NABARD

Survey, Design, Manufacturing, Supply, Installation, Testing and Commissioning of Cumulative Capacity Of 290 KWp Grid Connected Solar Power Plant with Five Years Comprehensive Annual Maintenance Contract at Various NABARD Buildings In Mumbai, Maharashtra

NABARD

Head Office

Department of Premises, Security and Procurement
Plot No.C-24, G-Block, Bandra Kurla Complex, Bandra (East), Mumbai - 400051

Date of issue of tender document	03rd October 2025
Pre-Bid Meeting with bidders	13th October 2025 at 11:00 AM
Due date for submission of tender	24th October 2025 upto 3:00 PM
Date and time of opening of technical bid	24th October 2025 at 3:30 PM
Date and time of opening of Price bid	To be communicated later

NABARD

INDEX

NB. DPSP / **97301** / NABARD HO/2025-26
Date: 03/10/2025

M/s

Dear Sir,

निविदा आमंत्रण सूचना
NOTICE INVITING TENDER

Notice inviting tender – Survey, Design, Manufacturing, Supply, Installation, Testing and Commissioning of Cumulative Capacity Of 290 KWp Grid Connected Solar Power Plant with Five Years Comprehensive Annual Maintenance Contract at Various NABARD Buildings In Mumbai, Maharashtra

1. NABARD intends to undertake the work of "**Survey, Design, Manufacturing, Supply, Installation, Testing and Commissioning of Cumulative Capacity Of 290 KWp Grid Connected Solar Power Plant with Five Years Comprehensive Annual Maintenance Contract at Various NABARD Buildings In Mumbai, Maharashtra**" and therefore, invites offer from the contractors/firms for the same work through e-tender platform GeM portal. The bidder/System Integrator shall submit two separate E-bids for the work - Technical Bid and Financial Bid i.e., Technical Qualification with respect to Techno-commercial aspects and Competitive Rates is being followed. The bid documents can be downloaded from GeM portal and Bank's website.

2. The interested tenderers should upload their bids along with duly signed scanned copies of all relevant documents etc., in support of their technical & financial bids on the website *GeM* only within the prescribed time limit. The evaluation of Tender will be based on online bids submitted by the tenderers.

3. The tender document is available on NABARD website www.nabard.org and GeM Portal. No physical copy shall be provided by NABARD and submitted to NABARD.
4. National Bank for Agriculture and Rural Development (NABARD) has its Head Office at C-24 G Block, Bandra Kurla Complex, Bandra (E), Mumbai 400051. Bidders are advised to go through the tender documents carefully before quoting the rates. *The bidders are advised to visit the site, conduct surveys of the existing conditions so as to familiarize themselves with the nature and scope of works to be carried out and get all clarifications as necessary from NABARD before quoting their rates.*

5. Earnest Money Deposit (EMD) of Rs.3,80,000 /- (Rupee 3.80 lakhs) amount shall be payable.

6. The EMD amount shall be directly credited to NABARD account as detailed below –

Name of Account	NATIONAL BANK FOR AGRICULTURE AND RURAL DEVELOPMENT
BANK NAME	NABARD
BRANCH NAME	HEAD OFFICE, MUMBAI
IFSC code	NBRD0000002

Account Number	NABADMN07

7. Counterfoil/ receipt/transaction detail for the same must be enclosed with the tender. The Tender without EMD shall be rejected outright. No interest is allowed on the EMD/RMD.

8. MSE registered vendor are exempted for EMD. For this they need to submit valid MSE registered certificate.
Micro and Small Enterprises (MSEs)- not Medium enterprises- registered with Udyam Registration or NSIC for the relevant goods/services are exempted from payment of Earnest Money Deposit (EMD) as per the provisions of the Public Procurement Policy for MSEs, 2012. Eligible bidders claiming this exemption must submit valid supporting documents along with their bids to avail the benefit.

9. It may be noted that it will be a 02-bid system tendering wherein the 1st bid will be 'Technical Bid' and 2nd bid will be the 'Price Bid'. Tenderers are advised to submit e-tender (e-bids) through GeM portal (***https://gem.gov.in/***) only, after carefully following the instructions related to systems and procedures as indicated in GeM.

10. **Technical Bid (Part-I) i.e.** shall contain;
    a. EMD counter-foil OR required MSE certificate
    b. Notice Inviting Tender
    c. Covering letter for submission of Tender
    d. Form of Tender
    e. Pre-qualification criteria of the contractors
    f. Special Instructions to Bidders
    g. General terms and conditions
    h. Technical Specifications
    i. List of approved makes of materials/trade
    j. Information to be furnished by Contractor (Statement I, II & III) in support of fulfilling eligibility criteria.
    k. Safety Code
    l. The following forms should be submitted:
        i. Articles of Agreement.
        ii. Indemnity Bond
        iii. Format of Virtual Completion Certificate
        iv. Pre-contract Integrity Pact – Each page to be signed and uploaded
        v. An Undertaking by the Authorized Signatory of the Vendor/Bidder, on the letter head of the Vendor/Bidder stating that the Vendor/Bidder has not been blacklisted by any Central/State Government Organization or PSU for any corrupt and fraudulent practice
        vi. Vendor/Bidder's letter giving technical clarifications (if any).
        vii. CA certificate
        viii. Format of commitment from the bidder
    m. It should be specifically noted that the **contents of Technical Bid must not reveal commercials/ Price Bid.** In the event of the same, bid shall be rejected. Bank has appointed Independent Monitor Dr. Jagdeep Kumar Ghai, P&TA,

FS(Retd.) (hereinafter referred to as Monitor) for this consultation with the Central Vigilance Commission.

11. **Price Bid (Part-II) shall contain:**

    Duly Priced Schedule of Quantities

12. **Technical bid** will be opened as per schedule given in the GeM or on any other date as intimated to the bidders through online portal.

13. **Price bid -**

a. It should not contain any conditions whatsoever and any conditional bids shall be rejected.

b. Incomplete price bids in this respect would be summarily rejected.

c. The Price Bid should not contradict the Technical Bid in any manner.

d. It will be opened on a suitable date, after opening of technical bid and its scrutiny, it will be communicated later.

e. **Bidders are requested to quote the price in GeM portal itself. The bid price shall include all the costs for the entire scope of work as per the Bidding Documents. Bids based on a system of pricing other than that specified shall be rejected.**

f. The Bid Prices quoted by the bidders covers all the Contractor's obligations mentioned in or to be reasonably inferred from the Bidding Documents to successfully execute the intended services, on a "Single Responsibility" basis. Bidders are required to quote the price for the commercial, contractual and technical obligations outlined in the Bidding Documents.

g. Bidders shall upload price breakup as per format attached with the price bid as a part of their price bid on GeM portal as per provisions available on GeM Portal.

h. Bidders shall not upload the price details in technical part otherwise, technical bid will not be considered

14. Before filling up the tenders, the bidders may note the following:

a. Validity of the tender shall be 90 days from the date of opening of Price Bid.

b. Time of Completion: The time of completion for the total project shall be 02 months from the 10th date of issue of work order.

c. Liquidated damages for delay in completion of the works will be levied at 0.25% of the value of the accepted tender for every week of delay or part thereof, subject to maximum of 5% of the value of the accepted tender.

d. NABARD reserves the right to accept or reject any /all tender/s in part or whole of any firm / firms without assigning any reasons for doing so.

15. The successful bidder shall execute an agreement with NABARD at his cost on non-judicial stamp paper within 14 days from the date of issue of work order failing which the bidder's EMD may stand forfeited.

16. Opening of Bids:

The Technical Bid shall be opened on 24TH October 2025 **online at the GeM Portal.** The date and time for opening of the **Price Bid** shall be communicated to qualified bidders separately. The Successful Bidder shall have to get advance sample approved from buyer before bulk manufacturing / starting bulk supplies.

17. Any discrepancies, omissions, ambiguities in the Tender Documents, if any, or any doubt as to their meaning should be reported in writing to the **"The Chief General Manager, DPSP**, NABARD, Head Office, Gr. Floor, A-Wing, C-24, G Block, Bandra Kurla Complex, Bandra (E), Mumbai - 400 051" within 05 days of issue of bid, who will review the same and information sought if not clearly indicated or specified, NABARD will issue clarifications to all the bidders which will become part of the Contract Document. NABARD will not be responsible if the discrepancies, omissions, ambiguities in the Tender Documents or any doubts as to their meaning are not brought to the notice of NABARD within 05 (five) days of issue of this bid.

18. **A pre-bid meeting has been arranged at Ground Floor 'A' Wing, DPSP NABARD Head Office at Bandra Kurla Complex -400051 on 13th October 2025 at 11:00 AM.** in presence of Bank's Officials to guide the tenderers about the scope of work and give clarifications, if any, to the questions of the prospective bidders. The contractors are requested to participate in the scheduled pre-bid meeting. The contractors are advised to conduct a site survey and satisfy themselves about the overall feasibility of work. The clarifications being sought in the pre-bid meeting may be submitted in writing at our Office or to dpsp@nabard.org at least two working days prior to the date of pre bid meeting. The clarifications given in pre bid meeting will also form part of tender document and will be uploaded on the website. NABARD reserves the right to revise the Price Bid or any other document after pre-bid meeting, if required, and same will be uploaded on website.

19. In case of further clarification following persons may be contacted Shri R K Agrawal (DGM) - 022-26539178, 8008829847 or Shri Gautam Ghosh (AGM) - 022-26539021 , 8420870640 or Shri Amritanshu Ruhela (AM) - 022-26539143, 9413476117 .

Sd/-
R.K.Agrawal
(Dy. General Manager)

2. Covering letter for submission of Tender
(Letter to NABARD onTenderer/Bidder's letterhead)

The Chief General Manager,
DPSP, NABARD, Head Office,
Mumbai - 400 051

Dear Sir,

"Survey, Design, Manufacturing, Supply, Installation, Testing and Commissioning of Cumulative Capacity Of 290 KWp Grid Connected Solar Power Plant with Five Years Comprehensive Annual Maintenance Contract at Various NABARD Buildings In Mumbai, Maharashtra"

With reference to the above TENDER, having examined and understood the instructions, terms and conditions forming part of your above inquiry, we hereby enclose our offer for supply of the equipment and services as detailed in your above referred inquiry.

We confirm that the offer is in conformity with the terms and conditions as mentioned in your above referred TENDER and enclosures.

We also understand that NABARD is not bound to accept the offer either in part or in full. If NABARD rejects the offer in full or in part, NABARD may do so without assigning any reasons thereof.

Yours faithfully,

(Signature of Authorized Signatory of bidder firm along with the seal of the firm)

Name:

Designation of the Authorized signatory:

Place:

Date:

3. FORM OF TENDER

To,
The Chief General Manager,
Department of Premises, Security and Procurement
National Bank for Agriculture and Rural Development
Head Office, Mumbai – 400051

Date:

Dear Sir,

Notice inviting tender - Survey, Design, Manufacturing, Supply, Installation, Testing and Commissioning of Cumulative Capacity Of 290 KWp Grid Connected Solar Power Plant with Five Years Comprehensive Annual Maintenance Contract at Various NABARD Buildings In Mumbai, Maharashtra

1. Having examined the conditions relating to the works specified in the Memorandum hereinafter set out, having visited and examined the site of the works specified in the said Notice Inviting Tender (NIT) and having acquired the requisite information relating thereto as affecting the tender, I/We hereby offer to execute the works specified in the said Memorandum within the time specified, at the rates to be mentioned in the Price Bid, which may be issued to us by NABARD in the event that we qualify the technical bid and in accordance in all respects with the Technical Specifications and instructions referred in 'Instructions to Bidders and General Conditions of contract', **the Articles of Agreement** and Price Bid with such materials as are provided for, by and in all other aspects in accordance with such conditions so far as they may be applicable.

2. MEMORANDUM

Subject	**Specification**
Description of work	Notice inviting tender - Survey, Design, Manufacturing, Supply, Installation, Testing and Commissioning of Cumulative Capacity Of 290 KWp Grid Connected Solar Power Plant with Five Years Comprehensive Annual Maintenance Contract at Various NABARD Buildings In Mumbai, Maharashtra
Location	"NABARD Buildings, Mumbai"
Earnest Money Deposit	Rs. 3.80 lakhs /-
Time allowed for completion of the work	The time of completion for the total project shall be 02 months from the 10th date of issue of work order.
Defect Liability Period	1 years from the date of virtual completion.
Comprehensive Annual Maintenance Contract (CAMC)	5 years from the date of completion of Defect Liability Period.
Retention Money Deposit (RMD)	RMD @5% shall be deducted from the Running bill
Security Deposit	Earnest Money Deposit and Retention Money Deposit will form a total Security Deposit (SD). The security deposit will

	be 5% of the total value of work executed in the form of remittance through NEFT/RTGS. 50% of the Security Deposit will be refunded after the expiry of defects liability period. The remaining SD will be paid after the completion of CAMC period. No interest will be paid on it.
Terms of payment for Installation	1. No advance payment. 2. Running bills will be paid subject to minimum values of Rs. 20.00 Lakh per running bill. 60% payment will be on supply of items & 25% payment on installation and balance 15% on testing, commissioning, programming and handing over.

3. Should this tender be accepted, I/We hereby agree to abide by and fulfil the terms and provisions or the said Conditions of the tender annexed hereto in so far as they may be applicable or in default thereof to forfeit the EMD and pay to the National Bank for Agriculture and Rural Development, the amount mentioned in the said tender conditions.
4. I/ We hereby offer to execute and complete the works in strict accordance with the Tender documents at the rates quoted by me/ us in the attached Price Bid in all respects as per the Terms & Conditions and Scope of Works described in the Tender document and the Annexures containing Terms & Conditions.
5. I/ We enclose herewith interest-free **Earnest Money Deposit (EMD)** receipts of ₹_3.80 lakhs (Rupees Three Lakhs Eighty Thousand Only) by e-payment and the sum shall be forfeited in the event of our withdrawal of Tender before expiry of the validity period of offer and/ or in case of breach of contract in the event of our failure to execute the Contract when called upon to do so by accepting our Tender. I/ We agree that EMD shall not bear any interest.
6. I/ We agree to pay all Government (Central & State) taxes such as trade tax, excise duty, octroi, GST, etc. as applicable and the rates quoted by us in the tender are inclusive of the same
7. The rates quoted by me/ us are firm and shall not be subjected to variations on account of fluctuation in the market rates or any other reasons whatsoever.

Our Bankers are:

i) ..... Bank, ... Branch, ..., Mumbai

ii) ..... Bank, ... Branch, ..., Mumbai

iii) Type of account: Savings / Current account

iv) Bank Account No. :

v) IFS code of Bank and branch :

The names of partners of our firm are:

i)

ii)

iii)

Name of the partner of the firm
Authorized to sign:

OR

Name or person having Power of Attorney to sign the contract (certified copy of the Power of Attorney should be attached):

Yours faithfully,

Signature of Tenderer with stamp

4. PRE_QUALIFICATION CRITERIA

The contractor shall fulfil the following eligibility criteria for participating in the tender:

S.No.	Description
1.	The bidder should have experience of providing new SITC of solar plant in the last 7 years as on 31.03.2025. Work Experience details, service provided to Government Departments /PSUs/Public Sector Banks/Autonomous Bodies (set up by ministries /departments of Govt. of India) (Copies of Purchase Orders and completion certificates received) during each of the last five years should be enclosed / uploaded with clearly indicating the amounts of the contract/payment made to the bidder. **Following documents should be submitted:** 1. Copy of work order (s) /Contract document (s). 2. Completion Certificate (s) OR Copy of duly certified bill (s) / Invoice from client.
2.	Experience of having successfully completed Similar works during last 7 years (ending 31.03.2025) should be either of following: **a.** three similar completed works whose individual work value is costing not less than Rs. 76 lakhs. **b.** two similar completed works whose individual work value is costing not less than Rs. 95 Lakhs. **c.** one similar completed works whose individual work value is costing not less than Rs. 152 Lakhs. **d. Definition of Similar Works**: "Similar works" for the purpose of qualification: The bidder should have installed and Commissioning 500 KWP capacity (cumulative) projects Grid Connected net metering systems in **Government/Semi Government/PSUs/Public Sector Banks only.** • The list of projects (**As per attached format**) commissioned has to be submitted along with the tender. The copy of Commissioning certificate and Work Order/ Contract/ Agreement from the client/ Owner shall be submitted. • Scanned copies of work / purchase orders received for completed projects and performance reports from beneficiary. Incomplete Work Orders/ Purchase orders will not be accepted. • Satisfactory certificate along with contact details of concern authority at installation (Beneficiary/Client) is to be submitted. Representative of NABARD may visit such installation. Bidders to arrange necessary permissions
3.	Proof for the presence of Office set-up in Maharashtra. The bidder should have direct support office in areas of Maharashtra. Proof of address of office and the relevant work order/contract document. Must have field service setup to provide good after sale services including necessary repair and maintenance in the Maharashtra region. He must submit details of office location and infrastructure available at district /State /National level. (Valid proof to be submitted)
4.	Minimum Average Annual Turnover of the bidder (For 3 years) - Rs. 200 lakhs (Documentary evidence in the form of certified Audited Balance Sheets of relevant periods or a certificate from the Chartered Accountant / Cost Accountant indicating the turnover details for the relevant period shall be uploaded with the bid)
5.	The contractor shall submit copies of balance sheet / Profit & Loss a/c of the firm for the last three years (ending 31.03.2025). Latest audited final accounts of the business of the contractor duly certified by a Chartered Accountant/certificate of turnover issued by a Chartered Accountant should be enclosed in proof of their credit worthiness and turnover for the last three years.
6.	Valid MSE/Udyam Aadhar certificate against the Works if seeking exemption from EMD. Micro and Small Enterprises (MSEs)- not Medium enterprises- registered with Udyam Registration are valid
7.	EMD amount of **Rs. 3.80 lakh** in case not seeking exemption.

8.	Registration Certificate as per existing norms (indicating the legal status – Company / Partnership firm/ Proprietorship Concern, etc.)
9.	Copy of GST Registration Certificates
10.	Copy of PAN Card
11.	Copies of Income Tax Return filed for last three financial years ending 31.03.2025
12.	Copies of Annual Turnover details in Rupees at for last three Financial Years ending 31.03.2025 including audited balance sheet and Profit & Loss Account.
13.	**Integrity pact** – Bidder may ensure to execute a pre-contract integrity pact (duly stamped) (as per attached format) of BID and submit along with the bid which is required as per directions of the Central Vigilance commission. Important Note - Prospective bidders are requested to submit a duly signed and stamped 'Integrity Pact' on a ₹500.00 Stamp Paper. Compliance to 'Integrity Pact' is mandatory and shall be the pre-qualification criteria. Non-submission of 'Integrity Pact' or submission in different format (other than the prescribed one) and not duly authenticated by authorized signatory shall make the prospective bidder liable for disqualification from the bidding process. It would be a preliminary qualification and bid documents will not be considered in the absence of the Integrity Pact.
14.	Bidder shall upload Information, Experience Certificates, Test Reports and other such relevant documents specified in the list of other important documents.
15.	The solar PV modules shall be domestic modules manufactured from domestic cells as per Domestic Content Requirement (DCR) complied with MNRE guidelines and shall be from ALMM list (Approved List of Models and Manufacturers) of MNRE.
16.	Bidder should have office in Mumbai Metropolitan Region. Documentary evidence must be uploaded.
17.	Products also qualify as CLASS- I LOCAL SUPPLIER under PMA- Preferential Market Access and PPP MII Scheme of Govt. of India Dated. 04.06.2020 with desired Local Content as per Govt. norms. The 'Class-I local supplier' shall give a self-certification in his bid in the given format, indicating the percentage of Local Content and certifying that the item/Service offered meets the Local Content requirement for 'Class –I local supplier' and shall give details of the location(s) at which value addition is made (format of declaration)
18.	Bidder should not have been blacklisted / any criminal case registered by any State / Central Government Department or Central / State PSUs / Police or Globally during the last 3 years as on 31.03.2025.
19.	**IEC certificate of SPV Module and Inverter.**
20.	Bidder agency profile at a glance must be uploaded. (As per the attached format)
21.	Commitment from the bidder for maintenance - Commitment from the bidder for assured generation capacity to be submitted in prescribed format.
22.	Bidder's offer is liable to be rejected if they do not upload any of the certificates.
23.	The bidder is required to upload, along with the bid, all relevant certificates such as BIS license, Type Test Certificate, Approval Certificates and other Certificates as prescribed in the Product Specification given in the bid document.
24.	Data and Compliance Sheet of the product(s) offered in the bid, are to be uploaded along with the bid documents.

25.	Declaration regarding restriction on procurement from a bidder of a country which shares a land border with India and on sub-contracting to contractors from such countries.
26	Format of commitment from the Bidder
27	Certificate/Affidavit of Correctness & Non-Blacklisting Certificate
	Note: Any false and/or inadequate information may result in rejection of the tender.

