

# GENERAL CONDITIONS OF CONTRACT (GCC)

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## 1. DEFINITION OF TERMS:

Unless the context otherwise requires, the following terms whenever used in this document have the respective meaning:

- i. The **'Company'/'Employer'/'Department'** shall mean the WEST BENGAL STATE ELECTRICITY DISTRIBUTION COMPANY LTD. (WBSEDCL), having its Office at Vidyut Bhavan, Block-DJ, Sector-II, Kolkata – 700091 and shall include its successors and assigns.
- ii. The **'Engineer-in-Charge'** shall mean the Engineer designated by the Company for the purpose of this contract. He will authorize the Controlling Officer and Supervising Officer for carrying out the work.
- iii. **'Company's representative'** shall mean any person or persons of consulting firm appointed and remunerated by the Company to supervise, inspect, test and examine workmanship and materials of the work under this scope.
- iv. The **'Contractor'** shall mean the Bidder who will be awarded with the contract by the Company and shall include the contractor's executor's administrators, successors and permitted assignees.
- v. The **'Sub-Contractor'** shall mean the person named in the Contract for any part of the works or any person to whom any part of the contract has been sublet by the contractor with the consent in writing of the Engineer and will include the legal representatives, successors and permitted assigns of such persons.
- vi. **'Equipment/materials'** shall mean and include all type of construction equipment & materials etc. required for true and satisfactory completion of the work under this contract.
- vii. **'Workmanship'** shall mean the method/manner in which the jobs of the different items, whether included in the schedule or not but are required for true & satisfactory completion of the work under this contract, are executed.
- viii. **'General conditions'** shall mean all the clauses of General conditions of the proposed contract stated hereinafter. The specification shall mean the specification annexed to or issued with the General Conditions and shall include the schedule and drawings attached thereto.
- ix. The term **'Services'** shall mean all works to be undertaken by the contractor as laid down under the head "scope of work" or elsewhere in the specification enclosed. When the words "approved", "subject to Approval". "As directed", "Accepted", "Permitted" etc. are used, the approval, judgment, direction etc. are understood to be a function of Company.
- x. **'Day'** means a calendar day beginning and ending midnight.
- xi. **'Month'/'Calendar month'** means not only the period from the first of a particular month, but also any period between a date in a particular month, and the date previous to the corresponding date in subsequent month unless specifically stated otherwise.
- xii. **'Week'** means seven consecutive calendar days.
- xiii. **'Writing'** shall include any manuscript, type written, printed or other statement reproduced in any visible form.

- xiv. The work **'Site'** shall mean the site of proposed work as detailed in the specification or any other place where the work is to be executed under the contract.
- xv. **'Date of Commencement'** shall mean the date of actual handing over of site whichever is later.
- xvi. **'Date of Completion'** shall mean the date of final completion of the project in all respect.
- xvii. **'Specifications'** shall mean collectively all the terms and stipulations contained in this document including the conditions of contract, technical provisions and attachments thereto and list of corrections and amendments.
- xviii. **'Drawings'** means collectively all the accompanying general drawings as well as all detailed drawings, which may be used from time to time or desired by WBSEDCL.
- xix. **'Approval'** shall mean the written approval of WBSEDCL and/the statutory authorities, wherever such authorities are specified by any codes or otherwise.
- xx. **'Manufacturer'** shall refer to the party proposing to design/engineering and construct in complete or in part a particular job/work at their works/premises.
- xxi. **'Labourer'** shall mean all categories of labour engaged by the Contractor, his sub-contractors and his piece workers for work in connection with the execution of the worked covered by the specifications. All these labourers will be deemed to be employed primarily by the Contractor.
- xxii. **'Plant'/'Equipment'/'Stores'** means and include plant and machineries to be provided under the contract.
- xxiii. **'Delivery of Plant'/'Delivery of Equipment'** shall be deemed to take place on delivery of the plant/equipment in accordance with the terms of the contract complete in all respect after approval by WBSEDCL.
- xxiv. **'Tests on Completion'** shall mean all such tests as are prescribed by the specification to be made by the Contractor to the satisfaction of WBSEDCL before the plant and equipment are taken over by WBSEDCL and this also includes those tests not specifically mentioned in the specification but required under various BIS codes and relevant Electricity Acts and Rules.
- xxv. **'Commissioning'** shall mean the satisfactory, continuous and uninterrupted operation of the equipment/work as specified after all necessary initial tests, checks and adjustments required at site for a period of at least 30 (thirty) days to the satisfaction of WBSEDCL. Commissioning may be done Phase-wise or as a whole for complete 10 MW (AC).
- xxvi. **'Urgent Works'** shall mean any urgent measures, which in opinion of the Engineer-in-Charge, become necessary at the time of execution and/or during the progress of work to obviate any risk of damage to the structure, or required to accelerate the progress of work or which become necessary for security or for any other/reason WBSEDCL may deem expedient.
- xxvii. **'Joint Venture (JV)'** shall refer to a group of Entities that has collectively submitted the Bid in accordance with the provisions of this Tender.
- xxviii. **'Lead Entity of the JV' or "Lead Entity" or "Parent Company"** shall mean an entity which represents the JV, with relation to the project.

## 2. NAME OF THE WORK

Design & Engineering, Manufacture / Procurement, Supply, Packing and Forwarding, Transportation, Loading, Unloading, Storage at site, Site development, Construction, Erection, Installation, Testing and Commissioning including warrantee obligation with 05 (Five) years Comprehensive Operation and Maintenance of 10 MW (AC) Canal Top Solar Photovoltaic Power Plant on Tailrace Canal of TCFHP, Stage II Power Station at Haptiagachh of Chopra Block, Uttar Dinajpur District, West Bengal.

The proposed location near the Dhumdangi Railway Station and on the Tailrace Canal of TCFHP, Stage II Power Station at Haptiagachh of Chopra Block, , West Bengal The location of the project is at 26.47° N Latitude and 88.32° E Longitude.

