of the PV yard, Low Tension (LT) power system, earthing grid for switchyard, all electrical equipment, inverter, all junction boxes, etc. shall be grounded properly as per IS 3043-2018.
- iii. All metal casing/ shielding of the plant shall be thoroughly grounded in accordance with CEA Safety Regulation 2010. In addition, the lightning arrester/masts should also be earthed inside the array field.
- iv. Earth resistance should be as low as possible and shall never be higher than 5 ohms.
- v. separate three earth pits shall be provided for individual three earthing viz.: DC side earthing, AC side earthing and lightning arrester earthing.

12.4. GRID ISLANDING:

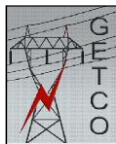
- i. In the event of a power failure on the electric grid, it is required that any independent power-producing inverters attached to the grid turn off immediately. This prevents the DC-to-AC inverters from continuing to feed power into small sections of the grid, known as “islands.” Powered islands present a risk to workers who may expect the area to be unpowered, and they may also damage grid-tied equipment. The Rooftop PV system shall be equipped with Anti islanding features. In addition to disconnection from the grid (due to islanding protection) disconnection due to under and over voltage conditions shall also be provided.
- ii. A manual disconnect 4 / 2 pole isolation switch (RCCB may also be used) beside automatic disconnection to grid would have to be provided at utility end to isolate the grid connection by the utility personnel to carry out any maintenance.

13. CABLES

Cables of required size to be used in the system shall have the following characteristics:

- i. Shall meet IEC 60227/IS 694, IEC 60502/IS1554 standards

Seal & Signature of Bidder



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- ii. Temp. Range: -10°C to $+80^{\circ}\text{C}$.
iii. Voltage rating 660/1000V
iv. Excellent resistance to heat, cold, water, oil, abrasion, UV radiation
v. Flexible
vi. Sizes of cables between array interconnections, array to junction boxes, junction boxes to Inverter etc. shall be so selected to keep the voltage drop (power loss) of the entire solar system to the minimum. The cables (as per IS) should be insulated with a special grade PVC compound formulated for outdoor use.
vii. **Cable Routing/ Marking:** All cable/wires are to be routed in a RPVC pipe/ GI cable tray and suitably tagged and marked with proper manner by good quality ferule or by other means so that the cable easily identified.
viii. The Cable should be so selected that it should be compatible up to the life of the solar PV panels i.e. 25 years.
ix. The ratings given are approximate. All the cables required for the plant are to be provided by the bidder. Any change in cabling sizes if desired by the bidder/approved after citing appropriate reasons.
x. Multi Strand, Annealed high conductivity copper conductor PVC type 'A' pressure extruded insulation or XLPE insulation. Overall PVC/XLPE insulation for UV protection Armoured cable for underground laying. All cable trays including covers to be provided. All cables conform to latest edition of IEC/equivalent BIS Standards as specified below: BoS item / component Standard Description Standard Number Cables General Test and Measuring Methods, PVC/XLPE insulated cables for working Voltage up to and including 1100 V, UV resistant for outdoor installation IS /IEC 69947. Aluminium cable may be used on the AC-side of the PV system.
xi. The size of each type of DC cable selected shall be based on minimum voltage drop however; the maximum drop shall be limited to 1%.
xii. The size of each type of AC cable selected shall be based on minimum voltage drop however; the maximum drop shall be limited to 2 %.

14. CONNECTIVITY

The maximum capacity for interconnection with the grid at a specific voltage level shall be as specified in the GERC regulation for Grid connectivity and norms of DISCOM and amended from time to time.

15. DRAWINGS & MANUALS:

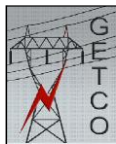
i. Operation & Maintenance manual/user manual, Engineering and Electrical Drawings shall be supplied along with the each power plant. The manual shall include complete system details such as array lay out, schematic of the system, inverter details, working principle etc. Step by step maintenance and troubleshooting procedures shall be given in the manuals and provided to the beneficiary.

ii. ISI marked (wherever applicable) and reputed makes equipment be used.

16. SOLAR PV SYSTEM ON THE ROOFTOP

The Solar PV system on the rooftop of the premises will be installed for PV capacity permitted by GETCO as per regulation issued by GERC.

17. SAFETY MEASURES:



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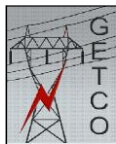
The bidder shall take entire responsibility for electrical safety of the installation(s) including connectivity with the grid and follow all the safety rules & regulations applicable as per Electricity Act, 2003 and CEA Safety Regulation 2010 etc.

18. DOCUMENTATION:

Operation & Maintenance manual / user manual shall be supplied along with the each power plant. The manual shall include complete system details such as array lay out, schematic of the system, inverter details, working principle etc. Step by step maintenance and troubleshooting procedures shall be given in the manuals and provided to the beneficiary.

19. SHADOW ANALYSIS:

The shadow analysis report with the instrument such as Solar Pathfinder or professional shadow analysis software of each site has to be submitted by Bidder and shall be his responsibility to educate the user to install the system only in shadow free space. Lower performance of the system due to shadow effect shall be the responsibility of the bidder and shall be liable for penalty for lower performance.



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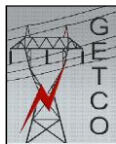
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Quality Certification, Standards and Testing for Grid-Connected Rooftop Solar PV Systems/Power Plants

Solar PV Modules/Panels	
IEC 61215 and IS 14286	Design Qualification and Type Approval for Crystalline Silicon Terrestrial Photovoltaic (PV) Modules
IEC 61701:2011	Salt Mist Corrosion Testing of Photovoltaic (PV) Modules
IEC 61853- 1:2011 / IS 16170-1:2014	Photovoltaic (PV) module performance testing and energy rating –: Irradiance and temperature performance measurements, and power Rating.
IEC 62716	Photovoltaic (PV) Modules – Ammonia (NH ₃) Corrosion Testing (as per the site condition like dairies, toilets etc)
IEC 61730-1,2	Photovoltaic (PV) Module Safety Qualification – Part 1: Requirements for Construction, Part 2: Requirements for Testing
IEC 62804	Photovoltaic (PV) modules – Test method for detection of potential-induced degradation. IEC 62804-1: Part 1: Crystalline Silicon
Solar PV Inverters	
IEC 62109 or IS : 16221	Safety of power converters for use in photovoltaic power systems – Part 1: General requirements, and Safety of power converters for use in photovoltaic power systems Part 2: Particular requirements for inverters. Safety compliance (Protection degree IP 65 or better for outdoor mounting, IP 54 or better for indoor mounting)
IS/IEC 61683 latest (as applicable)	Photovoltaic Systems – Power conditioners: Procedure for Measuring Efficiency (10%, 25%, 50%, 75% & 90-100% Loading Conditions)
IEC 60068-2 /IEC 62093 (as applicable)	Environmental Testing of PV System – Power Conditioners and Inverters
IEC 62116:2014/ IS16169	Utility-interconnected photovoltaic inverters - Test procedure of islanding prevention measures
Fuses	
IS/IEC 60947 (Part 1, 2 & 3), EN 50521	General safety requirements for connectors, switches, circuit breakers (AC/DC): 1)Low-voltage Switchgear and Control-gear, Part 1: General rules 2)Low-Voltage Switchgear and Control-gear, Part 2: Circuit Breakers 3)Low-voltage switchgear and Control-gear, Part 3: Switches, disconnectors switch-disconnectors and fuse-combination units



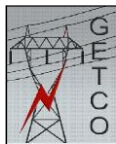
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	4) EN 50521. Connectors for photovoltaic system-Safety requirements and tests
IEC 60269-6:2010	Low-voltage fuses - Part 6: Supplementary requirements for fuse-links for the protection of solar photovoltaic energy systems
Solar PV Roof Mounting Structure	
IS 2062/IS 4759/AA6063 T6	Material for the structure mounting
Surge Arrestors	
BFC 17-102:2011/ NFC 102:2011/ IEC 62305	Lightening Protection Standard
IEC 60364-5-53/ IS 15086-5 (SPD) IEC 61643- 11:2011	Electrical installations of buildings - Part 5-53: Selection and erection of electrical equipment - Isolation, switching and control Low-voltage surge protective devices - Part 11: Surge protective devices connected to low-voltage power systems - Requirements and test methods
Cables	
IEC 60227/IS 694, IEC 60502/IS 1554 (Part 1& 2)/ IEC69947 (as applicable)	General test and measuring method for PVC (Polyvinyl chloride) insulated cables (for working voltages up to and including 1100 V, and UV resistant for outdoor installation)
BS EN 50618	Electric cables for photovoltaic systems (BT(DE/NOT)258), mainly for DC Cables
Earthing /Lightning	
IEC 62561/IEC 60634 Series (Chemical earthing) (as applicable)	IEC 62561-1: Lightning protection system components (LPSC) - Part: Requirements for connection components IEC 62561-2: Lightning protection system components (LPSC) – Part 2:Requirements for conductors and earth electrodes IEC 62561-7: Lightning protection system components (LPSC) - Part 7:Requirements for earthing enhancing compounds
Junction Boxes	
IEC 60529	Junction boxes and solar panel terminal boxes shall be of the thermo-plastic type with IP 65 or better protection for outdoor use, and IP 54 or better protection for indoor use



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Guarantee and CMC: -

(a) Guarantee

The Grid connected Solar Photovoltaic System for the project supplied, installed and commissioned shall be guaranteed by the empanelled agency for a minimum period of 5- years from the date of successfully commissioning of the last system, in regard to quality of design, material, workmanship, quality of process/ manufacturing, performance, efficiency, installation, etc.

In the event any defect is found or developed in the system within guarantee period, shall be rectified/replaced by the Empanelled Agency at his own expense promptly.

In case the defects are not rectified within 2 (Two) days of the receipt of the complaint by the Empanelled Agency, GETCO shall have full liberty to rectify such defect or undertake such repairs as may be necessary to restore the system in working condition at the risk and cost of the Empanelled Agency.

The expenditure so incurred by GETCO shall be deducted from EOI applicant's pending claims, security, etc. and if necessary may be recovered in other mode provided under the law. In the event of failure of the complete system, if necessary, the whole system shall be replaced by the Empanelled Agency promptly.

(b) CMC: - Comprehensive Maintenance Contract for 5 years:- (Resolving Complaints related to defects/ non-working / poor performance of the system)

This EOI Document cover Five-year Comprehensive Maintenance Contract under the scope of EOI applicant.

The Five-year comprehensive Maintenance Contract shall include comprehensive on-site guarantee and warranty for all materials and components of the system under the project as mentioned above in para no 16(a) .

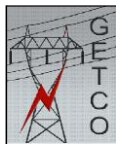
During this CMC period the Empanelled Agency has to repair/replace the defective part/s or the material/s or any or all Components of the System to make it in working condition without loss of performance or degradation in efficiency and without compromising safety aspects free of cost within 48 (Fort eight) Hours of time limit as soon as the complaint is received from the GETCO. Also the Empanelled Agency has to undertake regular/periodical preventive maintenance of the system to avoid any future fault in the system and to improve the solar yield.

During the CMC period, the inverter monitoring, monitoring and controlling, shall be done by EOI applicant. Hence necessary reports shall be submitted by the EOI applicant in the soft/hard copies periodically to the concern authority of the GETCO as and when asked.

a) Logging of complain:

The record of each and every complaint received and resolve with down time and up time shall have to be maintained by the Empanelled Agency in register as well as computer based software and shall have to be submitted to GETCO office

In each quarter.



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- b) While doing repairing or rectification work, the Empanelled Agency's technician or any person is not authorized to work on GETCO's electric line of 11 KV and LT having potential danger of electricity.

In case the defects are not rectified within 2 (Two) days from the receipt of the complaint by empaneled agencies then penalty of Rs 200 per day is applicable till the complaint is resolved.

This penalty shall be payable to GETCO, in case of empaneled agency failed to pay the same, it will be recovered from the PBG or may be recovered in other mode provided under the law. In the event of failure of the complete system, if necessary, the whole system shall be replaced by empaneled agencies within 15 days failing which 0.5% per day plus GST and cess on the particular project value subject to maximum of 10% of the project value plus applicable GST and cess to be recovered from the PBG.

(C) Generation Guarantee:

The Capacity utilization factor CUF of the solar power plant shall not be less than 17% on annual basis, during the five CMC period. The Capacity Utilization factor (CUF) shall be maintained at 17% and necessary efforts shall be made to achieve it by the bidder. In case the system fails to attain the required CUF annually, the system shall be deemed to underperforming. The calculation of the CUF shall be on the generation recorded by the inverter/Solar system AC meter. The shortfall of energy to achieve 17% CUF on the yearly basis shall be compensated by the bidder to GEDA at the rate equivalent to the prevailing DISCOM tariff during the year. Failing which GEDA may invoke the entire performance bank Guarantee.

Periodical maintenance:

The record of down time and up time and periodical maintenance at least in every quarter shall have to be maintained by the Empanelled Agency in register as well as computer based software and shall have Mandatorily to be submitted to GETCO Circle office at the end of every Quarter. Non submission of the report shall be considered as "Breach of Contract" and shall attract punitive actions like encashment of PBG will be applicable and the decision of GETCO shall be final in this regard.

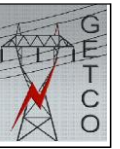
Notices, Statements and other communications sent by GETCO through registered post or e-mail or fax to the EOI applicant / Empanelled Agency at his specified address shall be deemed to have been delivered to the EOI applicant.

- Installation of remote Monitoring facility along with necessary dongle etc. for the period of 5 Years.
- The Scope of work covers cleaning and washing of the Photovoltaic modules regularly (Two times in a month) to ensure annual capacity utilization factor of 17% during the five years CMC.

GUIDELINES FOR AGENCY:

1. It is mandatory for EOI applicant to have valid test report of SPV Modules and grid tie inverters with similar or larger capacity from MNRE approved laboratories.
2. The program implementation guidelines of the MNRE, as declared from time to time, for SPV program shall be applicable and followed at all times.
3. The technical specification, scope of work for which EOI Document is invited are furnished in EOI Document
4. The quantity mentioned in the EOI Document is only indicative and not final. Payment will be done only for the actual quantity executed.

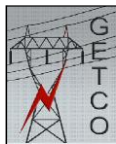
Seal & Signature of Bidder



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5. Cost of Comprehensive Maintenance during Guarantee and Warrantee period and Insurance of system for 5 years is required to be included in the quoted prices.
6. The Empanelled Agency shall be responsible for overall project management, system integration and testing to complete all criteria for successful functioning of the Grid connected Solar PV plant, but not limited to the functions laid down in this documents.



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- 2.2 The above cited requirements are only indicative. The owner reserves the right to requisition any other relevant information and also reserves the right to reject the Bid proposal of any Bidder, if in the Owner's opinion the Qualification data is incomplete and Bidder is not qualified to perform the Contract satisfactorily.

3.0 Bidding Costs

All costs/expenses in the preparation and submission of the Bid (including any post Bid discussions/presentations) shall be fully borne by the Bidder. Owner will not be responsible/liable for these costs irrespective of the course and conclusion of this Bidding.

B. BID DOCUMENTS

4.0 Details of Documents

- 4.1 The following Bid documents apart from Invitation to Bid detail the material and equipment specifications/characteristics, the bidding procedures and the terms & conditions of contract:

- a. Instructions to Bidders (ITB-Part I)
- b. General Conditions of Contract (GCC-Part I)
- c. Erection Conditions of Contract (ECC-Part I)
- d. Special Conditions of Contract (SCC-Part I)
- e. Technical Specifications (TSP-Part IIA)
- f. Technical Data Sheets (TDS-Part IIB)
- g. Bid Form and Price Schedules (BF/PS-Part IV)

5.0 Knowing the Bid Documents

- 5.1 Every intending Bidder is to examine and understand all instructions, forms, terms, conditions and specifications in the Bid Documents and fully know himself all the conditions and contents therein, which may in any manner, affect the scope & content of work and the costs thereof. Submission of a Bid not substantially responsive to the Bid Document in all respects and/or failure to furnish all information required by the Bid Document may entail rejection of the Bid at the Bidder's risk.

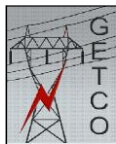
6.0 Clarifications on Bid Documents

- 6.1 In case an intending Bidder finds any discrepancy or omission in the documents and specifications or is in doubt as to the true meaning of any part, he shall make a request, in writing not later than the date of pre Bid discussion, to the owner in triplicate. The owner will issue explanations, interpretations and clarifications as deemed fit in writing as a response to this request. On receipt of such interpretations/clarifications, the Bidder may submit his Bid within the date and time stipulated in the Bid invitation, All such explanations, interpretations and clarifications from the Owner shall be deemed as part of Bid Documents and shall invariably accompany the Bidder's proposal.

- 6.2 Any verbal/telephonic clarifications and information given by the Owner or his employee (s) or his representative(s) will not in anyway be binding on the Owner.

7.0 Amendment of bidding document:

- 7.1 At any time prior to the deadline for submission of Bids the Owner may, for any reason, whether at his own initiative or in response to a clarification requested by the intending Bidder, modify the Bidding Document with amendment(s).



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7.2 The amendment will be notified in writing on GETCO's Website to all intending Bidders who have received the Bidding Document at the address contained in the letter of request for issue of bidding document from the Bidders. Owner will bear no responsibility or liability arising out of non-receipt of the same in time or otherwise.

7.3 In order to afford prospective bidders reasonable time in which to take the amendment into account in preparing their bids, the Owner may, at his discretion, extend the deadline for the submission of bids.

7.4 Such amendments, clarifications etc. shall be binding on bidders and will be given due consideration by the Bidders while they submit their bids and shall invariably enclose such documents as a part of the bid.

C. PREPARATION OF BIDS

8.0 Language of Bid:

8.1 The Bid prepared by the Bidder and all correspondence and documents relating to the Bid, exchanged by the Bidder and the Owner, shall be written in the English language, provided that any printed literature furnished by the Bidder may be written in another language so long as accompanied by an English translation of its pertinent passages. Failure to comply with this may disqualify a bid. For purposes of interpretation of the bid, the English translation shall govern.

8.2 Bid Format

Bidders have to make the Bid in the formats furnished with this Document. Verbatim without adding any printed/typewritten text of their own.

9.0 Local Conditions:

9.1 It will be imperative on each Bidder to fully inform himself of all local conditions and factors, which may have any effect on the execution of the Contract covered under these documents and specifications. The Owner shall not entertain any request for clarifications from the bidders, regarding such local conditions.

9.2 It must be understood and agreed that such factors have properly been investigated and considered while submitting the proposals. No claim for financial adjustment to the Contract awarded under these specifications and documents will be entertained by the owner. Neither any change in the time schedule of the Contract nor any financial adjustments arising thereof shall be permitted by the Owner, which are based on the lack of such clear information or its effect on the cost of the works to the Bidder.