5. Scope of Work

The scope of work shall include the following:

i. Survey, Design, Manufacturing, Supply, Installation, Testing and Commissioning of Cumulative Capacity Of 290 KWp Grid Connected Solar Power Plant with Five Years Comprehensive Annual Maintenance Contract at Various NABARD Buildings In Mumbai, Maharashtra at following locations and its capacity. **However, the proposed capacity can be increased or decreased as per the actual space availability of rooftop**. Selection of area/locations will be governed by the tender drawings/BOQ/Technical Specification only. As per tender Technical Specifications, bidder has to establish necessary infrastructure to install following capacities at defined locations with following details: -

S No	Location With Address	No of Buildings	Cumulative roof top area (in m^2)	Total Sanctioned Load (kW)	Proposed capacity (kWp)
1	NABARD Head Office Plot No. C, 2nd Floor, 'D' Wing C-24, 'G' Block, 24, Bandra Kurla Complex Rd, G Block BKC, Bandra East, Mumbai, Maharashtra 400051	1	200	3000	20
2	NABARD House, R-4A, G Block BKC, Bandra Kurla Complex, Bandra East, Mumbai, Maharashtra 400051	1	180	86.5	10
3	Krishi Vikas Sadan, 2RCM+WQP, Swatantryaveer Savarkar Rd, Chandrakant Dhuru Wadi, Dadar West, Mumbai, Maharashtra 400028	1	419	197	20
4	NABARD Nagar Society, CLUSTER_MUMBAI SUBURBAN_352, Kandivali, Saraf Chaudhary Nagar, Kandivali East, Mumbai, Maharashtra 400101	17	3834	179	165
5	NABARD Quarters, 400086, Nabard Colony, Damodar Park, Ghatkopar West, Mumbai, Maharashtra 400086	5	614	100	30
6	NABARD Park, 3RPQ+P2R, VM Bhargav Rd, opp. J&K Bank, Khira Nagar, Santacruz (West), Mumbai, Maharashtra 400054	5	600	55	30
7	Nestle -II Apartments, Pandurang Budhkar Marg, Kamagar Nagar Number 1, Lower Parel, Mumbai, Maharashtra 400013	3	250	52	15

ii. Free replacement of defective components of systems within Comprehensive Annual Maintenance Contract period (CAMC) of 5 years after commissioning for efficient

running of the system.

iii. Detailed planning for smooth execution of project.

iv. Site Visit, Identification of rooftop area & Solar potential assessment for the mentioned site(s), Obtaining No Objection Certificate (NOC) from the Electricity Distribution Company (DISCOM) for grid connectivity of rooftop Solar PV Power Plant

v. **The bidder shall have to consider all the cost of net metering, possible modification requirements in income/suggestions of the electrical inspectorate/electricity provider requirements to avail net metering for the consumer.**

vi. **Bidder must carry out work regarding load extension, submission of net meter application, net meter approvals etc. Also, successful bidder apply for net meter within 10 days from date of work order.**

vii. **The contractor/successful bidder shall do necessary coordination, and all liaison works involved with concerned agencies like Maharashtra State PWD / Electrical Inspectorate and MSEDCL for procuring necessary approvals on behalf of the NABARD. The cost of approvals and bi-directional meter, CT/PT shall be borne by the L-1 bidder only. Liaison with MNRE or Central / State Government for obtaining capital subsidy, if applicable. No extra payment shall be made by the NABARD for liaisoning works to the vendor. However, statutory fees, if any, paid by the vendor on behalf of NABARD to the Government Departments/Electricity Boards for approval/NOC etc. shall be reimbursed to the vendor on submission of original payment receipt to the Bank**

viii. Selected bidder shall give the generation guarantee for electricity generation from solar plant of **4 units/kW.**

ix. Selected Bidder(s) shall be bound by operation and management arrangements and rules, regulations and modalities as per MNRE and as established by NABARD and mutually agreed between NABARD and the contractor for effective implementation of the project.

x. The Works are to be carried out in Mumbai Suburban District. Bidder can quote only after the site visit in consultation with beneficiary representative. It is mandatory to conduct site visit and submit site visit report.

xi. Time is the essence in completing the Works. The successful Bidder will be required to complete the works within the stipulated time as specified in the tender document. The bidder shall ensure that solar power plant should be installed within 60 days and commissioned (with net meter) within 90 days from the date of issue of work order. If the bidder faces difficulties during the execution of the work, then NABARD reserved right to grand the extension for completion of work.

xii. **The above Cables, MCCB, Meter are tentative quantity. Bidder should quote by considering the actual site requirement and compliances asked by Electrical Inspector will be in the scope of bidder.**

xiii. Bidder can quote only after site visit and upload Site Visit format duly sign by NABARD.

xiv. Bids shall be complete and cover all Works described in the Schedule of Prices. Any item of works required for complete usable system shall be deemed to be included in bidder's scope irrespective of whether it is specifically mentioned or not in the price schedules.

xv. Bidder should note that obtaining permissions from statutory bodies wherever required for execution of works, shall be entirely in bidder's scope.

xvi. Bidder should note that during progress of the work he has to submit the progress report of the work in every 30 days along with the photograph of the site to NABARD.

xvii. Bidder should submit performance report in every 3 months from the date of installation to CAMC period (5 years).

xviii. Bidder should take the permission or testing certificate from authorize structural engineer for foundation (structure shall be withstand the wind speed of 150 kM/ hour).

xix. Partial bids, or bids which do not cover the entire scope of the project will be treated as incomplete and not responsive to the terms and conditions of bidding and are liable to be summarily rejected.

xx. After installation of project Bidder should submit the Structure Stability Certificate for shall be withstand the wind speed of 180 kM/hour installation Solar plant from authorized Structural Engineer.

xxi. The bidder must acknowledge that all the work of project must be in the observance of licensed electrical contractor. The responsibility of electrical works, safety precautions and safety parameters of the project will be of licensed electrical contractor and awarded bidder, which must as per standards specified.

xxii. Remote Monitoring System (RMS) with Wifi/GSM is necessary to install all the locations and provide quarterly generation report up to 5 years after commissioning at Division Office, Mumbai.

xxiii. Selected bidder shall provide a generation point meter as per discom/MSEDCL norms. Later claims from bidder will not be entertained.

xxiv. Civil Structure must be authorized by Charted Engineer (Civil) and provide Structural Certificate.

xxv. Under this scheme the budgetary provision for the programme is given above, the work orders will be placed in such a way that the total expenditure for the programme will not be more than sanction amount.

Defect Liability Period (DLP):

The entire equipment/ system shall be covered under defect liability period of **1 year** starting from the date of issue of certificate of virtual completion for the work and defect which in the opinion of the Bank (NABARD) have arisen from bad workmanship or materials, shall upon intimation by the Bank, be made good by the Contractor at his own cost within the time specified.

During the said period of **1 year** (DLP), the contractor (successful tenderer) shall make periodical inspection of the working of the entire system free of charge at least once in 30 days or earlier, if required, and attend to such other service that may be required of him.

The total Security Deposit @ 5% submitted by the successful tenderer shall originally be valid till end of DLP. The 50% security deposit will be released after the DLP is over and rest 50% shall be released after successfully completion of CAMC i.e., 5 years after completion of DLP.

During breakdown of any equipment, without any delay Contractor shall arrange for providing a temporary equipment to keep the system functioning. However, extension of warranty/replacement of equipment will not be applicable if the breakdown is due to reasons not

attributable to the tenderer. However, the onus of proving the same would be on the tenderer. If the system's defect is attributable to mishandling, negligence or operation by unauthorized staff, the tenderer will not be liable to repair the same under the contract. The tenderer under such circumstances shall charge extra for spare & service rendered. Complaint(s) will be deemed to be resolved only on the availability of the Customer Call Report (CCR) signed by both the service engineer and Bank's authorized official, confirming that the complaint is resolved. Date and time of resolution of the complaint shall be indicated clearly.

Comprehensive Annual Maintenance Contract

1. 5 years from the date of completion of Defect Liability Period and the Defect Liability Period shall be 1 year from the date of Virtual Completion Certificate.
2. Initially work order will be issues only for execution of work. The work order for CAMC shall be issued subsequently.
3. DLP shall be 1 year and Comprehensive AMC shall be for 5 years. Maintaining and servicing the equipment during the defects liability period (warranty) and thereafter under comprehensive maintenance is part of the contract. The annual increase in CAMC amount beyond the 5 years period will be based on mutually decided by both the parties.

Other Points:

a. The contractor must bear in mind that all the work shall be carried out strictly in accordance with the specifications made by the Bank and also in compliance of the requirement of the local public authorities and any other Acts/Rules/Regulations and no deviation on any account will be permitted.
b. The Contractor shall carry out all the work strictly in accordance with details, and instructions of the Bank's engineer. If in the opinion of the Bank's engineer, nominal changes have to be made to suit the site condition and with the prior approval in writing of the Bank, they desire the Contractor to carry out the same, the Contractor shall carry out the same without any extra charge.
c. The tenderer must obtain for himself on his own responsibility and at his own expense, all the information which may be necessary for the purpose of making a tender and for entering into a contract and must prepare the drawings as per request of clients, inspect the site of the work, and acquaint himself with all local conditions, means of access to the work, nature of the work and all matters pertaining thereto. The Bank's decision in such cases shall be final and shall not be open to arbitration.
d. The contractor shall not be entitled to any compensation for any loss suffered by him on account of delays in commencing or executing the work or availability of site, whatever the cause of delays may be, including delays arising out of modifications to the work entrusted to him or in any sub-contract connected therewith or delays in awarding contracts for other trades of the project or in commencement or completion of such works. The Bank does not accept liability for any sum besides the tender amount, subject to such variations as are provided for herein.
e. The successful tenderer is bound to carry out all items of work necessary for completion of the job even though such items are not included in the quantities and rates. Schedule of instruction in respect of such additional items and their quantities will be issued in writing by the Bank.
f. The successful tenderer must co-operate with other contractors appointed by the Bank so that the work shall proceed smoothly with the least possible delay. He should make his own arrangement for storage and protection of all materials supplied by him.
g. The work has to be carried out in an occupied office and, therefore, may have to be carried out during restricted hours/ Saturdays/Sundays/Bank's holidays.

Documentation:

The Solar RTS contractor, upon completion of all the activities, shall offer the system to the customer for acceptance. For this, the contractor shall provide the customer with the following documentation:

1. Copy of detailed report

2. Component and equipment list
3. Product description sheets
4. System design drawing(s)
6. System schematic diagram(s)
7. System operating manual

8. Original licensed copies of all the software **Final acceptance and Handover-takeover:**

Prior to final acceptance, the contractor shall provide complete operation and maintenance instruction manuals to the Bank along with all the above-mentioned documents. All aspects of system operation and maintenance shall be detailed, including wiring diagrams of all circuits, a written description of the system design, sequence of operation and drawing(s), illustrating control logic and equipment used in the system. Checklists and procedures for emergency situations, maintenance operations and procedures shall be included in the manual. **The Bank's Officer may test and inspect the functioning of various components**. In case of any observations from Bank's side, the same shall be conveyed to the contractor in writing and got attended to by the contractor to the satisfaction of the inspecting officials.

The entire system then shall be taken over by the Bank and the defect liability period shall start from the same day.

Training:

The contractor shall include in his tender cost of training of Bank's technical staff. Initial training of operating and maintenance personnel shall be provided at site to ensure competence in the operation and maintenance of the system provided. The training programme shall include but not limited to the following elements:

A) OPERATING TRAINING

i. System description including electrical, electronic and mechanical sub-system and their functions.
ii. System operating procedures.
iii. System operating characteristics.
iv. System limitations
v. On-site system operation.

B) MAINTENANCE TRAINING

i) System description including electrical, electronic and mechanical sub-systems and their functions.
ii) System and component troubleshooting
iii) On-site inspection, operation and maintenance
iv) Schedule of maintenance, safety checks and procedures.

For all the active components/ equipment the bidder shall provide a certificate, indicating the end of life and end of support in form of spares etc. The product selected should conform to the tender specified life period i.e. DLP and Comprehensive AMC.

6. GENERAL INSTRUCTION TO BIDDERS

1. Instructions to Bidder

Please note that pre-Contract Integrity pact is invariably to be submitted along with the part-I (Technical Bid) of the tender.

- The tenderers are advised to submit the tender strictly based on the General Conditions of the Contract and Technical Specifications contained in the tender documents, and not to stipulate any deviations. If acceptance of the terms and conditions given in the tender documents has any price implications, the same should be considered and included in the quoted price. Tender containing deviations from the terms and conditions may be rejected at the Bank's discretion.

- The tenderer shall submit full details of the patent, trademark, registered design, intellectual property rights, copyrights, industrial property rights held by them or used by them of any third party with regard to design or any part of the system.

- Intending contractors are required to submit their profile by giving details in the enclosed Pro-forma about their organization, experience, professional personnel in their organization, competence, etc.

Pre-Bid Meeting

A pre-bid meeting of the intending tenderer will be held at **11:00 hrs. on the** 13th **October 2025** to clarify any points / doubts raised by them in respect of the tender. No separate communication will be sent for this meeting. All the intending tenderers are advised to study the tender document and to be present in the above meeting. All the points/ conditions/ specifications requiring clarifications shall be given in writing addressed to, The Chief General Manager, DPSP, NABARD HO, Mumbai on *dpsp@nabard.org* .These issues will be discussed and clarifications if any, will be published on NABARD website. Any such clarifications will form part of the tender. The tenderer are expected to get all the issues clarified during the above meeting and, should strictly desist from deviating from NABARD's tender conditions/specifications in their tender.

Submission of Tender

a. Tenderer are advised to use only the forms issued by NABARD. However, if they desire to submit additional information, they may do so on their own letter head / paper. Each page of the forms shall be signed by the contractor. Insertions, postscripts, additions and alterations shall not be valid unless confirmed by the tenderer's signature.

b. Part I – Technical Bid

This part shall contain the covering letter, un-priced tender consisting of complete technical specification and commercial terms and conditions. Part I of the tender as submitted shall also contain the following: -

- EMD counter-foil OR required MSE certificate
- Power of Attorney/authorization with the seal of the company/firm in the name of the person signing the tender documents.
- List of deviations, if any, in commercial terms and conditions.

- List of deviations, if any, in technical specification.
- Any other technical information the tenderer wishes to furnish.
- Tenderer should also enclose authorizations letter from the manufacturer.
- Signed, sealed and stamped pre-bid pre-contract Integrity Pact on non-judicial stamp paper of Rs 500/- as per the proforma given in the tender document along with the Part-I of the tender failing which the tender will be summarily rejected.
- No extra work/facilities shall be provided by NABARD except those mentioned in the tender document.

c. Part II - Price Bid

- This part shall contain prices in Indian Rupees only as per format (Part II). Change of terms and conditions and technical deviations, if any, found in Part II of the tender will not be taken into account and will be treated as null and void. Tender in which prices are quoted in any other currency will not be considered.
- This contract is neither a fixed lump sum contract nor a piece work contract but is a contract to carry out the work in respect of provision of the tender to complete in all respect.
- Bills to be paid for according to actual measured quantities at the rates/quantities provided in the schedule of rates (Part II).
- The rates quoted shall be deemed to be for the finished work and shall be firm and binding without any escalation whatsoever till the system is handed over to NABARD.

d. The tenderer should indicate in his tender the complete description of the working of the system/sub systems for which the tender is submitted with all relevant brochures/literature etc. in addition to those called for in the Technical Specifications.

e. The tenderer shall carefully check the specifications and shall satisfy himself that the equipment offered is suitable as per the enclosed Technical Specifications and shall take full responsibility for the efficient operation of the equipment offered.

f. Tenderer shall supply all tools, plants, labour and consumables etc. as required for installation, testing and commissioning of the system as per tender.

g. The tenderer shall state clearly in his tender the standard tools, spare parts which he will supply free of cost when installing the system and handover the same to NABARD after completion of the work.

h. The tenders (Part I) shall be accompanied by the leaflets/literatures and full specifications of the equipment's offered and the "Makes" of all the major components and accessories.

i. During evaluation of technical Bid, NABARD representatives may visit the applicant's completed or on-going projects and contact his past clients for verification of information given by the applicant. On visiting the site if, committee finds quality of the work executed is not satisfactory, then it can lead to disqualification of the Contractor. Besides this, the documents submitted by the contractor, if found to be fraud/ manipulated/ false/amended, the contractor shall be blacklisted for a minimum period of 03 years for working in NABARD.

j. During the execution of work, the contractor must deploy qualified personnel and work experience certificate etc. should be attached for 7 years of experience in dealing similar works round the clock in order to supervise the work. Documentary proof for experience should also be submitted.

k. The contractor should submit undertaking/affidavit duly notarized stating that his / their/her firm is not blacklisted in NABARD/ Govt. / semi Govt. institutions on Rs. 100/-stamp paper. The undertaking/affidavit should be of latest date and in original.

l. **The applicant should also produce original documents for verification if called for. Failure to attach requisite documents with application will render applicant not eligible for qualification of bid without any intimation**.

m. The duly filled application form shall be uploaded in GeM after duly filled and signed on each page of tender. Incomplete tender liable to be rejected.
n. Price bid shall be opened of only those contracting firm who are qualified in pre-qualification in response to the application received for this notice.
o. Application containing false and/ or incomplete information is liable for rejection and consequences.
p. The application must be submitted in the Pro-forma without editing the text whatsoever. Any Violation of this condition shall render the application invalid**. [Please ensure that contractors provide details of works fulfilling the eligibility criteria in statements II & III].**
q. The tenders shall be signed by the person/persons on behalf of the Organization having necessary Authorization/Power of Attorney to do so. (Copy of Power of Attorney/Memorandum of Association shall be furnished along with application).
r. If the space in the Pro-forma is insufficient for furnishing full details, such information shall be supplemented on separate sheets of paper stating therein the part of the Pro-forma and serial number. Separate sheets shall be used for each part of application, if required.
s. Tenders containing false and/or incomplete information are liable for rejection.
t. While filling up the tenders with regard to the list of important assignments completed or on hand, the contractors shall only include major assignments having agreement/completion value of **Rs. 76 Lakhs and above**. The copies of the bill raised may be enclosed for assessment and verifications in this regard.
u. The contractor must have qualified and experienced professionals in the respective discipline. Details of the same may be shared with NABARD.
v. The applicant must have successfully completed the work according to the eligibility criteria under pre-qualification criteria.
w. In case L-1 bidder quotes abnormally low rates the bank may ask such bidder to submit the rate analysis of the item with justification. Failure to which, bid may be considered non-responsive and liable for rejection.
x. Water & Electricity supply for work execution: The client may provide Water & Electricity. In case of non-availability of the same, contractor may arrangement the cost on its own. All the necessary arrangement for electricity points i.e. cable, switch etc. contractor shall provide same.
y. The rates for each item as per scope of work shall be quoted by the applicant in the Price bid to be uploaded in the e-tendering website.
z. Financial bids of only those contractors qualified in the Technical bid will be opened for selection of contractor.
aa. All the protocols / guidelines related to COVID– 19 or other matters fixed by the government are to be followed by the contractor at his own cost.

Drawings and Documents

- The successful tenderer shall submit, in duplicate, on receipt of acceptance of the tender, detailed working drawings and specifications showing the complete details of all work required. He will be held responsible for any discrepancies, errors, omissions and commissions in the drawing or particulars submitted by him even if these have been approved by NABARD. The drawings will be scrutinized by NABARD and returned to the tenderer within two weeks of receipt, duly approved or with observations.
- The successful tenderer on completion of the work shall furnish three sets of schematic diagram, physical layout drawings and maintenance manuals and a detailed list of all the components, if required.

Packing and Dispatch

- The equipment shall be properly and securely packed for multiple handling and transportation by sea/ air / rail / road etc. All equipment/components shall be delivered on Duty Delivery Paid (DDP) basis at NABARD HO Building, Mumbai.

Taxes

- The prices quoted for supply of equipment shall be deemed to have included all taxes, custom duty, excise duty, GST or any other taxes/duties imposed by /State Government/ Local Bodies/ Central Government, charges for labor, transport, insurance charges for transit, shipment, packing, freight from the factory to the destination site, handling, clearing, installation, and commissioning charges, insurance charges for storage, erection, testing and commissioning, CAR policy (1.25 times the Contract Value), workmen compensation and third party liability etc. to commence from the 10 days after the date of Work Order from NABARD till the System is finally handed over to NABARD. If the tenderer fails to include such taxes and duties in the tender, no claim thereof will be entertained by NABARD afterwards. As per laws, income tax and GST-TDS etc. will be deducted at source and a certificate for the same will be issued to the contractor.

- The tendered rates shall be firm and shall not be subject to any variations on account of fluctuations in the market rate or any other source.

Validity of Tender

- The Tender along with the prices shall remain valid initially for a period of 90 days from the date of opening of Part II of tender, which period may be further extended by mutual agreement in writing by the tenderer and the tenderer shall not cancel or withdraw the tender during this period.

Language

- The Tender including all labels in drawings, documents, catalogues etc. shall be in English.

Earnest Money, Initial Security Deposit and Retention Money Deposit

Earnest Money Deposit

- The Tender must be accompanied by Earnest Money in the form of Direct Deposit in the Bank through NEFT OR RTGS for Rs. 3.80 lakhs as per NABARD's proforma towards Earnest Money deposit. Tender not accompanied by EMD OR Valid MSE registration certificate shall be rejected. Should the Invitation to Tender be withdrawn or cancelled by the Bank, which shall have the right to do so at any time, EMD will be returned.

Initial Security Deposit

- The successful tenderer to whom the Contract is awarded shall deposit as initial security deposit of a sum to make up 2% of the value of the accepted tender after the appropriation of the Earnest Money Deposited by him. The successful tenderer shall pay Initial Security Deposit within fifteen days after receiving the letter of acceptance of his tender. No interest shall be paid on this security deposit. The initial security deposit, either in whole or in part thereof, shall be forfeited in the event of the Contractor's failure to observe any terms of this Contract/ or noncompliance with the

conditions of the Contract. The initial security deposit amount will be adjusted or included in the retention money as per sub-Clause herein below.

Retention Money Deposit

- Apart from the initial security deposit to be made by the Contractor as aforesaid, the retention money shall be deducted from running bills @ 5% of the gross value of bill amount after adjusting the initial security deposit and claimed in each running account bill. Provided that the total security deposit, the initial security deposit amount plus the retention amount shall put together not exceed 5% of the Contract price as determined after considering all variations as approved.
- On virtual completion of the job and on the Contractor's submitting to the Employer the "As Built Drawings", the Employer shall declare the job to be virtually complete and upon this an amount equivalent to 5% of the total contract amount shall be retained by the Employer till the end of the Defects Liability Period (1 year reckoned from the completion /handing over the installation to the Employer, whichever is later). All maintenance and repair costs during aforesaid Defects Liability Period of 1 year shall be borne by the Contractor.
- The 50% of retention money shall be released only upon expiry of the Defects Liability Period and on determination and settlement of the Contractor's Final Bill, whichever is later. Balance 50% of Retention money will be returned after the completion of CAMC Period of 4 years.
- If the Contractors do not carry out the rectification work during the Defects Liability Period, then the Employer shall have the right to get such defective work rectified after giving due notice in writing to the Contractor/s and recover the cost of such repairs from the amount so retained.

Lowest Tender Not Necessarily to be Accepted

1. NABARD is not bound to accept any or all tenders or to assign any reason for non-acceptance.
2. The tenderer whose tender is not accepted shall not be entitled to claim any costs, charges, damages and expenses of and incidental to or incurred by him through or in connection with his submission of tenders, even though NABARD may elect to modify/withdraw the tender.

Right to Accept Part Tender

NABARD reserves the right to accept the tender either in whole or in part at the same prices quoted by the tenderer.

Evaluation of Tender

The tenders will be evaluated based on Total cost of ownership (TCO) which will include the capital cost quoted for the RTS system and the rates quoted for Comprehensive Annual Maintenance Contract for a period of 5 years after the expiry of One year Warranty Period (Defect Liability Period) and operation cost for a period of 6 years after issuing of Virtual Completion Certificate to Bidder, Payment terms for Service Maintenance contract will be as half yearly payment after satisfactory completion of the service

Signing of Contract Agreement

1. The General instructions to the tenderer and special conditions, herein before referred to, Conditions of Contract and Technical Specifications, schedule of works enclosed with the tender documents and the subsequent correspondence exchanged between

NABARD and the tenderer shall be the basis of the Purchase Order/final contract to be entered into with the successful tenderer.

2. The tenderer shall go through the terms and conditions given in the general conditions of contract herewith and his offer shall be strictly in line with the terms specified therein. No deviation from the terms and conditions specified shall be acceptable.

3. On receipt of intimation from NABARD of the acceptance of his/their tender, the successful tenderer shall be bound to implement the Contract and within 14 days thereof, the successful tenderer shall sign an agreement in accordance with the articles of agreement. Notwithstanding the signing of the agreement, the written acceptance by NABARD of a tender in itself will constitute a binding contract between NABARD and the person so tendering, whether such agreement is or is not subsequently executed. The stamp duty charges will have to be borne by the contractor.