Scope of Work includes Design, Engineering, Manufacture/ Procurement, Supply of equipment and materials; testing at manufacturers works, inspection, packing and forwarding, unloading at site, associated civil works, services, permits, installation and incidentals, erection, testing and commissioning with Warrantee obligation of 10 MW (AC) Capacity Grid connected Canal Top Solar PV Power Plant with associated equipments and materials at Haptiagachh of Chopra Block, Uttar Dinajpur District, West Bengal. The equipment and materials the Solar PV Power Plant with associated system shall include but not be limited to the following equipments and sub-systems:

- a) Contractor shall at his own cost carry out site survey, soil investigation, measurement of soil resistivity, and other relevant parameters required for design of the system.
- b) Contractor shall prepare and submit the Detailed Design Report along with Project Master Plan to WBSEDCL which must contain site meteorological data considered with necessary supporting documents, calculations for annual energy generation, schedule of site works, detailed specifications of each equipments and works (*as mentioned in the technical specification chapter of the tender document*), all necessary drawings and associated calculations for selection of different equipments for the plant based on the site location and relevant code of practice.

The Detailed Design Report shall also contain necessary test certificates and approvals as per relevant standard and practice for all the equipments, catalogues, quality assurance etc.

Bill of Quantity (BOQ) for each job including tools and spares, quality control procedures on materials & works and other conditions of contract prior to the execution of the work shall also be a part of the Detailed Design Report.

The contractor needs to submit their Detailed Design Report to WBSEDCL within the time specified in the 'Time Schedule' of the Letter of Award (LOA).

The contractor shall submit 03 (three) sets of the Draft Detailed Design/Drawing Report along with editable soft copy in a compact disk for approval.

After finalization of the same by WBSEDCL, the contractor shall submit 12 (twelve) sets of the finalized Detailed Design Report along with editable soft copy in a compact disk to carry out further course of action.

- c) The contractor should develop the land profile as per the approved land development drawings.
- d) The contractor shall supply all materials and equipment required for erection, testing & commissioning of the plant. The supply of materials shall also include transportation, loading and unloading at work site.
- e) Timely procurement and transportation to site in properly packed condition of all equipment, materials and miscellaneous item required to complete the project.
- f) Contractor shall arrange proper storage at site for the equipments and materials at his own cost and risk. The complete system shall be under the custody of the contractor till successful commissioning and handing over the plant to WBSEDCL. WBSEDCL in no case shall be held responsible for any loss/damage/theft of materials/equipment; so long those shall continue to remain under the custody of the contractor.
- g) The contractor shall carry out all necessary civil works for the power plant which include but not limited to the installation of PV array mounting structure & foundations, fencing & gates, construction of internal inspection path ways, access road (if required), electrical control room and a small office block, switch yard foundations and other details, watch tower, security room, utility services as required, cable trench, Deep Tube Well and drinking water system, water supply & drainage system required for utility services and cleaning of PV modules etc.
- h) The equipments and materials for 10 MW Canal Top Solar PV Power Plant at Haptiaghachh shall include but shall not be limited to the following:
  - i. Solar PV Modules;
  - ii. Array Junction Box;
  - iii. Solar Inverters;
  - iv. Three winding transformer;
  - v. Ring Main Unit (RMU);
  - vi. Cables and conductor;
  - vii. Station Auxiliary Transformer;
  - viii. LT switchgear;
  - ix. DC Battery, Battery charging equipment & DCDB;
  - x. Protection system;
  - xi. Earthing system;
  - xii. Control, monitoring and data acquisition system;
  - xiii. Illumination system;
  - xiv. Fire protection system;
  - xv. Ventilation system;
  - xvi. Air Conditioning system;
  - xvii. Module cleaning arrangement;
  - xviii. Drinking water system;
  - xix. Weather station;
  - xx. Communication system;
  - xxi. Recommended spares;
  - xxii. Required Tools and Tackles;
  - xxiii. Approach Road, Internal Road & Inspection pathways

- xxiv. Control rooms and 33 KV Switchyard
  - xxv. 33 KV HT Distribution Line up to nearest 33 KV Sub-station of WBSEDCL. 33 KV Transmission Line from 33 KV switchyard of Solar PV Power Plant to 33KV substation will be arranged by WBSEDCL. However, the contractor shall arrange the outgoing bay with necessary equipments/ protection system and metering system for Net Minimum Guaranteed Generation and others as required.
  - xxvi. 33 KV Indoor C & R Panel and Outdoor VCB.
  - xxvii. Drainage system
  - xxviii. Boundary Wall & Fencing
  - xxix. Cable Trench
  - xxx. Required number of signage (Project Name Plate and caution as per IS);
  - xxxi. Project Documents (required no. of sets) etc.
  - xxxii. Any other items required.
- i) Installation, testing and commissioning of 10 MW (AC) Canal Top Solar Photovoltaic Power Plant on Tailrace Canal of TCFHP, Stage II Power Station at Haptiagachh of Chopra Block, Uttar Dinajpur District, West Bengal as per the approved time schedule.
- j) 05 (Five) years comprehensive operation & maintenance of the plant shall also be in the scope of work. The contractor needs to submit 03 (three) sets of comprehensive user's manual and 02 (two) sets of Operation and Maintenance format book suitably useable for 60 months.

The scope of maintenance shall include supply of spare parts, replacement of all damaged equipment and accessories with new one within the price of yearly maintenance charge. The down time of PV system should not be more than 72 hours (03 days).

Deployment of adequate security personnel (minimum 1 no. of armed security guard and 3 nos. of security personnel in each of the three shifts) shall be a scope of the operation and maintenance.

PTZ (Pan-Tilt Zoom) outdoor camera as per requirement shall be deployed to cover the whole plant with night vision and central monitoring through 40" LED monitor/TV for surveillance during construction as well as after commissioning of the plant. PTZ cameras & 40" LED monitor shall be provided for monitoring the plant prior to the final commissioning of the plant.