10.0 Documents comprising the Bid:

10.1 The Bidder shall complete the Bid form inclusive of Price Schedules; Technical Data Requirements etc. furnished in the Bidding Documents, indicating, for the services to be rendered, a brief description of services, quantity and price.

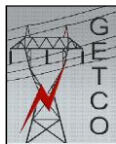
10.2 The Bidder shall also submit documentary evidence to establish that the Bidder meets the Qualification Requirements as detailed in Clause 2.0 above and Special Conditions of Contract (including Clause 11 of ITB).

10.3 All Tender Documents/ formats are to be returned completed and filled in all respects and signed by the Company Authorized Signatory wherever specified.

10.3 The Bid Guarantee shall be furnished in a separate cover in accordance with clause specific ITB.

11.0 Scope of the proposal

Seal & Signature of Bidder



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- 11.1 The Scope of the proposal shall be on the basis of a single Bidder's responsibility, completely covering all the equipment erection and other installation services specified under the accompanying Technical Specifications. It will include among others as specified therein the following: -
- a) Pre-assembly, if any, erection, testing and commissioning of all the equipments.
 - b) Reliability tests and performance and guarantee tests on completion of commissioning.
- 11.2 As specified in the Special Conditions of Contract, no deviation whatsoever to certain conditions of the bidding documents permitted by the Owner and therefore, the Bidders are advised that while making Bid Proposals and quoting prices these conditions may appropriately be taken into consideration. Bidders are required to furnish a certificate in this regard as per the format provided in Special Conditions of Contract in a separate sealed envelope containing Bid security, which shall accompany the Technical Bid. Any Bid not accompanied by such certificate shall be rejected by the Owner and shall not be opened.
- 11.3 Bids not covering the above cited entire scope of works may be treated as incomplete and hence rejected.
- 11.4 The Bidder shall complete all the schedules & annexure in the Bid Proposal Sheets, Technical Data Sheets and specified elsewhere. The Qualifying Data should be filled in the required schedule of Bid Proposal Sheets.

12.0 Bid Price:

- 12.1 The Bidder shall indicate percentage above/below of total bid price indicated in the appropriate price schedules, enclosed in bid proposal sheets for erection, and other services it proposes to furnish under the contract. The % above/below indicated shall be inclusive of all taxes and duties applicable inclusive GST applicable on required inputs and services.
- 12.2 The Bidder shall specifically note that the Tenders are invited on percentage rate increase/decrease based in relation to unit rates of tender price schedule.
- 12.3 If the Supplier/Contractor has opted for the Composition scheme of GST, the same must be clearly specified with valid Declaration & Certificate from Department. In the event of withdrawal/cessation of the Supplier from Composition scheme during the tenure of the contract, the rate (i.e. price) mentioned in the price bid shall be final and any additional GST will have to be borne by the tenderer himself. In no case additional amount towards GST or otherwise will be paid / reimbursed to supplier/contractor. Further Statutory Variation clause will not be applicable in case of Supplier / Contractor has opted for Composition Scheme under GST.

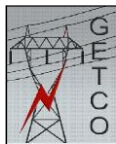
Also, please mention separate applicable HSN / SAC Code and rate of GST and Cess as applicable for each item of Goods/Service. If not specifically mentioned, then COMPANY will have the option to take the prices as exclusive of taxes and duties at maximum higher slab rates for the evaluation of the tenders.

The offered prices to be indicated in online mode of tender in the format given (i.e. Schedule-B).
The price bid submitted in physical mode shall not be considered.

Every bidder shall inform their GSTIN No. of the registered place(s) wherefrom the bidder intends to supply the goods / services, meaning thereby the bidder has to supply the goods / services from the relevant declared / registered place of supply only.

3.0 Price Basis:

- 13.1 The Price shall be quoted on firm basis.



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- 13.2 The Price quoted by the bidder shall remain fixed during the bidder's performance of the contract and shall not be subject to variation on any account saving for change in quantity. A bid submitted with an adjustable price quotation shall be treated as non-responsive and rejected.

14.0 Taxes and Duties:

- 14.1 As regards the income Tax, surcharge on income tax and any other corporate tax, including service tax at prevailing rate the owner shall not bear any tax liability whatsoever. The bidder shall be liable and responsible for payment of such taxes as attracted under the provisions of the law.

- 14.2 Notwithstanding the tax liabilities as per the sub-clause 14.1 above the owner shall have the right to make deduction at source from the amounts payable to the contractor in respect of Income Tax (on the cost of items of supply included in the works contract) as may be mandatory in terms of the law. The owner shall not bear any liability in this regard but shall issue necessary certificate in respect of such deduction made.

- 14.3 In case any tax or duty is newly introduced by the Government applicable for this contract with effect from the next day of the date submission of the bid and if the contractor is required to pay additional tax or duty, then the owner shall reimburse the contractor the additional tax or duty so paid by the contractor against submission by the contractor of documentary evidence to the satisfaction of the owner. This provision will not be applicable to transaction between the contractor and his sub-contractors. Besides the said statutory variation, no other statutory variation shall be payable by the owner.

- 14.4 The owner's liability for Goods & Service Tax(GST) under the contract shall be limited to those indicated by the Bidder in the Bid Proposal Sheets, subject to the statutory variations and variations as per Clause No. 14.3.

If the cost to the Contractor during the performance of the 'Contract' shall be increased or reduced by reasons of the making, passing or promulgation of any law after the date of submission of bid or by any order, regulation or bye-law having the force of law the amount of such increase or reduction shall be added to or deducted from the "Contract Price" as the case may be for direct transactions between contractor & owner, and not for bought out items. It is the Bidders responsibility to furnish details of taxes, duties, levies etc. applicable as on the date of submission of the bid.

- 14.5 No claim for any increase towards the statutory variation regarding enhancement of existing tax or duty or introduction of a new tax or duty applicable shall be entertained by the Owner during the extended period of contract, if any, provided the extension of the contract is required by causes attributable to the contractor.

- 14.6 The provision of statutory variation regarding enhancement of existing tax or duty or introduction of a new tax or duty will be applicable only to the direct transaction between the contractor and the owner.

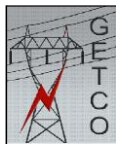
- 14.7 in addition, the conditions detailed under Special Conditions of Contract shall apply.

- 14.4 The validity of tender is 180 days from the date of opening of technical bid.

15.0 Time Schedule:

- 15.1 The basic consideration and the essence of the contract shall be strict adherence to the time schedule for performing the specified works.

Seal & Signature of Bidder

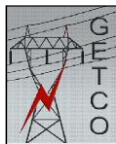


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- 15.2 The Owner's requirements of completion schedule for the Works are mentioned in the accompanying Special Conditions of Contract.
- 15.3 The completion schedule as stated in the special conditions of contract shall be one of the major factor in consideration of the bids.
- 16.0 Insurance:**
The Bidder's insurance liabilities pertaining to the scope of Works are detailed out in Clauses titled Insurance, in General Terms and Conditions of Contract and in Erection Conditions of this Part-I. Bidder's attention is specifically invited to these clauses. Bid price shall include all the costs in fulfilling all the insurance liabilities under the Contract.
- 17.0 Erection Tools and Tackles:**
The Bidder under a separate schedule, in his proposal shall include a list of all-special equipment tools & tackles etc. which he proposes to bring to site for the purpose of erection, handling, testing and commissioning including performance and guarantee tests of the equipment. If any such equipment is listed anywhere else in the proposal and not specially mentioned in the above schedule, it shall be deemed to have been included in the Bidder's proposed scope of supply.
- 18.0 Bid Security/EMD:**
- i.) 18.1: (a) Bidders are requested to pay an earnest money deposit (1 % of estimated cost) only by **Online-payment (NEFT/RTGS)** payable at **NAVSARI** for the amount as specified in the tender notice. Payment of EMD in any other form shall not be accepted.
- (c) Payment by Cheque/Coop Bank Guarantee/ Company Guarantee is not permissible.
- (d) Validity Period:** - The offer should be valid for a minimum period of **180 days** from the date of opening of Technical bid.
- 18.2 **The bid security is required to protect the owner against the risk of Bidder's conduct, which would warrant the guarantee forfeiture, pursuant to relevant paras elsewhere The bid guarantee shall be made payable to the Owner without any condition whatsoever.**
- 18.3 The Owner will reject any bid not secured in accordance with Para 20.1 above, as non-responsive. No exemptions are made in the furnishing of the security.
- 18.4 Unsuccessful Bidder's bid security/EMD will be returned/refunded on finalization of tender or three months from the date of submission of tender whichever is later.
- 18.5 The successful bidders, Bid Security will be discharged upon, furnishing the contract performance guarantee
- 18.6 **The bid guarantee may be forfeited.**
- a) If a Bidder withdraws its bid during the period of bid validity specified by the bidder on the bid Form:**
- b) If a bidder refuses to accept the contract or fails to commence the works (including supplies within thirty days of letter of award of contract)**
- 21.0 1. All Nationalized Banks.
- 22.0 (B) Guarantees issued by following Banks will be accepted as SD /EMD Or the issuance of new Government Resolution on the same subject whichever is earlier. The validity cut – off date in GR is with respect to date of issue of Bank Guarantee is irrespective of date of termination of Bank Guarantee.



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Corporate Identity No.U40100GJ1999SGCO36018

23.0

No.	Bank Name	No.	Bank Name
1	A U Small Finance Bank	14	Nutan Nagrik Sahakari Bank Limited
2	Ahmedabad Mercantile Co. Operative Bank Limited	15	Rajkot Nagrik Sahkari Bank Limited
3	Axis Bank	16	RBI Bank
4	City Union Bank	17	Saraswat Co-operative Bank
5	DBS Bank India Limited	18	Saurashtra Gramin Bank
6	DCB Bank	19	Standard Chartered Bank
7	Equitas Small Finance Bank	20	Tamilnadu Mercantile Bank
8	Federal bank	21	The Gujarat State Co-operative Bank
9	HDFC Bank	22	The Mehsana Urban Co-operative Bank Limited
10	ICICI Bank	23	The Surat District Co-operative Bank
11	IndusInd Bank	24	The Surat Peoples Co-operative Bank
12	Kalupur Commercial Co-operative Bank Limited	25	Ujjivan Small Finance Bank
13	Kotak Mahindra Bank		

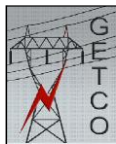
19.0 Brand Names:

- 19.1 The specific reference in these specifications and documents to any material/equipment by brand name makes or catalogue number shall be construed as establishing standards of quality and performance and not as limiting competition. However, Bidders may offer other similar material/equipment provided they meet the specified standard, design and performance requirements. The Bidder shall furnish adequate technical information about such alternative material equipment to enable the Owner to determine its acceptability. The Owner shall be the sole judge on the acceptability or otherwise of such alternatively material/equipment.
- 19.2 The bidder shall note that standards for workmanship material and equipment, and reference to brand name of catalogue numbers designed by the Owner in its Technical Specifications are intended to be descriptive only and not restrictive. The Bidder may substitute alternative standards, brand name and/or catalogue numbers in its bid, provided that it demonstrates to the Owner's satisfaction that the substitutions are substantially equivalent or superior to those designed in the Technical Specification.

20.0 Format of Bid:

- 20.1 The Bidder shall prepare one copies of the bid, clearly marking each "Original bid" as appropriate.
- 20.2 The original copy of the bid shall be typed or written in indelible ink and shall be signed by the Bidder or a person or persons duly authorized by the Bidder to sign the Contract. The letter of authorization shall be indicated by written power-of-attorney accompanying the bid. All pages of the bid, except for un-amended printed literature, shall be initiated by the person or persons signing the bid.

The Bidders must submit the qualifying data in one original as Required in this Instructions to Bidders in separate envelopes sealed and enclosed in the Envelope submitting proposals, super scribed as under:



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20.3 QUALIFYING DATA FOR THE: - Survey, Design, Supply, Installation, Commission and maintenance of Solar PV System for 5 years as a rooftop at Control Room terrace of various Substation of Vyara AM Division - Pkg II under Navsari Circle.

The bid shall contain no interlineations, erasures or Overwriting except as necessary to correct errors made by the Bidder, in which case such corrections shall be initiated by the person or persons signing the bid.

21.5 Bids shall be submitted as under:

Cover-I Earnest Money Deposit (Bid-Security), Annexure (A), as per relevant clause of SCC duly signed and Contractor's covering letter. Tender fee details (as per tender notice)

Cover-II Price Bid & Technical Bid

No Hard/Physical copy of technical Bid/Qualifying requirement documents and Price/Commercial bid required in physical submission. Technical Bid and Price bid must be consider from N-Code/Online only.

22.0 Signature of Bids:

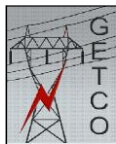
- 22.1 The bid must contain the name, residence and place of business of the person or persons making the bid and must be signed and sealed by the Bidder with his usual signature. The names of all persons signing should also be typed or printed below the signature.
- 22.2 Bid by a partnership must be furnished with full names of all partners and be signed with the partnership name; followed by the signature(s) and designation(s) or the authorized partner(s) or other authorized representative(s).
- 22.3 Bids by Corporation/Company must be signed with the legal name of the Corporation/Company by the President/Managing Director or by the Secretary or other person or persons authorized to bid on behalf of such Corporation/Company in the matter.
- 22.4 A bid by a person who affixes to his signature the word 'President', 'Managing Director', 'Secretary', 'Agent' or other designation without disclosing his Principal will be rejected.
- 22.5 If it is found that two or more persons who are connected with one another either financially or as a principal and agent have bid under different names without disclosing their connection then such bids will be liable for rejection. Satisfactory evidence of authority of the person signing on behalf of the Bidder shall be furnished with the bid.
- 22.6 The Bidder's name stated on the proposal shall be the exact legal name of the firm.
- 22.7 Bids not conforming to the above requirements of signing may be disqualified and EMD forfeited.

23.0 Sealing and marking of bids:

- 23.1 Cover-I
 - 1. Bid No.
 - 2. Due dates for opening
 - 3. Reference of tender fee & earnest money deposit

Technical Bid and Price Bid: Technical bid and Price bid shall be submitted 'online' only through n-code.

Cover-I, Cover-II & Cover-III shall be individually sealed and super scribed as indicated above and should be enclosed in the main cover duly sealed and super scribed as Tender for



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Corporate Identity Against Bid No. 1999SGCO36018 on..... containing Cover-I, of this tender.

The DD OF TENDER FEE, EMD documents clearly marked for Cover I shall be submitted by the Bidder at the date, time and place specified. In the event of any discrepancy between the original and the copies, the original shall govern.

The Bid shall be submitted by RPAD or through speed post services at the Office of **The Superintending Engineer, GETCO Navsari**. Bids submitted should be posted with due allowance for any postal delay. The Bids received after the Due Date and Time of opening are liable to be rejected. Telegraphic/Telex/Fax/e-mail Bids shall not be entertained.

23.2 The Bidders shall seal the original copy of the bid in an inner and an outer envelope, duly marking the envelopes as “original”.

23.3 a. Addressed to the Owner at the following address:

The Superintending Engineer (Tr.)
NH -8, Opp. NAVSARI
NAVSARI

b. Bear the name of package bid enquiry number, name of the work and the words. “DO NOT OPEN BEFORE.....

23.4 The inner envelope shall indicate the name and address of the Bidder to enable the bid to be returned unopened in case it is declared “late” or “rejected”.

23.5 If the outer envelope is not sealed and marked as required by Para 23.2 the Owner will assume no responsibility for the bid’s misplacement or premature opening.

23.6 The Bid Security conditions must be submitted in a separate sealed envelope.

24.0 Deadline for submission of bids:

24.1 The Bidders have the option of sending the bid by registered post or submitting the bid in person. Bids submitted by telex/telegram will not be accepted. No request from any Bidder to the Owner to collect the proposals from airlines, cargo agent etc. shall be entertained by the Owner.

24.2 Bids must be received by the Owner at the address specified under Para 23.3, not later than the time & date mentioned in the Invitation to Bid.

24.3 The Owner may, at its discretion, extend this deadline for the submission of bids by amending the Bidding Document in which case all rights and obligations on the Owner and Bidders previously subject to the deadline will thereafter be subject to the deadline as extended.

25.0 Late Bids

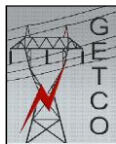
25.1 Any bid received by the Owner after the time and date fixed or extended for submission of bids prescribed by the Owner, will be rejected and not considered for evaluation.

26.0 Modification and withdrawal of bids:

26.1 The Bidder may modify or withdraw its bid after the bid’s submission provided that written notice of the modification or withdrawal is received by the Owner prior to the deadline prescribed for submission of bids.

26.2 The Bidder’s modification or withdrawal notice shall be prepared, sealed, marked and dispatched in accordance with the provisions of clause 23.0. The envelope should clearly indicate whether the

Seal & Signature of Bidder



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modification is for the Technical bid only. No bid modifications notice by Telex/Grams/Fax shall be entertained by the Owner.

26.3 No bid shall be modified in any manner, whatsoever subsequent to the deadline for submission of bids.

26.4 No bid may be withdrawn in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Bid Form. Withdrawal/modification of a bid during this interval may result in the Bidder's forfeiture of its bid security.

27.0 Information required with the proposal:

27.1 The bids must clearly indicate the name of the manufacturer, the type and/or model of each principal item of equipment proposed to be furnished and erected. The bid should also contain drawings and descriptive materials indicating general dimensions, materials from which the parts are manufactured, principles of operation, the extent of pre-assembly involved, major construction equipment proposed to be deployed, method of erection and the proposed erection organizational structure.

27.2 The above information shall be provided by the Bidder in the form of separate sheets, drawings, catalogues, etc.

27.3 Any bid not containing sufficient descriptive material to describe accurately the equipment proposed may be treated as incomplete and hence rejected. Such descriptive materials and drawings submitted by the Bidder will be retained by the Owner. Any major departure from these drawings and descriptive material submitted will not be permitted during the execution of the Contract without specific written permission of the Owner.

27.4 Oral statements made by the Bidder at any time regarding quality, quantity or arrangement of the equipment or any other matter will not be considered.

27.5 Standard catalogue pages and other documents of the Bidder may be used in the bid to provide additional information and data as deemed necessary by the Bidder.

27.6 The Bidder, along with his Proposal, shall submit a list of recommended erection equipment and materials which will be required for the purpose of erection of equipment and materials supplied under the Contract.

27.7 In case the 'Proposal' information contradicts specification requirements, the specification requirements will govern, unless otherwise brought out clearly in the technical commercial deviation schedule.

E. BID OPENING AND EVALUATION

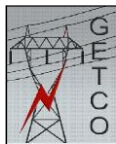
28.0 Opening of bids by owner:

28.1 The Owner will open the technical bids (Cover –I,II, and III) in the n-Procure on due date mention in Tender Notice representatives who want to remain present during technical bid opening remain present as per date mention on tender notice. The Bidder's representatives who are present shall sign a register evidencing their attendance.