4. The contractor shall not assign the contract. He shall not sublet any portion of the contract except with the written consent of NABARD. In case of breach of these conditions, NABARD may serve a notice in writing on the Contractor rescinding the contract whereupon the security deposit shall stand forfeited to NABARD, without prejudice to his other remedies against the Contractor.

Inspection of materials/work at site

1. Before dispatching of equipment to the site, if required, the equipment may be inspected by NABARD's engineers / officials at the manufacturer's works and then cleared for shipment. The contractor at his own expense offer to the inspector all reasonable facilities as may be necessary for satisfying himself that the equipment is being or have been manufactured according to the specifications laid down in the tender. NABARD at its discretion may inspect the equipment at the manufacturer's works, before dispatch of the same to the site at NABARD, Head Office, Mumbai. However, all cost towards inspector's travelling, lodging, boarding if any would be borne by NABARD.

2. NABARD's officials shall have free and full access at any time during execution of the contract to the contractor's works or site in case of the execution of work for the aforesaid purpose, and he may require the contractor to make arrangements for inspection of work or any part thereof or any material at his premises or at any other place specified by NABARD's officials and if the contractor has been permitted to employ the service of a sub-contractor, reserve to NABARD's officials a similar right.

3. The above will, however, not in any way absolve the contractor of his responsibility about proper performance of the system/ components after erection and commissioning at the designated place.

4. NABARD's officials carrying out the inspection shall have the power to certify/ accept/ reject as follows:
   a. Before any equipment or part thereof are submitted for inspection to certify that they or any portion thereof are not in accordance with the contract owing to adoption of any unsatisfactory method of manufacture.
   b. To reject any equipment or parts submitted as not being in accordance with the specification.
   c. To reject the whole of the equipment tendered for inspection, if after inspection of such portion thereof as he may in his discretion think fit, he is satisfied that the same is unsatisfactory; and

d. To mark the rejected equipment or parts with a rejection mark so that it may easily be identified if re-submitted.

Consequence of rejection:

If the equipment or a part thereof, being rejected by NABARD's consultant / officials, the contractor fails to make satisfactory supplies or rectify the faulty work thus executed within the stipulated period of delivery/completion period NABARD shall be at liberty to:

a. Allow the contractor to re-submit the equipment or parts in replacement of those rejected, within a time to be specified, the contractor bearing the cost of freight if any, on such replacement without being entitled to any extra payments on that account; or

b. Purchase/execute or authorize the purchase/execution of quantity/work of the equipment or parts rejected or others of a similar description (when equipment or parts exactly complying with specifications are not, in the opinion of NABARD which shall be final, readily available) to the contractor at his risk and cost and without affecting the contractor's liability as regards supply under the contract; or

c. Cancel the contract and purchase/execute or authorize the purchase/execution of the equipment or others of a similar description (when equipment or parts exactly complying with specifications are not in the opinion of NABARD, which shall be final, readily available) at the risk and cost of the contractor. In the event of action being taken under such clause (ii) above or this clause, the provision of delivery clause applies as far as applicable.

d. NABARD's decision as to rejection shall be final: - NABARD's decision as regards the rejection shall be final and binding on the contractor subject to contractor's appeal.

Completion Period

1. Time allowed for carrying out the work, as mentioned in the Memorandum, shall be strictly observed by the Contractor and it shall be reckoned from the 10th day after written order to commence the work is issued. The work throughout the stipulated period of the contract should proceed with all the due diligence and if the contractor fails to complete the work within the specified period, he shall be liable to pay liquidated damages as defined in “Appendix herein before referred to” of the contract. The tenderer shall, before commencing the work, prepare a detailed work program in the form of Bar Chart/PERT which shall be approved by NABARD. The tenderer shall indicate the time schedule as per the broad items of work listed below.

2. The contractor shall submit a Bar Chart for completion of the work within the contractual completion period from the 7th day of Work Order. Such chart shall include all activities like the date of supply of material at site, completion of work etc.,

3. NABARD will provide open space within the compound of the building. However, the responsibility and safety of the materials stored will be with the contractor. No accommodation will be provided for any worker by NABARD. The partitions/ enclosure for lockable storage to be erected by the vendor at his cost and shall be dismantled upon completion of work and all disposed materials to be stacked outside municipal limits by the contractor at his risk and cost.

Insurance

On or before the date of commencement of the contract, the contractor shall take all insurances at his cost covering all kinds of risks from the time the RTS system equipment leaves the manufacturer's workshop till end of defect liability period of the RTS system to NABARD, in the joint names of NABARD and the contractor (NABARD's name being first) and it shall take at least the following risk related policies:-Contractor's All Risk Policy at 1.25 times of the value of the contract. Workmen compensation policy for all the workmen of the contractor at site. Third party liability policy of Rs.30 lakhs in a year.

Note:

- These policies shall remain valid for all the time during the currency of the contract till the issuance of Virtual Completion Period. If these policies are not provided by the contractor, NABARD reserves the right to take the above insurance policies themselves and/ or recover the cost thereof from the bill of the contractor.

- The Contractor shall provide NABARD with documentary evidence from time to time, that he has taken all the insurance policies mentioned in the foregoing paragraphs and that he has paid the necessary premium for keeping the policies valid till the expiry of defect liability period.

- All insurance to be affected by the Contractor, and/or his sub-contractors, or nominated sub-contractors, if any, shall be taken only with any of the Nationalized Insurance Companies approved by NABARD.

- The Contractor has to Add-on covers under this policy, if at all they are not included under the original policy like:

- Clearing and removal of debris; Damage to surrounding property not forming part of the contract work. Maintenance visit / extended maintenance cover to cover accidental loss or damage whilst carrying out any rectification during maintenance period and / or any amount incurred for rectification of such original defects or faults during construction.

Warranty

The entire equipment shall be guaranteed to be free from defective workmanship or materials and any defects that may appear within 1 year from the date of commissioning and successful operation of the system which will be considered as virtual completion certificate for the work, which in the opinion of NABARD have arisen from bad workmanship or materials, shall upon intimation by NABARD, be made good by the Contractor at his own cost within the time specified. During the said period of 1 year, the contractor (successful tenderer) shall make periodical inspection of the working of the RTS system free of charge at least once in three months or as per requirement if required and attend to the servicing of the various parts and such other service that may be required to keep the RTS System in good operative condition all the time. The contractor shall be fully responsible for the warranty, in respect of proper design, quality and workmanship and warrant all components, accessories, spare parts etc. against any manufacturing defects during the warranty period. Warranty shall not become void for use or non-use of RTS System. The warranty period shall be 1 year from the date of handing over of the RTS System to NABARD i.e., date of virtual completion.

Maintenance Service Contract

The contractor shall furnish an undertaking that they will provide spare support so that the various equipment supplied can be maintained satisfactorily for a minimum period of 5 years after defects liability period of 1 year. Charges towards commissioning and successful operation of the system which will be considered as Maintenance Service Contract will include all labour charges, material charges, supervisory charges etc. towards all equipment. During the maintenance service contract, the firm should arrange for routine maintenance and inspection on all equipment as mentioned above on bimonthly basis and submit a report to the Bank regarding the health of the equipment along with recommendation, if any. This service contract shall be renewed annually as per rates quoted in the tender.

The payment for CAMC shall be made on half yearly basis on rendering satisfactory service. Bank will not provide any assistance in the form of men/material during the currency of the guarantee and service contract. The tenderers will have to make their own arrangements for deputing a helper to skilled personal including all necessary tools for rectification of the defects reported/observed. This being an emergency system, any fault in the system shall be rectified as early as possible. **During the period (DLP+CAMC) full check, servicing and cleaning of devices etc. shall be done and any breakdown call to be attended. The CAMC charges should be inclusive of repair/replacement of all spare parts/accessories, material, software, etc.**

Terms of Payment

The payment for the works to be executed under this contract shall be made as follows:

1. 60% of the quoted rate against delivery of materials at site against submission of the following items:
   - Manufacturer's Inspection and Test Certificates and proof of Invoice.
   - Delivery of material at site and after submission of a Certificate that all equipment for successful installation, commissioning and testing of the systems including maintenance have been received at site in good condition.
   - Policies of insurance covering all the risks during transit, storage.
   - Any other statutory documents such as excise duty, octroi etc., if required.
2. 25% of the quoted rate on completion of installation and testing.
3. 15% of the quoted rate on completion of Programming, commissioning and handing over of system to NABARD.
4. The Bank will recover 5% amount in every paid bill towards Retention Money Deposit.
5. No payment will be made without valid insurance policies.

Other Issues

- The Contractor shall carry out all the work strictly in accordance with drawing, details and instructions of Consultant/NABARD's officers. If in the opinion of Consultant/NABARD's Officers, nominal changes have to be made to suit the site condition and with the prior approval in writing of NABARD, they desire the Contractor to carry out the same, the Contractor shall carry out the same without any extra charge.

- The tenderer must obtain for himself on his own responsibility and at his own expense, all the information which may be necessary for the purpose of making a tender and for entering into a contract and must examine the drawings, inspect the site of the work, and acquaint himself with all local conditions, means of access to the work, nature of the work and all matters pertaining thereto. NABARD's decision in such cases shall be final and shall not be open to arbitration.

- A Schedule of Probable Quantities in respect of each work and Specifications accompany these Special Conditions. The Schedule of Probable Quantities is liable to alteration by omissions, deductions or additions at the discretion of NABARD.
- The rates quoted in the tender shall include all charges for watching and lighting by night as well as day including Saturdays/Sundays and holidays, protection of all other erections, matters or things and the Contractor shall take down and remove any or all material etc. as occasion shall require or when ordered so to do, and fully reinstate and make good all matters and things disturbed during the execution of work and to the satisfaction of NABARD.
- The contractor shall not be entitled to any compensation for any loss suffered by him on account of delays in commencing or executing the work, whatever the cause of delays may be, including delays arising out of modifications to the work entrusted to him or in any sub-contract connected therewith or delays in awarding contracts for other trades of the project or in commencement or completion of such works. NABARD does not accept liability for any sum besides the tender amount, subject to such variations as are provided for herein.
- The successful tenderer is bound to carry out all items of work necessary for completion of the job even though such items are not included in the quantities and rates. Schedule of instruction in respect of such additional items and their quantities will be issued in writing by NABARD.
- The successful tenderer must co-operate with the other contractors appointed by NABARD so that the work shall proceed smoothly with the least possible delay. He should make his own arrangement for storage and protection of all materials supplied by him.
- The work has to be carried out in an occupied office and, therefore, may have to be carried out during restricted hours beyond office hours / Saturdays / Sundays / NABARD's holidays etc. so that normal working of office does not get affected.
- The contractor must bear in mind that all the work shall be carried out strictly in accordance with the specifications made by NABARD.
- **Contract Agreement**: The Contract shall come into full force and effect on the date of issue of the Work Order. The costs of stamp duties and similar charges (if any) imposed by law in connection with the Contract Agreement shall be borne by the Contractor.
- **Confidentiality:** The Contractor shall treat the details of the Contract as private and confidential, except to the extent necessary to carry out obligations under it or to comply with applicable Laws. The Contractor shall indemnify NABARD for any loss suffered by them as a result of disclosure of any confidential information. The Contractor shall not publish, permit to be published, or disclose any particulars of the Works in any trade or technical paper or elsewhere without the written permission of NABARD.

I/We hereby declare that I/we have read and understood the above instructions for the guidance of the tenderers.

Signature of Witness with date
Address----------

Signature of tenderer with date
Address ----------

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7. SPECIAL INSTRUCTIONS TO BIDDERS

1. The tenderer must obtain for himself on his own responsibility and at his own expense all the information which may be necessary for the purpose of making a tender for entering into a contract and must examine the site and must inspect the site of the work and acquaint himself with all local conditions, means of access to work, nature of the work and all matters pertaining thereto.

2. The rates quoted in the tender shall include all charges for SITC for any tools and plants, sheds for material, marking out and clearing of site etc. as mentioned in the specification. The rates quoted shall be deemed to be for the finished work to be measured at site. The rates shall also be firm and shall not be subject to exchange variations, labour conditions, fluctuations in railway freights or any conditions whatsoever. **Tenderers must include in their rates GST and any other tax and duty or other levy levied by the Central Government or any State Government or Local authority, if applicable.** No claim in respect of GST or other tax duty or levy shall be entertained by the Employer.

3. The Contractor should note that unless otherwise stated the tender is strictly on item rate basis and his attention is drawn to the fact that rates for each and every item should be correct, workable and self-supporting. The quantities in the Schedule of Quantities approximately indicate the total extent of work but may vary to any extent and may even be omitted thus altering the aggregate value of the Contract. No claim shall be entertained on this account.

4. The work shall throughout the stipulated period of the Contract be proceeded with all due diligence and if the Contractor fails to complete the work within the specified period, he shall be liable to pay compensation as defined in relevant clause of the Conditions of Contract. The tenderer shall before commence work prepare a detailed work program and submit the same within 10 days from the award of work.

5. Tenders will be considered only from bonafide eligible contractors.

6. The Contractor shall not be entitled to any compensation for any loss suffered by him on account of delays in commencing or executing the work, whatever the cause of delays may be, including delays arising out of modification to the work entrusted to him or in any sub-contract connected therewith or delays in awarding contracts for other trades of the project or in commencement or completion of such works or in procuring Government controlled or other building materials or in obtaining water and power connections for construction purposes or for any other reason whatsoever and the Employer shall not be liable for any claim in respect thereof. The Employer does not accept liability for any sum besides the tender amount, subject to such variations as are provided for herein.

7. The successful tenderer is bound to carry out any items of work necessary for the completion of the job even though such items are not included in the quantities and rates. Schedule of instructions in respect of such additional items and their quantities will be issued in writing by the Employer.

8. The successful tenderer must co-operate with the other contractors appointed by the Employer so that the work shall proceed smoothly with the least possible delay and to the satisfaction of the Employer.

9. The Security Deposit of the successful tenderer will be forfeited if he fails to comply with any of the conditions of the Contract.

10. **CONTRACTOR'S LIABILITY AND INSURANCE**:

From commencement to completion of works, the Contractor shall take full responsibility for the care of the work and for taking precautions to prevent any loss or damage to the works and shall be liable for any damage or loss or theft that may arise to the works or any part thereof from any cause whatsoever, inherent defects and failures due to poor workmanship and causes such as lightning, explosion, earthquake, storm. hurricane,

floods, inundation, riots excluding civil war, rebellion, revolution and insurrection) and shall at his own cost repair and make good the same so that at all times the work shall be in good order and condition and in conformity in every respect with the requirements of the Contract.

Explanation:

a. For the purpose of this condition, the expression "from the commencement to completion of work" shall mean the time commencing from the issue of the work order to the contractor and ending with the issue of Virtual Completion Certificate.

b. Without limiting the obligations and responsibilities under this condition, the Contractor shall insure and keep insured the works from commencement to completion, as aforesaid, **for their full value provided under this contract, increased by 25% of the contract value** against the risk of loss or damage from any cause whatsoever including the causes enumerated in the forgoing Clauses (a) above. In the event of there being a variation in the nature and extent of the work, the Contractor shall from time to time increase or decrease the value of the insurance correspondingly. All the premium shall be borne and paid by the contractor. The said insurance shall also provide for the removal of debris of the lost or the damaged works. The said insurance shall be in the joint name of the Employer and the Contractor, The Employer's name being mentioned first in the policies and the Contractor should deposit with the Employer the said policy or policies before commencing the work at site. All money payable by the insurers under such policy or policies shall be recovered by the Employer and shall be paid to the Contractor or any other agency of Employer's choice in instalments for the purpose of rebuilding or replacement or repairing the works and/or goods destroyed or damaged as the case may be.

c. If the Contractor has a blanket insurance policy for all the works to be executed by him and the policy covers all the items to be insured under the condition, the said policy shall be assigned by the Contractor in favour of the Employer, provide however that if any amount is payable under the policy by the insurers in respect of works other than the work under the Contract, the same may be recovered by the Contractors directly from the insurers.

d. **The contractor shall indemnify and keep indemnified the Employer** against all losses and claims, damages or compensation under the provision of the payments of Wages Act 1936, Minimum Wage Act 1948, Employer's Liability Act 1938, Workmen's Compensation Act 1923, the Maternity Benefit Act 1961, Bombay Shops and Establishment Act 1947, Industrial Dispute Act 1947, and the Contractor Labour (Regulation and Abolition) Act, 1970 and Employee's State Insurance Act or any modification thereof or any other law relating thereto and rules made there under from time to time or as consequence of any accident or injury to any workmen or other person in or about the work whether in the employment of the employer or Contractor or not, and also against cost, charges and expenses of any suit, action or proceedings whatsoever out of such accident or injury of combination or any such claim.

e. Before commencing the work, the Contractor shall without limiting his obligations and responsibilities under this condition, insure against any loss of life or injury to any personnel in the Employment of Contractor/sub- Contractor. For this purpose, an insurance shall be taken by the contractor or sub-contractor. Such an insurance shall be taken to include both employees/workmen covered by Workmen's Compensation Act 1923, as well those employees/workmen not covered by the said Act. Separate insurance policies shall be taken for employees/workmen covered by Workman's Compensation Act 1923, and Employees /workmen not covered by the said Act. All the premium shall be paid by the Contractor. Policy/policies taken under this clause for the personnel in employment with the Contractor/Sub- Contractor/ nominated sub-Contractors, may be in their Employer's names of the Contractors/sub- Contractors. In the event of any loss or injury to the personnel in employment with the contractors/sub-contractors, the Employee and the Contractor shall recover directly from the Insurance Company and ensure that payment of the same is made to the affected parties. The policy in original shall be deposited with the Employer.

f. The Contractor shall at all-time indemnify and keep indemnified the Employer against all losses

and claims for injuries or damage to any person or any property whatsoever which may arise out of or in consequence of the construction and or rehabilitation/repair and during the defects liability period and against all claims, demands, proceedings, damages, costs, charges and expenses whatsoever in respect of and in relation thereto. Before commencing the execution of the works, the Contractor shall without in any way limiting his obligations and liabilities under this condition, insure at his cost and expense against any damage or loss or injury which may be caused to any person or property including the Employee or servants of the Employer and the Consultants and their property by or in the course of the execution of the works.

g. The Contractor shall provide the Employer with documentary evidence from time to time, that he has taken all the insurance policies mentioned in the foregoing paragraphs and that he has paid the necessary premium for keeping the policies valid till the expiry of defects liability period.

h. If the Contractor and/or his sub- Contractor or nominated Contractor, if any shall fail to effect and keep in force the insurance referred to above or any other insurance which he/they may be required to effect under the terms of the Contract, then in any such case, the Employer may, without being bound to effect and keep in force any such insurance policy and pay such premium or premium, as may be necessary for that purpose from time to time and deduct the amount so paid by the Employer from any moneys due or which may become due to the Contractor or recover the same as a debt due from the Contractor.

i. We also agree to indemnify NABARD by giving suitable Indemnity Bond as per NABARD's pro forma attached herewith. We agree that NABARD will make payment to us only after we furnish the Indemnity Bond to NABARD.

j. **SCHEDULE OF QUANTITIES: The** Schedule of the Quantities unless otherwise stated shall be deemed to have been prepared in accordance with the standard procedure of the Bank and shall be considered to be approximate and no liability shall attach to the Bank's Officer for any error that may be discovered therein.

k. **SUFFICIENCY OF SCHEDULE OF QUANTITIES:** The Contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender for the works, and of the prices stated in the Schedule of Quantities and/or Schedule of Rates and prices, which rates and prices shall cover all his obligations under the Contract, and all matters and things necessary for the proper completion of the works.

l. **CONTRACTOR TO PROVIDE EVERYTHING NECESSARY:** The Contractor shall provide everything necessary for the proper execution of the works according to the true intent and meaning of the Drawings, Specifications and Schedule of Quantities taken together whether the same may or may not be particularly shown or described therein, provided that the same can be inferred there from and if the Contractor finds any discrepancy in the Drawings or between the Drawings, Specifications and Schedule of Quantities he shall immediately refer the same in writing to the Employer, who shall decide which shall be followed, and their decision shall be final and binding on all parties. The Contractors will supply, fix and maintain at his cost during the execution of any works, all the necessary centering, staging, watching and lighting by night as well as by day required not only for the proper execution and protection of the public and safety of any adjacent roads, streets, cellars, vaults, pavements, walls, houses, buildings and all other erections, matters or things. The Contractor shall pull down and remove any or all such materials , after completing his work as occasion shall require or when ordered to do so, and shall fully reinstate and make good all matters and things disturbed during the execution of the works, to the satisfaction of the Consultant / Employer.

m. **AUTHORITIES, NOTICES, PATENTS, RIGHTS & ROYALTIES:** The Contractor shall conform to the provisions of all the statutes relating to the works, and to the Regulations and bye-laws of any local Authority, and of any Water, Lighting of other Companies or Authorities with whose systems the structure is proposed to be connected, and shall

before making any variation from the drawings or specifications that may be necessitated by so conforming, give to the Bank's Officer written notice, specifying the variations proposed to be made and the reason for making it, and apply for instruction thereon. In case the Contractor shall not within ten days receive such instructions, he shall proceed with the work conforming to the provisions, Regulations or By-laws in question. The Contractor shall bring to the attention of the Bank's Engineer all notices required by the said Acts, Regulations of By-laws to be given to any Authority by the Bank's Engineer and pay to such Authority, or to any Public Officer, all fees that may be properly chargeable in respect of the works and lodge the receipts with the Bank's Engineer. The Contractor shall indemnify the Employer against all claims in respect of patent rights, design, trademarks of name or other protected rights in respect of any plant, machine work or material used for or in connection with the works or temporary works and from against all claims, demands, proceedings, damages, costs, charges and expenses whatsoever in respect thereof or in relation thereto. The Contractor shall defend all actions arising from such claims, unless he has informed the Bank's Engineer, before any such infringement and received their permission to proceed, and shall himself pay all royalties, license fees, damages, costs and charges of all and every sort that may be legally incurred in respect thereof.

n. **MATERIALS AND WORKMANSHIP TO CONFORM TO DESCRIPTION:** All materials and workmanship shall, so far as procurable, be of the respective kinds specified in the Schedule of Quantities and/or specifications and in accordance with the Bank's Officer and NABARD's instructions and the Contractor shall upon the request of the Bank's Officer furnish to them all invoices, accounts, receipts and other vouchers to prove that the materials comply therewith. The Contractor shall at his own cost arrange for and/or carry out any test of any materials which the Bank's Officer and NABARD may require. The Specifications shall wherever not mention in the tender be taken in accordance with the latest CPWD Specifications and its latest revision or BIS, if any. If the Contractor contends that any of the material, goods or workmanship specified as aforesaid, is unobtainable, he shall submit to the clients, his grounds for his contention, and thereupon, the Bank's Officer and NABARD shall decide whether the same is unobtainable in fact. If the Bank's Officer and NABARD shall decide that any of the materials, goods or workmanship is in fact unobtainable, they shall issue an order in writing as what is to be substituted thereof and such order shall be deemed to be an order for variation; such order shall however be got approved by the client before issue.