The contractor shall arrange sufficient transportation arrangement (24X7) for the operation and maintenance purpose.

- k) Provision of Safety items like hand gloves, shock treatment charts, rubber mats, danger/caution boards etc. shall be a part of scope of works. The contractor shall adhere to safety practices during erection, commissioning and subsequent operation and maintenance of the system including fire prevention.
- l) The contractor needs to clean all the debris from the site before final commissioning of the plant.
- m) Any other items not specifically mentioned in the technical specification and/ scope of work but which are required for successful completion and satisfactory operation of the solar power plant are deemed to be included in the scope of work/specification.
- n)** The contractor should submit the total system warranty as per clause no. 23 of GCC in a 100 Rs. Non-judicial Stamp Paper (Proforma for the same should be approved by WBSEDCL) duly indemnified at the time of submission of completion report.

### **3. CONTROLLING OFFICER'S DECISION**

Controlling Officer's decision is final in respect of all matters which are left to the decision of the Controlling Officer including the granting or with-holding of certificates.

If, in the opinion of the contractor, a decision made by the Controlling Officer is not in accordance with the meaning and intent of the contract, the contractor may file with the Controlling Officer, within 07 (seven) days after receipt of the decision, a written objection to the decision. Failure to file an objection within the allotted time will be considered as an acceptance of the Controlling Officer's decision and the decision shall become final and binding.

### **4. COMMENCEMENT & COMPLETION TIME**

Date of commencement should be reckoned from the date of issuance of LOA/ date of actual handing over of site whichever is later.

The whole work (including finalization of Detailed Design Drawings & Reports and Site execution work) must be completed within 365 (Three Hundred and Sixty Five) days from the date of commencement.

A detailed time schedule for the site work has to be prepared and submitted by the contractor with the Detailed Design Report.

All works under the contract must be completed by period of completion mentioned in NIT while portions of work as per programme settled in consultation with the Controlling Officer shall be completed by the date stipulated in the said programme. It is to be noted that time is the essence of the contract and any default on the part of the contractor to complete the work within the stipulated date/dates aforesaid or within the time as may be extended in writing by the Controlling Officer subject to the payment of liquidated damages, the Company shall have the right, without prejudice to any other clauses, to terminate contract forthwith and to take possession of the balance work/materials and have the same allotted to any other agency and the contractor shall be liable to compensate the loss that may be occasioned to the Company on that account. Any letter in writing by the Controlling Officer shall be treated as conclusive on behalf of the Company.

### **5. SUBMISSION OF DETAILED DESIGN REPORT**

The contractor shall submit 03 (three) sets of the Draft Detailed Design Drawings & Reports including master plan along with editable soft copy in a compact disk for approval.

Draft Detailed design report shall contain all requisite documents as mentioned in the 'Scope of Work'. The contractor should submit the same within 21 (twenty one) days from the date of issuance of 'Letter of Award'.

The contractor shall submit 6 (six) sets of the finalized Detailed Design Drawings & Reports along with editable soft copy in a compact disk to the Chief Engineer, Solar Power Generation Department (SPGD), WBSEDCL.

The contractor shall submit 6 (six) sets as built drawing after final completion of the project.

### **6. SCHEDULE OF WORK**

Before actual commencement of the work, the contractor shall submit a time bound schedule for approval of the Controlling Officer who have the authority to

make additional alteration, and substitution of such programme including modification and time to time as decided by the department and contractor shall strictly follow such modified schedule for timely completion of the work.

## **7. VARIATION, ADDITIONS AND OMISSIONS**

The Contractor shall not modify the work except under direction in writing by the WBSEDCL. The quantities provided in the schedule of works are provisional only which may vary up to any extent or may be deleted altogether. The quoted rate of each item shall remain firm. The WBSEDCL reserves the right to alter, amend, omit or otherwise vary the quantities as may be necessary but such variation will be limited to +/- 25% (Plus or minus twenty five percent) of the contract price. Payment shall be made as per actual execution.

However, any item(s) not included in the schedule or specification but required for completion of the work shall have to be carried out/supplied without any extra price. While submitting the offer the bidder shall consider price of those items and may indicate separately as additional deliverable items.

## **8. CONFIDENTIALITY**

The Contractor, or any entity affiliated with the Contractor, shall not disclose to any unauthorized person any information and/or data that may be supplied to him/her by the WBSEDCL or by any other organization, under the directions of the WBSEDCL. All such documents shall be the property of the WBSEDCL or any information that may have come to his/her knowledge directly or indirectly by virtue of the assignment.

## **9. DEPARTMENTAL MATERIAL**

Departmental material shall not be issued to the contractor for the work except under special circumstances. For ABT metering system, the contractor shall communicate with the Testing Department (Distribution) for necessary action.

## **10. FORCE MAJEURE**

Force Majeure means any circumstances beyond the control of the parties, including but not limited to:

- a. War and other hostilities, (whether war be declared or not), invasion, act of foreign enemies, requisition or embargo.
- b. Rebellion, revolution, insurrection, military power and civil war.
- c. Riot, commotion or disorder, except where solely restricted to employees of the Contractor or of his sub-contractors.
- d. Earthquake, flood, cyclone and such other natural disaster affecting Contractor's work.

WBSEDCL shall neither be responsible nor be liable to bear any compensation for any interruption of work in the site due to force majeure.

Upon the occurrence of any situation of Force Majeure, the Contractor shall endeavor to continue to perform his obligations under the Contract so far as reasonably practicable. The Contractor shall notify within a week in written to the controlling officer of the steps he proposes to take including any reasonable alternative means for performance which is not prevented by Force Majeure. The Contractor shall not take any such steps unless directed to do so by the controlling officer.



## **11. EXTENSION OF TIME**

An extension of time without imposition of Liquidated Damage (LD), may be granted for delay in execution of work provided there is no fault whatsoever on the part of the contractor. Such extension may only be granted on the basis of application to be submitted within the schedule date of completion by the contractor who has to establish that the extension of time required by him is not due to his fault.