28.2 The Bidder's names, Technical modifications, Bid withdrawal and such other details as the Owner, at his discretion may consider appropriate, will be announced in the Technical Bid Opening.

28.3 Price bid will be open 'online' only through n-code after technical scrutiny of tender.

Seal & Signature of Bidder



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28.0 Purpose of evaluation of bids:

29.1 The Bids received/accepted/opened will be evaluated by the Owner to ascertain the technical responsiveness of the bid for the complete scope of the proposal, as covered under these specifications and documents. All technically responsive bids shall then be examined to determine the **LOWEST EVALUATED COMMERCIALY AND TECHNICALLY RESPONSIVE BIDS.**

29.0. Policy for bids under consideration:

29.1 Bids shall be deemed to be under consideration immediately after opening of Technical Bid and until such time official intimation of award/rejection is made by the Owner to the Bidders. While the Bids are under consideration, **Bidders and/or their representatives and other interested parties are advised to refrain from contacting by any means, the owner and/or his employee's representatives on the matters related to Bids under consideration.**

29.2 Clarification of bids:

To assist in the examination evaluation and comparison of Bids the owner may on his own ask the Bidder for a clarification of its bid. The request for clarification and the response shall be in writing and no change in the price or substance of the bid shall be sought, offered or permitted.

30.0 Preliminary Examination:

30.1 The Owner will examine the bids 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 bids are generally in order.

31.2 Arithmetical errors will be rectified on the following basis:

If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected. If there is a discrepancy between the total bid amount and the sum of total costs, the latter shall prevail and the total bid amount will be corrected accordingly. If there is a discrepancy between words and figures, the amount advantageous to the Owner will prevail. If the Bidder does not accept the correction of the errors as above, his Bid will be rejected and the amount of Bid Security will be forfeited. The Bidder should ensure that the prices furnished in various price schedules are consistent with each other. In the case of any inconsistency in the prices furnished in the specified prices schedules to be identified in Bid Form for this purpose, the Owner shall be entitled to consider the highest price for the purpose of evaluation and for the purpose of award of Contract use the lowest of the prices in these schedules.

31.3 Prior to the detailed evaluation, the Owner will determine the substantial responsiveness of each bid to the Bidding Document. For purpose of these Clauses, a substantially responsive bid is one, which conforms to all the terms and conditions of the Bidding Document without material deviations. A material deviation is one which affects in any way the prices, quality, quantity or delivery period of the equipment, completion of works or which limits in any way the responsibilities or liabilities of the Bidder of any right of the Owner as required in these specifications and documents. The Owner's determination of a bid's responsiveness shall be based on the contents of the bid itself without recourse to extrinsic evidence.

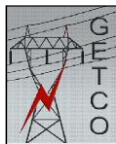
31.4 A bid determined as not substantially responsive will be rejected by the Owner and may not subsequently be made responsive by the Bidder by correction of non-conformity.

31.5 The Owner may waive any minor informality or non-conformity or irregularity in a bid which does not constitute a material deviation, provided such waiver does not prejudice or affect the relative ranking of any Bidder.

31.0 Evaluation of Price Bids:

32.1 Definitions and Meanings:

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For the purpose of the evaluation and comparison of bids, the following meanings and definition will apply: -

- a) 'Bid Price' shall mean the price quoted by each Bidder in his proposal for the complete scope of works.
- d) 'Evaluated Bid Price' shall be summation of 'Bid Price', 'Differential Price' and 'Cost Compensation for Deviations.'

33.0 **Calculation of differential Price & Cost Compensation for Deviations.**

The Differential Price to be added to the Bid Price of each bid during evaluation and comparison shall be derived as under:

Differential Price (DP)= $n_1F_1+n_2F_2+...+n_nF_n$, where $F_1, F_2, ..., F_n$ are the various factors in Indian Rupees per unit of parameter differential or deficiency in the equipment and services offered as stipulated in these specifications: $n_1, n_2, ..., n_n$ are the respective parameter differential or deficiency in the corresponding units to be determined from the Bidder's proposal. The above factors and corresponding units of parameter differential are derived from the Technical Specifications, Data sheets and/or Special Conditions of Contract.

Deviations from the Bidding Documents in so far as practicable will be converted to a Rupee value (D) and from the Bidding Document while evaluating the bids. In determining the Rupee value of the deviations the Owner will use parameters consistent with those specified in the specifications and documents and or other information as necessary and available to the Owner.

33.1 **Comparison of Bids**

The bids shall be compared on the basis of lump sum prices (i.e., for erection services to be rendered as quoted by the Bidder) for the entire scope of the proposal as defined in the Bidding Document.

For comparison purposes all the evaluated bid prices shall be in Indian Rupees as under:

$$W = Q + DP + D$$

Where

W = Total Comparison Price

Q = Bid Price quoted by the bidder in Indian Rupees (Value Of erection cost including other components if any.)

DP = Different price in Indian Rupees calculated as above

D = Cost compensation for deviations calculated as above.

All evaluated bid prices of all the bidders shall be compared among themselves to determine the lowest evaluated bid and, as a result of this comparison, the lowest bid will be selected for the award of the Contract.

F. **AWARD OF CONTRACT**

34.0 **Award Criteria**

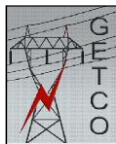
34.1 The owner will award the contract to the successful Bidder, whose bid has been determined to be substantially responsive and has been determined as the lowest evaluated bid, providing further that the Bidder is determined to be qualified to perform the contract satisfactorily. The Owner shall be the sole judge in this regard.

34.2 Further, the Owner reserves the right to award separate contracts to two or more parties in line with the terms and conditions specified in the accompanying Technical Specifications.

35.0 **Owner's right to accept any bid and to reject any or all bids:**

35.1 The Owner reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at time prior to award of contract, any without thereby incurring any liability to the affected Bidder or Bidders or any obligation to inform the affected Bidder or Bidders of the grounds for the Owner's action.

Seal & Signature of Bidder



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36.0 Notification of award:

- 36.1 Prior to the expiration of the period of bid validity and extended validity period, if any, the Owner will notify the successful Bidder in writing by registered letter or cable or telex or FAX, to be confirmed in writing by registered letter, that its bid has been accepted.
- 36.2 The notification of award will constitute the formation of the Contract.

37.0 Signing of contract:

- 37.1 At the same time as the Owner notifies the successful Bidder that his bid has been accepted, the Owner will send the Bidder the detailed of Award, incorporating all agreements between the parties.
- 37.2 Within 15 days of receipt of the detailed of Award, the successful bidder shall sign the same with date and return it to the Owner.
- 37.3 The Bidder will prepare the Contract Agreement as per the Performa prescribed and the same will be signed within 15 (Fifteen) days of notification of Award.

38.0 Contract Security deposit:

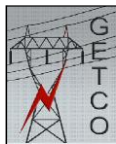
- 38.1 As a contract **Security deposit**, the successful bidder, to whom the work is awarded, shall be required to furnish a SD in form of Bank guarantee/DD from a Public Sector Indian bank/Scheduled, Commercial Bank in the form to be furnished. The SD amount shall be equal to **5 percent (5%)** of the Contract price and it shall guarantee the faithful performance of the Contract in accordance with the terms and conditions specified in these documents and specifications. the SD shall be valid up to 90 days after the end of Work Completion Period.

SD amount shall be release after completion of total Installation and with bill payment.

Note : Performance Guarantee for 5 years –CMC :

You have to Submit 20% of the order value against the equivalent amount of performance bank guarantee/ Demand draft valid for a period of 5 years from the date of commissioning of the system. (date of meter Installation).

- 38.2 The Performance Guarantee shall cover additionally the following guarantees to the Owner:
- a) The successful Bidder guarantees the successful and satisfactory operation of the equipment furnished and erected under the Contract, as per the specifications and documents.
 - b) The successful Bidder further guarantees that the equipment provided by him/his sub-vendors and installed by him shall be free from all defects in design, material and workmanship and shall upon written notice from the Owner fully remedy free of expenses to the Owner such defects as developed under the normal use of the said equipment within the period of guarantee specified in the relevant clause of the General Terms and Conditions in the Part-I/Special Conditions of Contract.
- 38.3 The Contract Performance Guarantee is intended to secure the performance of the entire contract. However, it is not to be construed as limiting the damages under clause entitled "Equipment Performance Guarantee" in Technical Specifications, Part-II and damages stipulated in other clauses in the Bid documents.
- 38.4 The performance guarantee will be discharged without any interest at the end of guarantee period, unless otherwise specified in Special Conditions of Contract.



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PART-I GCC

GENERAL TERMS & CONDITIONS OF CONTRACT

A. INTRODUCTION

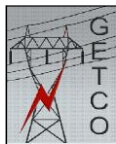
1.0 DEFINITION OF TERMS

- 1.1 The 'Contract' means the agreement entered into between the Owner and the Contractor as per the Contract Agreement signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.
- 1.2 'Owner' shall mean the Superintending Engineer (TR.) NAVSARI or any of its subsidiaries and shall include its legal representatives, successors and assigns.
- 1.3 'Contractor' shall mean the Bidder whose bid is accepted by the Owner for the award of the Works and shall include such successful Bidder's legal representatives, successors and permitted assigns.
- 1.4 'Engineer' shall mean the officer appointed in writing by the Owner to act as Engineer from time to time for the purpose of the Contract.
- 1.5 The terms 'Equipment', 'Stores' and 'Materials' shall mean and include equipment, stores and materials to be provided by the Contractor under the Contract.
- 1.6 'Works' shall mean and include the furnishing of equipment, labour and services, as per the Specifications and complete erection, testing and putting into satisfactory operation including all transportation, handling, unloading and storage at the Site as defined in the Contract.
- 1.7 'Specifications' shall mean the Specifications and Bidding Document forming a part of the Contract and such other schedules and drawings as may be mutually agreed upon.
- 1.8 'Site' shall mean and include the land and other places on, into or through which the works and the related facilities are to be erected or installed and any adjacent land, paths, street or reservoir which may be allocated or used by the Owner or Contractor in the performance of the Contract.
- 1.9 The term 'Contract Price' shall mean the lump-sum price quoted by the Contractor in his bid with additions and/or deletions as may be agreed and incorporated in the Letter of Award and the contract agreement for the entire scope of the works.
- 1.12 The term 'Erection Portion' of the Contract price shall mean the value of field activities of the works including erection, testing and putting into satisfactory operation including successful completion of performance and guarantee tests to be performed at Site by the Contractor including cost of insurances.
- 1.13 Site Engineer 'Inspector' shall mean the owner's Engineers or any person nominated by the time to inspect the equipment; stores or Works under the Contract and/or the duly authorized representative of the Owner.
- 1.14 'Notice of Award of Contract'/'Letter of Award'/'Telex of Award' shall mean the official notice issued by the Owner notifying the Contractor that his bid has been accepted.
- 1.16 'Order' shall mean the official letter issued by the Owner informing the acceptance of the bid.
- 1.17 'Date of Contract' shall mean the date on which letter of commencement of work issued by the respective sub division deputy engineer.
- 1.18 'Month' shall mean the calendar month. 'Day' or 'Days' unless herein otherwise expressly defined shall mean calendar day or days of 24 hours each.

A 'Week' shall mean continuous period of seven (7) days.

- 1.19 Writing' shall include any manuscript, type written or printed statement, under or over signature and/or seal as the case may be.
- 1.20 When the words 'Approved', 'Subject to Approval', 'Satisfactory', 'Equal to', 'Proper', 'Requested', 'As Directed', 'Where Directed', 'When Directed', 'Determined by', 'Accepted', 'Permitted', or words and phrases of like importance are used the approval, judgment, direction etc. is understood to be a function of the Owner/Engineer.
- 1.21 Test on completion shall mean such tests as prescribed in the Contract to be performed by the Contractor before the work is taken over by the Owner.

Seal & Signature of Bidder



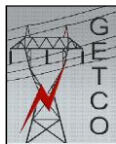
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- 1.22 'Performance and Guarantee Tests', shall mean all operational checks and tests required to determine and demonstrate capacity, efficiency, and operating characteristics as specified in the Contract Documents.
- 1.23 The term 'Final Acceptance'/'Taking Over' shall mean the Owner's written acceptance of the Works performed under the Contract, after successful commissioning/completion of Performance and Guarantee Tests, as specified in the accompanying Technical Specifications or otherwise agreed in the Contract.
- 1.25 'Latent Defects' shall mean such defects caused by faulty designs, material or work-man- ship which cannot be detected during inspection, testing etc, based on the technology available for carrying out such tests.
- 1.26 'Codes' shall mean the following including the latest amendments and/or replacements, if any :
- a) Indian Electricity Act, 1905 and Rules and Regulations made there under.
 - b) Electricity Act 2003 and Rules & Regulations made there under.
 - c) Indian Factory Act, 1948 and Rules and Regulations made there under.
 - d) Indian Explosives Act, 1884 and Rules and Regulations made there under.
 - e) Indian Petroleum Act, 1934 and Rules and Regulations made there under.
 - f) A.S.M.E. Test Codes.
 - g) A.I.E.E. Test Codes.
 - h) American Society of Materials Testing Codes.
 - i) Standards of the Indian Standards Institution.
 - j) Other Internationally approved standards and/or rules and regulations touching the subject matter of the Contract.
- 1.28 Words imparting the singular only shall also include the plural and vice –versa where the context so requires.
- 1.29 Words imparting 'Person' shall include firms, companies, corporations and associations or bodies of individuals, whether incorporated or not.
- 2.0 APPLICATION**
- These General Conditions shall apply to the extent that they are not super ceded by provisions in other parts of the Contract.
- 5.0 CONTRACT DOCUMENTS**
- 5.1 The term Contract Documents shall mean and include the following which shall be deemed to form an integral part of the Contract:
- a) Invitation to Bid including letter forwarding the Bidding Documents, Instructions to Bidders, General Terms and Conditions of Contract, the Special Conditions of Contract. and all other documents included under Part-I, Part-II and Part-III .
 - b) Specifications of the erection of the equipments and other technical services to be provided under the Contract as brought out in the accompanying Technical Specifications.
 - c) Contractor's Bid Proposal and the documents attached there to including the letters of clarifications thereto between the Contractor and the Owner prior to the Award of Contract except to the extent of repugnancy.
 - d) Letter of Award and any agreed variations of the conditions of the documents and special terms and conditions of Contract, if any.
- 5.2 In the event of any conflict between the above mentioned documents the matter shall be referred to the Engineer whose decision shall be considered as final and binding upon the parties.
- 6.0 USE OF CONTRACT DOCUMENTS AND INFORMATION**
- 6.1 The Contractor shall not, without the Owner's prior written consent, disclose the Contract, or any provision thereof, or any specification, plan, drawing, pattern, sample or information furnished by or on behalf of the Owner in connection therewith, to any person other than a person employed by the Contractor in the performance of the Contract. Disclosure to any such employed person shall



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be made in confidence and shall extend only so far as may be necessary for the purpose of such performance.

- 6.2 The Contractor shall not, without the Owner's prior written consent, make use of any document or information enumerated in various Contract documents except for the purpose of performing the Contract.
- 6.3 The Contractor shall not communicate or use in advertising, publicity, sales releases or in any other medium, photographs or other reproduction of the Works under this Contract, or descriptions of the site, dimensions, quantity, quality or other information, concerning the works unless prior written permission has been obtained from the Owner.
- 6.4 Any document, other than the Contract itself, enumerated in various Contract documents shall remain the property of the Owner and shall be returned (in all copies) to the Owner on completion of the Contractor's performance under the Contract if so required by the Owner.

7.0 CONSTRUCTION OF THE CONTRACT

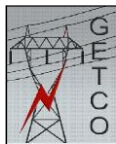
- 7.1 Notwithstanding anything stated elsewhere in the bid documents, the Contract to be entered into will be treated as a single Contract. Award shall be placed on the successful Bidder as follows:
For providing services like inland transportation, insurance for delivery at site, unloading, storage, handling at site, installation, testing and commissioning including performance testing in respect of all the equipment material equipment/materials given by the owner after observing standard store procedures for transport from owner's stores, insurance, unloading storage handling at site installation testing & commissioning.
- 7.2 In case erection Contract, or where the Owner hands over his equipment to the Contractor for executing, then the Contractor shall at the time of taking delivery of the equipment/dispatch documents be required to execute an Indemnity Bond in favor of the Owner in the form acceptable to the **SE (TR) Navsari** for keeping the equipment in safe custody and to utilize the same exclusively for the purpose of the said Contract. Samples of Performa for the Indemnity Bond will be furnished during award of Contract.
- 7.3 The Contract shall in all respects be construed and governed according to Indian Laws.
- 7.4 It is clearly understood that the total consideration for the Contract(s) has been broken up into various components only for the convenience of payment under the Contract(s) and for the measurement of deviations or modifications under the Contract(s).

8.0 JURISDICTION OF CONTRACT

- 8.1 The laws applicable to the Contract shall be the laws in force in India. **The Courts of NAVSARI shall have exclusive jurisdiction in all matters arising under this Contract.**

9.0 EXECUTION OF CONTRACT:

- 9.1 The Owner, after the issue of the Letter of Award to the Contractor, will send one copy of the final agreement to the Contractor for his scrutiny and approval.
- 9.2 The Agreement, unless otherwise agreed to, shall be signed within 30 days of the acceptance of the Letter of Award, at the office the Owner at NAVSARI on a date and time to be mutually agreed. The Contractor shall provide for signing of the Contract, Performance Guarantee, appropriate power of attorney and other requisite materials. In case the Contract is to be signed beyond the stipulated time, the Bid Guarantee submitted with the Proposal will have to be extended accordingly.
- 9.3 The Agreement will be signed in copies to be specified and the Contractor shall be provided with one signed original and the rest will be retained by the Owner.



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- 9.4 Subsequent to signing of the Contract, the Contractor at its own cost shall provide the Owner with copies of agreement within fifteen (15) days after the signing of the Contractor.

10.0 ENFORCEMENT OF TERMS

- 10.1 The failure of either party to enforce at any time any of the provisions of this Contract or any rights in respect thereto or to exercise any option therein provided, shall in no way be construed to be a waiver of such provisions, rights or options or in anyway to affect the validity of the Contract. The exercise by either party of any of its rights herein shall not preclude or prejudice either party from exercising the same or any other right it may have under the Contract.

11.0 COMPLETION OF CONTRACT

The time limit for completion of entire work is **90 (Ninety) Days** from the date of issue of work order.

The time allowed for completion the work is as specified in the sub-order placed by concern division of GETCO from the date of the commencement of the work, failing which the penalty ½% per week as applicable or part thereof on delayed portion of work and / or supply value subject to ceiling of 10% of the total contract value as applicable will be imposed.

14.0 PENALTY FOR DELAY

The time limit allowed for carrying out the work as entered in the tender shall strictly observed by the contractor and shall be reckoned from the date on which the order to commence the work is given to the contractor. The work shall throughout the stipulated period of contract the proceeds with due diligence (time being deemed to be essence of contract) and for delay, the contract shall pay compensation ,an amount equal to half percent per one week for the contract amount of work or such smaller amount as per the decision of the competent authority of the GETCO as applicable.