o. **SETTING OUT :**The Contractor shall at his own expense, set out the works, accurately in accordance with the plans and to the complete satisfaction of the Bank's Officer and NABARD. The Contractor shall be solely responsible for the true and perfect setting out of the works, and for the correctness of the position, levels, dimensions and alignment of all parts thereof. If at any time any error shall appear during the progress or on completion of any part of the work, the Contractor shall at his own cost rectify such error if called upon, to the satisfaction of the Bank's Officer and NABARD. The Bank's Officer and/or his representatives shall from time to time inspect the work, but such inspections shall not exonerate the Contractor in any way from his obligations to remedy any defects which may be found to exist at any stage of the work or subsequently after the same is completed.

p. **CONTRACTOR'S SUPERINTENDENCE AND REPRESENTATIVE ON WORKS:** The Contractor shall give all necessary personal superintendence during the execution of the works and as long thereafter as the Bank's Officer may consider it necessary until the expiration of the "Defects Liability Period". The Contractor shall meet the Bank's Officer, or his representative whenever required if demanded by Bank's Engineer. The Contractor shall maintain and be represented on site by qualified licensed Electrical Engineer, as a site supervisor, having minimum experience of 5 years in the said field, at all times while the work is in progress, details of the Site Supervisor must be shared prior commencement of the work. The site Supervisor must thoroughly understand all the traces entailed and be constantly in attendance, while the men are at work. Any directions, explanations, instructions or notices given by the Bank's Officer to such Engineer shall be deemed to be given to the Contractor and shall be binding as such on the Contractor. The Engineer should be able to read, write and speak English.

q. **DISMISSAL OF WORKMEN:** The Contractor shall on the request of the Bank's Officer immediately dismiss from the works any person Employed there-on who may, in the opinion of the Consultant / Bank's Engineer, be unsuitable or incompetent or who may misconduct himself and such person shall not again be employed or allowed on the works without the permission of

the Bank's Officer.

r. **ACCESS TO WORKS:** The Bank's Officer and any person authorized by them shall at all reasonable times have free access to the works, and to the workshops, factories or other places where materials are being prepared or fabricated for the Contract and also to any place where the materials are lying or from which they are being obtained. The Contractor shall give every facility to the Bank's Officer and the Employer and their representative for inspection and examination and test of the materials and workmanship. No person unless authorized by the Bank's Officer or the Employer, except the Representatives of Public Authorities, shall be allowed on the works at any time. If any work is to be done at place other than the site of the works, the Contractor shall obtain the written permission of the Bank's Officer for doing so.

s. **MEASUREMENT OF WORKS:** The Bank's Officer may from time to time intimate the Contractor that he requires the works to be measured and the Contractor shall forthwith attend or send qualified personnel to assist the Bank's Officer or their representative in taking such measurements and calculations and to furnish all particulars or give all assistance required by either of them. Should the Contractor not attend or neglect or omit to send such agent, then the measurements taken by the Bank's Officer or approved by him shall be taken to be the correct measurements. The works shall be measured according to the mode of measurements stated in the annexed general specifications. The measurement shall wherever not mention in the tender be taken in accordance with the Indian Standard of "Method of Measurement, if any". The Contractor or his Agent may at the time of measurement take such notes and measurements as he may require.

t. **PRICES FOR EXTRAS ETC. ASCERTAINMENT OF:** Should it be found after the completion of the works from measurements taken in accordance with the previous paragraph that any of the quantities or amounts of works thus ascertained are less or greater than the amounts specified for the works in the priced Schedule of Quantities and/or that any variation is made, the valuation thereof, unless previously or otherwise agreed upon, shall be made in accordance with the following rules:-

   i. The net rates or prices in the original Tender shall determine the valuation of the extra work where extra work is of a similar character and executed under similar conditions as the work priced therein.
   ii. The net rates or prices in the original tender shall determine the value of the items omitted, provided if omissions vary the conditions under which any remaining items of works are carried out, the prices for the same shall be valued under (iii) hereof.
   iii. Where the extra works are not of similar character and/or not executed under similar condition as aforesaid or where the omissions vary, the conditions under which any remaining items of works are carried out or if the amount any omission or additions relative to the amount of the whole of the Contract works or to be any part thereof shall be such that in the opinion of the Bank's Engineer, the net rate or price contain in the priced Schedule of Quantities or tender or for any item of the works involves loss or expenses beyond that reasonably contemplated by the Contractor or is by reason of such omission or addition rendered unreasonable or inapplicable, the Bank's Officer shall fix such other rate or prices as in the circumstances considers reasonable and proper, on the basis of actual rate analysis for cost of work involved plus fifteen percent towards contractor's overhead and profits, which shall be final and binding on the contractor. The rate analysis to be approved by the Bank before finalization of such rates. No escalation shall be entertained on the extra or deviated items.

u. **REMOVAL OF DEFECTIVE WORK AND MATERIALS:** The Bank's Officer shall, during the progress of the works, have power to order in writing from time to time the removal from the works, within such reasonable time as may be specified in the order, of any materials which, in the opinion of the Bank's Engineer are not in accordance with the specifications or the instructions of the Bank's Officer and the substitution of proper materials and the removal and proper re-execution of any such work, which has been executed with materials or workmanship, not in accordance with the Drawings and Specifications or instructions, and the Contractor shall forthwith carry out such order at his own cost. In case of default on the part of the Contractor to carry out such order the Employer shall have power to employ and pay other persons to carry out the same and all expenses consequent thereon or incidental thereto shall be borne by the Contractor, and shall be recoverable from him on behalf of the Employer or may be deducted by the Bank's Officer from any money due or that may become due to the Contractor. If the correcting works are not done in accordance with the contract, the Bank's Officer in consultation

with the Bank's Officer may allow such work to remain and, in that case, may make allowance for the difference in value together with such further allowance for damages to the Employer, as may be reasonable.

v. **DEFECTS AFTER COMPLETION:** Any defect may appear within the "Defects Liability Period" stated in the Appendix hereto or if none stated, then for a period of three years after the Virtual Completion of the work and responsibility for making good at their own cost of the latent/patent imperfections or defect becoming apparent during this period arising in the opinion of the Bank's Engineer from materials or workmanship not in accordance with the Contract, shall upon the directions and writing of the Bank's Engineer, and within such reasonable time as shall be specified therein, be amended and made good by the Contractor, at his cost, unless, the Bank's Officer in consultation with the Employer shall decide that he ought to be paid for such amending and making good and in case of default the Employer may employ and pay other persons to amend and make good such defects, or faults, and all damages, loss and expenses consequent thereon or incidental thereto shall be made good and borne by the Contractor and such damage, loss and expenses shall be recoverable from him by the Employer or may be deducted by the Employer upon the Bank's Officer Certificate in writing from any moneys due or that may become due to the Contractor or the Employer may in lieu of such amending and making good by the Contractor, deduct from any money due to the Contractor a sum, to be determined by the Bank's Engineer, equivalent to the cost of amending such woks, and in the event the amount retained (Certificate and Payments) being insufficient, recover the balance from the Contractor.

w. **DELAY AND EXTENSION OF TIME:** If in the opinion of the Bank's Officer, the works be delayed.

i. by force majeure or
ii. by reason of any exceptionally inclement weather or
iii. by reason of proceedings taken or threatened by the dispute with adjoining or neighboring owners or public authorities arising otherwise than through the Contractor's own default or
iv. by the works or delays of other Contractors or tradesmen engaged or nominated by the Employer or the Bank's Officer and not referred to in the Schedule of Quantities and/or Specifications or
v. by reason of Bank's Officer instructions, or
vi. by reason of civil commotion, local commotion of workmen or strike or lock-out affecting any of the building trades or
vii. in consequence of the Contractor not having in due time necessary instructions from the Bank's Engineer for which he shall have specifically applied in writing, ahead of time, giving the Bank's Engineer reasonable time to prepare such instructions, the Bank's Officer shall make a fair and reasonable extension of time for completion of the Contracted works. In case of such strike or lock-out, the Contractor shall, as soon as may be, given written notice thereof to the Bank's Engineer, but the Contractor shall nevertheless constantly use his endeavours to prevent delay and shall do all that may reasonably be required to the satisfaction of the Bank's Officer to proceed with the work.
viii. The Contractor shall take all practicable steps to avoid or reduce any delay in the execution and completion of the works.

y. Keeping Site Clean: The contractor shall at all times keep the Site clean and shall dispose of all rubbish and offensive material in a manner approved by the Employer.

z. Avoidance of Nuisance

1. The Contractor shall take all necessary precautions in reducing noise of plant by means of mufflers, silencers, screens, etc.
2. Work liable to create dust shall be well wetted before being executed.
3. The work shall be carried out strictly in accordance with the time schedule and other instructions given by the Employer taking care to cause minimum amount of noise, dust

and another nuisance at the site.

aa. Mobilization Advance

No advance payment shall be made.

bb. **Terms of Payment**

1. No advance payment.
2. Running bills will be paid subject to minimum values of Rs. 20 Lakh per running bill. 60% payment will be on supply & 25% payment on installations and balance 15% on testing, commissioning, programming and handing over, subject to retaining 5% under Retention Money Deposit.
3. Final bill shall be released after complete measurement along with issuance of VCC by the Bank and approved by the Bank, after obtaining approvals / certification from bank's authorities as required for usage of the system and after issue of VCC.
4. The Bidder has to submit the RMD of 5 % of the work order.

DECLARATION BY THE CONTRACTOR

We / I have read and understood all the instructions / conditions made above and we / I have taken into account the above Instructions / Terms and Conditions while quoting the rates. We / I accept all the above Terms and Conditions without any reservation, in all respects.

(SEAL & SIGNATURE OF THE TENDERER) Place:
ADDRESS: DATE:

8.Technical Specifications: Grid Tied Solar Rooftop Photovoltaic (SPV) Power Plant

In submission the bidder must complete the compliance schedule and indicate that they meet or exceed each requirement. Offered make and model in compliance sheet must meet with Technical specifications. **Bidders are advised to indicate in the table below, the makes and model of the various items being offered. If offered, make and model by the bidder does not meets the minimum requirement/compatibility. Then, Technical bid liable to be rejected:** Check List for technical specifications of the SPV System. All the tenderers are requested to fill and submit the compliance and submit the same along with Part – I Technical Bid

➢ DEFINITION: -

A Grid Tied Solar Rooftop Photovoltaic (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, Junction boxes, Distribution boxes and switches. PV Array is mounted on a suitable structure. Grid tied SPV system 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 conform to the BIS or IEC or international specifications, wherever such specifications are available and applicable. Solar PV system shall consist of following equipment / components.
Solar PV modules consisting of required number of Crystalline PV cells. Grid interactive Power Conditioning Unit with Remote Monitoring System Mounting structures Junction Boxes.
Earthing and lightening protections.
IR/UV protected PVC Cables, pipes and accessories

➢ SOLAR PHOTOVOLTAIC MODULES: -

- The PV modules used should be made in India.
- The PV modules used must qualify to the latest edition of IEC PV module qualificatio n test or equivalent BIS standards Crystalline Silicon Solar Cell Modules IEC 61215/IS14286. In addition, the modules must conform to IEC 61730 Part-1 - requirements for construction & Part 2 – requirements for testing, for safety qualification or equivalent IS.

a. For the PV modules to be used in a highly corrosive atmosphere throughout their lifetime, they must qualify to IEC 61701.
b. The total solar PV array capacity should not be less than allocated capacity (kWp) and should comprise of solar **Monocrystalline** modules of minimum 545 Wp and above wattage. Module capacity less than minimum 545 watts shall not be accepted.
c. Adequate protective devices against surges at the PV module shall be provided. Low voltage drop bypass diodes shall be provided.
d. PV modules must be tested and approved by one of the IEC authorized tests centres.
e. The module frame shall be made of corrosion resistant materials, preferably having anodized aluminium.
f. SPV plant shall be carefully designed & accommodate requisite numbers of the modules to achieve the rated power. NABARD/owners shall allow only minor changes at the time of execution.

g. Other general requirement for the PV modules and subsystems shall be the following:
   - The rated output power of any supplied module shall have tolerance within +/-3%.
   - The peak-power point voltage and the peak-power point current of any supplied module and/or any module string (series connected modules) shall not vary by more than 2 (two) per cent from the respective arithmetic means for all modules and/or for all module strings, as the case may be.
   - The module shall be provided with a junction box with either provision of external screw terminal connection or sealed type and with arrangement for provision of by-pass diode. The box shall have hinged, weatherproof lid with captive screws and cable gland entry points or may be of sealed type and IP-65 rated.
   - I-V curves at STC should be provided by Project developer.

➢ SOLAR PV MODULES: -

- Modules deployed must use a RF identification tag. The following information must be mentioned in the RFID used on each module. This should be inside the laminate only.
  a. Name of the manufacture of the PV module
  b. Name of the manufacture 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

➢ WARRANTIES:-

- Material Warranty:
  a. Material Warranty is defined as: The project developer 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 sale to the original customer ("Customer")
  b. Defects and/or failures due to manufacturing
  c. Defects and/or failures due to quality of materials
  d. Nonconformity to specifications due to faulty manufacturing and/or inspection processes. If the solar Module(s) fails to conform to this warranty, the project developer will repair or replace the solar module(s), at the Owners sole option.
- Performance Warranty:
  a. 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.

➢ ARRAY STRUCTURE:-

- Hot dip galvanized MS mounting structures may be used for mounting the modules / panels / arrays. Minimum thickness of galvanization should be at least 120 microns.
- Each structure should have angle of inclination as per the site conditions to take

maximum insolation. However, to accommodate more capacity the angle inclination may be reduced until the plant meets the specified performance ratio requirements.

- 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 (wind speed of 180 kM/ hour). It may be ensured that the design has been certified by a recognized Lab/ Institution in this regard and submit wind loading calculation sheet to NABARD. Suitable fastening arrangement such as grouting and calming should be provided to secure the installation against the specific wind speed.
- The mounting structure steel shall be as per latest IS 2062: 1992 and galvanization of the mounting structure shall be in compliance of latest IS 4759.
- Structural material shall be corrosion resistant and electrolytically compatible with the materials used in the module frame, its fasteners, nuts and bolts.
- Aluminium structures also can be used which can withstand the wind speed of respective wind zone. Necessary protection towards rusting need to be provided either by coating or anodization.
- **The height of lower leg of the Hot Dipped GI Structure for the Solar Panels shall be well above the parapet wall / neighborhood structure/wall so that no shade of the parapet wall / neighborhood wall / should not fall on the solar panels during the day and Solar Panels should be fully exposed to the Sun.**
- Aluminium frames should be avoided for installations in coastal areas.
- The fasteners used should be made up of stainless steel. The structures shall be designed to allow easy replacement of any module. The array structure shall be so designed that it will occupy minimum space without sacrificing the output from the SPV panels.
- Regarding civil structures the Project developer need to take care of the load bearing capacity of the roof and need arrange suitable structures based on the quality of roof.
- The total load of the structure (when installed with PV modules) on the terrace should be less than 60 kg/m^2.
- The minimum clearance of the structure from the roof level should be 300 mm.

➢ JUNCTION BOXES (JBs) :-

- The junction boxes are to be provided in the PV array for termination of connecting cables. The J. 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 JBs shall be such that input & output termination can be made through suitable cable glands.
- 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. Provision of earthings. It should be placed at 5 feet height or above for ease of accessibility.
- Each Junction Box shall have High quality Suitable capacity Metal Oxide Varistors (MOVs) / SPDs, suitable Reverse Blocking Diodes. The Junction Boxes shall have suitable arrangement monitoring and disconnection for each of the groups.
- 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.
- All fuses shall have DIN rail mountable fuse holders and shall be housed in

thermoplastic IP 65 enclosures with transparent covers.

- **DC DISTRIBUTION BOARD: -**

  - DC Distribution panel to receive the DC output from the array field.
  - DC DPBs shall have sheet from enclosure of dust & vermin proof conform to IP 65 protection. The bus bars are made of copper of desired size. Suitable capacity MCBs/MCCB shall be provided for controlling the DC power output to the PCU along with necessary surge arrestors.

- **AC DISTRIBUTION PANEL BOARD: -**

  - 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.
  - All switches and the circuit breakers, connectors should conform to IEC 60947, part I, II and III/ IS 60947 part I, II and III.
  - The changeover switches, cabling work should be undertaken by the Project developer as part of the project.
  - 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
  - The panels shall be designed for minimum expected ambient temperature of 45 degree Celsius, 80 percent humidity and dusty weather.
  - All indoor panels will have protection of IP54 or better. All outdoor panels will have protection of IP65 or better.
  - Should conform to Indian Electricity Act and rules (till last amendment).
  - 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	+/- 10 %
Variation in supply frequency	+/- 3 Hz

- **PCU / ARRAY SIZE RATIO: -**

  - The combined wattage of all inverters should not be less than rated capacity of power plant under STC.
  - Maximum power point tracker shall be integrated in the PCU/inverter to maximize energy drawn from the array.

- **PCU / INVERTER: -**

  - As SPV array produce direct current electricity, it is necessary to convert this direct current into alternating current and adjust the voltage levels to match the grid voltage. Conversion shall be achieved using an electronic Inverter and the associated control and protection devices. All these components of the system are termed the "Power Conditioning Unit (PCU)". In addition, the PCU shall also house MPPT (Maximum Power Point Tracker), an interface between Solar PV array & the Inverter, to the power conditioning unit/inverter should also be DG set interactive. If necessary. Inverter output

should be compatible with the grid frequency. Typical technical features of the inverter shall be as follows:

Switching devices	IGBT/MOSFET
Control	Microprocessor /DSP
Nominal AC output voltage and frequency	415V, 3 Phase, 50 Hz (In case single phase are offered, suitable arrangement for balancing the phases must be made.)
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-20(Minimum) for indoor.
	IP-65(Minimum) for outdoor.
Grid Frequency Tolerance range	+ 3 or more
Grid Voltage tolerance	-0.20.15
No-load losses	Less than 1% of rated power
Inverter efficiency(minimum)	>93% (In case of 10 kW or above with in- built galvanic isolation) >97% (In case of 10 KW or above without in-built galvanic isolation)
Inverter efficiency (minimum)	> 90% (In case of less than 10 kW)
THD	< 3%
PF	> 0.9

a. Three phase PCU/ inverter shall be used with each power plant system (10kW and/or above) but in case of less than 10kW single phase inverter can be used.
b. PCU / inverter shall be capable of complete automatic operation including wake-up, synchronization & shutdown.
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 sustainable 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. **Anti-islanding** (Protection against Islanding of grid): The PCU shall have Anti-islanding protection in conformity to IEEE 1547/UL 1741/ IEC 62116 or equivalent BIS standard.
f. Channel Partner shall be responsible for galvanic isolation of solar roof top power plant (>100kW) with electrical grid or LT panel.

g. In PCU/Inverter, there shall be a direct current isolation provided at the output by means of a suitable isolating transformer. If Isolation Transformer is not incorporated with PCU/Inverter, there shall be a separate Isolation Transformer of suitable rating provided at the output side of PCU/PCU units for capacity more than 100 kW.
h. The PCU/ inverter generated harmonics, flicker, DC injection limits, Voltage Range, Frequency Range and Anti-Islanding measures at the point of connection to the utility services should follow the latest CEA (Technical Standards for Connectivity Distribution Generation Resources) Guidelines.
i. 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.
j. The 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.
k. The PCU / inverters should be tested from the MNRE approved test centres / NABL / BIS / IEC accredited testing- calibration laboratories. In case of imported power conditioning units, these should be approved by international test houses.

➢ 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 case of grid failure, or low or high voltage, solar PV system shall be out of synchronization and shall be disconnected from the grid. Once the DG set comes into service, PV system shall again be synchronized with DG supply and load requirement would be met to the extent of availability of power. 4 pole isolation of inverter output with respect to the grid/ DG power connection need to be provided.

➢ DATA ACQUISITION SYSTEM / PLANT MONITORING:-

- Data Acquisition System shall be provided for each of the solar PV plant above 10 KWp capacity.
- Data Logging Provision for plant control and monitoring, time and date stamped system data logs for analysis with the high quality, suitable PC. Metering and Instrumentation for display of systems parameters and status indication to be provided.
- Temperature: Temperature probes for recording the Solar panel temperature and/or ambient temperature to be provided complete with readouts integrated with the data logging system.
- The following parameters are accessible via the operating interface display in real time separately for solar power plant:

a. AC Voltage.
b. AC Output current.
c. Output Power
d. Power factor.
e. DC Input Voltage.

f. DC Input Current.
g. Time Active.
h. Time disabled.
i. Time Idle.
j. Power produced
k. Protective function limits (Viz-AC Over voltage, AC Under voltage, Over frequency, under frequency ground fault, PV starting voltage, PV stopping voltage.

- All major parameters available on the digital bus and logging facility for energy auditing through the internal microprocessor and read on the digital front panel at any time) and logging facility (the current values, previous values for up to a month and the average values) should be made available for energy auditing through the internal microprocessor and should be read on the digital front panel.
- PV array energy production: Digital Energy Meters to log the actual value of AC/ DC voltage, Current & Energy generated by the PV system provided. Energy meter along with CT/PT should be of 0.5 accuracy class.
- Computerized DC String/Array monitoring and AC output monitoring shall be provided as part of the inverter and/or string/array combiner box or separately.
- String and array DC Voltage, Current and Power, Inverter AC output voltage and current (All 3 phases and lines), AC power (Active, Reactive and Apparent), Power Factor and AC energy (All 3 phases and cumulative) and frequency shall be monitored.
- Computerized AC energy monitoring shall be in addition to the digital AC energy meter.
- The data shall be recorded in a common work sheet chronologically date wise. The data file shall be MS Excel compatible. The data shall be represented in both tabular and graphical form.
- All instantaneous data shall be shown on the computer screen.
- Software shall be provided for USB download and analysis of DC and AC parametric data for individual plant.
- Provision for instantaneous Internet monitoring and download of historical data shall be also incorporated.
- Remote Server and Software for centralized Internet monitoring system shall be also provided for download and analysis of cumulative data of all the plants and the data of the solar radiation and temperature monitoring system.
- Ambient / Solar PV module back surface temperature shall be also monitored on continuous basis.
- Simultaneous monitoring of DC and AC electrical voltage, current, power, energy and other data of the plant for correlation with solar and environment data shall be provided.
- Remote Monitoring and data acquisition through Remote Monitoring System software at the owner / NABARD 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 shall be provided.
- The Project developer shall be obligated to push real-time plant monitoring data on a specified intervals (say 15 minute) through open protocol at receiver location (cloud server) in XML/JSON format, preferably.

➢ METERING:-

- The Bi-Directional electronic energy meter (0.5 S class) shall be installed for the measurement of import/Export of energy.
- The Project developer must take approval/NOC from the Concerned DISCOM for the connectivity, technical feasibility, and synchronization of SPV plant with distribution network before commissioning of SPV plant.
- Reverse power relay shall be provided as per the local DISCOM requirement.

➢ POWER CONSUMPTION:

- Regarding the generated power consumption, priority need to give for internal consumption first and thereafter any excess power can be exported to grid. Finalization of tariff is not under the purview of NABARD or MNRE.
  Decisions of appropriate authority like DISCOM, state regulator may be followed.