The Contractor may claim an extension of the Time for Completion if he is or will be delayed in completing the Works by any of the following causes:

- a. Extra or additional work ordered in writing by WBSEDCL.
- b. Suspension of work ordered in writing.
- c. Delay by any other Contractor engaged by WBSEDCL, affecting this Contract.
- d. Delay in handover of site by WBSEDCL
- e. Force Majeure.

The Contractor shall give notice to WBSEDCL of his intention to make a claim for an extension of time within 15 days of the occurrence of any of the above cause(s). The notice shall be followed as soon as possible by the claim with full supporting details. WBSEDCL shall after verification allow the Contractor for updating of the programme chart as facts may justify.

## **12. LIQUIDATED DAMAGE**

If the Contractor shall fail to complete the total works within the time prescribed herein or extended time for completion, then the Contractor shall pay to the Company a sum amounting to half percent (0.50%) of the "Contract value of work" as liquidated damages for such delay for every week or part thereof which shall elapse between the time prescribed or extended time as the case may be and the date of completion of the work in each phase, subject to a maximum of ten percent (10%) of the contract price.

The Company may, without prejudice to any, all other method of recovery deduct the amount of such damages from any money in their hand due or which may become due to the contractor. The payment or deduction of such damages shall not relieve the contractor from this obligation to complete the works or from any other of his obligations and liabilities under the contract.

If there is a valid acceptable reason for delay of execution, the Controlling Officer may at his discretion consider lower down of the liquidated damage or even waive the liquidated damage on having written prayer from the contractor along with valid reason.

## **13. DEFECTIVE MATERIAL**

If in the opinion of the Engineer, any of the machineries/equipment/materials etc. brought to the site for use are not of the quality or kind specified in the contract and/or are unfit for the work, he shall be at liberty to order the removal of the said items and the contractor shall remove the same within twenty four (24) hours after notice has been given to him and if he fails to remove them within the time the engineer may cause them to be removed anywhere at the risk of the Contractor and any cost incurred in so doing shall be deducted from the dues to the contractor under the contract. In such case, items as prescribed by the Controlling Officer or his representative are to be substituted immediately.

#### **14. RISK PURCHASE**

If the contractor fail, on receipt of the order, to take up the work within reasonable period or leave the work site after partial execution of the work WBSEDCL shall have the liberty to get the work done through other agency at his own risk and additional amount if any. If the situation so warranted to compel WBSEDCL to cancel the order placed on the Contractor, he shall be liable to compensate the loss or damage, which WBSEDCL may sustain due to reasons of failure on his part to execute the work in time.

#### **15. DEFECT LIABILITY PERIOD**

The term 'Defect Liability Period' shall mean the period of 365 (three hundred and sixty five) days from the Date of final completion and handing over of the entire project work. If any defect is found within the defect liability period the contractor shall be liable to rectify/replace the materials at their own cost and responsibility.

Defects/rectification work so notified shall have to be attended and completed satisfactorily within the specified date or as deemed justified by the Controlling Officer. For faithful & due fulfillment of all obligations, this defect liability period shall be covered by the performance security/contract performance, already submitted by the contractor.

After completion of defect liability period, and on completion of satisfactory rectification of defects, if any, reported within the defect liability period and on receipt of the application from the contractor and considering other factors as per clause no. 25 of GCC, the Controlling Officer of the work shall recommend for amount of the performance security/contract performance to be submitted by the contractor for the next year.

#### **16. SUBLETTING OF CONTRACT**

The contractor shall not, without the written consent of the Company, assign or sublet any part thereof, other than for raw materials, or for any part of the work provided that any such consent shall not relieve the contractor from any obligation, duty or responsibility under the contract. In the event of sub-letting of contract or any part thereof is permitted, the fact that such permission has been accorded shall not establish any contractual relationship between the approved Sub-vendor and WBSEDCL of any of his liabilities and obligations under the contract.

#### **17. NOTICES**

Unless otherwise stated in the Contract, all notices to be given under the Contract shall be in writing, and shall be sent by personal delivery, Registered post, special courier, cable, telegraph, telex, facsimile (fax) or Electronic Data Interchange (EDI), e-mail to the address of the relevant party.

Any notice sent by cable, telegraph, facsimile or EDI shall be confirmed within two (2) days after dispatch by notice sent by airmail post or special courier, except as otherwise specified in the Contract.

Any notice sent by airmail post or special courier shall be deemed (in the absence of evidence of earlier receipt) to have been delivered ten (10) days after dispatch. In proving the fact of dispatch, it shall be sufficient to show that the envelope containing such notice was properly addressed, stamped and conveyed to the postal authorities or courier service for transmission by airmail or special courier.

Either party may change its postal, cable, telex, facsimile or EDI address or addressee for receipt of such notices by ten (10) days' notice to the other party in writing.

Notices shall be deemed to include any approvals, consents, instructions, orders and certificates to be given under the Contract.

#### **18. WBSEDCL'S RIGHT TO TERMINATE CONTRACT & HOLIDAY LISTING**

- If the contractor fails to start the work within a month from the date of issue of the work order, the West Bengal State Electricity Distribution Company Limited shall have the right to cancel the work order with forfeiture of earnest money (Converted into initial security) without giving any notice to the contractor. The contractor may be subjected to holiday listing as per company's policy.

- If the contractor neglects, or fails to proceed with the work proportionate to the scheduled time of completion of the work or fails to complete the work within scheduled time for completion or within the extended time approved by West Bengal State Electricity Distribution Company Limited, the West Bengal State Electricity Distribution Company Limited shall have right to terminate the work order after giving notice in writing to the contractor. If the contractor fails after 14 (fourteen) days of such notice, to proceed with the work in the manner notified, West Bengal State Electricity Distribution Company Limited shall terminate the contract and call the contractor to take joint measurement along with the Engineer for the finished portion of work. If the contractor does not appear for joint measurement, ex-party measurement by West Bengal State Electricity Distribution Company Limited will be taken as final.