However, the total amount of compensation to be paid by the contractor, under the provision of the clauses shall not exceed 10 percent of the amount of contract value ad decided by the competent authority of the GETCO. The penalty will be invariably deducted from the bills of the contract and no refund will be given unless the competent authorities approves the reduction the reason the delay attributable to GETCO as well as to party will be brought out clearly while putting the proposal for waiver reduction in penalty

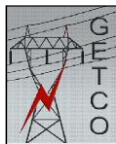
*In event of failure of the Contractor to pay the amount of Penalty as demanded **the Owner shall be entitled to deduct the amount of Penalty for delay from the amounts payable to the Contractors under any bills raised under this contract of any other amount payable under any other contract with the GUVNL and its Subsidiary Companies i.e. GETCO, GUVNL, GSECL, MGVL, DGVCL, PGVCL, UGVCL.** It is permissible for the Owner to adjust the amount of Penalty of delay against any Bank Guarantee furnished by the Contractor under this contract or any other contract with GUVNL and / or its subsidiary companies*

16.0 TAXES, PERMITS & LICENCES

The Contractor shall be liable and pay all non-Indian taxes, duties, levies lawfully assessed against the Owner or the Contractor in pursuance of the Contract. In addition, the Contractor shall be responsible for payment of all Indian duties, levies and taxes lawfully assessed against the Contractor for his personal income & property only.

18.0 DEFENCE OF SUITS

Seal & Signature of Bidder



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If any action in court is brought against the Owner or Engineer or an officer or agent of the Owner, for the failure, omission or neglect on the part of the Contractor to perform any acts, matters, covenants or things under the Contract, or for damage or injury caused by the alleged omission or negligence on the part of the Contractor, his agents, representatives or his Sub-Contractors, or in connection with any claim based on lawful demands of Sub-Contractors, workmen, suppliers or employees, the Contractor shall in all such cases indemnify and keep the Owner, and the Engineer and/or his representative, harmless from all losses, damages, expenses or decrees arising of such action.

20.0 LIMITATION OF LIABILITIES

The final payment by the Owner in pursuance of the Contract shall mean the release of the Contractor from all his liabilities under the Contract. Such final payment shall be made only at the end of the Guarantee/Warranty period or after finalization of material account and final bill and till such time as the Contractual liabilities and responsibilities of the Contractor, shall prevail. All other payments made under the Contract shall be treated as on-account payments.

21.0 ENGINEER'S DECISION

21.1 In respect of all matters which are left to the decision of the Engineer including the granting or with-holding of the certificates, the Engineer shall, if required to do so by the Contractor, give in writing a decision thereon.

21.2 If, in the opinion of the Contractor, a decision made by the Engineer is not in accordance with the meaning and intent of the Contract, the Contractor may file with the Engineer, within fifteen (15) days after receipt of the decision, a written objection to the decision.

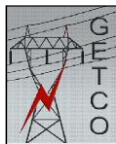
Failure to file an objection within the allotted time will be considered as an acceptance of the Engineer's decision and the decision shall become final and binding.

21.3 The Engineer's decision and the filing of the written objection thereto shall be a condition precedent to the right to request arbitration. It is the intent of the Agreement that there shall be no delay in the execution of the works and the decision of the Engineer as rendered shall be promptly observed.

22.0 POWER TO VARY OR OMIT WORK

22.1 No alterations, amendments, omissions, suspensions or variations of the Works (hereinafter referred to as 'variation') under the Contract as detailed in the Contract Documents, shall be made by the Contractor except as directed in writing by the Engineer, but the Engineer shall have full powers subject to the provisions hereinafter contained, from time to time during the execution of the Contract, by notice in writing to instruct the Contractor to make such variation without prejudice to the Contract. The Contractor shall carry out such variation and be bound by the same conditions as far as applicable as though the said variations occurred in the Contract Documents. If any suggested variations would, in the opinion of the Contractor, if carried out, prevent him from fulfilling any of his obligations or guarantees under the Contract, he shall notify the Engineer thereof in writing and the Engineer shall decide forthwith whether or not, the same shall be carried out and if the Engineer confirms his instructions, the Contractor's obligations and guarantees shall be modified to such an extent as may be mutually agreed. Any agreed difference in cost occasioned by any such variation shall be added to or deducted from the Contract Price as the case may be.

22.2 In the event of Engineer requiring any variation, a reasonable and proper notice shall be given to the Contractor to enable him to work his arrangement accordingly, and in cases where goods or materials are already prepared or any design, drawings or pattern made or work done as per the contract requires to be altered, a reasonable and agreed sum in respect thereof shall be paid to the Contractor.



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- 22.3 In any case in which the Contractor has received instructions from the Engineer as to the requirement of carrying out the alterations or additional or substituted work which either then or later on, will in the opinion of the Contractor, involve a claim for additional payment, the Contractor shall immediately and in no case later than thirty (30) days, after receipt of the instructions aforesaid and before carrying out the instructions, advise the Engineer to that effect. But the Engineer shall not become liable for payment of any charges in respect of any such variations, unless the instructions for the performance of the same shall be confirmed in writing by the Engineer.
- 22.4 If any variation in the Works results in reduction of Contract Price, the parties shall agree, in writing, so to the extent of any change in the price, before the Contractor proceeds with the change.
- 22.5 In all the above cases, in the event of a disagreement as to the reasonableness of the said sum, the decision of the Engineer shall prevail.
- 22.6 Notwithstanding anything stated above in this clause, the Engineer shall have the full power to instruct the Contractor, in writing, during the execution of the Contract to vary the quantities of the items or groups of items in accordance with the provisions of clause entitled 'Change of Quantity' in section GCC of this Volume-I. The Contractor shall carry out such variations and be bound by the same conditions as though the said variations occurred in the Contract Documents. However, the Contract Price shall be adjusted at the rates and the prices provided for the original quantities in the Contract.

24.0 CHANGE OF QUANTITY

- 24.1 During the execution of the Contract, the Owner reserves the right to increase or decrease the quantities of items under the Contract but without any change in unit price or other terms & conditions. Such variations unless otherwise specified in the accompanying Special Conditions of Contract and/or Technical Specifications, shall not be subjected to any limitation for the individual items but the total variations in all such items under the Contract shall be limited to a percentage of the Contract price as specified in the Special Conditions of Contract.
- 24.2 The Contract price shall accordingly be adjusted based on the unit rates available in the Contract for the change in quantities as above. The base unit rates, as identified in the Contract shall however remain constant during the currency of the Contract, except as provided for in Clause 33.0 below. In case the unit rates are not available for the change in quantity, the same shall be subjected to mutual agreement.

26.0 COOPERATION WITH OTHER CONTRACTORS AND CONSULTING ENGINEERS

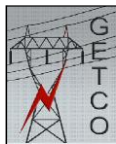
The Contractor shall agree to cooperate with the Owner's other Contractors and Consulting Engineers and freely exchange with them such technical information as is necessary to obtain the most efficient and economical design and to avoid unnecessary duplication of efforts. The Engineer shall be provided with three copies of all correspondence addressed by the Contractor to other Contractors and Consulting Engineers of the Owner in respect of such exchange of technical information, wherever needed.

27.0 NO WAIVER OF RIGHTS

Neither the inspection by the Owner or the Engineer or any of their officials, employees, or agents nor any order by the Owner or the Engineer for payment of money or any payment for or acceptance of, the whole or any part of the Works by the Owner or the Engineer, nor any extension of time, nor any possession taken by the Engineer shall operate as a waiver of any provision of the Contract, or of any power herein reserved to the Owner or any right to damages herein provided nor shall any waiver of any breach in the Contract be held to be a waiver of any other or subsequent breach.

28.0 CERTIFICATE NOT TO AFFECT RIGHT OF OWNER AND LIABILITY OF THE CONTRACTOR.

No interim payment certificate of the Engineer, nor any sum paid on account by the Owner, nor any extension of time for execution of the Works granted by the Engineer shall affect or prejudice the rights of the Owner against the Contractor or relieve the Contractor of his obligation for the due



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performance of the Contract, or be interpreted as approval of the Works done or of the equipment furnished and no certificate shall create liability for the Owner to pay for alterations, amendments, variations or additional works not ordered, in writing, by the Engineer or discharge the liability of the Contractor for the payment of damages whether due, ascertained, or certified or not or any sum against the payment of which he is bound to indemnify the Owner, nor shall any such certificate nor the acceptance by him of any sum paid on account or otherwise affect or prejudice the rights of the Owner against the Contractor.

29.0 PROGRESS REPORTS

During the various stages of the work in pursuance of the Contract, the Contractor shall at his own cost submit periodic progress reports as may be reasonably required by the Engineer with such materials as, charts, net-works, photographs, test certificates, etc. Such progress reports shall be in the form and size as may be required by the Engineer.

30.0 TAKING OVER

Upon successful completion of all the tests to be performed at Site on equipment furnished and erected by the Contractor, the Engineer shall issue to the Contractor a Taking Over Certificate as a proof of the final acceptance of the equipment. Such certificate shall not unreasonably be withheld nor will the Engineer delay the issuance thereof on account of minor omissions or defects which do not affect the commercial operation and/or cause any serious risk to the equipment. Such certificate shall not relieve the Contractor of any of his obligations which otherwise survive, by the terms and conditions of the Contract after issue of such certificate.

32.0 PAYMENT

32.1 The payment to the Contractor for the performance of the works under the Contract will be made by the Owner as per the guidelines and conditions specified herein. All payments made during the Contract shall be on account payments only. The final payment will be made on completion of all Works and on fulfillment by the Contractor of all his liabilities under the Contract.

32.2 Currency of Payment

All payments under the Contract shall be in Indian Rupees only.

32.3 Terms.

Payment terms will be as prescribed in the special conditions of contract and on fulfillment of conditions specified thereof.

34.3 Mode of Payment

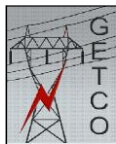
34.4 Payment made by GETCO through RTGS only directly to Owner's Bank or directly to the Contractor Bank account as per the payment schedule.

34.5 The payment of test charges, if any, payment, taxes and duties (whenever admissible) inland transportation (including port handling), insurance and the erection portion of the Works shall be made direct to the Contractor by the Owner.

34.6 All payments under the Contract shall be made as stipulated in the Special Conditions of Contract after signing the Contract Agreement. The payments linked with the dispatch of materials shall only be made after production of all dispatch documents as specified in the relevant Contract conditions which will inter alia include the Material Inspection Clearance Certificate issued by the Owner.

Progressive payments linked with erection shall only be made after the issue of certificates by the Engineer, one for the quantum of work completed and the other for the successful completion of quality check points involved in the quantum of work billed.

Seal & Signature of Bidder



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35.0 DEDUCTIONS FROM CONTRACT PRICE

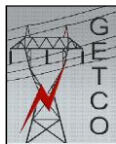
All costs, damages or expenses that the Owner may have paid, for which under the Contract the Contractor is liable, or any other retention award will be claimed by the Owner. The Owner to the Contractor shall bill all such claims regularly as and when they fall due. Such bills shall be supported by appropriate and certified vouchers or explanations, to enable the Contractor to properly identify such claims. Such claims shall be paid by the Contractor within thirty (30) days of the receipt of the corresponding bills and if not paid by the Contractor within the said period, the Owner may then deduct the amount, from any monies due or becoming due by him to the Contractor under the Contract or may be recovered by sections of Law or otherwise.

D. RISK DISTRIBUTION

37.0 INSURANCE

- 37.1 The Contractor at his cost shall arrange, secure and maintain all insurance as may be pertinent to the Works and obligatory in terms of law to protect his interest and interests of the Owner against all perils detailed herein. The form and the limit of such insurance as defined herein together with the under-writer in each case shall be acceptable to the Owner. However, irrespective of such acceptance, the responsibility to maintain adequate insurance coverage at all time during the period of Contract shall be of Contractor alone. The Contractor's failure in this regard shall not relieve him of any of his contractual responsibilities and obligations. The insurance covers to be taken by the Contractor shall be in the joint name of the Owner and the Contractor. The Contractor shall, however, be authorized to deal directly with Insurance Company or Companies and shall be responsible in regard to maintenance of all insurance covers. Further the insurance should be in freely convertible currency.
- 37.2 Any loss or damage to the equipment during handling, transportation, storage, erection, putting into satisfactory operation and all activities to be performed till the successful completion of commissioning of the equipment shall be to the account of the Contractor. The Contractor shall be responsible for preference of all claims and make good the damages or loss by way of repairs and/or replacement of the equipment, damaged or lost. The transfer of title shall not in any way relieve the Contractor of the above responsibilities during the period of Contract. The Contractor shall provide the Owner with copy of all insurance policies and documents taken out by him in pursuance of the Contract. Such copies of documents shall be submitted to the Owner immediately after such insurance coverage. The Contractor shall also inform the Owner in writing at least sixty (60) days in advance regarding the expiry/cancellation and/or change in any of such documents and ensure revalidation, renewal etc., as may be necessary well in time.
- 37.3 The perils required to be covered under the insurance shall include, but not be limited to fire and allied risks, miscellaneous accidents (erection risks) workman compensation risks, loss or damage in transit, theft, pilferage, riot and strikes and malicious damages, civil commotion, weather conditions, accidents of all kinds, etc. The scope of such insurance shall be adequate to cover the replacement/reinstatement cost of the equipment for all risks up to and including delivery of goods and other costs till the equipment is delivered at Site. The insurance policies to be taken should be on replacement value basis and/or incorporating escalation clause. Notwithstanding the extent of insurance cover and the amount of claim available from the underwriters, the Contractor shall be liable to make good the full replacement/rectification value of all equipment/materials and to ensure their availability as per project requirements.
- 37.4 All costs on account of insurance liabilities covered under the Contract will be on Contractor's account and will be included in Contract Price, However, the Owner may from time to time, during the pendency of the Contract, ask the Contractor in writing to limit the insurance coverage, risks and in such a case, the parties to the Contract will agree for a mutual settlement, for reduction in Contract price to the extent of reduced premia amount. The Contractor, while arranging the insurance shall ensure to obtain all discounts on premia, which may be available for higher volume or for reason of financing arrangement of the project.

Seal & Signature of Bidder



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37.5 The clause entitled 'Insurance' under the section ECC of this Volume-I, covers the additional insurance requirements for the portion of the works to be performed at the Site.

37.6 Special Conditions of Contract details out the various insurance liabilities.

38.0 LIABILITY FOR ACCIDENTS AND DAMAGES

Under the Contract, the Contractor shall be responsible for loss or damage to the plant until the successful completion of commissioning as defined else where in the Bid document.

39.0 DELAYS BY OWNER OR HIS AUTHORISED AGENTS

39.1 In case the Contractor's performance is delayed due to any act of omission on the part of the Owner or his authorized agents, then the Contractor shall be given due extension of time for the completion of the Works, to the extent such omission on the part of the Owner has caused delay in the Contractor's performance of the Contract.

Regarding reasonableness or otherwise of the extension of time, the decision of the Engineer shall be final.

39.2 In addition, the Contractor shall be entitled to claim demonstrable and reasonable compensation if such delays have resulted in any increase in cost. The Owner shall examine the justification for such a request for claim and if satisfied, the extent of compensation shall be mutually agreed depending upon the circumstances at the time of such an occurrence.

41.0 FORCE MAJEURE

41.1 Force major is herein defined as any cause which is beyond the control of the Contractor or the Owner as the case may be, which they could not foresee or with a reasonable amount of diligence could not have foreseen and which substantially affects the performance of the Contract, such as:

- a. Natural phenomena, including but not limited to floods, droughts, earthquakes and epidemics;
- b. Acts of any Government, domestic or foreign, including but not limited to war, declared or undeclared, priorities, guarantees, and embargoes.

Provided either party shall within fifteen (15) days from the occurrence of such a cause notify the other in writing of such causes.

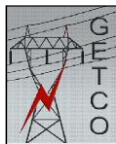
41.2 The Contractor or the Owner shall not be liable for delays in performing his obligations resulting from any force major cause as referred to and/or defined above

The date of completion will, subject to hereinafter provided, be extended by a reasonable time even though such cause may occur after Contractor's performance of obligation has been delayed due to other causes.

42.0 SUSPENSION OF WORK

42.1 The Owner reserves the right to suspend and reinstate execution of the whole or any part of the Works without invalidating the provisions of the Contract. Orders for suspension or reinstatement of the Works will be issued by the Engineer to the Contractor in writing. The time for completion of the works will be extended for a period equal to duration of the suspension.

42.2 Any necessary and demonstrable cost incurred by the Contractor as a result of such suspension of the works will be paid by the Owner, provided such costs are substantiated to the satisfaction of the Engineer. The Owner shall not be responsible for any liabilities if suspension or delay is due to some default on the part of the Contractor or his Sub-Contractor.



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43.0 CONTRACTOR'S DEFAULT

43.1 If the Contractor shall neglect to execute the works with due diligence and expedition or shall refuse or neglect to comply with any reasonable order given to him, in writing by the Engineer in connection with the works or shall contravene the provisions of the Contract, the Owner may give notice in writing to the Contractor to make good the failure, neglect or contravention complained of. Should the Contractor fail to comply with the notice within thirty (30) days from the date of serving the notice, then and in such case the Owner shall be at liberty to employ other workmen and forthwith execute such part of the works as the Contractor may have neglected to do or if the Owner shall think fit, without prejudice to any other right he may have under the Contract to take the work wholly or in part out of the Contractor's hands and re-contract with any other person or persons to complete the works or any part thereof and in that event the Owner shall have free use of all Contractor's equipment that may have been at the time on the Site in connection with the works without being responsible to the Contractor for fair wear and tear thereof and to the exclusion of any right of the Contractor over the same, and the Owner shall be entitled to retain and apply any balance which may otherwise be due on the Contract by him to the Contractor, or such part thereof as may be necessary, to the payment of the cost of executing the said part of the Works or of completing the Works as the case may be. If the cost of completing of works or executing part thereof as aforesaid shall exceed the balance due to the Contractor shall pay such excess. Such payment of excess amount shall be independent of the liquidated damages for delay which the Contractor shall have to pay if the completion of works is delayed.

43.2 In addition, such action by the Owner as aforesaid shall not relieve the Contractor of his liability to pay liquidated damages for delay in completion of Works as defined in Clause 14.0 of this Section.

43.3 Such action by the Owner as aforesaid the termination of the Contract under this clause shall not entitle the Contractor to reduce the value of the Contract Performance Guarantee nor the time thereof. The Contract Performance Guarantee shall be valid for the full value and for the full period of the Contract including guarantee period.

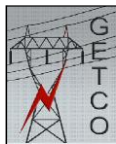
44.0 TERMINATION OF CONTRACT ON OWNER'S INITIATIVE

44.1 The Owner reserves the right to terminate the Contract either in part or in full due to reasons other than those mentioned under clause entitled 'Contractor's Default'. The Owner shall in such an event give fifteen (15) days notice in writing to the Contractor of his decision to do so.