➢ PROTECTIONS:-

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

➢ LIGHTNING PROTECTION:-

- The SPV power plants shall be provided with lightning &overvoltage protection. The main aim in this protection shall be to reduce the over voltage to a tolerable value before it reaches the PV or other sub system components. The source of over voltage can be lightning, atmosphere disturbances etc The entire space occupying the SPV array shall be suitably protected against Lightning by deploying required number of Lightning Arrestors. Lightning protection should be provided as per IEC 62305 standard. The protection against induced high- voltages shall be provided using metal oxide varistors (MOVs) and suitable earthing such that induced transients find an alternate route to earth.

➢ SURGE PROTECTION: -

- Internal surge protection shall consist of three MOV type surge-arrestors connected from +ve and –ve terminals to earth (via Y arrangement).

➢ EARTHING PROTECTION:-

- Each array structure of the PV yard should be grounded/ earthed properly as per IS:3043-1987. In addition, the lighting arrester/masts should also be earthed inside the array field. Earth Resistance shall be tested in presence of the representative of Department/owner as and when required after earthing by calibrated earth tester. PCU, ACDB and DCDB should also be earthed properly.
- Earth resistance shall not be more than 5 ohms. It shall be ensured that all the earthing points are bonded together to make them at the same potential.

➢ GRID ISLANDING: -

- 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 disconnects 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.

➢ CABLES:-

- Cables of appropriate size to be used in the system shall have the following

characteristics:

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

b. Temp. Range: –10°C to +80°C.

c. Voltage rating 660/1000V

d. Excellent resistance to heat, cold, water, oil, abrasion, UV radiation

e. Flexible

f. 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 (2%)

g. For the DC cabling, XLPE or, XLPO insulated and sheathed, UV-stabilized single core multi-stranded flexible copper cables shall be used; multi-core cables shall not be used.

h. For the AC cabling, PVC or, XLPE insulated, and PVC sheathed single or, multi-core multi-stranded flexible copper cables shall be used; Outdoor AC cables shall have a UV-stabilized outer sheath.

i. The cables (as per IS) should be insulated with a special grade PVC compound formulated for outdoor use. Outer sheath of cables shall be electron beam cross-linked XLPO type and black in colour.

j. The DC cables from the SPV module array shall run through a UV-stabilized PVC conduit pipe of adequate diameter with a minimum wall thickness of 1.5mm.

k. Cables and wires used for the interconnection of solar PV modules shall be provided with solar PV connectors (MC4) and couplers.

l. All cables and conduit pipes shall be clamped to the rooftop, walls and ceilings with thermo-plastic clamps at intervals not exceeding 50 cm; the minimum DC cable size shall be 4.0 mm^2 copper; the minimum AC cable size shall be 4.0 mm2 copper. In three phase systems, the size of the neutral wire size shall be equal to the size of the phase wires.

m. Cable Routing / Marking: All cable/wires are to be routed in a 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. In addition, cable

drum no. / Batch no. to be embossed/ printed at every one meter.

n. Cable Jacket should also be electron beam cross-linked XLPO, flame retardant, UV resistant and black in colour.

o. All cables and connectors for use for installation of solar field must be of solar grade which can withstand harsh environment conditions including High temperatures, UV radiation, rain, humidity, dirt, salt, burial and attack by moss and microbes for 25 years and voltages as per latest IEC standards. DC cables used from solar modules to array junction box shall be solar grade copper (Cu) with XLPO insulation and rated for 1.1kV as per relevant standards only.

p. The ratings given are approximate. Project developer to indicate size and length as per system design requirement. All the cables required for the plant shall be provided by the Project developer. Any change in cabling sizes if desired by the Project developer shall be approved after citing appropriate reasons. All cable schedules/ layout drawings shall be approved prior to installation.

q. 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.

r. The total voltage drop on the cable segments from the solar PV modules to the solar grid inverter shall not exceed 2.0%.

s. The total voltage drop on the cable segments from the solar grid inverter to the building distribution board shall not exceed 2.0%.

➢ CONNECTIVITY: -

- The maximum capacity for interconnection with the grid at a specific voltage level shall be as specified in the Distribution Code/Supply Code of the State and amended from time to time. Following criteria have been suggested for selection of voltage level in the distribution system for ready reference of the solar suppliers.

Plant Capacity	Connecting voltage
Up to 10 kW	240V-single phase or 415V-three phase at the option of the consumer
Above 10kW and up to 100 kW	415V – three phase
Above 100kW	At HT/EHT level (11kV/33kV/66kV) as per DISCOM rules

a. The maximum permissible capacity for rooftop shall be 1 MW for a single net metering point.

b. Utilities may have voltage levels other than above, DISCOMS may be consulted before finalization of the voltage level and specification be made accordingly.

➢ TOOLS & TACKLES AND SPARES :-

- After completion of installation & commissioning of the power plant, necessary tools & tackles are to be provided free of cost by the Project developer for maintenance purpose. List of tools and tackles to be supplied by the Project developer for approval of specifications and make from NABARD/ owner.
- A list of requisite spares in case of PCU/inverter comprising of a set of control logic cards, IGBT driver cards etc. Junction Boxes. Fuses, MOVs / arrestors, MCCBs etc along with spare set of PV modules be indicated, which shall be supplied along with the equipment. A minimum set of spares shall be maintained in the plant itself for the entire period of warranty and Operation & Maintenance which upon its use shall be replenished.

➢ DANGER BOARDS AND SIGNAGES :-

- Danger boards should be provided as and where necessary as per IE Act. /IE rules as amended up to date. Three signage shall be provided one each at battery-cum-control room, solar array area and main entry from administrative block.
  Text of the signage may be finalized in consultation with owner.

➢ DRAWINGS & MANUALS :-

- Two sets of Engineering, electrical drawings and Installation and O&M manuals are to be supplied. Project developer shall provide complete technical data sheets for each equipment giving details of the specifications along with make/makes along with basic design of the power plant and power evacuation, synchronization along with protection equipment.
- Approved ISI and reputed makes for equipment be used.
- For complete electro-mechanical works, Project developer shall supply complete design, details and drawings for approval to owners before progressing with the installation work.

➢ PLANNING AND DESIGNING:

- The Project developer should carry out Shadow Analysis at the site and accordingly design strings & arrays layout considering optimal usage of space, material and labour. The Project developer should submit the array layout drawings along with Shadow Analysis Report to owner for approval.

➢ DRAWINGS TO BE FURNISHED BY PROJECT DEVELOPER AFTER AWARD OF CONTRACT FROM BENEFICIARY:-

- The Project developer shall furnish the following drawings Award/Intent and obtain approval
- General arrangement and dimensioned layout.

- Schematic drawing showing the requirement of SV panel, Power conditioning Unit(s)/ inverter, Junction Boxes, AC and DC Distribution Boards, meters etc.
- Structural drawing along with foundation details for the structure.

- Itemized bill of material for complete SV plant covering all the components and associated accessories.

- Layout of solar Power array
- Shadow analysis of the roof

➢ **SOLAR PV SYSTEM ON THE ROOFTOP FOR MEETING THE ANNUAL ENERGY REQUIREMENT :-**

- The Solar PV system on the rooftop of the selected buildings will be installed for meeting upto 90% of the annual energy requirements depending upon the area of rooftop available and the remaining energy requirement of the buildings will be met by drawing power from grid at commercial tariff of DISCOMs.

➢ **SAFETY MEASURES :-**

- The Project developer 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 guidelines etc.

➢ **DISPLAY BOARD :-**

- The Project developer has to display a board at the project site (above 10 kWp) mentioning the following:
  a. Plant Name, Capacity, Location, Type of Renewable Energy plant (Like solar wind etc.), Date of commissioning, details of tie-up with transmission and distribution companies, Power generation and Export FY wise.
  b. The size and type of board and display shall be appropriate.

CONNECTIVITY

The maximum capacity for interconnection with the grid at a specific voltage level shall be as specified in the Distribution Code/Supply Code of the State and amended from time to time. Following criteria have been suggested for selection of voltage level in the distribution system for Ready reference of the solar suppliers.

Voltage Level	Threshold limit of Rooftop RE Generation System	Authority for processing the application
230/240 V (1 Phase)	Less than 8 kW/40A	Concerned Sub Division office
400/415 V (3 Phase)	Up to 150 kW/187 kVA	
11 kV and above	Above 150 kW/187 kVA	Concerned Circle office

Testing, Certification and Approval Schedule

All components, sub-assemblies and system test parameters shall be verified on site to ensure they meet the specifications.

Plant Power Performance Ratio Testing

The successful bidder shall be required to meet minimum guaranteed generation with Performance Ratio (PR) at the time of commissioning and

related Capacity Utilization Factor (CUF) as per the GHI levels of the location during the O&M period. PR should be shown minimum of 75% at the time of inspection for initial commissioning acceptance to qualify for release of applicable incentive. Minimum CUF of 15% should be maintained for a period of 5 years. Correction shall be applied based on available solar radiation.

Operation and Maintenance (O&M)

1. Cleaning of solar PV modules with soft water, wet and dry mops : Weekly
2. DC String / Array and AC Inverter monitoring: Continuous and computerized.
3. AC Energy monitoring: Continuous and computerized.
4. Visual Inspection of the plant : Monthly
5. Functional Checks of Protection Components and Switchgear: Quarterly.
6. Spring Clean PV Array and Installation Area: Quarterly.
7. Inverter, transformer, data acquisition, energy meters and power evacuation checks: Half Yearly.
8. Support structure and terrace water-proofing checks: Yearly.
9. O & M log sheet shall be provided and maintained.
10. The repair/replacement work shall be completed within 48 hours from the time of reporting the fault.
11. A quarter yearly performance report of the plant inclusive of energy generation data shall be provided as per approved format.
12. All recorded data for the first 5 years shall be preserved in both manual and computer format and submitted at hand over.

COMPREHENSIVE ANNUAL MAINTENANCE CONTRACT (CAMC)

(i) The complete Solar PV Power Plants must be guaranteed against any manufacturing / design/ installation defects for a minimum period of 5 years.

(ii) PV modules used in Solar PV Power Plants must be guaranteed for their output peak watt capacity, which should not be less than 90% at the end of 12 years and 80% at the end of 30 years.

(iii) During the CAMC period, MNRE / NABARD / users will have all the rights to cross check the performance of the Solar PV Power Plants. NABARD may carry out the frequent inspections of the Solar PV Power Plants installed and randomly pick up its components to get them tested at Govt. / MNRE approved any test Centre. If during such tests any part is not found as per the specified technical parameters, NABARD will take the necessary action. The decision of NABARD in this regard will be final and binding on the bidder.

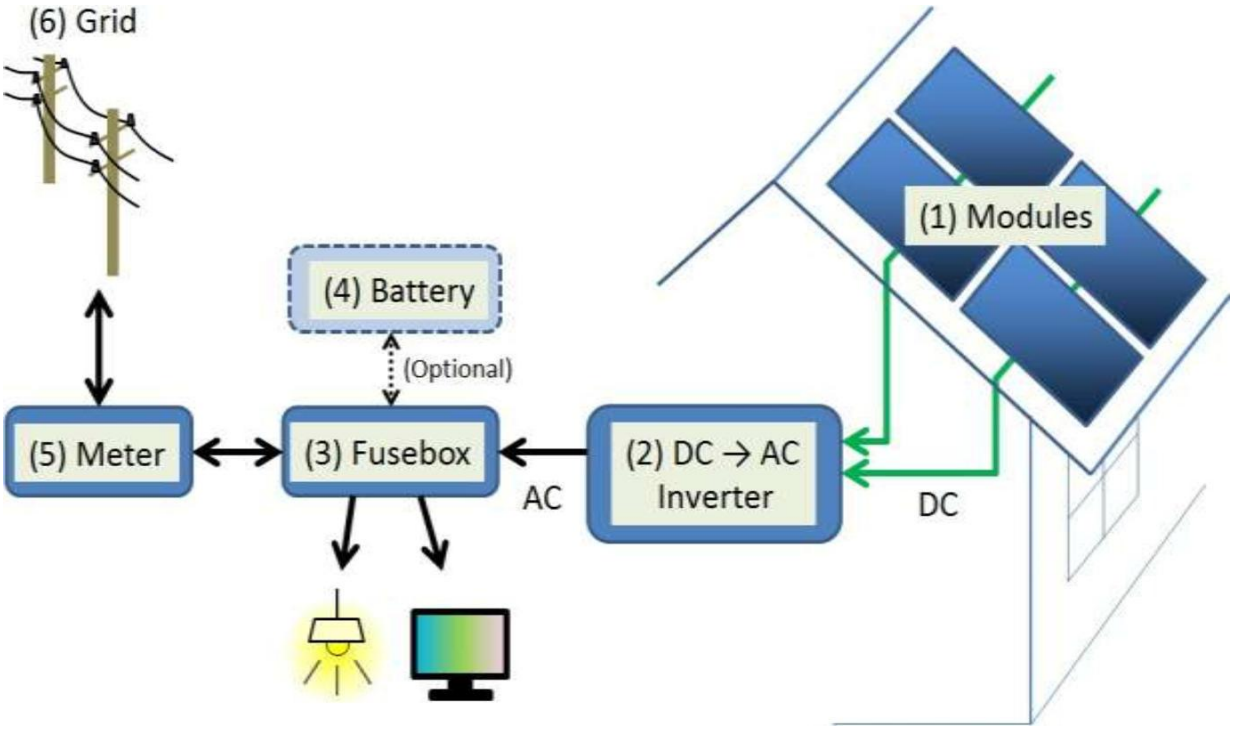
Warranties and Guarantees

1. Solar Modules: Workmanship/ product replacement for 10 years.
2. Solar Modules: 90% power output for 10 years & 80% power output for 30 years.
3. Inverter: Workmanship/product replacement for 5 years, service for 30 years
4. Power Evacuation and Metering Equipment: Workmanship/product replacement for 10 years, service for 30 years

5. BoS: Parts and Workmanship for 10 years, service for 30 years.
6. Power Plant Installation: Workmanship for 10 years, service for 30 years
7. PV Array Installation: Structural for 30 years
8. Power plant power performance ratio-min 75%
9. Power plant energy performance ratio-min. 75%

Standards and Compliance

1. IEC 60364-7-712: Electrical Installations of Buildings: Requirements for Solar PV power supply systems.
2. IEC 61727 or similar: Utility Interface Standard for PV power plants > 10 kW.
3. IEC 62103, 62109 and 62040 (UL 1741): Safety of Static Inverters – Mechanical and Electrical safety aspects.
4. IEC 62116: Testing procedure of Islanding Prevention Methods for Utility-Interactive PV Inverters.
5. PV Modules : IEC 61730- Safety qualification testing, IEC 61701 – Operation in corrosive atmosphere
6. IEC 61215 : Crystalline Silicon PV Modules qualification
7. String/array junction boxes : IP65, Protection Class II, IEC 604391, 3.
8. Surge Protection Devices: Type 2, DC 1000V rated.
9. PV module / string / string combiner box interconnects: MC4 compatible. DC 1000V rated.
10. The central inverter shall be rated for IP54.
11. The DC/AC distribution boxes shall be rated IP54.
12. The data acquisition systems shall be rated for IP54.
13. All DC and AC cables, conduits, cable trays, hardware: relevant IS.
14. Earthing System: relevant IS.
15. PV array support structure: relevant IS.
16. Quality Certification, Standards and Testing for Grid-Connected Rooftop Solar PV Systems/ Power Plants should be maintained as per Annexure- A



9. Information to be furnished by the Bidder:

1	Name, registered address and phone numbers	Attach documentary proof
2	Addresses and phone numbers of Branches in India	use separate sheets as attachment
3	Organizational set up of the firm including names, qualifications and experience of partners/Associates and staff and Electrical license	Details to be furnished in the prescribed proforma (Statement I)
4	Whether Registered as a contractor to any Govt. / Private Body? Mention the registration Number and year of registration.	Attach documentary proof.
5	Experience as contractor (give number of years)	
6	Important major contracts completed (value of the contracts having individual value of Rs. 76.00 lakhs and above only). The full postal address of the clients including their contact telephone numbers.	Details to be furnished in the prescribed pro-forma (Statement II)
7	Important major contracts (value of the contracts having individual value of Rs. 76.00 lakhs and above only) on which the firm is engaged at present. The full address of the clients and their contact telephone numbers shall be indicated against each assignment.	Details to be furnished in the prescribed pro-forma (Statement III)
8	Turnover of the firm during last 3 years (ending 31.03.2025). Copy of IT return for the last 3 years may be furnished.	
9	PAN No.	
10	GST No.	

Signature of the applicant with full address and office seal

Note: Statements I, II & III are enclosed.

NABARD

STATEMENT - I

List of professional staff with the contractor, giving their qualification, experience, including that in the present organization*

Sr. No.	Name	Age	Qualification	Experience	Nature of works handled	Name of the assignments handled	Date from which employed in the present organization
1	2	3	4	5	6	7	8

*** Use separate/additional sheets as per the requirement**

Signature of the applicant with full address and office seal

Note: Indicate other points (including clients' certificates), if any, relating to your technical and managerial competency which you would like to bring to our notice.

STATEMENT - II

List of important contracts executed by the contractor *

Sr. No.	Name of the Work including name of the building and location.	Nature of work involved in the contract.	Name of the owner and indicate whether it is a State Govt./ Govt. of India undertaking or Pvt. body with full address and telephone numbers. ***	Completion Period		Value of the work ** (Rs in lakh)	
				Stipulated	Actual		
1	2	3	4	5	6	7	

*** Use separate /additional sheets as per the requirement**

**** Mention the assignments where value of works costing Rs. 76.00 lakhs and above only.**

***** Attach client's certificates, Copy of work order, Scope of work etc.**

Signature of the applicant with full address and office seal

NABARD

STATEMENT - III

List of important contracts ON HAND being executed by the contractor*

Sr. No.	Name of the Work including name of the building and location	Nature of work involved in the Contract.	Name of owner and indicate whether it is a State Govt./ Semi-Govt./ Govt. of India Undertaking or Pvt. Body with full address and telephone numbers.***	Stipulated date of completion	Expected date of completion	Present stage of work with reasons if the work is getting delayed	Value of the work ** (Rs. in lakh)
1	2	3	4	5	6	7	8

*** Use separate /additional sheets as per the requirement**
**** Mention the assignments where value of works costing Rs. 76.00 lakhs and above only.**
***** Attach client's certificatesf**

Signature of the applicant with full address and office seal

10. ARTICLES OF AGREEMENT

(On a Rs 200/- Non- Judicial stamp paper)

ARTICLES OF AGREEMENT made on this ..... day of ..... (month) ..... between the National Bank for Agriculture and Rural Development (NABARD) (hereinafter called "the Employer") and having its Head Office at C-24, G-Block, Bandra Kurla Complex, Bandra (E), Mumbai – 400051 of the one part and M/s ..... (hereinafter called "the Tenderer" or "the contractor") and having its registered office at ....., Mumbai ..... of the other part.

WHEREAS the Employer is desirous of getting executed the work of "..... ....." and has caused the technical and price bids showing and describing the work to be done under the direction of the Employer.

AND WHEREAS the said technical bid and the Price Bid have been signed by or on behalf of the parties hereto.

AND WHEREAS the Tenderer has agreed to execute upon and subject to the conditions set forth in the *technical &* Price Bids and Conditions of Contract (all of which are collectively hereinafter referred to as "the said Conditions") the work shown upon the said technical specifications, and included in the Price Bid at the respective rates therein set forth amounting the sum as therein arrived or such other sum as shall become payable there under (hereinafter referred to as "the said contract amount").

NOW IT IS HEREBY AGREED AS FOLLOWS: -

1. In consideration hereinafter mentioned, the Tenderer will upon and subject to the conditions annexed, carry out and complete the works shown in the contract, described by or referred to in the Schedule of Quantities and in the said conditions.
2. The Employer shall pay the Tenderer the said contract amount or such sum as shall become payable at the times and in the manner specified in the said conditions.
3. The said Conditions and Appendix thereto and the documents attached hereto shall be read and construed as forming part of this Agreement and the parties hereto shall be respectively abide by, submit themselves to the said Conditions and the correspondence and perform the agreement on their part respectively in the said conditions and the documents contained herein.
4. This Agreement and documents mentioned herein shall form the basis of this contract.
5. This contract is an item rate contract for carrying out the work of "**..... .....**" and to be paid for according to actual measured quantities at the rates contained in the Schedule of Rates and probable quantities or as provided in the said conditions.
6. The Tenderer shall afford every reasonable facility for the works of all the other Contractors, who are engaged by the Employer and shall make good any damage done by them or their people to any of the Employer's property after the completion of such works.
7. The Employer reserves to itself the right of altering the nature of work by adding to or omitting any items of work or having portions of the same carried out by engaging any

other contractor / agency at it's sole discretion without prejudice to this contract. The contractor shall not have any right to claim loss of profit / loss of opportunity to work from the Employer.

8. The tenderer shall have to submit the "no other claims certificate" along-with the final bill and once the final bill is settled by the Employer, the tenderer will not have any right to claim for either any tender related or non-related work.
9. Time shall be considered as the essence of this contract, and the Tenderer hereby agrees to complete the entire work within **2 Months** as prescribed in the tender, which shall be reckoned from 10th day of the date of issue of work order subject nevertheless to the provision for extension of time as permissible by the Employer.
10. All disputes arising out of or in any way connected with this agreement shall be deemed to have arisen at Mumbai and only the sole Arbitrator as appointed by both the parties upon mutual consent in Mumbai shall have the jurisdiction to determine the same.
11. That the all parts of this contract have been read and fully understood by the tenderer.
12. **Warranty/ Defects Liability Period.**
    a. The entire system shall be warranted against any manufacturing/design/ installation defects etc for a minimum period of one year from the date of handing over. During this period any defect observed in the system shall be rectified within 2 days of the observation without any additional cost to the Bank.
    b. Supply and replacement of all spares, consumables and parts required for smooth operation and serviceability of the system shall be the responsibility of the contractor during this period. In this respect the contractor shall maintain sufficient spares/consumables for immediate replacement of defective / damaged part during day-to-day routine maintenance / breakdown maintenance. Cost of these spares and any other spares which may be required during maintenance is deemed to be included in the rates quoted by the contractor. The periodicity of service shall be monthly or more depending upon the weather conditions.
    c. PV modules used in solar power systems / systems must be warranted for their output peak watt capacity, which should not be less than 90% at the end of 10 years and 80% at the end of 25 years.
13. **Comprehensive Annual Maintenance Contract (CAMC) after DLP period**
    a) The tenderers shall quote their charges separately for comprehensive annual maintenance service of complete system as per schedule of quantities which will be applicable after one year of defect liability period (DLP). The rates shall also include the charges for the insurance of the workmen for carrying out the above job and GST for maintenance shall be quoted in respective column in the BOQ.
    b) The system shall be inspected, upkeep/serviced periodically. The periodicity shall be **monthly or earlier** depending upon the weather conditions.
    c) The charges for comprehensive annual maintenance service shall include replacement of any part of the system, including all required spares, consumables etc during service contract period. Any defects in the system/sub-assemblies, found within the AMC period, shall be rectified/ replaced by the tenderer without any additional cost to the Bank.
    d) **Payment of service charges during comprehensive annual maintenance service (CAMC):**

The payment during the CAMC period shall be **made on half yearly basis** on rendering satisfactory service.

e) The service contract shall be renewed for a further additional period of at least 8 years after the initial Comprehensive annual service contact period of one year after five-year warranty. While renewing the contract the new contract amount will be arrived at based on following formula:

AC = AP [(15+60x(EPIC/EPIP)+25x(CPIC/CPIP)] / 100	
AC	The contract amount for the current year.
AP	The contract amount for the previous year.
EPIC	Wholesale Price Index for Electrical Products 6 months prior to the commencement date of contract for the current year.
EPIP	Wholesale Price Index for Electrical Products 6 months prior to the commencement date of contract for the previous year.
CPIC	Consumer Price Index for Industrial Workers (All India Average) 6 months prior to the commencement date of contract for the current year.
CPIP	Consumer Price Index for Industrial Workers (All India Average) 6 months prior to the commencement date of contract for the previous year.