In that case, WBSEDCL shall take possession of the work, site and engage other agency to complete the work. Extra cost, if incurred, to get the unfinished work done through other agency, will be realized from him from his pending bills and security money. In the contract terminated as above, the contractor shall have no claim for compensation against West Bengal State Electricity Distribution Company Limited for any loss or deterioration of any materials that he may have collected or he may have entered into account of the work.

The contractor may be subject to holiday listing as per company's policy.

#### **19. APPROVAL**

**Design and Drawing:** The contractor shall have to prepare and submit the designs and drawings associated with civil, mechanical and electrical work which includes design of foundation, structure cable sizing, fabrication work, layout design, wiring diagram etc. and obtain approval prior to the execution of work and for this purpose the contractor shall submit Detailed Design Report for obtaining approval from WBSEDCL. The contents of the Detailed Design Report shall be as mentioned in the scope of work (Clause no. 2 of GCC).

**Testing and Inspection:** Any authorized representative of WBSEDCL shall, at all times, have full access to all parts of the site, places from which natural materials are being obtained, during production, manufacture and construction and be entitled to examine, inspect, measure and test materials and workmanship, and check the progress of manufacture of plant and production of

materials/equipments at manufacturer's workshop. No such activity shall relieve the Contractor from any obligation or responsibility.

Material Inspection will be carried out after submission of all test reports/certificates and after completion of the manufacturing work, against formal intimation from the contractor. The contractor shall give notice of any material being ready for testing to SPGD, WBSEDCL.

The contractor shall arrange for all the necessary tests required for the project in the premises of the contractor or Sub-contractor and provide assistance, labour, materials, electricity, fuel, stores, calibrated apparatus and instruments as may be necessary to carry out the tests efficiently without any extra charges. If the facilities are inadequate to carry out tests as per standard, the contractor shall have to arrange suitable testing place having all such required facilities and the cost towards this will be on contractor's account.

The contractor shall also bear all charges towards travelling expenses of the Inspecting Team of the Purchaser or the authorized representatives of the Outside Inspecting agency consisting of at least two (2) persons for to and fro journey by Air from purchaser's Headquarter, including boarding and lodging at the place of inspection and transit, if any for the purpose of Inspection and Testing.

WBSEDCL, if desired, will visit the contractor's premises/manufacturer's workshop and may proceed with the routine tests. Arrangements for such program shall be done by the contractor. The inspection setup and instruments must be provided by the contractor within the contract value.

The material shall have to be dispatched at site after inspection and clearance from the purchaser.

WBSEDCL, if desired, may test the delivered product (especially solar module) at site from any accredited laboratory of Govt. of India. The result of that test and subsequent decisions taken by the controlling officer will be bound to the contractor.

**Rejection:** If, as a result of an examination/testing, any plant, materials, design or workmanship is found defective and/or not in accordance with the Contract, WBSEDCL may reject the plant, materials, design or workmanship by giving notice with reasons. The Contractor shall then promptly make good the defect and/or ensure that the rejected/replaced item complies with the Contract.

**Materials:** Contractor shall obtain prior approval for the materials deliverable under the project from WBSEDCL as mentioned in the technical specification.

## **20. MODE OF EXECUTION**

The PV power plant shall be procured as a complete package. The entire work shall have to be executed on TURNKEY BASIS.

## **21. SUBMISSION OF PROGRESS REPORT**

The contractor shall submit the field progress report weekly to the controlling officer for the work. The contractor needs to get approval of the format of the progress report prior to the execution of the work.

## **22. INSURANCE**

**Freight Insurance:** The Contractor shall arrange for insurance coverage for the equipment, accessories, materials etc. during transportation & delivery at site till successful handover of the plant.

**Execution Insurance:** It is desired that the contractor shall arrange for insurance coverage for the equipment, accessories, materials etc. to be delivered at site till successful commissioning of the plant. As such the bidder shall include the price of such insurance in their price bid as part of the price of work.

**Insurance after commissioning of PV Power Plant:** After handing over of the PV plant, insurance will be made by WBSEDCL.

### **23. WARRANTEE**

The contractor must ensure that the goods supplied under the contract are new, unused and of most recent or current models and incorporate all recent improvements in design and materials unless provided otherwise in the contract.

The warrantee period of the complete systems of the Solar PV Power Plant will be 60 (sixty) calendar months from the date of successful handover of the plant. However the performance guarantee of the PV Module shall be 25 years as per guideline of Ministry of New and Renewable Energy (MNRE), Government of India. The contractor shall remain liable to replace any defective parts that may develop in the plant of his own manufacture or that of his sub-contractors under the conditions provided for by the contract under proper use, and arising solely from faulty design, materials or workmanship, provided always that such defective parts as are not, repairable at site and are not essential in the meantime to the maintenance in commercial use of the plant are promptly returned to the contractor's works at the expense of the contractor unless otherwise arranged.

The contractor will submit Warrantee Certificates of the work & spare parts and materials in a 100 Rs. Non-judicial Stamp Paper (Proforma for the same should be approved by WBSEDCL) duly indemnified at the time of submission of completion report. If any defect is found within the warrantee period, contractor will be liable to repair or replace the same at his own cost and risk, within three (72 hours) days from the date of complaint lodged by WBSEDCL.

The contractor shall submit recommended spares and quote the price of the same for extended warranty for next 60 (sixty) calendar months from the date of expiration of the first 60 (sixty) month's warranty period. The contractor shall submit the same before 30 (thirty) days prior to the said expiration of the first warranty period.

### **24. COMPREHENSIVE OPERATION AND MAINTENANCE**

Maintenance contract shall be commence after successful handing over of the plant.