44.2 The Contractor upon receipt of such notice shall discontinue the work on the date and to the extent specified in the notice, make all reasonable efforts to obtain cancellation of all orders and Contracts to the extent they are related to the work terminated and terms satisfactory to the Owner, stop all further sub-contracting or purchasing activity related to the work terminated, and assist Owner in maintenance, protection, and disposition of the works acquired under the Contract by the Owner.

In the event of such a termination the Contractor shall be paid compensation, equitable and reasonable, dictated by the circumstances prevalent at the time of termination.

44.3 If the Contractor is an individual or a proprietary concern and the individual or the proprietor dies and if the Contractor is a partnership concern and one of the partners dies then unless the Owner is satisfied that the legal representatives of the individual Contractor or of the proprietor of the propriety concern and in the case of partnership, the surviving partners, are capable of carrying out and completing the Contract the Owner shall be entitled to cancel the Contract as to its incomplete part without being in any way liable to payment of any compensation to the estate of deceased Contractor and/or to the surviving partners of the Contractor's firm on account of the cancellation of the Contract. The decision of the Owner that the legal representatives of the deceased Contractor or surviving partners of the Contractor's firm cannot carry out and complete the Contract shall be final and binding on the parties. In the event of such cancellation the Owner shall not hold the estate of the deceased Contractor and/or the surviving partners of the estate of



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the deceased Contractor and/or the surviving partners of the Contractor's firm liable to damages for not completing the Contract.

45.0 FRUSTRATION OF CONTRACT

45.1 In the event of frustration of the Contract because of supervening impossibility in terms of Section 56 of the Indian Contract Act, parties shall be absolved of their responsibility to perform the balance portion of the Contract, subject to provisions contained in sub-clause 45.3 below.

45.2 In the event of non-availability or suspension of funds for any reasons, whatsoever (except for reason of willful or flagrant breach by the Owner) and/or Contractor then the works under the Contract shall be suspended.

Furthermore, if the Owner is unable to make satisfactory alternative arrangements for financing to the Contractor in accordance with the terms of the Contract within three months of the event, the parties hereto shall be relieved from carrying out further obligations under the Contract treating it as frustration of the Contract.

45.3 In the event referred to in sub-clauses 45.1 & 45.2 above the parties shall mutually discuss to arrive at reasonable settlement on all issues including amounts due to either party for the work already done on quantum merit_ basis, which shall be determined by mutual agreement between the parties.

46.0 GRAFTS AND COMMISSIONS ETC.

Any graft, commission, gift or advantage given, promised or offered by or on behalf of the Contractor or his partner(s), agent(s), officer(s), director(s), employee(s) or servant(s) or any one on his or their behalf in relation to the obtaining or to the execution of this or any other Contract with the Owner, shall in addition to any criminal liability which it may incur, subject the Contractor to the cancellation of this and all other Contracts and also to payment of any loss or damage to the Owner resulting from any cancellation. The Owner shall then be entitled to deduct the amount so payable from any monies otherwise due to Contractor under the Contract.

RESOLUTION OF DISPUTES

47.0 SETTLEMENT OF DISPUTES

47.1 Any dispute(s) or difference(s) arising out of or in connection with the Contract shall, to the extent possible, be settled amicably between the parties.

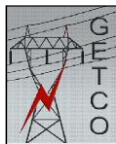
47.2 If any dispute or difference of any kind, whatsoever, shall arise between the Owner and the Contractor, arising out of the Contract for the performance of the Works whether during the progress of the Works or after its completion or whether before or after the termination, abandonment or breach of the Contract, it shall, in the first place, be referred to and settled by the Engineer, who, within a period of thirty (30) days after being requested by either party to do so, shall give written notice of his decision to the Owner and the Contractor.

47.3 Save as hereinafter provided, such decision in respect of every matters so referred shall be final and binding upon the parties until the completion of the Works and shall forthwith be given effect to by the Contractor who shall proceed with the Works with all due diligence, whether he or the Owner requires arbitration as hereinafter provided or not.

47.4 If after the Engineer has given written notice of his decision to the parties, no claim to arbitration has been communicated to him by either party within thirty (30) days from the receipt of such notice, the said decision shall become final and binding on the parties.

47.5 In the event of the Engineer failing to notify his decision as aforesaid within thirty (30) days after being requested as aforesaid, or in the event of either the Owner or the Contractor being dissatisfied with any such decision, or within thirty (30) days after the expiry of the first mentioned

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period of thirty days, as the case may be, either party may require that the matters in dispute be referred to arbitration as hereinafter provided.

48.0 ARBITRATION

48.1 All disputes or differences in respect of which the decision, if any, of the Engineer has not become final or binding as aforesaid shall be settled by arbitration in the manner hereinafter provided.

48.1.1 The arbitration shall be conducted by three arbitrators, one each to be nominated by the Contractor and the Owner and the third to be appointed as an umpire by both the arbitrators in accordance with the Indian Arbitration Act. If either of the parties fails to appoint its arbitrator within sixty (60) days after receipt of a notice from the other party invoking the Arbitration clause, the arbitrator appointed by the party invoking the arbitration clause shall become the sole arbitrator to conduct the arbitration.

48.1.2 The arbitration shall be conducted in accordance with the provisions of the Indian Arbitration Act, 1940 or any statutory modification thereof. The venue of arbitration shall be NAVSARI.

48.2 The decision of the majority of the arbitrators shall be final and binding upon the parties. The arbitrators may, from time to time with the consent of all the parties enlarge the time for making the award. In the event of any of the aforesaid arbitrators dying, neglecting, resigning or being unable to act for any reason, it will be lawful for the party concerned to nominate another arbitrator in place of the outgoing arbitrator.

48.3 The arbitrator shall have full powers to review and/or revise any decision, opinion, direction, certification or valuation of the Engineer in accordance with the Contract, and neither party shall be limited in the proceedings before such arbitrators to the evidence or arguments put before the Engineer for the purpose of obtaining the said decision.

48.4 No decision given by the Engineer in accordance with the foregoing provisions shall disqualify him as being called as a witness or giving evidence before the arbitrators on any matter whatsoever relevant to the dispute or difference referred to the arbitrators as aforesaid.

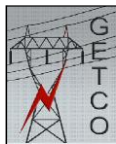
48.5 During settlement of disputes and arbitration proceedings, both parties shall be obliged to carry out their respective obligations under the Contract.

49.0 RECONCILIATION OF ACCOUNTS

The Contractor shall prepare and submit every **one** month, a statement covering payments claimed and the payments received vis-à-vis the works executed, for reconciliation of accounts with the Owner. The Contractor shall also prepare and submit a detailed account of Owner Issue materials received and utilized by him for reconciliation purpose in a format to be discussed & finalized with the Owner before the award of Contract.

Welfare Cess

- As per the Welfare Cess Act, the welfare cess @ 1% is applicable on supply and erection items for supply, erection, testing & commissioning of substation, transmission lines, EPC/Turnkey projects and civil works.
- Contractor shall get registered under Welfare Cess Act before commencement of work. Office of the Factory Inspector is authorized at present as a registering authority.
- The welfare cess@1% is considered in the price schedules so; the bidders are requested to quote accordingly.
- GETCO shall pay the welfare cess by way of reimbursing to contractors on production of documentary evidence of payment.



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- The contracts for which supply or part supply of material are in the scope of GETCO, then contractors shall deposit welfare cess on estimated cost of supplied items to GETCO on progressive basis of utilization. As this part of welfare cess is on GETCO account, the same shall be reimbursed to the contractor on receipt of request letter along with documentary evidence of payment. For calculation of welfare cess on supply part, valuation as per MR shall be taken and informed to the contractor for payment. This will be over and above the A/T value. The modality of payment/ reimbursement of welfare cess will be as under.
- On receipt of A/T, the contractor / bidder will get them registered under Welfare Cess Act and submit the documentary evidence to the concern office.
- Before release of payment of first R.A. Bill, the contractor has to submit the documentary evidence of registration. Only thereafter, the bill will be processed for payment.
- Before release of payment of subsequent R.A. Bills, the contractor has to submit the documentary evidence of payment of welfare cess of previous R.A. Bill.
- Before release of payment of final bill, the contractor has to submit documentary evidence of payment of welfare cess of previous R.A. Bill as well as of this final bill.
- If the R.A. Bill happens to be first and final bill, then before release of payment, contractor has to submit documentary evidence of registration under Welfare Cess Act and evidence of payment of welfare cess.
- The welfare cess shall be reimbursed to the contractor on submission of copy of documentary evidence of payment by observing due formalities.

Note: welfare tax shall be reimbursed on production of proof of such payments made by the contractor to the appropriate department.

1.0 GENERAL

- 1.1 The following shall supplement the conditions already contained in other parts of these specifications & document and shall govern the portion of the work of this Contract to be performed at Site.
- 1.2 The Contractor upon signing of the Contract shall, nominate a responsible officer as his representative at Site suitably designated for the purpose of overall responsibility and coordination of the works to be performed at Site. Such person shall function from the Site office of the Contractor during the pendency of Contract.

2.0 REGULATION OF LOCAL AUTHORITIES AND STATUTES

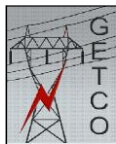
- 2.1 The Contractor shall comply with all the rules and regulations of local authorities during the performance of his field activities. He shall also comply with the Minimum Wages Act, 1948 and the Payment of Wages Act (both of the Government of India) and the rules made there under in respect of any employee or workman employed or engaged by him or his Sub-Contractor. He shall abide by labour laws and others as specified in the special conditions of contract.
- 2.2 All registration and statutory inspection fees, if any, in respect of his work pursuant to this Contract shall be to the account of the Contractor. Should any such inspection or registration need to be re-arranged due to the fault of the Contractor or his Sub Contractor, the additional fees to such inspection and/or registration also shall be borne by the Contractor.

3.0 OWNER'S LIEN ON EQUIPMENT

The Owner shall have lien on all equipment brought to the Site for the purpose of erection, testing and commissioning of the equipment to be supplied & erected under the Contract. The Owner shall continue to hold the lien on all such equipment throughout the period of Contract. No material brought to the Site shall be removed from the Site by the Contractor and/or his Sub-Contractors without the prior written approval of the Engineer.

4.0 ACCESS TO SITE AND WORKS ON SITE

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- 4.1 Suitable access to and possession of the Site shall be afforded to the Contractor by the Owner in reasonable time.
- 4.2 The works so far as it is carried out on the Owner's premises, shall be carried out at such time as the Owner may approve and the Owner shall give the Contractor reasonable facilities for carrying out the works.
- 4.3 In the execution of the works, no person other than the Contractor or his duly appointed representative, Sub- Contractor and workmen, shall be allowed to do work on the Site, except by the special permission, in writing of the Engineer or his representative.

5.0 CONTRACTOR'S SITE ESTABLISHMENT

The Contractor shall at all times keep posted an authorized representative for the purpose of the Contract. Any written order or instruction of the Engineer or his duly authorized representative, shall be communicated to the said authorized resident representative of the Contractor and the representative shall be available at a stated address for this purpose.

6.0 CO-OPERATION WITH OTHER CONTRACTORS

- 6.1 The Contractor shall co-operate with all other Contractors or tradesmen of the Owner, who may be performing other works on behalf of the Owner and the workmen who may be employed by the Owner and doing work in the vicinity of the Works under the Contract. The Contractor shall also so arrange to perform his work as to minimize, to the maximum extent possible, interference with the work of other Contractors and their workmen. Any injury or damage that may be sustained by the employees of the other Contractors and the Owner, due to the Contractor's work shall promptly be made good at the Contractor's own expense.

7.0 DISCIPLINE OF WORKMEN

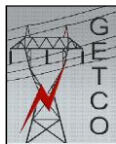
The Contractor shall adhere to the disciplinary procedure set by the Engineer in respect of his employees and workmen at Site. The Engineer shall be at liberty to object to the presence of any representative or employee of the Contractor at the Site, if in the opinion of the Engineer such employee has misconduct himself or is incompetent or negligent or otherwise undesirable and then the Contractor shall remove such a person objected to and provide in his place a competent replacement.

8.0 CONTRACTOR'S FIELD OPERATION

- 8.1 The Contractor shall keep the Engineer informed in advance regarding his field activity plans and schedules for carrying-out each part of the works. Any review of such plan or schedule or method of work by the Engineer shall not relieve the Contractor of any of his responsibilities towards the field activities. Such reviews shall also not be considered as an assumption of any risk or liability by the Engineer or the Owner or any of his representatives and no claim of the Contractor will be entertained because of the failure or inefficiency of any such plan or schedule or method of work reviewed. The Contractor shall be solely responsible for the safety, adequacy and efficiency of plant and equipment and his erection methods.
- 8.2 The Contractor shall have the complete responsibility for the conditions of the Work-site including the safety of all persons employed by him or his Sub-Contractor and all the properties under his custody during the performance of the work. This requirement shall apply continuously till the completion of the Contract and shall not be limited to normal working hours.

9.0 PROGRESS REPORT

- 9.1 The Contractor shall furnish three (3) copies each to the Engineer of progress including if any, photographs of the work done at Site.
- 9.2 The monthly progress report detailing-out the progress achieved on all erection activities shall highlight comparison to the schedules. The report shall also indicate the reasons for the variance



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between the scheduled and actual progress and the action proposed for corrective measures, wherever necessary.

10.0 MAN-POWER REPORT

10.1 The Contractor shall submit to the Engineer, on the first day of every month, a man hours schedule for the month, detailing the man hours scheduled for the month, skill-wise and area-wise.

11.0 PROTECTION OF WORK

The Contractor shall have total responsibility for protecting his works till it is finally taken over by the Engineer. No claim will be entertained by the Owner or by the Engineer for any damage or loss to the Contractor's works and the Contractor shall be responsible for complete restoration of the damaged works to original conditions to comply with the specification and drawings.

12.0 EMPLOYMENT OF LABOUR

12.1 The Contractor will be expected to employ on the work only his regular skilled employees with experience of his particular work. No person below the age of eighteen years shall be employed.

12.2 All traveling expenses including provisions of necessary transport to and from Site, lodging, allowances and other payments to the Contractor's employees shall be the sole responsibility of the Contractor.

12.3 In case the Owner becomes liable to pay any wages or dues to Labour or any Government agency under any of the provisions of the Minimum Wages Act, Workmen Compensation Act, Contract Labour Regulation Abolition Act or any other law due to act of omission of the Contractor, the Owner may make such payment and shall recover the same from the Contractor's bills.

13.0 FACILITIES TO BE PROVIDED BY THE CONTRACTOR

13.1 Tools, tackles and scaffoldings

The Contractor shall provide all the construction equipment's; tools, tackles and scaffoldings required for pre-assembly, erection, of the Breaker, Bus-bar Gantry etc, covered under the Contract. He shall submit a list of all such materials to the Engineer before the commencement of work at Site. These tools and tackles shall not be removed from the Site without the written permission of the Engineer.

13.2 First-aid

13.3 The Contractor shall provide necessary first-aid facilities for all his employees, representatives and workmen working at the Site. Enough number of Contractor's personals shall be trained in administering first-aid.

13.4 Cleanliness

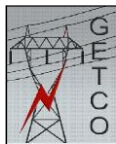
13.4.1 The Contractor shall be responsible for keeping the entire area allotted to him clean and free from rubbish, debris etc. during the period of Contract. The Contractor shall employ enough number of personnel to keep the work area clean. Materials and stores shall be so arranged to permit easy cleaning of the area. In areas where equipment might drip oil and cause damage to the floor surface, a suitable protective cover of a flame resistant, oil proof sheet shall be provided to protect the floor from such damage.

14.0 LINES AND GRADES

All the works shall be performed to the lines, grades and elevations indicated on the drawings. The Contractor shall be responsible to locate and lay-out the works. Basic horizontal and vertical control points will be established and marked by the Engineer at site at suitable points. These points shall be used as datum for the works under the Contract. The Contractor shall inform the Engineer well in advance of the times and places at which he wishes to do work in the area allotted to him so that suitable datum points may be established and checked by the Engineer to enable the Contractor to proceed with his works. Any work done without being properly located may be removed and/or dismantled by the Engineer at Contractor's expense.

15.0 FIRE PROTECTION

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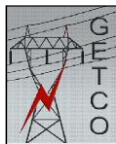


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- 15.1 The work procedures that are to be used during the erection shall be those, which minimize fire hazards to the extent practicable. Combustible materials, combustible waste and rubbish shall be collected and removed from the Site at least once each day. Fuels, oils and volatile or inflammable materials shall be stored away from the construction and equipment and materials storage areas.
- 15.2 All the Contractor's supervisory personnel and select number of workers shall be trained for fire fighting. Enough of such trained personnel must be available at the Site during the entire period of the Contract.
- 16.0 SECURITY**
The Contractor shall have total responsibility for all equipment and materials in his custody/stores, loose, semi-assembled and/or erected by him at Site. The Contractor shall make suitable security arrangements ensure the protection of all materials, equipment and works from theft, fire, pilferage and any other damages and loss.
- 17.0 PRE-COMMISSIONING TRIALS AND INITIAL OPERATIONS**
The pre-commissioning trials and initial operations of the equipment erected by the Contractor shall be carried out in presence of contractor and is deemed considered as part of the work completion. If it is anticipated that the above test may prolong for a long time, the Contractor's workmen required for the above test shall always be present at Site during such tests and trials.
- 18.0 MATERIALS HANDLING AND STORAGE**
- 18.1 All the equipment furnished under the Contract and arriving at Site shall be promptly received, unloaded, transported and stored in the storage spaces by the Contractor.
- 18.2 Contractor shall be responsible for examining all the shipment and notify the Engineer immediately of any damages, storage, discrepancy etc, for the purpose of Engineer's information only. The Contractor shall submit to the Engineer every week a report detailing all the receipts during the week. However, the Contractor shall be solely responsible for any shortages or damages in transit, handling and / or in storage and erection of the equipment at Site. Any demurrage, wharf age and other such charges claimed by the transporters, railways etc, shall be to the account of the Contractor.
- 18.3 The Contractor shall maintain an accurate and exhaustive record detailing out the list of all equipment materials received by him for the purpose of erection and keep such record open for the inspection of the Engineer in-charge.
- 18.4 All equipment shall be handled very carefully to prevent any damage or loss. The equipment stored shall be properly protected to prevent damage either to the equipment or to the floor where they are stored. The equipment from the store shall be moved to the actual location at the appropriate time so as to avoid damage of such equipment at Site.
- 18.5 All electrical panels, control gears, motors and such other devices shall be properly dried by heating before they are installed and energized. Motor bearings, slip ring, commutators and other exposed parts shall be protected against moisture ingress and corrosion during storage and periodically inspected.
- 18.6 All the electrical equipment such as motors, generators, etc. shall be tested for insulation resistance at least once in three months from the date of receipt till the date of commissioning and a record of such measured insulation values maintained by the Contractor. Such records shall be opened for inspection by the Engineer.
- 18.7 The consumable and other supplies likely to deteriorate due to storage must be thoroughly protected and stored in a suitable manner to prevent damage or deterioration in quality by storage.