The successful tenderer shall enter into an agreement for comprehensive annual maintenance contract of the system with the Bank.

Scope of works during CAMC

(A) The scope of work shall include the following:

(i) Routine servicing/ troubleshooting/ setting/ adjustments/ cleaning/ checking of safeties etc. to ensure smooth and trouble free working of the system.

(ii) Repairs/ replacement to the SPP including re-loading software etc. in the event of any malfunctioning including replacement of spares/ components/ sub-system/ cards/ and any other component, part or whole, which may need replacement/ repairs.

(iii) Procurement, including Import, wherever required, of spares and stocking them shall be responsibility of the tenderer. Non availability of spares/ components will not be accepted as a reason for waiving of penalty towards delay in rendering prompt service.

(iv) All manufacturers preventive maintenance schedules/ replacement periodicity of components like electrical/electronics parts including checking of safety devices, protections phase reversal, load testing etc. shall be strictly followed as per the manufacturer's periodicity or as required in addition to the scope of maintenance indicated above.

(v) The scope of maintenance in addition to periodic maintenance will also include attending to any number of breakdown calls.

(vi) Inspection along with measurement of earth resistance of all the earth stations and report to be submitted to the concerned RBI office once in a year.

The contactor shall also ensure that the required spares etc. for proper maintenance are readily available with them for the complete life span of the system.

All payments by the Employer under this Contract shall be made only at Mumbai.

IN WITNESS WHEREOF the Employer has set its hands to these presents through its duly authorized officials and the Tenderer has caused its common seal to be affixed hereunto and the said two duplicates/ has caused these presents and the said two duplicates here of to be executed on its behalf, the day and year first herein above written.

Signature Clause

SIGNED AND DELIVERED by the

National Bank for Agriculture and

Rural Development by the hand of

Shri _____

(Name & Designation)

In the presence of:

Witness #1

Signature: _____

Name: _____

Address _____

Witness #2

Signature: _____

Name: _____

Address _____

SIGNED AND DELIVERED by the Bidder

_____

(Name, Signature & Designation)

Witness #1

Signature: _____

Name: _____

Address _____

Witness #2

Signature: _____

Name: _____

Address _____

11. INDEMNITY BOND

Know all men by these presents that I, Shri.....of M/s ..... do hereby execute Indemnity Bond in favour of National Bank for Agriculture and Rural Development (NABARD), having their Registered Office at C-24, G Block, Bandra-KurIa Complex, Bandra(E) Mumbai-400051 and M/s ..... having their registered office at ....., Mumbai – 400051 ..... on this ..... day of ..... 2025.

Whereas NABARD have appointed M/s ..... as the Contractor for their proposed work relating to "_____".

THIS DEED WITNESSETH AS FOLLOWS: -
I/We, on behalf of M/s ..... hereby do indemnify *to keep NABARD and its Employees harmless* against and from

any third party claims, civil or criminal complaints liabilities, site mishaps and other accidents or disputes and/or damages occurring or arising out of any mishaps at the site due to faulty work, for our negligence, faulty construction and/or for violating any law, rules and regulations in force, for the time being while executing/executed works by me/us,

any damages, loss or expenses due to or resulting from negligence or breach of duty on the part of me/us or any *of our* sub-contractor/s if any, servants or agents.

any claim by an employee of mine/ours or of sub-contractor/s, if any, under the Workmen Compensation Act and Employers Liability Act, 1939 or any other law, rules and regulations in force for the time being and any Acts replacing and/or amend the same or any of the same as may be in force at the time and under any law in respect of injuries to persons or property arising out of and in the course of the execution of the contract work and/or arising out of and in the course of employment of any workmen/employee.

any act or omission of mine/ours of sub-contractor/s if any, our/their servants or agents which may involve any loss, damage, liability, civil or criminal action.

IN WITNESS WHEREOF M/s ..... has set their hands on this .....day of .....
SIGNED AND DELIVERED BY THE AFORESAID M/s ..... through their authorized representative (Shri .....).

Signature

IN THE PRESENCE OF WITNESSES:

1. Name & Signature :

2. Name & Signature:

12.

संविदा पूर्व सत्यनिष्ठा करार

PRE CONTRACT INTEGRITY PACT

(to be submitted On Rs. 500/- Non-judicial stamp paper)

INTEGRITY PACT

Between

National Bank for Agriculture and Rural Development (NABARD) hereinafter referred to as **"The Principal"**

And

..... hereinafter referred to as **"The Bidder/Contractor"**

Preamble

The Principal intends to award, under laid down organizational procedures, contract/s for ..... . The Principal values full compliance with all relevant laws of the land, rules, regulation, and economic use of resources and of fairness /transparency in its relations with its Bidder(s) and/or Contractor(s).

In order to achieve these goals, the Principal will appoint Independent External Monitors (IEMs) who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

Section 1 – Commitments of the Principal

(1) The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:-

a. No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.

b. The Principal will, during the tender process treat all Bidder(s) with equity and reason. The Principal will, in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential / additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.

c. The Principal will exclude from the process all known prejudiced persons.

(2) If the Principal obtains information on the conduct of any of its employees which is a criminal offence under the IPC/PC Act, or if there be a substantive suspicion in this regard, the Principal will inform the Chief Vigilance Officer and in addition can initiate disciplinary actions.

Section 2 – Commitments of the Bidder(s)/Contractor(s)

(1) The Bidder(s) / Contractor(s) commit themselves to take all measures necessary to prevent corruption. The Bidder(s) / Contractor(s) commit themselves to observe the following principles during participation in the tender process and during the contract execution :

a. The Bidder(s) / Contractor(s) will not, directly or through any other person or firm, offer, promise or give to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.

b. The Bidder(s)/Contractor(s) will not enter with other Bidders into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelisation in the bidding process.

c. The Bidder(s)/Contractor(s) will not commit any offence under the relevant IPC/PC Act; further the Bidder(s) / Contractor(s) will not use improperly, for purposes of competition

or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.

d. The Bidder(s)/Contractor(s) of foreign origin shall disclose the name and address of the Agents/representatives in India, if any. Similarly the Bidder(s)/Contractors(s) of Indian Nationality shall furnish the name and address of the foreign principals, if any.

e. The Bidder(s) /Contractor(s) will, when presenting their bid, disclose any and all payments made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.

f. Bidder(s) /Contractor(s) who have signed the Integrity Pact shall not approach the Courts while representing the matter to IEMs and shall wait for their decision in the matter.

(2) The Bidder(s) /Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

Section 3 – Disqualification from tender process and exclusion from future contracts

If the Bidder(s) /Contractor(s), before award or during execution has committed a transgression through a violation of Section 2, above or in any other form which put their reliability or credibility in question, the Principal is entitled to disqualify the Bidder(s) /Contractor(s) from the tender process.

Section 4 – Compensation for Damages

(1) If the Principal has disqualified the Bidder(s) from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover the damages equivalent to Earnest Money Deposit/Bid Security.

(2) If the Principal has terminated the contract according to Section 3, or if the Principal is entitled to terminate the contract according to Section 3, the Principal shall be entitled to demand and recover from the Contractor liquidated damages of the Contract value or the amount equivalent to Performance Bank Guarantee.

Section 5 – Previous transgression

(1) The Bidder declares that no previous transgressions occurred in the last three years with any other Company in any country conforming to the anti-corruption approach or with any Public Sector Enterprise in India that could justify his exclusion from the tender process.

(2) If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process.

Section 6 – Equal treatment of all Bidders / Contractors/ Subcontractors

(1) In case of Sub-contracting, the Principal Contractor shall take the responsibility of the adoption of Integrity Pact by the Sub-contractor.
(2) The Principal will enter into agreements with identical conditions as this one with all Bidders and Contractors
(3) The Principal will disqualify from the tender process all bidders who do not sign the Pact or violate its provisions.

Section 7 – Criminal charges against violating Bidders(s) / Contractor(s) / Subcontractor(s)

If the Principal obtains knowledge of conduct of a Bidder, Contractor or Subcontractor, or of an employee or a representative or an associate of a Bidder, Contractor or Subcontractor which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the same to the Chief Vigilance Officer.

Section 8 – Independent External Monitor

(1) The Principal appoints competent and credible Independent External Monitor for this Pact after approval by Central Vigilance Commission. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.

The Independent External Monitors appointed for NABARD are

1. Shri Jagdeep Kumar Ghai, P&TA, FS (Retd), Falt 1032, A Wing, Vanashree Society, Sector 58 A&B, Palm Beach Road, Nerul, Navi Mumbai – 400706. Email : jkghai@gmail.com

(Name & Address of the Monitor)

(2) The Monitor is not subject to instructions by the representatives of the parties and performs his/her functions neutrally and independently. The Monitor would have access to all Contract documents, whenever required. It will be obligatory for him / her to treat the information and documents of the Bidders /Contractors as confidential. He / she reports to the Chairman, NABARD.

(3) The Bidder(s)/Contractor(s) accepts that the Monitor has the right to access without restriction to all Project documentation of the Principal including that provided by the Contractor. The Contractor will also grant the Monitor, upon his/her request and demonstration of a valid interest, unrestricted and unconditional access to their project documentation. The same is applicable to Sub-contractors.

(4) The monitor is under contractual obligation to treat the information and documents of the Bidder(s) /Contractor(s) / Sub-contractor(s) with confidentiality. The Monitor has also signed declarations on 'Non-disclosure of Confidential Information and of 'Absence of Conflict of Interest'. In case of any conflict of interest arising at a later date, the IEM shall inform Chairman, NABARD and recuse himself/herself from that case.

(5) The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the Project, provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings.

(6) As soon as the Monitor notices, or believes to notice, a violation of this agreement, he/she will so inform the Management of the Principal and request the Management to discontinue or take corrective action, or to take other relevant action. The monitor can in this regard submit non-binding recommendations. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.

(7) The monitor will submit a written report the Chairman, NABARD within 8 to 10 weeks from the date of reference or intimation to him by the Principal and, should the occasion arise, submit proposal for correcting problematic situations.

(8) If the Monitor has reported to the Chairman, NABARD, a substantiated suspicion of an offence under relevant IPC/PC Act, and the Chairman NABARD has not, within the reasonable time taken visible action to proceed against such offence or reported it to the Chief Vigilance Officer, the Monitor may also transmit this information directly to the Central Vigilance Commissioner.

(9) The word **'Monitor'** would include both singular and plural.

Section 9 – Pact Duration

This Pact begins when both parties have legally signed it. It expires for the Contractor 12 months after the last payment under the contract, and for all other Bidders 6 months after the contract has been awarded. Any violation of the same would entail disqualification of the bidders and exclusion from future business dealings.

If any claim is made/lodged during this time, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharge/determined by the Chairman of NABARD.

Section 10 – Other provisions

(1) This agreement is subject of Indian Law, Place of performance and jurisdiction is the Head Office of the Principal, i.e. Mumbai.

(2) Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.

(3) If the Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.

(4) Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

(5) Issues like Warranty/Guarantee etc. shall be outside the purview of IEMs.

(6) In the event of any contradiction between the Integrity Pact and its Annexure, if any, the Clause in the Integrity Pact will prevail.

_____	_____
(For & On behalf of the Principal)	(For & on behalf of the Bidder/contractor)
(Office Seal)	(Office Seal)

Place _____

Date _____

Witness 1:

(Name & Address) _____

_____

_____

Witness 2:

(Name & Address) _____

_____

_____

Format for Self-certification regarding Local Content in line with PPP-MII order and MoP Order, if applicable, to be provided on OEM Company's Letterhead. (to be deleted before printing)

13. Format for Self-Certification regarding Local Content (LC)

Tender Ref. No.:_____ & Date: _____

To, Date:
The Chief General Manager,
Department of Premises, Security and Procurement
National Bank for Agriculture and Rural Development
Head Office, Mumbai – 400051

Survey, Design, Manufacturing, Supply, Installation, Testing and Commissioning of Cumulative Capacity Of 290 KWp Grid Connected Solar Power Plant with Five Years Comprehensive Annual Maintenance Contract at Various NABARD Buildings In Mumbai, Maharashtra

In consideration of the above referred Tender floated/issued by National Bank for Agriculture and Rural Development
I/We M/s_____ certify that I/we have offered the products with local content of -----% in line with Government Public Procurement Order No. P-45021/2/2017-PP (BE-II) dated 04.06.2020 and its amendments thereafter. I/We further certify that, in case we are awarded an order against this tender, the supplies against such order will comply with above indicated Minimum Local Content.

Date :
Authorised Signatory :
Place : Name of the Person :
Designation :
Firm Name & Seal :

14. List of makes

List of Approved make of materials (To be filled by the bidder and submitted along with Part – I)			
Sr. No.	**Name of Item**	**Approved Makes**	**Makes offered by contractor**
1	PVC wire copper conductor 1100 volts grade FR/FRLS.	Finolex/Polycab/KEI or any other similar make	
2	MCBs/RCCBs/DBs/ Contactors/Metal clad AC socket.	Legrand/Havells/ L&T/Schinider/ ABB / C & S / Siemens or any other similar make	
3.	MS conduit and casing capping, PVC box	Precision/Modi/Prestoplast /BEC/AST/Anchor/Finolex any other similar make	
4	GI pipe	ACE/ NIC/ Jindal any other similar make	
5	DCDB Junction box	Phoneix/ Eaton/ Legrand any other similar make	
6	ACDB Junction box	Schinider/Phoneix/ Legrand any other similar make	
7	Lugs	Dowell/ Comet any other similar make	
8	Surge protection device	ABB/ Elmex/ Havells any other similar make	
9	Solar Panels	APPROVED LIST OF MODELS AND MANUFACTURERS (ALMM) (of solar PV modules) as per MNRE approved list updated upto 30 June 2025	
10	Solar Inverter/ MPPT/Solar optimizer or microinverter	EnPhase/SMA/Solar Edge any other similar make	

15. Safety Code

1. First-aid appliances, including adequate supply of sterilized dressings and cotton wool, shall be maintained in a readily accessible place.
2. The injured person shall be taken to a public hospital without loss of time, in cases where the injury necessitates hospitalisation.
3. Suitable and strong scaffolds should be provided for workmen for all works that cannot safely be done from ground.
4. No portable single ladder shall be over 8 meters in length, the width between the side rails not less than 30 cm (clear) and the distance between two adjacent rungs shall not be more than 30 cm. When a ladder is used, an extra mazdoor shall be engaged for holding the ladder.
5. The excavated material shall not be placed within 1.5 meters of the edge of the trench or half of the depth of the trench, whichever is more. All trenches and excavations shall be provided with necessary minimum height shall be one metre.
6. Every opening in the floor of a building or a working platform shall be provided with suitable means to prevent the fall of persons or materials by providing suitable fencing or railing whose minimum height shall be one metre.
7. No floor, roof or other part of the structure shall be so over-loaded with debris or materials as to render it unsafe.
8. Workers employed on mixing and handling material such as asphalt, cement, mortar or concrete and lime mortar shall be provided with protective footwear and rubber hand-gloves.
9. Those engaged in welding works shall be provided with welder's protective eye- shields and gloves.
10. No paint containing lead or lead products shall be used except in the form of paste or readymade paint.
11. Suitable face masks should be supplied for use by the workers when the paint is applied in the form of spray or surface having lead paint dry rubbed and scrapped.
12. Hoisting machines and tackles used in the work, including their attachments, anchorage and supports shall be in perfect condition.
13. The ropes used in hoisting or lowering material or as a means of suspension shall be of durable quality and adequate strength and free from defects.

NABARD

FIRE SAFETY

i. Cutting / drilling machine and other electrically operated equipments used at site shall be plugged into correctly rated electrical outlets.

ii. Only ISI marked 3 pin plug and other appliances and equipments shall be used.

iii. Electrical power cables/wires used shall not have any joints and shall be properly rated.

iv. All electrical appliances i.e. welding, drilling, cutting machine etc. shall be safely and securely earthed to prevent leakage current while in operation.

v. Before commencing the welding work for the first time on any day, fire section shall be informed and only after the site inspection by the Fire officers/Personnel, work shall be started.

vi. Two buckets of water and sand shall be kept in an easily accessible area on the site.

vii. Fire extinguishers recommended and issued by fire officers shall be kept on the site.

viii. Used paint drums shall be stored in specified store only after closing them properly.

ix. Personal protective equipments such as safety shoes, hand gloves, welder's mask, ear plug etc. depending upon the requirement of the work shall be provided by the contractor to the workmen to prevent occupational health hazards.

x. The safety belt shall be provided by the contractor and used by the workmen while working from height for more than 10' from Ground level.

xi. None of the passages near lift lobby and staircases shall be used for stacking / dumping any kind of materials/waste.

xii. Both the staircase doors shall be normally kept closed.

xiii. None of the fire extinguishers shall be removed/shifted from its designated location.

xiv. Power supply shall be switched off from the mains when equipment is not in use.

xv. Wood-shavings and saw-dust generated from the work shall be collected on daily basis , removed from site and stored at the designated place in proper manner.

xvi. Any debris generated from the work shall be collected on daily basis, removed from site and stored at the designated place in proper manner.

xvii. Battery operated emergency light/torches shall be provided by the contractor to the workmen while working beyond office hours.

NABARD

Electric Safety

I. All the temporary electrical power for carrying out various services at site such as cutti ng /drilling machine shall be provided through properly rated earth leakage protection devices (ELCB).
II. Only ISI marked 3 pin plug and other appliances and equipment's shall be used.
III. Electrical power cables/wires used shall be properly rated and joints should be avoid ed. If there, the joint should be proper and insulated.
IV. All electrical appliances i.e. welding, drilling, cutting machine, etc. shall be safely and securely earthed to prevent leakage current while in operation.
V. Before commencing the welding work for the first time on any day, fire section shall be informed.
VI. Fire buckets filled with clean dry sand and ready for immediate use for extinguishing fires, in addition to fire extinguishers suitable for dealing with fires, shall be co nspicuously marked and kept at site at convenient location
VII. Personal protective equipment such as safety shoes, hand gloves, welder's mask, ear plugs, etc. as applicable depending upon the requirement of the wo rk, shall be used by the workmen to prevent occupational health hazards.
VIII. The safety belt shall be used by the workmen while working from height for mo re than 10 feet from ground level.
IX. None of the passages near lift lobby and staircases shall be used for stacking / dumpi ng any kind of materials/waste.
X. Power supply shall be switched off from the Mains when equipment is not in use.
XI. Wood-shavings, saw-dust or any debris generated from the work shall be collected o n daily basis, removed from site and stored at the designated place in proper manne d
XII. The work site shall be properly illuminated during the work.
XIII. All the electrical works should be carried out by licensed/ authorized electricians/ wi remen.
XIV. Portable battery-operated lights may be used at work site to avoid laying of tem porary wire for lights.
XV. Necessary barricading and signage boards of good quality shall be fixed at c onspicuous locations at the work site.
XVI. Aluminum / steel ladders should have proper rubber insulation at the base a nd wherever required, these ladders shall be kept on electrical insulating safe rubbe r mats

16. Format of VIRTUAL COMPLETION CERTIFICATE

To,
The Chief General Manager
DPSP, NABARD Head Office
Mumbai

Dear Sir,

Survey, Design, Manufacturing, Supply, Installation, Testing and Commissioning of Cumulative Capacity Of 290 KWp Grid Connected Solar Power Plant with Five Years Comprehensive Annual Maintenance Contract at Various NABARD Buildings In Mumbai, Maharashtra

Ref. No.: *[Indicate Work/ Purchase Order No.]*

1. Having executed the work in terms of the contract, we hereby certify and affirm that we have virtually completed the contracted works.
2. We hereby certify that the work has been executed wholly to our satisfaction and with materials and workmanship in accordance with the contract.
3. We do certify further that we have executed the work in accordance with the applicable laws and without any transgression of such laws.

(Signature of Authorized Signatory of bidder firm along with Seal of the firm)

Name:

Designation of the Authorized Signatory:

Place:

Date:

17. Proforma of EMD credit details

TENDER for Survey, Design, Manufacturing, Supply, Installation, Testing and Commissioning of Cumulative Capacity Of 290 KWp Grid Connected Solar Power Plant with Five Years Comprehensive Annual Maintenance Contract at Various NABARD Buildings In Mumbai, Maharashtra

(EMD details to be filled by bidders)

लेखा का नाम NAME OF THE ACCOUNT	**NATIONAL BANK FOR AGRICULTURE AND RURAL DEVELOPMENT**
बैंक का नाम BANK NAME	**NABARD**
शाखा का नाम BRANCH NAME	**HEAD OFFICE, MUMBAI**
आईएफएस कोड IFS CODE	**NBRD0000002**
खाता संख्या ACCOUNT NUMBER (वैन VAN)	NABADMN07

Name of depositor	
Mode of transfer – Online (NEFT / RTGS)	
UTR No.	
Transaction date	
Amount deposited	
** ***Attach Bank Statement showing amount debited from account, on or before last date of submission of NIT.***	

Date:

Place: Signature with seal:

18.Pro-forma of furnishing the Payment details

TENDER for Survey, Design, Manufacturing, Supply, Installation, Testing and Commissioning of Cumulative Capacity Of 290 KWp Grid Connected Solar Power Plant with Five Years Comprehensive Annual Maintenance Contract at Various NABARD Buildings In Mumbai, Maharashtra

Name of the Agency		
Contact Details	Name	
	Email	
	Phone No	
PAN details (enclose copy of PAN)		
GST Number (enclose copy of GST registration)		
Address of principle place of business in the state as per GST registration certificate	Address	
	City	
	PIN	
	State	
Bank account number		
Account Name		
Type of the account		
Name & Address of Bank		
IFSC Code **(enclose copy of cancelled cheque)**		

Name of the Agency:

Date:

Place: Signature with seal:

19. Bidder agency profile at a glance

TENDER for Survey, Design, Manufacturing, Supply, Installation, Testing and Commissioning of Cumulative Capacity Of 290 KWp Grid Connected Solar Power Plant with Five Years Comprehensive Annual Maintenance Contract at Various NABARD Buildings In Mumbai, Maharashtra

Sr. No.	Particulars	
1	Name & Mailing Address of firm	
2	Contact Person Name, Designation & Contact No.	
3	E-mail Address for correspondence	
4	Firm Website Address	
5	Firm Status (Private/ PSU/ Incorporate / Properiter)	
6	Establish Year of firm	
7	PAN/ TAN No.	
8	Firm Registration No/ ROC	
9	EPF Registration No, if applicable	
10	STR/ GST/ TIN No	
11	Bank name & contact No	
12	Turnover 2021-22, 2022-23 & 2023-24(in Crore Rs.)	
13	Company Profile (<100 words)	
14	Partner/ JV Firm details, if any (<100 words)	
15	Factory Address & Floor Area of factory	
16	Net worth	
17	Self- Manufacturing facilities & Capacity (A list of machinery be attached)	

Sr. No.	Particulars	
18	Outsourcing Item and Firm (Name & Address of Indian/ foreign	
19	Collaborator/s, if Any)	
20	Own Testing facility	
21	Skilled manpower	
22	Dealer/ supply network in Maharashtra	
23	Experience in SPV Power Plant (<100 words)	
24	Experience in other solar projects (<100 words)	
25	Solar related Product Range	
26	Guarantee, Maintenance & After Sales Services (Years)	
27	Accreditation (Own Firm)	
28	Accreditation (Partner/ outsourcing Firm)	
29	List of ISI, ISO, other cert. for own firm	
30	List of ISI, ISO, other cert. for partner/ outsourcing firm	
31	Technical specification for solar photovoltaic cell/ panel/ module	

Sr. No.	Particulars	
32	Technical specification for Battery	
33	Technical specification for Junction boxes	
34	Technical specification for Inverter / Controller	
35	Technical specification for Cables	
36	Other Technical specification, if any	
37	Has any Govt. / Under - taking ever debarred the company / firm from executing any work?	
38	Special Remarks, if any	

It is certified that the information provided above is true to the best of my knowledge and belief. If any information found to be concealed, suppressed or incorrect at later date, our tender shall be liable to be rejected, and our company may be debarred from executing any business with NABARD.