05 (Five) years comprehensive operation & maintenance of the plant shall be in the scope of work. The contractor needs to submit 03 (three) sets of comprehensive user's manual and 02 (two) sets of Operation and Maintenance format book suitably useable for 60 months.

The scope of maintenance shall include supply of spare parts, replacement of all damaged equipment and accessories with new one within the price of yearly maintenance charge.

Time for repair/ replacement of equipment or any works in case of any major failure will be granted by the Controlling Officer considering the type of failure and receiving written prayer from the contractor for the same. But in general the downtime will be 72 hours.

The period of unavailability of grid & Force Majeure Conditions will not be considered as downtime.

After final commissioning of the plant, arrangement of security (minimum 1 no. of armed security guard and 3 nos. of security personnel in each of the three shifts) shall be a scope of the operation and maintenance.

The contractor shall arrange sufficient transportation arrangement (24X7) for the operation and maintenance purpose.

The maintenance includes Routine and preventive, Breakdown and Capital Maintenance which shall be but not limited to the following:

**Routine and preventive maintenance:**

This shall include:

- i. Regular cleaning of PV modules.
- ii. Checking & tightening of all electrical connections and mechanical fittings.
- iii. Checking and restoring of earthing system.
- iv. Cleaning of Inverter and other electrical equipments.
- v. Routine maintenance as recommended by the original equipment manufacturer.

The contractor shall be responsible to carry out routine and preventive maintenance and replacement of each and every damaged/faulty component/equipment of the power plant and he shall provide all labour, material, consumables etc. for routine and preventive maintenance at his own cost.

**Breakdown maintenance:**

Breakdown maintenance shall mean the maintenance activity including repairs and replacement of any component or equipment of the power plant which is not covered by routine and preventive maintenance and which is required to be carried out as a result of sudden failure/breakdown of that particular component or equipment while the plant is running. The supplier shall be responsible to carry out breakdown maintenance of each and every component of the power plant and he shall provide the required manpower, materials, consumables, components or equipment etc. for breakdown maintenance at his own cost irrespective of the reasons of the breakdown/failure.

**Capital maintenance:**

Capital Maintenance shall mean the major overhaul of any component or equipment of the power plant which is not covered by routine, preventive and breakdown maintenance which may become necessary on account of excessive wear & tear, aging, which needs repair/replacement. The capital maintenance of power plant and all civil structures shall normally be planned to be carried out on an annual basis. For this purpose a joint inspection by the supplier and WBSEDCL shall be carried out of all the major components of the power plant, about two months in advance of the annual maintenance period, in order to ascertain as to which components of the power plant require capital maintenance. In this regard the decision of WBSEDCL will be final and binding.

However, if the condition of any plant component warrants its capital maintenance at any other time, a joint inspection of WBSEDCL and supplier shall be carried out immediately on occurrence of such situation and capital maintenance shall be

carried out by arranging the shutdown of the plant/part of the plant, if required, in consultation with concerned authorities. The decision of WBSEDCL shall be final and binding to the contractor.

The capital maintenance also includes painting of mechanical & civil structures etc.

The contractor shall undertake necessary maintenance/troubleshooting work of the Solar PV Power Systems. Down time shall not be more than 72 hours from time of occurrence of such faults. Adequate measures should be taken for prevention of wear and tear of the machines. Solar PV Power System is to be designed to operate with a minimum of maintenance.

The scope of support service provides preventive maintenance as & when necessary within the contract period and break down maintenance in the event of malfunctions, which prevent the operation of the power system or part of it within the stipulated time period & free replacement of spares required for maintenance.

The contractor will provide Spare parts & measuring instruments.

The contractor shall submit the detailed schedule for routine and preventive maintenance before final commissioning of the plant. The contractor shall also submit Detailed Report to WBSEDCL for any capital or breakdown maintenance mentioning the cause of breakdown, actions taken to resolve that issue and preventive measures taken to avoid failure/damage/loss of generation due to similar incidents/accidents in future etc. within 07 (seven) days from the date of recovery.

The contractor shall engage at least 02 (two) operator having necessary technical knowledge and experience at the plant.

**Maintenance Report:** Maintenance register / log book must be maintained at site. However, quarterly maintenance and monthly generation report of each location as per format duly approved by WBSEDCL must be submitted by the contractor to WBSEDCL on quarterly basis.

The contractor shall mention the annual operation and maintenance charge as a distinct part in their financial proposal (Proforma: 3 C – Price Break Up). Annual operation and maintenance charge shall be inclusive of security and transportation arrangement. The contractor shall submit detailed price break up for operation and maintenance work to WBSEDCL before final commissioning of the plant.

The payment shall be made on quarterly basis and the Eligible amount will be due for payment after the certification by the Controlling Officer within 45 (forty five) days from the end of each quarter subject to satisfactory performance and submission of maintenance report in regular basis as mentioned in Clause no. 28 of GCC. The quarterly amount shall be worked out by the Controlling Officer or his authorized representative by dividing the total quoted Annual Operation and Maintenance Cost for that particular year by 04 (four) i.e. the no. of quarters in a year. Further this quarterly amount payable shall be subject to clause no. 28 of GCC as per discretion of the Controlling Officer.

## **25. PENALTY & REWARD**

### **25.1 PENALTY:**

Penalty may be imposed to the contractor for any of the following reasons:

- a. If the contractor fails to repair/replace any defective material/equipment and/or run the whole plant satisfactorily for any equipment failure/ operator's fault within the downtime mentioned in clause no. 24 of GCC or the time period granted by the controlling officer after receiving such prayer from the contractor in writing, a sum amounting to two percent (2.00%) of annual operation and maintenance charge for every week or part thereof subject to maximum 10% (ten percent) will be deducted from the annual operation and maintenance charge of that particular year.
- b. If the plant fails to generate the Net Minimum Guaranteed Generation (NMG) as per clause no. 11 of ITB for that particular year and the plant fails to perform satisfactorily, WBSEDCL will realize the cost of Generation short fall at the average rate of power purchase of WBSEDCL as per the Tariff Order issued by West Bengal Electricity Regulatory Commission (WBERC) for that particular year from the Performance Security and/ or outstanding dues of the contractor. In such case, the PBG for next year shall be of exact amount of previous years PBG and submitted in accordance to the Cl. 19 of ITB as modified. The present average price of purchase of power by WBSEDCL is Rs. 4.07/ kWh. The price varies according to the approval of WBSERC.