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- 18.8 All the materials stored in the open or dusty location must be covered with suitable weatherproof and flame proof covering material wherever applicable.
- 18.9 If the materials belonging to the Contractor are stored in areas other than those earmarked for him, the Engineer will have the right to get it moved to the area earmarked for the Contractor at the Contractor's cost.
- 18.10 The Contractor shall be responsible for making suitable indoor storage facilities to store all equipment, which require indoor storage. Normally, all the electrical equipment such as motors, control gears, generators, exciters and consumables like electrodes, lubricants etc. shall be stored in the closed storage space. The Engineer, in addition, may direct the Contractor to move certain other materials, which in his opinion will require indoor storage, to indoor storage areas, which the Contractor shall strictly comply with.

19.0 CONSTRUCTION MANAGEMENT

- 19.1 The field activities of the Contractors working at Site, will be coordinated by the Engineer and the Engineer's decision shall be final in resolving any disputes or conflicts between the Contractor and other Contractors and the tradesmen of the Owner regarding scheduling and coordination of work. Such decision by the Engineer shall not be a cause for extra compensation or extension of time for the Contractor.
- 19.2 The Engineer shall hold weekly meetings of the Contractor at Site, at a time and place to be designated by the Engineer. The Contractor shall attend such meetings and take notes of discussions during the meeting and the decision of the Engineer and shall strictly adhere to those decisions in performing his works. In addition to the above weekly meeting, the Engineer may call for other meetings either with individual Contractors or with selected number of Contractors and in such a case the Contractors if called, will also attend such meetings.
- 19.3 Time is the essence of the Contract and the Contractor shall be responsible for performance of his works in accordance with the specified construction schedule. If at any time, the Contractor is falling behind the schedule, he shall take necessary action to make good for such delays by increasing his work force or by working overtime or otherwise accelerate the progress of the work to comply with the schedule and shall communicate such actions in writing to the Engineer, satisfying that his action will compensate for the delay. The Contractor shall not be allowed any extra compensation for such action.
- 19.4 The Engineer shall, however, not be responsible for provision of additional labour and/or materials or supply or any other services to the Contractor except for the coordination work between various Contractors if any at site.

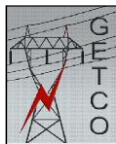
20.0 FIELD OFFICE RECORDS

The Contractor shall maintain up to date copies of all drawings, specifications and other Contract Documents and any other supplementary data complete with all the latest revisions thereto. The Contractor shall also maintain in addition the continuous record of all changes to the above Contract Documents, drawings, specifications, and supplementary data, etc. effected at the field and on completion of his total assignment under the Contract shall incorporate all such changes on the drawings and other Engineering data to indicate as installed conditions of the equipment furnished and erected under the Contract. Such drawings and Engineering data shall be submitted to the Engineer in required number of copies.

21.0 CONTRACTOR'S MATERIALS BROUGHT TO SITE

- 21.1 The Contractor shall bring to Site all equipment, components, parts, materials, including construction equipment, tools and tackles for the purpose of the works under intimation to the Engineer. All such goods shall, from the time of their being brought vest in the Owner, but may be

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used for the purpose of the Works only and shall not on any account be removed or taken away by the Contractor without the written permission of the Engineer. The Contractor shall nevertheless be solely liable and responsible for any loss or destruction thereof and damage thereto.

21.2 The Owner shall have a lien on such goods for any sum or sums which may at any time be due or owing to him by the Contractor, under, in respect of or by reasons of the Contract. After giving a fifteen (15) days notice in writing of his intention to do so, the Owner shall be at liberty to sell and dispose off any such goods, in such manner as he shall think fit and to apply the proceeds in or towards the satisfaction of such sum or sums due as aforesaid.

21.3 After the completion of the Works, the Contractor shall remove from the Site under the direction of the Engineer the materials such as construction equipment, erection tools and tackles, scaffolding etc. with the written permission of the Engineer.

22.0 PROTECTION OF PROPERTY AND CONTRACTOR'S LIABILITY

22.1 The Contractor shall be responsible for any damage resulting from his operations. He shall also be responsible for protection of all persons including members of public and employees of the Owner and the employees of other Contractors and Sub-Contractors and all public and private property.

23.2 Workmen's Compensation Insurance

This insurance shall protect the Contractor against all claims applicable under the Workmen's Compensation Act, 1948 (Government of India). This policy shall also cover the Contractor against claims for injury, disability, disease or death of his or his Sub-Contractor's employee, which for any reason are not covered under the Workmen's Compensation Act, 1948. The liabilities shall not be less than:

Workmen's : As per statutory
Compensation Provisions

Employee's : As per statutory
Liability Provisions

23.3 Comprehensive General Liability Insurance

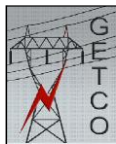
The insurance shall protect the Contractor against all claims arising from injuries, disabilities, disease or death of members of public or damage to property of others, due to any act of omission on the part of the Contractor, his agents, his employees, his representatives and Sub-Contractors or from riots, strikes and civil commotion.

23.4 The hazards to be covered will pertain to all the works and areas where the Contractor, his Sub-Contractors, his agents and his employees have to perform work pursuant to the Contract.

23.5 The above are only illustrative list of insurance covers normally required and it will be the responsibility of the Contractors to maintain all necessary insurance coverage to the extent both in time and amount to take care of all his liabilities either direct or indirect, in pursuance of the Contract.

24.0 UNFAVOURABLE WORKING CONDITIONS

The Contractor shall confine all his field operations to those works, which can be performed without subjecting the equipment and materials to adverse effects during inclement weather conditions, like monsoon, storms etc. and during other unfavorable construction conditions. No field activities shall be performed by the Contractor under conditions, which might adversely affect the quality and efficiency thereof, unless special precautions or measures are taken by the Contractor in a proper and satisfactory manner in the performance of such Works and with the



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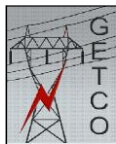
concurrency of the Engineer. Such unfavorable construction conditions will in no way relieve the Contractor of his responsibility to perform the Works as per the schedule.

25.0 PROTECTION OF MONUMENTS AND REFERENCE POINTS

The Contractor shall ensure that any finds such as relic, antiquity, coins, fossils, etc. which he may come across during the course of performance of his Works either during excavation or elsewhere, are properly protected and handed over to the Engineer. Similarly, the Contractor shall ensure that the bench marks, reference points, etc, which are marked either with the help of Engineer or by the Engineer shall not be disturbed in any way during the performance of his Works. If any work is to be performed which disturbs such reference the same shall be done only after these are transferred to other suitable locations under the direction of the Engineer. The Contractor shall provide all necessary materials and assistance for such relocation of reference points etc.

27.0 WORK & SAFETY REGULATIONS

- 27.1 The Contractor shall ensure proper safety of all the workmen, materials, plant and equipment belonging to him or to others, working at the Site. The Contractor shall also be responsible for provision of all safety notices and safety equipment required both by the relevant legislations and the Engineer, as he may deem necessary.
- 27.4 All equipment used in construction and erection by Contractor shall meet Indian/International Standards and where such standards do not exist, the Contractor shall ensure these to be absolutely safe. All equipment shall be strictly operated and maintained by the Contractor in accordance with manufacturer's Operation Manual and safety instructions and as per Guidelines/rules of in this regard.
- 27.5 Periodical examinations and all tests for all lifting/hoisting equipment & tackles shall be carried-out in accordance with the relevant provisions of Factories Act 1948, Indian Electricity Act 1910 and associated Laws/Rules in force from time to time. A register of such examinations and tests shall be properly maintained by the Contractor and will be promptly produced as and when desired by the Engineer or by the person authorized by him.
- 27.6 The Contractor shall provide suitable safety equipment of prescribed standard to all employees and workmen according to the need.
- 27.8 The Contractor shall provide safe working conditions to all workmen and employees at the Site including safe means of access, railings, stairs, ladders, scaffoldings etc. The scaffoldings shall be erected under the control and supervision of an experienced and competent person. For erection, good and standard quality of material only shall be used by the Contractor.
- 27.9 The Contractor shall not interfere or disturb electric fuses, wiring and other electrical equipment belonging to the Owner or other Contractors under any circumstances, whatsoever, unless expressly permitted in writing by to handle such fuses, wiring or electrical equipment
- 27.10 Before the Contractor connects any electrical appliances to any plug or socket belonging to the other Contractor or Owner, he shall:
- Satisfy the Engineer that the appliance is in good working condition;
 - Inform the Engineer of the maximum current rating, voltage and phases of the appliances;
 - Obtain permission of the Engineer detailing the sockets to which the appliances may be connected.
- 27.11 The Engineer will not grant permission to connect until he is satisfied that;
- The appliance is in good condition and is fitted with suitable plug;



GUJARAT ENERGY TRANSMISSION CORPORATION LIMITED

Transmission Circle Office, Navsari – 396 427. Telephone No. (02637)236232/236274 F

No. (02637) 236104 Email: setrnavasari@gebmail.com

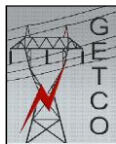
- b. The appliance is fitted with a suitable cable having two earth conductors, one of which shall be an earthed metal sheath surrounding the cores.

- 27.12 No electric cable in use by the Contractor/Owner will be disturbed without prior permission. No weight of any description will be imposed on any cable and no ladder or similar equipment will rest against or attached to it.
- 27.13 No repair work shall be carried out on any live equipment. The equipment must be declared safe by the Engineer and a permit to work shall be issued by the Engineer before any repair work is carried out by the Contractor. While working on electric lines/equipment, whether live or dead, suitable type and sufficient quantity of tools will have to be provided by the Contractor to electricians/workmen/officers.
- 27.14 In case any accident occurs during the construction/ erection or other associated activities undertaken by the Contractor thereby causing any minor or major or fatal injury to his employees due to any reason, whatsoever, it shall be the responsibility of the Contractor to promptly inform the same to the Engineer in prescribed form and also to all the authorities envisaged under the applicable laws.
- 27.15 The Engineer shall have the right at his sole discretion to stop the work, if in his opinion the work is being carried out in such a way that it may cause accidents and endanger the safety of the persons and/or property, and/or equipment. In such cases, the Contractor shall be informed in writing about the nature of hazards and possible injury/accident and he shall comply to remove shortcomings promptly. The Contractor after stopping the specific work can, if felt necessary, appeal against the order of stoppage of work to the Engineer within 3 days of such stoppage of work and decision of the Engineer in this respect shall be conclusive and binding on the Contractor.
- 27.16 The Contractor shall not be entitled for any damages/compensation for stoppage of work due to safety reasons as provided in Para 31.18 above and the period of such stoppage of work will not be taken as an extension of time for completion of work and will not be the ground for waiver of levy of liquidated damages.
- 27.17 It is mandatory for the Contractor to observe during the execution of the works, requirements of Safety Rules which would generally include but not limited to following
- a) Each employee shall be provided with initial indoctrination regarding safety by the Contractor, so as to enable him to conduct his work in a safe manner.
 - b) No employee shall be given a new assignment of work unfamiliar to him without proper introduction as to the hazards incident thereto, both to himself and his fellow employees.
 - c) Employees must not leave naked fires unattended. Smoking shall not be permitted around fire prone areas and adequate fire fighting equipment shall be provided at crucial location.
 - d) There shall be a suitable arrangement at every work site for rendering prompt and sufficient first aid to the injured.
 - j) Requirements of ventilation in underwater working to licensed and experienced divers, use of gum boots for working in slushy or in inundated conditions are essential requirements to be fulfilled.
- 27.18 The Contractor shall follow and comply with all Safety Rules, relevant provisions of applicable laws pertaining to the safety of workmen, employees, plant and equipment as may be prescribed from time to time without any demur, protest or contest or reservations. In case of any discrepancy between statutory requirement and Safety Rules referred above, the latter shall be binding on the Contractor unless the statutory provisions are more stringent.

a. Fatal injury or accident

Rs. 1,00,000/- : These are applicable for death

Seal & Signature of Bidder



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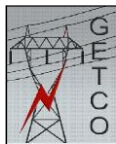
Causing death Corporate Identity No.U40100GJ1999SC6036018

- b. Major injuries or accident causing Rs. 20,000/- : injury to any person, whosoever.
25% or more permanent disablement per person
to Workmen or employees

Permanent disablement shall have same meaning as indicated in Workmen's Compensation Act. The compensation mentioned above shall be in addition to the compensation payable to the workmen/employees under the relevant provisions of the Workmen's Compensation Act and rules framed there under or any other applicable laws as applicable from time to time. In case the Owner is made to pay such compensation then the Contractor is liable to reimburse the Owner such amount in addition to the compensation indicated above.

28.0 CODE REQUIREMENTS

The erection requirements and procedures to be followed during the installation of the equipment shall be in accordance with the relevant Codes and accepted good engineering practice, the Engineer's drawings and other applicable Indian recognized codes and laws and regulation of the Government of India.



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Corporate Identity No.U40100GJ1999SGCO36018

TENDER SPECIFICATION NO: - [TCNS/TR/ETRM-31/](#)

Sub.: Survey, Design, Supply, Installation, Commission and maintenance of Solar PV System for 5 years as a rooftop at Control Room terrace of Various 220kV/132kV/66kV under Vapi AM Division under Navsari Circle

In connection with above subject, I / we confirm the following:

I/ we, the undersigned, have read and understand the Tender Specification No. _____ For

Survey, Design, Supply, Installation, Commission and maintenance of Solar PV System for 5 years as a rooftop at Control Room terrace of various Substation of Vyara AM Division - Pkg II under Navsari Circle.

complete with the entire Tender Terms and Conditions.

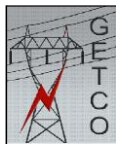
- a. The price in the bid is firm prices in line with Tender Specifications and shall stand valid till completion of the Contract, if awarded.
- b. I/We declare that our bid is strictly in line with Tender Specifications and there is no deviation. Further, I / we also agree that additional conditions / deviations, if any found in bid, the offer shall be out rightly rejected without assigning any reason thereof.

Signature of Authorized representative
of Company / Agency

NAME: _____

STATUS: _____

Name of BIDDER



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Corporate Identity No.U40100GJ1999SGCO36018

CONFIRMATION OF DETAILS OF BIDDER

Bidders are required to furnish following information specifying YES / NO

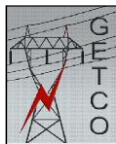
- 1) Whether the Bid is on percentage basis as called for. Yes / No
- 2) Whether rebate furnished is in percentage basis as called for. Yes / No
- 3) Whether the Bid is submitted by RPAD. Yes / No
- 4) Whether all pages of Bid Specifications are sealed and signed by the Bidder. Yes / No
- 5)
 - a) Whether the Bidder is registered with for erection Yes / No
 - b) In case of "Yes", please furnish following details:
 - i) Registration Letter No. & date.
 - ii) Class of Registration
 - iii) Validity
 - c) Whether Bidder is having PF Code No. Yes / No
- 6)
 - a) Whether EMD paid. (DD / BG) Yes / No
 - b) In case "Yes", furnish details
- 7) Whether following documents as specified are submitted.
 - a) Human Resources detail. Yes / No
 - b) Availability of tools, equipments etc. Yes / No
 - c) Details of orders executed / on hand Yes / No
 - d) Financial capability. Yes / No
 - e) Experience as specified. Yes / No
 - f) Latest Income-tax certificate Yes / No
 - g) Company's Articles Of Association Yes / No
 - h) Details Of Partners / Directors Yes / No
 - i) B.R./P.A. Authorizing Person Yes / No
 - j) Power of Attorney of Consortium Members Yes / No.

**Signature of Authorized Representative of
Company/Agency**

NAME: _____

STATUS: _____

**Name of tendering
Company**



GUJARAT ENERGY TRANSMISSION CORPORATION LIMITED

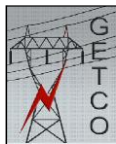
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No. (02637) 236104 Email: setrnavasari@gebmail.com

Corporate Identity No.U40100GJ1999SGCO36018

WORK & SAFETY REGULATIONS

1. The contractor shall ensure proper safety of all the workmen, materials, equipment & plant & belonging to him or to GETCO or to others, working at the site. The contractor shall also be responsible for provision of all safety notices and safety equipment required both by the relevant legislations and Engineer, as he may deem necessary.
2. Contractor has to provide ISI marked ELCB / MCB having sufficient capacity of standard make at point of supply.
3. All equipment used in construction and erection by contractor shall meet Indian/International Standards and where such standards do not exist, the contractor shall ensure these to be absolutely safe. All equipment shall be strictly operated and maintained by the contractor in accordance with manufacturer's operation manual and safety instructions and as per guidelines/ rules of GETCO in this regard.
4. Periodical examinations and all tests for all lifting/ hoisting equipment & tackles shall be carried – out in accordance with the relevant provisions of Factories Act 1948, Indian Electricity Act 1910 and associated Laws/Rules in force from time to time. A register of such examinations and tests shall be property maintained by the contractor and will be promptly produces as and when desired by Engineer or by the person authorized.
5. The contractor shall provide suitable safety equipment of prescribed standard to all employees and workmen according to the need.
6. The contractor shall provide safe working conditions to all workmen and employees at the site including safe means of access, railings, stairs, ladders, scaffoldings etc. the scaffoldings shall be erected under the control and supervision of an experienced and competent person. The contractor only shall use good and standard quality of material.
7. The contractor shall not interfere or disturb electric fuses, wiring and other electrical equipment belonging to the owner / other contractors under any circumstances, whatsoever, unless expressly permitted in writing to handle such fuses, wiring or electrical equipment.
8. Before the contractor connects any electrical appliances to any plug or socket belonging to the other contractor or owner, he shall:
 - a. Satisfy the Engineer that the appliance is in good working condition;
 - b. Inform the Engineer of the max. current rating & voltage of the appliances;
 - c. Obtain permission of the Engineer detailing the sockets to which the appliances may be connected.
9. The Engineer will not grant permission to connect until he is satisfied that;
 - a. The appliance is in good condition and is fitted with suitable plug
 - b. The appliance is fitted with a suitable cable having two earth conductors, ones of which shall be an earthed metal sheath surrounding the cores.