Name of the Agency:

Date:

Place: Signature with seal:

20. LIST OF PROJECTS of SPV executed by the agency

(Grid connected)

Sr. No	Name of Beneficiary and address with E- mail Id and Contact No. (Landline & Mobile No.)	Plant Capacity (KWp)	Date for commissioning / Current Status of Project (Attach certificate by user Agency)

For

(Company Name)

Name of signing authority / Designation / Place / Date

Note: Bidders to submit self-attested scanned copies of complete work / purchase orders supporting with above project list, this is necessary for to review qualifying criteria.

21. Typical Maintenance Schedule

Component	Activity	Description	Interval	By
Module Mounting structure	Inspection	Check whether the MMS are properly in tightened position and check for corrosion.	Annual	
PV Modules/ Array	Inspection	Use infrared camera to inspect for hot spots; bypass diode failure	Annual	
	Inspection	Check the PV modules and rack for any damage. Note down location and serial number of damaged modules.	Annual	
Junction Boxes	Inspection	Inspect electrical boxes for corrosion or intrusion of water or insects. Seal boxes if required. Check position of switches and breakers. Check operation of all protection devices.	Annual	
Wiring	Inspection	Inspect cabling for signs of cracks, defects, lose connections, overheating, arcing, short or open circuits and ground faults.	Annual	
Inverter	Service	Clean or replace any air filters.	As needed	

No DC overloading is allowed.

22. Annual Maintenance Report to be submitted to Employer

Month and year:

Name of the Contractor:

Order No:

Project Capacity:

Address of the site:

Date:

Component	Activity	Description	Remarks
PV Modules Array	Inspection	Infrared camera inspection for hot spots; bypass diode failure.	
	Inspection	Check the PV modules and rack for any damage.	
Junction Boxes	Inspection	Inspect electrical boxes for corrosion, intrusion of water or vermin. • Check position of switches and breakers. Check status of all protection devices.	
Wiring	Inspection	Inspect cabling for signs of cracks, defects, lose connections, corrosion, overheating, arcing, short or open circuits, and ground faults	
Inverter	Inspection	Observe instantaneous operational indicators on the faceplate. Inspect Inverter housing or shelter for any physical	
Inverter	Service	Clean or replace any air filters.	

Signature of the Authorized signatory of the Contractor

Signature of the Owner/Representative of building

23. General Standard and Codes

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 (NH3) 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
IS/IEC 61683	Photovoltaic Systems – Power conditioners: Procedure for Measuring Efficiency (10%, 25%, 50%, 75% & 90-100% Loading Conditions)
IEC 60068-2 / IEC 62093	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): Low-voltage Switchgear and Control-gear, Part 1: General rules Low-Voltage Switchgear and Control-gear, Part 2: Circuit Breakers Low-voltage switchgear and Control-gear, Part 3: Switches, disconnectors switch-disconnectors and fuse-combination units 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
Surge Arrestor	
BFC 17-102:2011/ NFC 102:2011/ IEC 62305	102:2011/ IEC 62305 Lightning Protection
IEC 60364-5-53/ IS 15086- (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

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
Others	
IS/IEC 60529	Degrees of Protection provided by enclosures (IP coding)
IS 2705/ IS 16227/ IEC 61869	Instrument Transformers
IS 3043	Code of practice for earthing.
IS/IEC 60255	Measuring Relays and Protection Equipment
IEC 60269	HRC Cartridge fuses
IS 10118	Code of practice for selection, installation and maintenance of switchgear and control gear.

Note: If any standard has expired or does not exist anymore, then the other standard which has substituted it shall be applicable.

24. DATA FOR ASSURED POWER GENERATION

Sr. No.	Power Generation during #	On-Grid
1	Min. total peak hour	
2	Min. total for 1st year	
3	Min. total for 2nd year	
4	Min. total for 3rd year	
5	Min. total for 4th year	
6	Min. total for 5th year	
7	Min. total for 10th year	
8	Min. total for 15th year	
9	Min. total for 20th year	
10	Min. total for 25th year	

Note:"#" Energy generation /Power production in (AC) units at application end by offered SPV system; considering ideal conditions / climatic conditions for proposed location; as per reference Data available by various reputed International / GoI institutes.

25. DETAILS OF OFFERED SYSTEM

Sr. No.	Particulars	Capacity
		Quantity
		Make
1	Module Mounting Structure	
2	Solar PV modules	
3	PCU	
4	Array Junction Box	
5	DC Cables	
6	Distribution Boards / Panels	
7	AC Cables	
8	Tools & Tackles required for installation, testing, operation & maintenance of entire SPV Systems	

*Note: Bidders to submit technical Brochure for offered **P V Module & Inverter** along with test certificates / reports compiling applicable Standards as per guidelines issued by MNRE & with details of Guaranty & Warranty. Sub-standard makes or indication of 'Equivalent make' shall strictly be avoided.*

26. Certificate/Affidavit of Correctness & Non-Blacklisting Certificate

(To be executed on vendor's letter head by the bidder)

I / We Proprietor/ Partner(s)/ Director(s) of M/S. [*Full Name of the Bidder Firm]* hereby declare that the information and documents submitted online as technical bid for the Bid No. [*Enter GeM Bid No. ……..]* are true and correct to my knowledge and belief and I/We are fully responsible for the correctness of the information and documents submitted by us in the Technical Bid.

And

I / We Proprietor/ Partner(s)/ Director(s) of M/S. [*Full Name of the Bidder Firm] hereby* declare that the I/We have not been Blacklisted by any Centra/ or State Govt. Department/ Public Sector Undertakings/ Public & Private Sector Banks & Financial Institutions/ Regulatory Authorities/Autonomous Bodies /Govt. Undertakings/ Institutions/Universities.

(Signature of Authorized Signatory of bidder firm along with Seal of the firm)

Name:

Designation of the Authorized Signatory:

Place:

Date:

27. Chartered Accountant's Certificate

(As attachment to Format for Technical Bid on letter head of the Chartered Accountant's Firm)

The following details of M/s _____ given in the table below are certified to be correct based on the verification of original documents and supporting information:
Profit and Loss Account:

Year	Turnover (₹)	Profit for the Financial Year in (₹ Lakh)	Page Number in the Attached P&L A/c
2022-23			
2023-24			
2024-25			

Name and Signature of the Partner seal:
Membership number:

Name of the Firm :
FRN of the firm :

Part- II

PRICE BID

Preamble to Bill of Quantities/ Financial Bid

"Survey, Design, Manufacturing, Supply, Installation, Testing and Commissioning of Cumulative Capacity Of 290 KWp Grid Connected Solar Power Plant with Five Years Comprehensive Annual Maintenance Contract at Various NABARD Buildings In Mumbai, Maharashtra"

1. Preamble to bill of quantities/ financial bid form a part of the bill of quantities/ financial bid for contractual purpose and should be studied carefully prior to filling up the schedule of quantities.

2. Items are described to the best possible extent in the bill of quantities. However, should there be any clarifications required about any item, the same should be obtained by the bidder during pre-bid meeting prior to quoting the rate for a particular item. No claim for any unclear and missing information shall be entertained after opening of the financial bid and also once the contract is awarded.

3. If no rate/amount is mentioned against any of the items in Bill of Quantities, the tender will be summarily rejected.
4. Notes given in the Bill of Quantities should be read carefully before quoting the rates.

5. All quoted rates shall be inclusive of all taxes including goods and service tax (GST) and transportation costs, installations costs or any other costs, unless otherwise stated. No other claim whatsoever in this respect shall be entertained.

6. Income Tax, IT(TDS), GST(TDS), Works Contract Tax or any other Tax as applicable will be deducted from any payment due to the Contractors as per the applicable law. The Contractor shall furnish necessary documentary evidence related to PAN and Certificate for Registration under Works Contract Tax/ Goods and Service Tax.

7. The Bank do not bind itself to accept the lowest or any tender and reserve its right to accept or reject any or all the tenders, either in whole or in part without assigning any reason for doing so.

8. Rates quoted by the firm should be valid for a minimum period of **90 days** from the date of opening of price bid.

9. The Bidder in their own interest and expense may visit the site and see and understand the site before quoting the rates.

Declaration by the Contractor/Bidder

We/ I have read and understood all the instructions/conditions stated above and we / I accept all the above terms and conditions without any reservation. We/ I have taken in to account the above terms and conditions while quoting the rates.

Accepted all Terms & Conditions

Place: **Authorized Signatory**

Date:

Signature & Seal of Tenderer

NABARD

UNPRICED BILL OF QUANTITY.

Tender Inviting Authority: Chief General Manager, Department of Premises, Security and Procurement, NABARD, Head Office, Mumbai
Name of Work: Tender for Supply, Installation, Testing And Commissioning of Cumulative Capacity Of Grid Connected Solar Power Plant at various properties of NABARD at Mumbai with Five Years Comprehensive Maintenance Contract
Contract No:
Name of the Bidder/ Bidding Firm / Company :

Price Summary for Supply, Installation, Testing And Commissioning of Cumulative Capacity Of Grid Connected Solar Power Plant at various properties of NABARD at Mumbai with Five Years Comprehensive Maintenance Contract

Bidders are required to input their rates in the respective Excel sheets provided for each colony. The consolidated values will be auto-populated in this summary sheet.
(This BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevent columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only)

Sr. No.	Description	Total Amount SITC Incl. GST	Total Amount CAMC incl. GST	Total Amount Incl. GST (As Quoted on GeM portal consigne e wise)
1	Survey, Design, Manufacture, Supply, Installation, Testing And Commissioning With Five Years Comprehensive Maintenance Contract Cumulative Capacity Of Grid Connected Solar Power Plant at **NABARD HO BKC**			
2	Survey, Design, Manufacture, Supply, Installation, Testing And Commissioning With Five Years Comprehensive Maintenance Contract Cumulative Capacity Of Grid Connected Solar Power Plant at **NABARD House BKC**			
3	Survey, Design, Manufacture, Supply, Installation, Testing And Commissioning With Five Years Comprehensive Maintenance Contract Cumulative Capacity Of Grid Connected Solar Power Plant at **NABARD KVS Dadar**			

4	Survey, Design, Manufacture, Supply, Installation, Testing And Commissioning With Five Years Comprehensive Maintenance Contract Cumulative Capacity Of Grid Connected Solar Power Plant at **NABARD Nagar Kandivali**			
5	Survey, Design, Manufacture, Supply, Installation, Testing And Commissioning With Five Years Comprehensive Maintenance Contract Cumulative Capacity Of Grid Connected Solar Power Plant at **NABARD Damodhar Park Ghatkopar**			
6	Survey, Design, Manufacture, Supply, Installation, Testing And Commissioning With Five Years Comprehensive Maintenance Contract Cumulative Capacity Of Grid Connected Solar Power Plant at **NABARD Park Santa Cruz**			
7	Survey, Design, Manufacture, Supply, Installation, Testing And Commissioning With Five Years Comprehensive Maintenance Contract Cumulative Capacity Of Grid Connected Solar Power Plant at **NABARD Nestle-II Lower Parel**			
8	TOTAL CONTRACT PRICE INCL. GST			

NOTE: This is only the Price Summary

Refer detailed BOQ below and also see the BOQ excel sheet uploaded. Bidders need to fill their Price Bid in that Excel Sheet only

BOQ of Survey, Design, Manufacture, Supply, Installation, Testing And Commissioning With Five Years Comprehensive Maintenance Contract Cumulative Capacity Of Grid Connected Solar Power Plant **at NABARD HO BKC** - 20 KWp

Sr. No.	Description	Unit	Qty	Unit Rate Excl. GST	GST rate (%)	Amount Excl. GST	Amount Incl. GST
A	Supply, Installation, Testing and Commissioning of ongrid Solar Photovoltaic Power Plant conforming to MNRE specifications as amended, consisting of Monocrystalline silicon solar cells, net metering facility, necessary protections, earthing, mounted on Aluminium/GI structure of suitable strength with following components complete as required:- a) Solar Photovoltaic Module of capacity 545 Wp or above manufactured in India, conforming to IS 14286/IEC 61215, IS/IEC 61730- Part-1, IS/IEC 61730-Part-2. Solar Photovoltaic Module conversion efficiency shall not be less than 16.5%. PV modules used in solar power plants/ systems must be warranted for their output peak watt capacity, which should not be less than 90% at the end of 10 years and 80% at the end of 25 years. b) Power Conditioning Unit (PCU) of 350-800 V DC Input voltage range and 415 V AC, three phase, 4 wire, 50Hz +/- 2.5 Hz, output voltage suitable to generate AC Power with efficiency not less than 93%, total harmonic distortion less than 3% and suitable for ambient temperature from 0 to 50 degree C. The PCU shall adjust the voltage and frequency level to suit the Grid Voltage Frequency. c) Online Data Monitoring System completes with accessories for daily monitoring of power generated though roof top solar. d) Fixing of Array junction box & Main junction box with IP 65 protection and termination arrangement for incoming and outgoing cable along with glands, lugs and other accessories etc. as required. e) Lightning and surge voltage protection with dedicated earth pits. Bidder has to lay suitable size copper earth flat/strip from earth pit to each array of solar power plant including inverter. Earth strip should be painted with two coats of red oxide primer and one coat of anti rust green paint with his cost. f) Connections & Interconnections by supplying & fixing required size XLPE insulated copper conductor 1.1 kV grade armoured power and control cables between solar modules, main power cable to grid supply PCU unit along with supplying & fixing of necessary channel/conduit lugs and other accessories etc. as required. The scope of work includes supply and laying of suitable size armored aluminium cable (Minimum length of the cable is 50 Rmt) from ground floor main panel to Solar AC DB near inverter. The Scope also includes g) Getting necessary approvals from Government Authorities, as per The site requirement including fees and other incidental expenses to be paid i) loading, transport, unloading and shifting of the above materials to the terrace irrespective of the height and number of floors as per site requirement ii) Assembling of all the components, parts, fabrication and erection of the supports for the Solar panels and Installation of the entire system iii)Wastage of materials during execution iv) Water and power required at the site for execution of the work at the site v) temporary works such as scaffolding, cleaning the site before and after the installation of the system, disposing all the debris generated during the work vi) all type of Insurance Charges covering men and materials, transit insurance, third party insurance etc All applicable taxes like levies, Octroi (if applicable), local body taxes (if applicable) etc excluding GST Overheads, profit, statutory expenses, incidental charges and all Related expenses to complete the work etc **Metering Cubicle/Panel**: SITC of outdoor type weather proof type metering cubicle made out of CRCA sheet powder coated as per DISCOM approved standards, makes. LT Metering cubicle with net metering facility: SITC of LT metering cubicle with Bidirectional meter, as per DISCOM requirement. Solar meter- unidirectional meter for solar generation measurement with metering cubicle as required as per requirements of concerned DISCOM. Charges for testing of new metering equipments, calibration, transportation of same for necessary approvals, preparation of drawings etc. all complete as required to complete the work in total. **Warranty Period:** The warranty of overall Solar Power system Auxiliaries like AJB, SPD, Inverter etc. except solar panels will be 5 years from date of commissioning of plant. Warranty of the solar PV panels should be 25 years from date of commissioning of plant. The price must be quoted including warranty as per the tender terms	KWp	20		**18**	0	0
	Comprehensive AMC as per technical Specifications						
	1st Year Comprehensive AMC service as per Technical Specifications	Per Year	1		18		
	2nd Year Comprehensive AMC service as per Technical Specifications	Per Year	1		18		
	3rd Year Comprehensive AMC service as per Technical Specifications	Per Year	1		18		
	4th Year Comprehensive AMC service as per Technical Specifications	Per Year	1		18		
	5th Year Comprehensive AMC service as per Technical Specifications	Per Year	1		18		
B	**Total for 5 Yr Comprehensive AMC service as per Technical Specifications**			0.00	18		
C	**Total for SITC and 5 years CAMC (A+B)**						0

BOQ of Survey, Design, Manufacture, Supply, Installation, Testing And Commissioning With Five Years Comprehensive Maintenance Contract Cumulative Capacity Of Grid Connected Solar Power Plant **at NABARD House BKC - 10KWp**

Sr. No.	Description	Unit	Qty	Unit Rate Excl. GST	GST rate (%)	Amount Excl. GST	Amount Incl. GST
A	Supply, Installation, Testing and Commissioning of ongrid Solar Photovoltaic Power Plant conforming to MNRE specifications as amended, consisting of Monocrystalline silicon solar cells, net metering facility, necessary protections, earthing, mounted on Aluminium/GI structure of suitable strength with following components complete as required:- a) Solar Photovoltaic Module of capacity 545 Wp or above manufactured in India, conforming to IS 14286/IEC 61215, IS/IEC 61730- Part-1, IS/IEC 61730-Part-2. Solar Photovoltaic Module conversion efficiency shall not be less than 16.5%. PV modules used in solar power plants/ systems must be warranted for their output peak watt capacity, which should not be less than 90% at the end of 10 years and 80% at the end of 25 years. b) Power Conditioning Unit (PCU) of 350-800 V DC Input voltage range and 415 V AC, three phase, 4 wire, 50Hz +/- 2.5 Hz, output voltage suitable to generate AC Power with efficiency not less than 93%, total harmonic distortion less than 3% and suitable for ambient temperature from 0 to 50 degree C. The PCU shall adjust the voltage and frequency level to suit the Grid Voltage Frequency. c) Online Data Monitoring System completes with accessories for daily monitoring of power generated though roof top solar. d) Fixing of Array junction box & Main junction box with IP 65 protection and termination arrangement for incoming and outgoing cable along with glands, lugs and other accessories etc. as required. e) Lightning and surge voltage protection with dedicated earth pits. Bidder has to lay suitable size copper earth flat/strip from earth pit to each array of solar power plant including inverter. Earth strip should be painted with two coats of red oxide primer and one coat of anti rust green paint with his cost. f) Connections & Interconnections by supplying & fixing required size XLPE insulated copper conductor 1.1 kV grade armoured power and control cables between solar modules, main power cable to grid supply PCU unit along with supplying & fixing of necessary channel/conduit lugs and other accessories etc. as required. The scope of work includes supply and laying of suitable size armored aluminium cable (Minimum length of the cable is 50 Rmt) from ground floor main panel to Solar AC DB near inverter. The Scope also includes g) Getting necessary approvals from Government Authorities, as per The site requirement including fees and other incidental expenses to be paid i) loading, transport, unloading and shifting of the above materials to the terrace irrespective of the height and number of floors as per site requirement ii) Assembling of all the components, parts, fabrication and erection of the supports for the Solar panels and Installation of the entire system iii)Wastage of materials during execution iv) Water and power required at the site for execution of the work at the site v) temporary works such as scaffolding, cleaning the site before and after the installation of the system, disposing all the debris generated during the work vi) all type of Insurance Charges covering men and materials, transit insurance, third party insurance etc All applicable taxes like levies, Octroi (if applicable), local body taxes (if applicable) etc excluding GST Overheads, profit, statutory expenses, incidental charges and all Related expenses to complete the work etc **Metering Cubicle/Panel**: SITC of outdoor type weather proof type metering cubicle made out of CRCA sheet powder coated as per DISCOM approved standards, makes. LT Metering cubicle with net metering facility: SITC of LT metering cubicle with Bidirectional meter, as per DISCOM requirement. Solar meter- unidirectional meter for solar generation measurement with metering cubicle as required as per requirements of concerned DISCOM. Charges for testing of new metering equipments, calibration, transportation of same for necessary approvals, preparation of drawings etc. all complete as required to complete the work in total. **Warranty Period:** The warranty of overall Solar Power system Auxiliaries like AJB, SPD, Inverter etc. except solar panels will be 5 years from date of commissioning of plant. Warranty of the solar PV panels should be 25 years from date of commissioning of plant. The price must be quoted including warranty as per the tender terms	KWp	10			0	0
	Comprehensive AMC as per technical Specifications						
	1st Year Comprehensive AMC service as per Technical Specifications	Per Year	1		18		
	2nd Year Comprehensive AMC service as per Technical Specifications	Per Year	1		18		
	3rd Year Comprehensive AMC service as per Technical Specifications	Per Year	1		18		
	4th Year Comprehensive AMC service as per Technical Specifications	Per Year	1		18		
	5th Year Comprehensive AMC service as per Technical Specifications	Per Year	1		18		
B	**Total for 5 Yr Comprehensive AMC service as per Technical Specifications**			0.00	18		
C	**Total for SITC and 5 years CAMC (A+B)**						0

BOQ of Survey, Design, Manufacture, Supply, Installation, Testing And Commissioning With Five Years Comprehensive Maintenance Contract Cumulative Capacity Of Grid Connected Solar Power Plant **at NABARD KVS Dadar** - 20 KWp