## **25.2 REWARD:**

If the plant performs satisfactorily and generate specified quantity of power during each year of 05 (five) years O&M period, a relaxation @ 01% of the PBG will be allowed during next year.

In case of failure of requisite performance in terms of generation on part of the bidder, in either year the relevant penalty clause shall be imposed and the bidder will have to submit full amount of PBG i.e. 10% of the total value of the contracts during next year.

## **26. LABOUR LICENSE**

Contractor will have to obtain Labour License in respect of the above work as per Contract Labour (Regulation & Abolition) Act, 1970 as early as possible.

## **27. PRICE**

Price shall be fixed/firm. No escalation shall be paid due to any reason whatsoever. Price as quoted at column (III) of Proforma 2: Price Bid against Sl. No. 1, 2 & 3 should be equal to amount arrived by aggregating the quoted prices for the respective items in Proforma 3 A – Price Break up for supply of equipments & materials, Proforma 3 B – Price Break Up for Construction, Erection, Testing And Commissioning and Proforma 3 C – Price Break Up for Comprehensive Operation & Maintenance respectively. In case of any discrepancies between the rate or price as quoted in Proforma 2 and corresponding rates or price in Proforma 3 A, 3 B and 3 C, then rate or price as quoted or arrived in Proforma 3 A, 3 B and 3 C shall prevail and evaluation shall be done accordingly.

Amount of Freight Insurance & Execution Insurance shall be quoted in the Proforma: 3 A – Price Break Up For Supply of Equipments & Materials & Proforma: 3 B - Price Break Up for Construction, Erection, Testing and Commissioning, respectively considering the clause of Insurance under Clause No: 22 of GCC.



Any action on the part of the bidder to revise the price and/or change the structure of price at his own after the opening of the bid may result in rejection of the bid and forfeiture of the earnest money.

Total Comprehensive Annual Operation & Maintenance charge inclusive of security and transportation arrangement for 05 (Five) years i.e., Price of Proforma 3 C shall not be less than 08 % (eight percent) of the total quoted price in Proforma 3 A – Price Break up for supply of equipments & materials and Proforma 3 B – Price Break Up For Construction, Erection, Testing And Commissioning.

Prices shall be quoted and payable in Indian Rupees only.

## 28. PAYMENT

Payment will be made as per following schedule:

Sl. No.	Work Head	Pattern of Release of Billing Amount
<b>Part A</b>	<p><b>Mobilisation Advance:</b></p> <p>Interest Bearing Mobilization advance will be paid to the contractor against submission of BG equivalent to 110% of the Mobilisation Advance, subject to the conditions mentioned below. The interest will be at the Base Rate of State Bank of India at the time of recovery of the advance. <b>The mobilisation advance will be recovered along with interests from the progressive bills to be processed against Sl. No. Part-B below.</b> However, WBSEDCL may recover the amount in maximum two installments according to Bill value.</p>	10% of Schedule of Prices of Proforma- 3 A.
<b>Part B</b>	<ul style="list-style-type: none"> <li>• After Verification of site, Submission of Detail Design Report (DDR) &amp; Project Implementation Schedule.</li> <li>• Approval of <ul style="list-style-type: none"> <li>➤ Engineering &amp; design of plant complete.</li> <li>➤ Manufacturing drawings of equipments e.g. Modules, Inverters, transformers, modules structures, HT equipments and all other accessories along with makes.</li> <li>➤ QAP of inverters, modules, solar transformers, modules structures and all other equipments.</li> </ul> </li> </ul> <p>i. After mandatory delivery of the following major materials and safe storage at site:</p> <ol style="list-style-type: none"> <li>1. Solar Module</li> <li>2. Array Junction Box</li> <li>3. Solar Central Inverter</li> <li>4. Three Winding Transformer</li> </ol>	40% of total amount of supplied materials as per the Schedule of Prices of Proforma- 3 A shall be paid on pro-rata basis. <b>Mobilisation Advance with interest will be recovered from progressive bills under this payment head.</b>

Sl. No.	Work Head	Pattern of Release of Billing Amount
<b>Part B</b>	ii. After installation and necessary testing of the plant	20% of total amount of the Schedule of Prices of Proforma- 3 A shall be paid on pro-rata basis of installation capacity.
	iii. After commissioning of the plant in phases	20% of total amount of the Schedule of Prices of Proforma- 3 A shall be paid on pro-rata basis of plant capacity.
	iv. After successful Trial Run (for at least 30 days) and Final commissioning of the whole plant (subject to submission of completion report and other requisite documents as per clause no. 32 of GCC during handing over the project).	<b>Balance</b> of total amount of the Schedule of Prices of Proforma- 3 A shall be paid.
<b>Part C</b>	i. After successful: <ul style="list-style-type: none"> <li>• Completion of contour survey, Soil Testing, Land development (Site grading, levelling, clearing of vegetation etc.)</li> <li>• 20% of structural works for boundary wall.</li> <li>• Installation of 20 % of Solar PV modules.</li> <li>• 50% of structural work for all the buildings.</li> <li>• Completion of sub base work for 50% of the total length of the roads.</li> <li>• And allied work.</li> </ul>	25% of total amount of the Schedule of Prices of Proforma- 3 B shall be paid.
	ii. After successful: <ul style="list-style-type: none"> <li>• Installation of total 50 % of SPV modules.</li> <li>• Completion of works for all the buildings including all finishing work.</li> <li>• Completion of sub base work for all the roads.</li> <li>• Total 50% structural and Brick work for boundary wall</li> <li>• Completion of road works in full for 50% of total length of the road.</li> <li>• Completion of foundation work for all the equipments and structures.</li> <li>• RCC Cable trench completion at both array and switch yard.</li> <li>• Erection of substation structure complete.</li> <li>• And allied work.</li> </ul>	40% of total amount of the Schedule of Prices of Proforma- 3 B shall be paid.