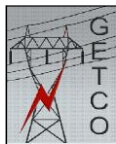


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No. (02637) 236104 Email: setrnavasari@gebmail.com

10. No electric cable in use by the contractor Owner will be disturbed without prior permission. No weight of any description will be imposed on any cable and no ladder or similar equipment will rest against or attached to it.
11. No repair work shall be carried out on any live equipment. The equipment must be declared safe by the Engineer and a permit to work shall be issued by the Engineer before any repair work is carried out by the contractor. While working on electric lines/ equipment, whether live or dead, suitable type and sufficiently quantity of tools will have to be provided by the contractor to electricians/ workmen/ officers.
12. In case any accident occurs during the construction/ erection or other associated activities undertaken by the contractor thereby causing any minor or major fatal injury to his employees due to any reason, whatsoever, it shall be the responsibility of the contractor provide medical facility / treatment & to promptly inform the same to the Engineer in prescribed form and to also to all the authorities envisaged under the applicable laws.
13. The Engineer shall have the right at his sole discretion to stop the work, if in his opinion the work is being carried out in such a way that it may cause accidents and endanger the safety of the persons and/or property and/or equipment. In such cases, the contractor shall be informed in writing about the nature of hazards and possible injury/ accident and he shall comply to remove shortcomings promptly. The contractor after stopping the specific work can, if felt necessary, appeal against the order of stoppage of work to the Engineer within 3 days of such stoppage of work and decision of the Engineer in this respect shall be conclusive and binding on the contractor.
14. The contractor shall not be entitled for any damages/ compensation for stoppage of work due to safety reasons and the period of such stoppage of work will not be taken as an extension of time for completion of work and will not be the ground for waiver of levy of liquidated damages.
15. it is mandatory for the contractor to observe during the execution of the works, requirements of safety rules which would generally include but not limited to following;
 - a. Each employee shall be provided with initial indoctrination regarding safety by the contractor, so as to enable him to conduct his work in a safe manner.
 - b. No employee shall be given a new assignment of work unfamiliar to him without proper introduction as to the hazards incident thereto, both himself & his fellow employees.
 - c. Employee must not leave naked fires unattended, smoking shall not be permitted around fire prone areas and adequate firefighting equipment shall be provided at crucial location.
 - d. There shall be a suitable arrangement at every work site for rendering prompt and sufficient first aid to the injured.
 - e. Requirements of ventilation in underwater working to licensed and experienced divers, use of gumboots for working in slushy or in inundated conditions are essential requirements to be fulfilled.
16. The contractor shall follow and comply with all GETCO safety Rules, relevant provisions of applicable laws pertaining to the safety of workmen, employees, plant and equipment as may be prescribed from time to time without any demur, protest or contest or reservations. In case of any



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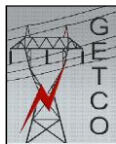
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No. (02637) 236104 Email: setrnavasari@gebmail.com

discrepancy between statutory requirement and GETCO safety rules referred above the latter shall be binding on the contractor unless the statutory provisions are more stringent.

- | | | |
|---------------------------------------|--------------------|---------------|
| a. Fatal injury or accident | Rs. 1,00,000/- per | These are |
| Causing death | person for death/ | applicable |
| b. Major injuries or accident causing | Rs. 20,000/- | injury to any |
| 25% or more permanent disablement | per person | person, |
| To workmen or employees | | |

Permanent disablement shall have same meaning as indicated in workmen's compensation Act. The compensation mentioned above shall be in addition to the compensation payable to the workmen/ employees under the relevant provisions of the laws as applicable from time to time. In case the owner is made to pay such compensation then the contractor is liable to reimburse the owner such amount in addition to the compensation indicated above.



GUJARAT ENERGY TRANSMISSION CORPORATION LIMITED

Transmission Circle Office, Navsari – 396 427. Telephone No. (02637)236232/236274 F

No. (02637) 236104 Email: setnavasari@gebmail.com

Corporate Identity No.U40100GJ1999SGCO36018

(E) APPENDICES

Gujarat Energy Transmission Corporation Ltd.

APPENDIX –I

TENDERER'S EXPERIENCE

A List of Similar jobs executed by the Contractor & Name with address of a Person whom reference can be made, by the Corporation, if required necessary.

[Tenderers shall submit the information in the Format detailed here under]

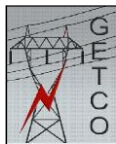
Sr. No	Description of Work	Value Of Work Executed Rs.	Construction Period as per Contract	Actual Construction Period for the Completion of the work	Date Of Completion	Client	Persons to whom Reference may be made	Principal Features
1	2	3	4	5	6	7	8	9

Contractor's Representative legible signature: _____

Name of the person: _____

Seal of the company

Date & place:



GUJARAT ENERGY TRANSMISSION CORPORATION LIMITED

Transmission Circle Office, Navsari – 396 427. Telephone No. (02637)236232/236274 F

No. (02637) 236104 Email: setnavasari@gebmail.com

Corporate Identity No.U40100GJ1999SGCO36018

Gujarat Energy Transmission Corporation Ltd.

APPENDIX – II

WORKS TENDERED / IN HAND

Details of other Works, tendered for & in hand , as on the date of the Submission of this tender [Tenderers shall submit the information in the

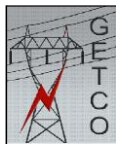
Format detailed here under]

Sr. No	Name of work with location and address	Work in hand			Work Tender for			Remarks
		Tender Cost	Cost of Remaining work	Anticipated Date of Completion	Estimated Cost	Date when decision is Expected	Stipulated Date or period Of Completion	
1	2	3	4	5	6	7	8	9

Contractor's Representative legible signature: _____

Name of the person: _____

Seal of the company Date & place: _____



GUJARAT ENERGY TRANSMISSION CORPORATION LIMITED

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No. (02637) 236104 Email: setnavasari@gebmail.com
Corporate Identity No.U40100GJ1999SGCO36018

Gujarat Energy Transmission Corporation Ltd.

GETCO APPENDIX-III

TENDERER'S DETAILS OF PERSONNEL

The List of Technical Personnel intended to be placed at the Work by the Contractor.
[Tenderers shall submit in the Format detailed here under]

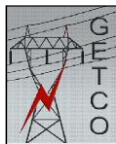
Sr. No.	Description &Details of position	Name	Qualification	Professional Experience & details of works carried out	Remarks
1	2	3	4	5	6

Contractor's Representative legible signature: _____

Name of the person: _____

Seal of the company

Date & place: _____



GUJARAT ENERGY TRANSMISSION CORPORATION LIMITED

Transmission Circle Office, Navsari – 396 427. Telephone No. (02637)236232/236274 F

No. (02637) 236104 Email: setrnavasari@gebmail.com

Corporate Identity No. T-140100G-1998SGCO36018
Gujarat Energy Transmission Corporation Ltd.

APPENDIX-IV

TENDERER'S DETAILS OF MACHINERY

The List of Technical Personnel intended to be placed at the Work by the Contractor.
[Tenderer shall submit in the Format detailed here under.]

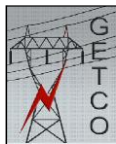
Sr. No.	Description & Details machinery	Capacity	Numbers	Make	Remarks
(a)	(b)	(c)	(d)	(e)	(f)

Contractor's Representative legible signature: _____

Name of the person: _____

Seal of the company

Date & place: _____



GUJARAT ENERGY TRANSMISSION CORPORATION LIMITED

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Corporate Identity No.U40100GJ1999SGCO36018

Gujarat Energy Transmission Corporation Ltd.

APPENDIX-V

PERFORMA, SHOWING THE DETAILS OF SITE VISIT DONE BY AGENCY BEFORE QUOTING THE TENDER.

[Tenderers shall submit in the Format detailed here under]

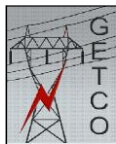
Sr. No.	Name of firm	Name of Authorized representative of firm who has visited the site.	Qualification	Designation / post holding in company.	Remarks.
(a)	(b)	(c)	(d)	(e)	(f)

Contractor's Representative legible signature: _____

Name of the person: _____

Seal of the company

Date & place: _____



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Corporate Identity No.U40100GJ1999SGCO36018

Gujarat Energy Transmission Corporation Ltd.

APPENDIX – VI Qualification Requirement.

Contractor must fill up below details & should place at the top of the Technical Bid.

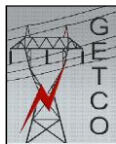
Sr No:	List of Documents	
1	Registration	Class – with valid up to
2	P.F. No.	GJ/
3	Partnership deed/Proprietor (Notarized copy)	
4	Power of Attorney (Notarized copy)	
5	Bl. Sheet / P&L A/C, Statement of last three years.	
6	Latest Solvency certificate.	Rs. Lacs issued by Bank, branch dtd.
7	GST Registration No.	
8	PAN NO	
9	Experience certificate – form 3A of last 5 years (minimum value of similar work done should be equal to or more than 50% of estimated cost	

Signature of Tenderer

Date :

Place

Company's Round Seal



GUJARAT ENERGY TRANSMISSION CORPORATION LIMITED

Transmission Circle Office, Navsari – 396 427. Telephone No. (02637)236232/236274 F

No. (02637) 236104 Email: setrnavasari@gebmail.com

Corporate Identity No.U40100GJ1999SGCO36018

APPENDIX – VII

Qualification Requirement.

Contractor must fill up above details

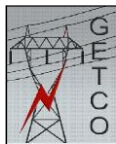
1.	PRICES: [FIRM ONLY] (Please Specify YES / NO.)	
2.	PENALTY TERMS AGREED (Please Specify YES / NO.)	
3.	SECURITY TERMS AGREED: (Please Specify YES / NO.)	
4.	TERMS AGREED: (Please Specify YES / NO.)	
5.	VALIDITY Of the offer for 180 DAYS From the date of opening of the Technical Bid: AGREED: (Please Specify YES / NO.)	
6.	PAYMENT TERMS AGREED: (Please Specify YES / NO.)	
7.	MOBILE NOS., TELEPHONE NOS. & FAX NO:	
8.	Authorized person of the firm :	
9.	Name of the proprietor, partners, directors [as the case may be], along with address, telephone, fax no. etc.	

Signature of Tenderer

Date :

Place

Company's Round Seal



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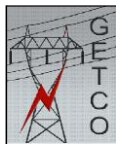
Corporate Identity No.U40100GJ1999SGCO36018

Placing Vendors/Contractors for Purchase/Works in a Stop deal/Banned for business dealing / blacklisting:

- 1.1. Stop deal / banned for business dealing / blacklist means debarment of parties from participating in the tendering process.
 - 1.1.1. Firm will mean Bidder / Licensor / Tendered / Consultant / Vendor / Contractor.
 - 1.1.2. Reasons for Putting a Firm on Stop deal / banned for business dealing / Blacklisting is to protect the GUVNL and its subsidiary Companies from dealing with an undesirable firm.
- 1.2. The list of indicative reasons for placing the firm in a Stop deal / banned for business dealing / Blacklist are as under.

A Firm will be placed in a Stop deal / banned for business dealing / blacklist, if the Firm-

- 1.2.1. Has submitted fake, false or forged documents / certificates,
 - 1.2.2. Has revised / withdrawn price bid after opening of Techno – commercial bid, until and unless it is sought for,
 - 1.2.3. Has tampered with the stipulated tendering procedure.
 - 1.2.3. Has refused to accept letter of Acceptance / purchase Order / Work Order after the same is issued by the Company within the validity period and as per agreed terms and conditions,
 - 1.2.5. Has committed breach of contract or has failed to perform a contract or has abandoned the contract,
 - 1.2.6. Has failed to provide suitable expertise for the work as per per-scheduled Program.
 - 1.2.7. Has failed to submit all the necessary tests reports / documents within time schedule / as per company's time limit, as mentioned in the LOI, if the letter of Acceptance (LOA) is placed subject to submission of type reports / documents to the firm.
 - 1.2.8. Has indulged in construction and erection of defective works.
 - 1.2.9. Has supplied inferior quality / defective materials and refused to replace with stipulated time frame, as specified by the company,
 - 1.2.10. Has substituted materials in lieu of materials supplied by the company or has not returned or has short returned or has unauthorisely disposed of materials / documents / drawings / tools or plants or equipment supplied by the Company,
 - 1.2.11. Has involved in malpractices such as bribery, corruption, fraud, canvassing and pilferage,
 - 1.2.12. Has unauthorisely obtained official company information or copies of documents, in relation the tender / Contract.
 - 1.2.13. Has failed to follow the stipulated mode of communication, if specified by the tendering authority / purchaser.
 - 1.2.14. Has parted with, leaked or provided confidential / proprietary information of the Company given to the firm only for its use (in discharge of its obligation against an order) to any third party without prior consent of the Company,
 - 1.2.15. Any other ground for which in opinion of the company makes it undesirable to deal with the Firm
 - 1.2.16. In case the State Government directs the Company to place a firm in stop dealing / banned for business dealing / banned for business dealing / blacklisting.
- 1.3. Every bidder should at the time of submission of bid, give a declaration that bidder and / or proprietor / partner / Director of the firm has not been placed on stop dealing / banned for business dealing / blacklisting by GUVNL and It's any subsidiary Companies as per **ANNEXURE-VIII (as per attached format)**.



GUJARAT ENERGY TRANSMISSION CORPORATION LIMITED

Transmission Circle Office, Navsari – 396 427. Telephone No. (02637)236232/236274 F

No. (02637) 236104 Email: setnavasari@gebmail.com

Corporate Identity No.U40100GJ1999SGCO36018

(On the letter head of the firm/company)

ANNEXURE-VIII

(UNDERTAKING IN REGARD TO STOP DEAL / BANNED FOR BUSINESS DEALING/ BLACK LIST THEREOF)

Sub: Undertaking in regard to Stop Deal/ Banned for Business dealing/ Black List thereof

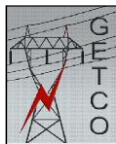
Ref: Tender Notice No

All bidders will have to furnish the following undertaking dully filled in, signed and stamped for each quoted item of the tender along with the Technical Bid.

I/We _____ authorized signatory of M/S _____ here by certify that M/S _____ and their proprietor / any partner / any directors of the firm are not stop deal and / or banned for business dealing and / or black listed by GUVNL and / or their any subsidiary company viz. GSECL / GETCO / DGVCL / MGVL / UGVCL / PGVL.

Seal of the Firm

Signature of the Tenderer



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Corporate Identity No.U40100GJ1999SGCO36018

For Line, S/S & Transmission Department

NON JUDICIAL STAMP PAPER OF Rs.300/- [Stamp Paper Validity Six months]

To,

Superintending Engineer

Gujarat Energy Transmission Corporation Ltd,

P.O. Dabhan,

Dist. Kheda

NAVSARI-387320

BG No.

Issue Date

Expiry Date

Amount

BANK GUARANTEE FOR SECURITY DEPOSIT

In consideration of the _____ [Insert name of the Supplier / Contractor / Agency, Address] who have entered in to a contract for the supply/ works specified below.

L.O.I. No. _____ dated _____ with Gujarat Energy Transmission Corporation Limited [herein after referred to as GETCO], We _____ [Insert name and address of the bank issuing the guarantee and address of the Registered Office] [hereinafter referred to as "Guarantor Bank"] hereby agrees unequivocally, irrevocably and unconditionally to pay to the GETCO at Circle Office, NAVSARI forthwith on demand in writing from the GETCO or any Officer authorized by it in this behalf, any amount up to and not exceeding Rupees _____ only [Insert the amount of the bank guarantee].

This Bank Guarantee shall be valid and binding on the Guarantor Bank up to ` [Date of Expiry of BG] with a right to seek encashment for a period up to 30 Days from the said Date and shall in no event be terminable by notice or any change in the constitution of the Bank or the term of the Agreement or by any other reasons whatsoever and our liability hereunder shall not be impaired or discharged by any extension of time or variations or alternations made given or agreed with or without our knowledge or consent, by or between parties to the respective agreement.

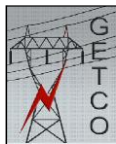
Our liability under this Guarantee is restricted to Rupees [Rs. _____ Only] Our Guarantee shall remain in force until _____ [Insert Date of Expiry of BG]. The GETCO shall be entitled to invoke this Guarantee any time up to thirty [30] days of the last date of the validity of this Guarantee i.e. _____ [Date of Expiry of BG + 30 Days] by issuance of a written demand to invoke this guarantee.

The BANK GUARANTEE can also be presented at the _____ [hereinafter referred to as Local Branch at NAVSARI] of the _____ [Issuing Bank of BG] for its Invocation.

The Guarantor Bank hereby expressly agrees that it shall not require any proof in addition to the written demand from the GETCO, made in any format, raised at the above mentioned address or local branch at NAVSARI of the Guarantor Bank, in order to make the said payment to the GETCO at NAVSARI.

The Guarantor Bank shall make payment hereunder on first demand without demur and without raising any restriction or conditions and not withstanding any objection by, _____ [Insert name of Contractor /Supplier/Agency] and/or any other person.

Seal & Signature of Bidder



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The Guarantor Bank shall not require the GETCO to justify the invocation of this BANK GUARANTEE, nor shall the Guarantor Bank have any recourse against the GETCO in respect of any payment made hereunder.

This BANK GUARANTEE shall be a primary obligation of the Guarantor Bank and accordingly the GETCO shall not be obliged before enforcing this BANK GUARANTEE to take any action in any court or arbitral proceedings against the _____ [Name of party] to make any claim against or any demand on the _____ [Name of party] or to give any notice to the _____ [Name of Party] or to enforce any security held by GETCO or to exercise, levy or enforce any distress, diligence or other process against _____ [Name of party]

This BANK GUARANTEE shall be interpreted in accordance with the laws of India and the courts at NAVSARI shall have exclusive jurisdiction.

The Guarantor Bank represents that this BANK GUARANTEE has been established in such form and with such content that it is fully enforceable in accordance with its terms as against the Guarantor Bank in the manner provided herein.

This BANK GUARANTEE shall not be affected in any manner by reason of merger, amalgamation, restructuring, liquidation, winding up, dissolution or any other change in the constitution of the Guarantor Bank.

The Guarantor Bank hereby agrees and acknowledges that the GETCO shall have a right to invoke this Bank Guarantee either in part or in full, as it may deem fit.

Any Demand made by GETCO on the Guarantor Bank or its Local Branch at NAVSARI shall be conclusive and binding notwithstanding any difference between GETCO and _____ [Name of Supplier/Contractor/Agency] or any dispute pending before any Court, Tribunal, Arbitrator or any other Authority.

Notwithstanding anything contained hereinabove, our liability under this Guarantee is restricted to Rs. _____ [Rupees _____ only] and it shall remain in force until _____ [Insert date of validity of BG], with an additional claim period of thirty [30] days of the last date of the validity of this Guarantee i.e. _____ [Date of Expiry of BG + 30], We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only if the GETCO services up on us a written claim or demand.