Sr. No.	Description	Unit	Qty	Unit Rate Excl. GST	GST rate (%)	Amount Excl. GST	Amount Incl. GST
A	Supply, Installation, Testing and Commissioning of ongrid Solar Photovoltaic Power Plant conforming to MNRE specifications as amended, consisting of Monocrystalline silicon solar cells, net metering facility, necessary protections, earthing, mounted on Aluminium/GI structure of suitable strength with following components complete as required:- a) Solar Photovoltaic Module of capacity 545 Wp or above manufactured in India, conforming to IS 14286/IEC 61215, IS/IEC 61730- Part-1, IS/IEC 61730-Part-2. Solar Photovoltaic Module conversion efficiency shall not be less than 16.5%. PV modules used in solar power plants/ systems must be warranted for their output peak watt capacity, which should not be less than 90% at the end of 10 years and 80% at the end of 25 years. b) Power Conditioning Unit (PCU) of 350-800 V DC Input voltage range and 415 V AC, three phase, 4 wire, 50Hz +/- 2.5 Hz, output voltage suitable to generate AC Power with efficiency not less than 93%, total harmonic distortion less than 3% and suitable for ambient temperature from 0 to 50 degree C. The PCU shall adjust the voltage and frequency level to suit the Grid Voltage Frequency. c) Online Data Monitoring System completes with accessories for daily monitoring of power generated though roof top solar. d) Fixing of Array junction box & Main junction box with IP 65 protection and termination arrangement for incoming and outgoing cable along with glands, lugs and other accessories etc. as required. e) Lightning and surge voltage protection with dedicated earth pits. Bidder has to lay suitable size copper earth flat/strip from earth pit to each array of solar power plant including inverter. Earth strip should be painted with two coats of red oxide primer and one coat of anti rust green paint with his cost. f) Connections & Interconnections by supplying & fixing required size XLPE insulated copper conductor 1.1 kV grade armoured power and control cables between solar modules, main power cable to grid supply PCU unit along with supplying & fixing of necessary channel/conduit lugs and other accessories etc. as required. The scope of work includes supply and laying of suitable size armored aluminium cable (Minimum length of the cable is 50 Rmt) from ground floor main panel to Solar AC DB near inverter. The Scope also includes g) Getting necessary approvals from Government Authorities, as per The site requirement including fees and other incidental expenses to be paid i) loading, transport, unloading and shifting of the above materials to the terrace irrespective of the height and number of floors as per site requirement ii) Assembling of all the components, parts, fabrication and erection of the supports for the Solar panels and Installation of the entire system iii)Wastage of materials during execution iv) Water and power required at the site for execution of the work at the site v) temporary works such as scaffolding, cleaning the site before and after the installation of the system, disposing all the debris generated during the work vi) all type of Insurance Charges covering men and materials, transit insurance, third party insurance etc All applicable taxes like levies, Octroi (if applicable), local body taxes (if applicable) etc excluding GST Overheads, profit, statutory expenses, incidental charges and all Related expenses to complete the work etc **Metering Cubicle/Panel**: SITC of outdoor type weather proof type metering cubicle made out of CRCA sheet powder coated as per DISCOM approved standards, makes. LT Metering cubicle with net metering facility: SITC of LT metering cubicle with Bidirectional meter, as per DISCOM requirement. Solar meter- unidirectional meter for solar generation measurement with metering cubicle as required as per requirements of concerned DISCOM. Charges for testing of new metering equipments, calibration, transportation of same for necessary approvals, preparation of drawings etc. all complete as required to complete the work in total. **Warranty Period:** The warranty of overall Solar Power system Auxiliaries like AJB, SPD, Inverter etc. except solar panels will be 5 years from date of commissioning of plant. Warranty of the solar PV panels should be 25 years from date of commissioning of plant. The price must be quoted including warranty as per the tender terms	KWp	20			0	0
	Comprehensive AMC as per technical Specifications						
	1st Year Comprehensive AMC service as per Technical Specifications	Per Year	1		18		
	2nd Year Comprehensive AMC service as per Technical Specifications	Per Year	1		18		
	3rd Year Comprehensive AMC service as per Technical Specifications	Per Year	1		18		
	4th Year Comprehensive AMC service as per Technical Specifications	Per Year	1		18		
	5th Year Comprehensive AMC service as per Technical Specifications	Per Year	1		18		
B	**Total for 5 Yr Comprehensive AMC service as per Technical Specifications**			0.00	18		
C	**Total for SITC and 5 years CAMC (A+B)**						0

BOQ of Survey, Design, Manufacture, Supply, Installation, Testing And Commissioning With Five Years Comprehensive Maintenance Contract Cumulative Capacity Of Grid Connected Solar Power Plant **at NABARD Nagar Kandivali**

Sr. No.	Description	Unit	Qty	Unit Rate Excl. GST	GST rate (%)	Amount Excl. GST	Amount Incl. GST
A	Supply, Installation, Testing and Commissioning of ongrid Solar Photovoltaic Power Plant conforming to MNRE specifications as amended, consisting of Monocrystalline silicon solar cells, net metering facility, necessary protections, earthing, mounted on Aluminium/GI structure of suitable strength with following components complete as required:- a) Solar Photovoltaic Module of capacity 545 Wp or above manufactured in India, conforming to IS 14286/IEC 61215, IS/IEC 61730- Part-1, IS/IEC 61730-Part-2. Solar Photovoltaic Module conversion efficiency shall not be less than 16.5%. PV modules used in solar power plants/ systems must be warranted for their output peak watt capacity, which should not be less than 90% at the end of 10 years and 80% at the end of 25 years. b) Power Conditioning Unit (PCU) of 350-800 V DC Input voltage range and 415 V AC, three phase, 4 wire, 50Hz +/- 2.5 Hz, output voltage suitable to generate AC Power with efficiency not less than 93%, total harmonic distortion less than 3% and suitable for ambient temperature from 0 to 50 degree C. The PCU shall adjust the voltage and frequency level to suit the Grid Voltage Frequency. c) Online Data Monitoring System completes with accessories for daily monitoring of power generated though roof top solar. d) Fixing of Array junction box & Main junction box with IP 65 protection and termination arrangement for incoming and outgoing cable along with glands, lugs and other accessories etc. as required. e) Lightning and surge voltage protection with dedicated earth pits. Bidder has to lay suitable size copper earth flat/strip from earth pit to each array of solar power plant including inverter. Earth strip should be painted with two coats of red oxide primer and one coat of anti rust green paint with his cost. f) Connections & Interconnections by supplying & fixing required size XLPE insulated copper conductor 1.1 kV grade armoured power and control cables between solar modules, main power cable to grid supply PCU unit along with supplying & fixing of necessary channel/conduit lugs and other accessories etc. as required. The scope of work includes supply and laying of suitable size armored aluminium cable (Minimum length of the cable is 50 Rmt) from ground floor main panel to Solar AC DB near inverter. The Scope also includes g) Getting necessary approvals from Government Authorities, as per The site requirement including fees and other incidental expenses to be paid i) loading, transport, unloading and shifting of the above materials to the terrace irrespective of the height and number of floors as per site requirement ii) Assembling of all the components, parts, fabrication and erection of the supports for the Solar panels and Installation of the entire system iii)Wastage of materials during execution iv) Water and power required at the site for execution of the work at the site v) temporary works such as scaffolding, cleaning the site before and after the installation of the system, disposing all the debris generated during the work vi) all type of Insurance Charges covering men and materials, transit insurance, third party insurance etc All applicable taxes like levies, Octroi (if applicable), local body taxes (if applicable) etc excluding GST Overheads, profit, statutory expenses, incidental charges and all Related expenses to complete the work etc **Metering Cubicle/Panel**: SITC of outdoor type weather proof type metering cubicle made out of CRCA sheet powder coated as per DISCOM approved standards, makes. LT Metering cubicle with net metering facility: SITC of LT metering cubicle with Bidirectional meter, as per DISCOM requirement. Solar meter- unidirectional meter for solar generation measurement with metering cubicle as required as per requirements of concerned DISCOM. Charges for testing of new metering equipments, calibration, transportation of same for necessary approvals, preparation of drawings etc. all complete as required to complete the work in total. **Warranty Period:** The warranty of overall Solar Power system Auxiliaries like AJB, SPD, Inverter etc. except solar panels will be 5 years from date of commissioning of plant. Warranty of the solar PV panels should be 25 years from date of commissioning of plant. The price must be quoted including warranty as per the tender terms	KWp	165			0	0
	Comprehensive AMC as per technical Specifications						
	1st Year Comprehensive AMC service as per Technical Specifications	Per Year	1		18		
	2nd Year Comprehensive AMC service as per Technical Specifications	Per Year	1		18		
	3rd Year Comprehensive AMC service as per Technical Specifications	Per Year	1		18		
	4th Year Comprehensive AMC service as per Technical Specifications	Per Year	1		18		
	5th Year Comprehensive AMC service as per Technical Specifications	Per Year	1		18		
B	**Total for 5 Yr Comprehensive AMC service as per Technical Specifications**			0.00	18		
C	**Total for SITC and 5 years CAMC (A+B)**						0

BOQ of Survey, Design, Manufacture, Supply, Installation, Testing And Commissioning With Five Years Comprehensive Maintenance Contract Cumulative Capacity Of Grid Connected Solar Power Plant **at NABARD Damodhar Park Ghatkopar**

Sr. No.	Description	Unit	Qty	Unit Rate Excl. GST	GST rate (%)	Amount Excl. GST	Amount Incl. GST
A	Supply, Installation, Testing and Commissioning of ongrid Solar Photovoltaic Power Plant conforming to MNRE specifications as amended, consisting of Monocrystalline silicon solar cells, net metering facility, necessary protections, earthing, mounted on Aluminium/GI structure of suitable strength with following components complete as required:- a) Solar Photovoltaic Module of capacity 545 Wp or above manufactured in India, conforming to IS 14286/IEC 61215, IS/IEC 61730- Part-1, IS/IEC 61730-Part-2. Solar Photovoltaic Module conversion efficiency shall not be less than 16.5%. PV modules used in solar power plants/ systems must be warranted for their output peak watt capacity, which should not be less than 90% at the end of 10 years and 80% at the end of 25 years. b) Power Conditioning Unit (PCU) of 350-800 V DC Input voltage range and 415 V AC, three phase, 4 wire, 50Hz +/- 2.5 Hz, output voltage suitable to generate AC Power with efficiency not less than 93%, total harmonic distortion less than 3% and suitable for ambient temperature from 0 to 50 degree C. The PCU shall adjust the voltage and frequency level to suit the Grid Voltage Frequency. c) Online Data Monitoring System completes with accessories for daily monitoring of power generated though roof top solar. d) Fixing of Array junction box & Main junction box with IP 65 protection and termination arrangement for incoming and outgoing cable along with glands, lugs and other accessories etc. as required. e) Lightning and surge voltage protection with dedicated earth pits. Bidder has to lay suitable size copper earth flat/strip from earth pit to each array of solar power plant including inverter. Earth strip should be painted with two coats of red oxide primer and one coat of anti rust green paint with his cost. f) Connections & Interconnections by supplying & fixing required size XLPE insulated copper conductor 1.1 kV grade armoured power and control cables between solar modules, main power cable to grid supply PCU unit along with supplying & fixing of necessary channel/conduit lugs and other accessories etc. as required. The scope of work includes supply and laying of suitable size armored aluminium cable (Minimum length of the cable is 50 Rmt) from ground floor main panel to Solar AC DB near inverter. The Scope also includes g) Getting necessary approvals from Government Authorities, as per The site requirement including fees and other incidental expenses to be paid i) loading, transport, unloading and shifting of the above materials to the terrace irrespective of the height and number of floors as per site requirement ii) Assembling of all the components, parts, fabrication and erection of the supports for the Solar panels and Installation of the entire system iii)Wastage of materials during execution iv) Water and power required at the site for execution of the work at the site v) temporary works such as scaffolding, cleaning the site before and after the installation of the system, disposing all the debris generated during the work vi) all type of Insurance Charges covering men and materials, transit insurance, third party insurance etc All applicable taxes like levies, Octroi (if applicable), local body taxes (if applicable) etc excluding GST Overheads, profit, statutory expenses, incidental charges and all Related expenses to complete the work etc **Metering Cubicle/Panel**: SITC of outdoor type weather proof type metering cubicle made out of CRCA sheet powder coated as per DISCOM approved standards, makes. LT Metering cubicle with net metering facility: SITC of LT metering cubicle with Bidirectional meter, as per DISCOM requirement. Solar meter- unidirectional meter for solar generation measurement with metering cubicle as required as per requirements of concerned DISCOM. Charges for testing of new metering equipments, calibration, transportation of same for necessary approvals, preparation of drawings etc. all complete as required to complete the work in total. **Warranty Period:** The warranty of overall Solar Power system Auxiliaries like AJB, SPD, Inverter etc. except solar panels will be 5 years from date of commissioning of plant. Warranty of the solar PV panels should be 25 years from date of commissioning of plant. The price must be quoted including warranty as per the tender terms	KWp	30			0	0
	Comprehensive AMC as per technical Specifications						
	1st Year Comprehensive AMC service as per Technical Specifications	Per Year	1		18		
	2nd Year Comprehensive AMC service as per Technical Specifications	Per Year	1		18		
	3rd Year Comprehensive AMC service as per Technical Specifications	Per Year	1		18		
	4th Year Comprehensive AMC service as per Technical Specifications	Per Year	1		18		
	5th Year Comprehensive AMC service as per Technical Specifications	Per Year	1		18		
B	**Total for 5 Yr Comprehensive AMC service as per Technical Specifications**			0.00	18		
C	**Total for SITC and 5 years CAMC (A+B)**						0

BOQ of Survey, Design, Manufacture, Supply, Installation, Testing And Commissioning With Five Years Comprehensive Maintenance Contract Cumulative Capacity Of Grid Connected Solar Power Plant **at NABARD Park SantaCruz**

Sr. No.	Description	Unit	Qty	Unit Rate Excl. GST	GST rate (%)	Amount Excl. GST	Amount Incl. GST
A	Supply, Installation, Testing and Commissioning of ongrid Solar Photovoltaic Power Plant conforming to MNRE specifications as amended, consisting of Monocrystalline silicon solar cells, net metering facility, necessary protections, earthing, mounted on Aluminium/GI structure of suitable strength with following components complete as required:- a) Solar Photovoltaic Module of capacity 545 Wp or above manufactured in India, conforming to IS 14286/IEC 61215, IS/IEC 61730- Part-1, IS/IEC 61730-Part-2. Solar Photovoltaic Module conversion efficiency shall not be less than 16.5%. PV modules used in solar power plants/ systems must be warranted for their output peak watt capacity, which should not be less than 90% at the end of 10 years and 80% at the end of 25 years. b) Power Conditioning Unit (PCU) of 350-800 V DC Input voltage range and 415 V AC, three phase, 4 wire, 50Hz +/- 2.5 Hz, output voltage suitable to generate AC Power with efficiency not less than 93%, total harmonic distortion less than 3% and suitable for ambient temperature from 0 to 50 degree C. The PCU shall adjust the voltage and frequency level to suit the Grid Voltage Frequency. c) Online Data Monitoring System completes with accessories for daily monitoring of power generated though roof top solar. d) Fixing of Array junction box & Main junction box with IP 65 protection and termination arrangement for incoming and outgoing cable along with glands, lugs and other accessories etc. as required. e) Lightning and surge voltage protection with dedicated earth pits. Bidder has to lay suitable size copper earth flat/strip from earth pit to each array of solar power plant including inverter. Earth strip should be painted with two coats of red oxide primer and one coat of anti rust green paint with his cost. f) Connections & Interconnections by supplying & fixing required size XLPE insulated copper conductor 1.1 kV grade armoured power and control cables between solar modules, main power cable to grid supply PCU unit along with supplying & fixing of necessary channel/conduit lugs and other accessories etc. as required. The scope of work includes supply and laying of suitable size armored aluminium cable (Minimum length of the cable is 50 Rmt) from ground floor main panel to Solar AC DB near inverter. The Scope also includes g) Getting necessary approvals from Government Authorities, as per The site requirement including fees and other incidental expenses to be paid i) loading, transport, unloading and shifting of the above materials to the terrace irrespective of the height and number of floors as per site requirement ii) Assembling of all the components, parts, fabrication and erection of the supports for the Solar panels and Installation of the entire system iii)Wastage of materials during execution iv) Water and power required at the site for execution of the work at the site v) temporary works such as scaffolding, cleaning the site before and after the installation of the system, disposing all the debris generated during the work vi) all type of Insurance Charges covering men and materials, transit insurance, third party insurance etc All applicable taxes like levies, Octroi (if applicable), local body taxes (if applicable) etc excluding GST Overheads, profit, statutory expenses, incidental charges and all Related expenses to complete the work etc **Metering Cubicle/Panel**: SITC of outdoor type weather proof type metering cubicle made out of CRCA sheet powder coated as per DISCOM approved standards, makes. LT Metering cubicle with net metering facility: SITC of LT metering cubicle with Bidirectional meter, as per DISCOM requirement. Solar meter- unidirectional meter for solar generation measurement with metering cubicle as required as per requirements of concerned DISCOM. Charges for testing of new metering equipments, calibration, transportation of same for necessary approvals, preparation of drawings etc. all complete as required to complete the work in total. **Warranty Period:** The warranty of overall Solar Power system Auxiliaries like AJB, SPD, Inverter etc. except solar panels will be 5 years from date of commissioning of plant. Warranty of the solar PV panels should be 25 years from date of commissioning of plant. The price must be quoted including warranty as per the tender terms	KWp	30			0	0
	Comprehensive AMC as per technical Specifications						
	1st Year Comprehensive AMC service as per Technical Specifications	Per Year	1		18		
	2nd Year Comprehensive AMC service as per Technical Specifications	Per Year	1		18		
	3rd Year Comprehensive AMC service as per Technical Specifications	Per Year	1		18		
	4th Year Comprehensive AMC service as per Technical Specifications	Per Year	1		18		
	5th Year Comprehensive AMC service as per Technical Specifications	Per Year	1		18		
B	**Total for 5 Yr Comprehensive AMC service as per Technical Specifications**			0.00	18		
C	**Total for SITC and 5 years CAMC (A+B)**						0

BOQ of Survey, Design, Manufacture, Supply, Installation, Testing And Commissioning With Five Years Comprehensive Maintenance Contract Cumulative Capacity Of Grid Connected Solar Power Plant **at NABARD Nestle-II Lower Parel**

Sr. No.	Description	Unit	Qty	Unit Rate Excl. GST	GST rate (%)	Amount Excl. GST	Amount Incl. GST
A	Supply, Installation, Testing and Commissioning of ongrid Solar Photovoltaic Power Plant conforming to MNRE specifications as amended, consisting of Monocrystalline silicon solar cells, net metering facility, necessary protections, earthing, mounted on Aluminium/GI structure of suitable strength with following components complete as required:- a) Solar Photovoltaic Module of capacity 545 Wp or above manufactured in India, conforming to IS 14286/IEC 61215, IS/IEC 61730- Part-1, IS/IEC 61730-Part-2. Solar Photovoltaic Module conversion efficiency shall not be less than 16.5%. PV modules used in solar power plants/ systems must be warranted for their output peak watt capacity, which should not be less than 90% at the end of 10 years and 80% at the end of 25 years. b) Power Conditioning Unit (PCU) of 350-800 V DC Input voltage range and 415 V AC, three phase, 4 wire, 50Hz +/- 2.5 Hz, output voltage suitable to generate AC Power with efficiency not less than 93%, total harmonic distortion less than 3% and suitable for ambient temperature from 0 to 50 degree C. The PCU shall adjust the voltage and frequency level to suit the Grid Voltage Frequency. c) Online Data Monitoring System completes with accessories for daily monitoring of power generated though roof top solar. d) Fixing of Array junction box & Main junction box with IP 65 protection and termination arrangement for incoming and outgoing cable along with glands, lugs and other accessories etc. as required. e) Lightning and surge voltage protection with dedicated earth pits. Bidder has to lay suitable size copper earth flat/strip from earth pit to each array of solar power plant including inverter. Earth strip should be painted with two coats of red oxide primer and one coat of anti rust green paint with his cost. f) Connections & Interconnections by supplying & fixing required size XLPE insulated copper conductor 1.1 kV grade armoured power and control cables between solar modules, main power cable to grid supply PCU unit along with supplying & fixing of necessary channel/conduit lugs and other accessories etc. as required. The scope of work includes supply and laying of suitable size armored aluminium cable (Minimum length of the cable is 50 Rmt) from ground floor main panel to Solar AC DB near inverter. The Scope also includes g) Getting necessary approvals from Government Authorities, as per The site requirement including fees and other incidental expenses to be paid i) loading, transport, unloading and shifting of the above materials to the terrace irrespective of the height and number of floors as per site requirement ii) Assembling of all the components, parts, fabrication and erection of the supports for the Solar panels and Installation of the entire system iii)Wastage of materials during execution iv) Water and power required at the site for execution of the work at the site v) temporary works such as scaffolding, cleaning the site before and after the installation of the system, disposing all the debris generated during the work vi) all type of Insurance Charges covering men and materials, transit insurance, third party insurance etc All applicable taxes like levies, Octroi (if applicable), local body taxes (if applicable) etc excluding GST Overheads, profit, statutory expenses, incidental charges and all Related expenses to complete the work etc **Metering Cubicle/Panel**: SITC of outdoor type weather proof type metering cubicle made out of CRCA sheet powder coated as per DISCOM approved standards, makes. LT Metering cubicle with net metering facility: SITC of LT metering cubicle with Bidirectional meter, as per DISCOM requirement. Solar meter- unidirectional meter for solar generation measurement with metering cubicle as required as per requirements of concerned DISCOM. Charges for testing of new metering equipments, calibration, transportation of same for necessary approvals, preparation of drawings etc. all complete as required to complete the work in total. **Warranty Period:** The warranty of overall Solar Power system Auxiliaries like AJB, SPD, Inverter etc. except solar panels will be 5 years from date of commissioning of plant. Warranty of the solar PV panels should be 25 years from date of commissioning of plant. The price must be quoted including warranty as per the tender terms	KWp	15			0	0
	Comprehensive AMC as per technical Specifications						
	1st Year Comprehensive AMC service as per Technical Specifications	Per Year	1		18		
	2nd Year Comprehensive AMC service as per Technical Specifications	Per Year	1		18		
	3rd Year Comprehensive AMC service as per Technical Specifications	Per Year	1		18		
	4th Year Comprehensive AMC service as per Technical Specifications	Per Year	1		18		
	5th Year Comprehensive AMC service as per Technical Specifications	Per Year	1		18		
B	**Total for 5 Yr Comprehensive AMC service as per Technical Specifications**			0.00	18		
C	**Total for SITC and 5 years CAMC (A+B)**						0

NABARD NAGAR Kandivali	
Details	**Feasible Solar (in kWp)**
A1	7
A2	11
A3	11
A4	11
A5	11
C1	3
C2	10
C3	10
C4	10
C5	10
C6	10
C7	10
C8	10
B1	10.5
B2	10.5
B3	10
B4	10
Total	165

NABARD Damodhar Park Ghatkopar	
Details	**Feasible Solar (in kWp)**
5A	6
5B	6
5E	6
5D	6
5E	6
Total	30

NABARD Park SantaCruz	
Details	**Feasible Solar (in kWp)**
A2	7
A3	7
A4	7
A5	7
A6	2
Total	30