In witness whereof the Bank, through its authorized officer, has set its hand and stamp on this _____ day of _____ at _____

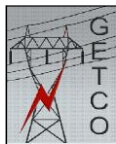
Witness:

1. _____
Name and Address

2. _____
Name of Address

Signatures [s] of

Seal & Signature of Bidder



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Corporate Identity No.U40100GJ1999SGCO36018

Constituted Attorney with PAO No. and round seal of

Bank

OR

Signature of Two Bank Officials with their

Sign, sign code nos. & round seal of Bank

SAFETY CUM INDEMNITY BOND

(On Non-Judicial Stamp paper of value not less than Rs. 300.00)

KNOW ALL MEN BY THESE PRESENTS that we, _____ by this SAFETY CUM INDEMNITY BOND Executed on this _____ Day of _____ 2020. We Having Registered Office _____ (herein after called "THE CONTRACTOR" which expression shall mean and includes my /our heirs, executors, administrators and legal representatives, successors and permitted assigns) do hereby binds myself/ourselves and also our company/firms after having the power to bind by this promise and undertaking in favor of the Gujarat Energy Transmission Corporation Limited (GETCO), Vadodara a State Transmission Utility under The Electricity Act, 2003 having its registered office at Sardar Patel Vidyut Bhavan, Race course, Vadodara.(hereinafter called as GETCO, which expression shall mean and include its legal representative, administrator's assigns) has agreed under the terms and conditions of the contract no. _____ dated _____ made between _____ and _____ for the contract of the _____ value of Rs. _____ interalia on production of Safety Cum Indemnity Bond.

We do hereby undertake and agree to Indemnify and keep Indemnified GETCO from time to time to the extent of Rs. _____ Rupees _____ only against any losses or damages, costs, charges and expenses caused to or suffered by reason of the CONTRACTOR while Project, R&M, O&M work including work carried out by outsourcing agency, failing to take proper care or not complying the guidelines given hereunder as per Annexure-A and instructions which may be given from time to time during the continuance of the contract and we further undertake to unconditionally pay the amount claimed by the GETCO on demand and without demur to the extent aforesaid.

Whereas the CONTRACTOR has/have been awarded to execute the job/works under order no. _____, dated _____ for _____ issued by the GETCO after having observing necessary formalities, the details of which is described in the order no. _____ dated _____ and whereas the said job/works will be /likely to be done in places covered under Employees' State Insurance Act,1948 (ESI) and /or the Workmen Compensation Act,1923 and /or other laws relating to the Labour Management and Welfare Act. (Respective Amendments)

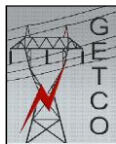
And whereas according to the condition of the Contract the CONTRACTOR is under obligation to execute this Safety cum Indemnity Bond before the commencement of actual execution of work.

Now the indenture witnesses that I/We the CONTRACTOR do hereby undertake to follow the guidelines as per Annexure-A prepared by the GETCO.

Further we the CONTRACTOR agree that the GETCO shall be sole judge of and as to whether there has been any breach of the guidelines as per Annexure-A of this bond and as to the extent of the loss, damages, costs, charges and expenses caused to or suffered by the GETCO.

We the CONTRACTOR further agree that our liability under this bond shall not be discharged because of the change in the constitution of the GETCO or for the extension of the time limit or for any other reason.

We the CONTRACTOR further agrees to the given terms and conditions:



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- a. That the CONTRACTOR undertakes under the Workmen Compensation Act, 1923 to keep harmless the GETCO from all claims, actions, proceedings and risk, damage danger to any person whether belonging or not belonging to the. CONTRACTOR.
- b. That the CONTRACTOR shall keep harmless the GETCO from all claims compensation, damages any proceedings in respect of any of its employee / workmen under the Workmen Compensation Act or any other laws for the time being in force.
- c. That, if during the course of execution of work as stated in the contract order mentioned hereinabove issued by the OBLIGEE, it is found that the CONTRACTOR has not complied with guidelines as per Annexure-A or terms and conditions / formalities within the meaning of Employees' State Insurance Act, 1948 (ESI) or Workmen Compensation Act 1923 or any other laws relating to the Labour Welfare for the time being in force, and also has not observed the safety norms in accordance with the law prevailing at the place of work/job to the satisfaction of the GETCO, the GETCO shall have the right to stop the execution of work/job and the period of such stoppage shall not be taken into account for the calculation of the total period of completion of work for which the CONTRACTOR is responsible to complete the work/job and it will be deemed that discontinuance was due to default of the CONTRACTOR .
- d. That, if any time due to exigency, GETCO as the Principle Employer, becomes liable to pay any such compensation mentioned hereinabove, whether on failure of the CONTRACTOR or for any other reason, the GETCO shall have the right to recover the said amount from any amount receivable by GETCO or any bank guarantee deposited or anything payable whether in connection with this contract \ or other contract by the CONTRACTOR to the OBLIGEE.
- e. That the CONTRACTOR is/are aware and accept that for the persistent or repeated violation of any guidelines as per Annexure-A and terms and conditions mentioned in this Safety cum Indemnity Bond GETCO shall have right to terminate the contract of work issued to the CONTRACTOR.
- f. In case if any safety related fatal Electrical / Mechanical accident occurred to any employee of agency or outsider due to negligence or non-compliance of GETCO safety norms then in addition to the compensation and liability as per statutory requirement contractor / agency is hereby agreed to pay the penalty amount as given below:

Sr. no	Amount of Contract in Rs.	Penalty amount
1	Up to 1 Lac	Rs. 5000/-+GST as applicable
2	Above 1 Lac to 10 Lacs	Rs. 40,000/+GST as applicable
3	10 Lacs to 100 Lacs	Rs. 1,00,000/+GST as applicable
4	More than 100 Lacs	1.0 % of contract value.+ GST as applicable.

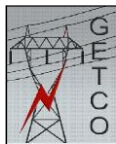
g. I/We the CONTRACTOR hereby confirm that in case of any dispute/difference for settlement of claims under this Safety Cum Indemnity bond the courts in Gujarat State wherever job/work is performed or as per GETCO norms shall have the jurisdiction to decide the rights & liabilities of the parties while adjudicating the matter of claims under this Safety Cum Indemnity Bond.

h. This Safety cum Indemnity Bond shall continue and hold good until it is released by the GETCO in Writing on the CONTRACTOR's application after the Contractor has discharged all his obligations under the order mentioned hereinabove and submitted a "NO DEMAND CERTIFICATE" from the GETCO under the said order. The Safety cum Indemnity Bond shall be valid for a CONTRACT PERIOD and renewable thereof (Claim Period).

i. This Safety cum Indemnity Bond and the guidelines as per Annexure-A herein contained are in addition to And not by way of limitation or substitution for any other guarantee, indemnities Hereto before given to the GETCO by the

CONTRACTOR and this indemnity does not Revoke or limit such indemnities or guarantees. IN WITNESS WHERE OF the Parties hereto have executed this indenture the day the year First hereinabove written.

Seal & Signature of Bidder



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Transmission Circle Office, Navsari – 396 427. Telephone No. (02637)236232/236274 F

No. (02637) 236104 Email: setnavasari@gebmail.com

(Signature with seal of The CONTRACTOR) No. U40100GJ1999SGCO36018

In the presence of:

- 1.
- 2.

GENERAL TERMS & CONDITIONS OF TENDER

1.0 DEFINITION OF TERMS

“Owner” shall mean the Gujarat Energy Transmission Corporation Ltd. Vadodara or any of its group companies i.e. GUVNL, GSECL, MGVL, DGVCL, PGVCL, UGVCL and shall include its legal representatives, successors and assigns.

2.0 CONTRACTOR'S DEFAULT

79.1 If the contractor shall neglect to execute the works with due diligence and expedition or shall refuse or neglect to comply with any reasonable order given to him, in writing by the Engineer in connection with the works or shall contravene the provisions of the Contract, the Owner may give notice in writing to the Contractor to make good the failure, neglect or contravention complained of should the contractor fail to comply with the notice within thirty (30) days from the date of serving the notice, then and in such case the Owner shall be at liberty to employ other workmen and forthwith to execute such part of the works as the Contractor may have neglected to do or if the Owner shall think fit, without prejudice to any other right he may have under the Contract to take the work wholly or in part out of the Contractor's hands and recontract with any other person or persons to complete the works or any part thereof and in that event the Owner shall have free use of all Contractor's equipment that may have been at the time on the site in connection with the works without being responsible to the Contractor for fair wear and tear thereof and to the exclusion of any right of the contractor over the same, and **if the sum that the contractor is entitled to be paid plus the costs incurred by the Owner in completing the works, exceeds the Contract Price or the entire works if entire works have been completed or the price for part of the works if part of the works have been completed, the Contractor shall be liable for such excess.**

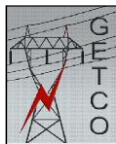
If such excess is greater than the sums due to the Contractor, the contractor shall pay the balance to the Owner and if such excess is less than the sums due to the Contractor, Owner shall pay the balance to the contractor. For facilitating such payment, Owner shall encash the Bank Guarantees of Contractor available with Owner/s and retain such other payments due to the Contractor under the Contract in question or any other contract that the Owner/s may have with contractor. Such payment of excess amount shall be independent of the liquidated damages for delay which the contractor shall have to pay if the completion of works is delayed.

SPECIAL CONDITIONS OF CONTRACT

1.0 Penalty for Delay

1.1 The parties agree that delay in completion of contract will result into loss of revenue and consequently loss of profit to the Owner. However, the amount of loss of revenue on account of delay in commissioning the works cannot be calculated accurately at this stage. The parties, therefore, agree that the Penalty stipulated above is a genuine pre-estimate of the loss/damage which will be suffered on account of delay and/or breach on the part of the contractor and the said amount will be payable by the contractor on demand.

Seal & Signature of Bidder



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Corporate Identity No. U40100GJ1999SG036018

1.2 In event of failure of the contractor to pay the amount of Penalty as demanded, **the Owner shall be entitled to deduct the amount of penalty for delay from the amounts payable to the contractors under any bills raised under this contract or any other amount payable under any other contract with the GUVNL and its Subsidiary Companies i.e. GETCO, GUVNL, GSECL, MGVCL, DGVCL, PGVCL, UGVCL.** It is permissible for the Owner to adjust the amount of Penalty of delay against any Bank Guarantee furnished by the Contractor under this contract or any other contract with GUVNL and/or its subsidiary companies.

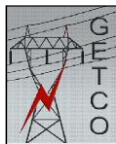
Separate Clause to be incorporated in Special Conditions of Contract :

“Rights of the Owner :

Whenever any claim or claims for payment of a sum of money arises out of or under the contract against the contractor, the Owner shall be entitled to withhold and also have a lien to retain such sum or sums in whole or in part from the security, if any, deposited by the contractor and for the purpose aforesaid, the Owner shall be entitled to encash and withhold the amount of Performance Bank Guarantee or other security. If any, furnished as the case may be. The Owner shall also have a lien over the same pending finalization or adjudication of any such claim. In the event of the security is insufficient to cover the claimed amount or amounts, the Owner shall be entitled to withhold and have lien to retain to the extent of the such claimed amount or amounts referred to above, from any sum or sums found payable or which at any time there after may become payable to the contractor under the same contract or any other contract with the Owner or GUVNL or its subsidiary companies pending finalization or adjudication of any such claim.

Lien in respect of claims in other contracts :

- A) Any sum of money due and payable, to the contractor (including the security deposit) under the contract may be withheld or retained by way of lien by the Owner against any of its claim in respect of payment of a sum of money arising out of or under any other contract made by the contractor with the Owner or GUVNL or any of its subsidiary companies.
- B) It is an agreed that the sum of money so withheld or retained under this clause by the Owner will be kept withheld or retained as such by the Owner till its claim arising out of the same contract or any other contract is either mutually settled or determined by the arbitrator or competent court, as the case may be, and the contractor shall have no claim for interest or damages whatsoever on this account or on any other ground in respect of any sum of money withheld or retained under this clause and as may be duly notified to the contractor.



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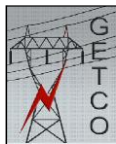
ANNEXURE-A OUR ENDEVOUR - Safety a habit

To create environment where Business Confidence is built through Best Business Practices and is fostered in an atmosphere of trust and respect between providers of goods and services and their users for the ultimate benefit of society as the nation, safety guidelines are agreed upon by the agency as under.

Safety is our prime concern and zero accident is our goal. In order to prevent the accident, while execution of work in indoor and outdoor systems of GETCO the following guideline and preventive measures are identified.

Indoor safety precaution	Outdoor safety precaution
The method of work required T&P and manpower should be discussed between GETCO supervisor, contractor's supervisor and gang leaders.	The method of work required T&P and manpower should be discussed between GETCO supervisor, contractor's supervisor and gang leaders.
Prior to execution of work a joint survey must be conducted by GETCO supervisor, and contractor's supervisor for risk Assessment.	Prior to execution of work a joint survey must be conducted by GETCO supervisor, and contractor's supervisor and DISCOM line man in order to identify the following.
- Clearly identify the work location to distinguish between the equipment that is dead and other equipment / part that may be live. - Disconnect the equipment from supply. - Protect against other live parts. - Take special precautions when close to the bare conductors/bus bar	a. HT/LT line or tap line crossing under each span of line of the work. that b. Isolation point of each line crossing. c. Each line crossing & isolation point under each span must be discussed and noted in maintenance register with sketch
Following safety guidelines are mandatory for all contractors operating in GETCO premises for Electrical, non-electrical & civil works. 1) The contractors must provide advance planning of work to concerned in-charge of substation in writing. 2. Before starting any work whether switch yard, "permit to allow to work" must be taken from control room in-charge. 3. Utilizing Electrical / non-electrical equipment's, safety rules must be Implemented. 4. If the work is to be carried out on Sunday or public holiday, the necessary permission must be taken in advance, requesting in writing. 5. Unwanted person including children of labours will not be allowed at working site/in the switchyard and in the prohibited area. 6. Any electrical work or electrical	Contractor's supervisor and GETCO Supervisor must ensure all isolations physically with adequate earthing Technically prior to give clearance to gang leader for taking up job. While execution of stringing work the identified line crossing must be isolated / de-energized and written clearance should be obtained from concerned DISCOM supervisor. The isolation of Tap line must be physically seen and verified by Contractor and GETCO supervisor. At D.O. fuse junction contractor's person should be posted to ensure that no person restore D.O. Supply while work is under execution. Contractor's supervisor must ensure that concern officer take LCP for EHV line and

Seal & Signature of Bidder



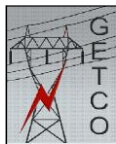
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connections to equipment for any other work must be carried out by certified electrician/wiremen with adequate size of wire through MCB as per I.E. Rule. - Live penal area / bus bar must be isolated and sealed / bifurcated with red colour tape for visible warning. - Display Board must hang on LCP panel. - Transformer must be switched off whenever and wherever contractor and line workers are not satisfied with isolation, earthing or any equipment performance of GETCO, it will be pointed out and work shall begin only after resolution. Contractor shall not take up job in absence of GETCO authorized person. All wire temporary connection & material whenever erection activity has any connection and disconnection work of bus bar, string bus.	power line crossing.
All workers / labour of contractor & supervisors must use personal protective equipment (PPE) during the work like gloves, safety belt, Safety shoes, Helmet, earthing rods, etc, duly approved by GETCO.	All workers / labour of contractor & supervisors must use personal protective equipment (PPE) during the work like, gloves, safety belt, Safety shoes, Helmet, earthing rods, Live line detector etc, duly. Approved by GETCO.
The local earthing must be done at the place of work before execution of any work.	The local earthing must be done at the place of work before execution of any work.
11 kV breaker in panel must be switched off and racked out only after ensuring no voltage in breaker and without door opening.	Circuit breaker opening is not an isolation and isolator on either side must be opened. No work during rains and cloudy weather Condition.
	Transmission line activities. 1) Used of Voltage detector to ensure Outage. 2) Earthing at three points, local, left &right side of bus bar / string bus. 3) Match line colour code with color of wrist band.
	Local earthing of electrical equipment's like filter M/c, welding machine, testing kits etc. is must. Crane shall only be used for material handling and erection. Working platform shall only be used for work in switchyard.



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TENDER SPECIFICATION FOR

Sub: - Survey, Design, Supply, Installation, Commission and maintenance of Solar PV System for 5 years as a rooftop at Control Room terrace of various Substation of Vyara AM Division - Pkg II under Navsari Circle.

Estimated Cost – ₹ 73,57,711.20

Tender fee – ₹ 5900.00 (Including 18% GST)

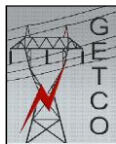
EMD – ₹ 73,577.00

Time limit- 02 Month

TECHNICAL BID

TENDER NO. TCNS/TR/ET-99/26-27

PRICE BID



GUJARAT ENERGY TRANSMISSION CORPORATION LIMITED

Transmission Circle Office, Navsari – 396 427. Telephone No. (02637)236232/236274 F

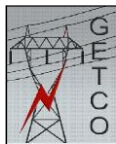
No. (02637) 236104 Email: setrnavasari@gebmil.com

Corporate Identity No.U40100GJ1999SGCO36018

Schedule-B

Work:- Survey, Design, Supply, Installation, Commission and maintenance of Solar PV System for 5 years as a rooftop at Control Room terrace of various Substation of Vyara AM Division - Pkg II under Navsari Circle.

SR No.	Division	Substation Name	Capacity (kW)	Rate per KW	Amount (INR)
1	Vyara	66KV Bhinar	12	43795.9	525550.8
2	Vyara	66KV Borikuva	12	43795.9	525550.8
3	Vyara	66KV Gamdi	12	43795.9	525550.8
4	Vyara	66KV Hathoda	12	43795.9	525550.8
5	Vyara	66KV Hingani	12	43795.9	525550.8
6	Vyara	66KV Kukarmunda	12	43795.9	525550.8
7	Vyara	66KV Naranpur	12	43795.9	525550.8
8	Vyara	66KV Nimbhora	12	43795.9	525550.8
9	Vyara	66KV Nizar	12	43795.9	525550.8
10	Vyara	66KV Rumkitalav	12	43795.9	525550.8
11	Vyara	66KV Kharsi	12	43795.9	525550.8
12	Vyara	66KV Kumkuva	12	43795.9	525550.8



GUJARAT ENERGY TRANSMISSION CORPORATION LIMITED

Transmission Circle Office, Navsari – 396 427. Telephone No. (02637)236232/236274 F
No. (02637) 236104 Email: setrnavasari@gebmil.com

Corporate Identity No.U40100GJ1999SGC036018

SR No.	Division	Substation Name	Capacity (kW)	Rate per KW	Amount (INR)
13	Vyara	66KV Tokarva	12	43795.9	525550.8
14	Vyara	66KV Vadpada	12	43795.9	525550.8
Total Amount Incl. all Tax					Rs- 73,57,711.20

- ~~1. GST tax shall be reimbursed on production of proof of such payments made by the contractor to the appropriate department.~~
2. All the required tools and tackles , instruments etc are to be arranged by the contractor at his cost
3. The welfare cess@1% is considered in the price schedules so; the bidders are requested to quote accordingly

CERTIFICATE

I/we am/are ready to carry out the above work% equal/above/below, (In word % equal/above/below) of schedule rate of GETCO,

Rate should be quoted in N-procure Online Tender.

We agree with all the terms and conditions of GETCO as mentioned in this tender.

(With rubber stamp/seal of the company) SIGNATURE OF CONTRACTOR

SE TR Navsari