Sl. No.	Work Head	Pattern of Release of Billing Amount
<b>Part C</b>	iii. After successful: <ul style="list-style-type: none"> <li>• Installation of total 100 % of SPV modules.</li> <li>• Cable tray / cable supports for all the cables as required.</li> <li>• Completion of boundary wall in all respect.</li> <li>• Installation all the equipments e.g. Inverters /PCUs, Transformers, all panels, Battery system.</li> <li>• Completion of installation works for all the cables (Power, control &amp; communication).</li> <li>• Completion of road work in all respect for 100% of total length of the road.</li> <li>• Installation of solar plant lighting system complete.</li> <li>• Installation of SCADA system and Plant monitoring desk complete.</li> <li>• Installation of Weather station complete.</li> <li>• Carrying out of any other job necessary/relevant for commissioning of the plant as per NIT.</li> </ul>	<p><b>Balance</b> of total amount of the Schedule of Prices of Proforma- 3 B shall be paid.</p>
<b>Part D</b>	Comprehensive Annual operation and maintenance	<p>The payment shall be made on quarterly basis and the Eligible amount will be due for payment after the certification by the controlling officer within 45 (forty five) days from the end of each quarter subject to satisfactory performance and submission of maintenance report in regular basis as mentioned in Clause no. 24 of GCC.</p> <p>The quarterly amount will be worked out by the controlling officer or his authorized representative by dividing the total quoted Annual Operation and Maintenance Cost for that particular year by 04 (four) i.e. the no. of quarters in a year.</p> <p>Further this quarterly amount payable shall be subject to clause no. 25 of GCC document of the tender.</p>

All payments will be made to the Contractor under the contract in Indian rupees only.

The contractor shall submit Invoice in triplicate for release of payment to them.

Gross Value of the invoice (excluding the work of comprehensive O & M) should not be less than Rs. 5,00,00,000/- (Rupees Five Crore Only) except for the final bill.

Payment against delivery of materials, as mentioned above in Sl. No-Part B (i), will be released to the contractor for the materials for which delivery instructions would be issued by the authorized officer of WBSEDCL after successful inspection and testing of the materials carried out at the works of the manufacturer. The materials shall be according to the approved bill of materials.

WBSEDCL shall arrange joint inspection and measurement of work by the representatives of WBSEDCL and the contractor, for releasing payments.

**Mobilization Advance & Recovery:**

10% of Total Schedule of Prices of Proforma- 3 A will be paid to the contractor as mobilization advance after submission of the Bank Guarantee (BG) of 110% of the mobilization advance amount in the prescribed format of WBSEDCL and fulfillment of the following criteria:

- Unconditional acceptance of the LOA
- Taking over of site from WBSEDCL
- Execution of Contract Agreement
- Submission of Performance Bank Guarantee
- Submission of duly authenticated 'Activity Schedule' showing the entire execution of work

The Bank Guarantee shall be valid for a total period of 12 (twelve) months plus a claim period of 3 (three) months.

Mobilization advance, so paid shall be recovered in maximum two installments from Part B of Payment Terms as mentioned in the payment schedule with interest.

Bank Guarantee submitted for mobilization advance will be released after full recovery of the mobilization advance (with interest) and on receipt of written request of the contractor for release of the same.

**29. TAXES, DUTIES, LEVIES**

- GST & Basic Customs duty (wherever applicable) shall be included in the bid price by the bidder.
- Bidders shall have to quote the GST component as applicable in the respective BOQs duly mentioning proper HSN & SAC code therein. Bidders shall have to ensure correct reflection of GST while quoting the price bid.
- In case of any change subsequently in GST including rates by the Government, LOA will be modified accordingly till the scheduled date of completion of the entire work.
- Tax invoices need to be issued by the bidder for raising claim under the contract showing separately the tax component (CGST, SGST, IGST, Cess as applicable) in accordance with the provisions of the GST Act, 2017.
- Bidder shall furnish GST Registration number (GSTIN).

### **30. STATUTORY DEDUCTIONS**

All statutory deductions will be made from each RA/Final Bill as per applicability of different laws of the land.

### **31. HANDING OVER**

The work will be taken over by WBSEDCL after final completion of the plant in all respect. In case of phase-wise commissioning of the plant, the contractor shall have to maintain the same at his risk & cost until handing over of the plant. During handing over the plant, the contractor shall submit the following documents.

- i. Completion Certificate including Warrantee Certificates of the work & spare parts and materials in a 100 Rs. Non-judicial Stamp Paper (Proforma for the same should be approved by WBSEDCL) duly indemnified.
- ii. All as-built drawings, design and manual of the power plant in 06 (six) sets.
- iii. Operation, Maintenance & Safety Instruction Manual and other information about the project.
- iv. Detailed Bill of Materials for operation & maintenance, inventory of spares at project site.
- v. Completion certificate as per prescribed format provided by WBSEDCL.

After submitting all the requisite documents as mentioned above, WBSEDCL will hand over the plant to the contractor for comprehensive operation and maintenance for 5 (Five) years as per clause no. 24 of GCC.

### **32. CERTIFICATE OF COMPLETION OF WORKS**

Before taking over the works into commercial use, WBSEDCL will issue a certificate of completion based on the following certifications by the Controlling Officer:

- i. Acceptable quality and workmanship of works.
- ii. Acceptance of field tests by the Controlling Officer or his authorized representative after final commissioning the plant.

### **33. FINAL ACCEPTANCE CERTIFICATES (FAC)**

The Controlling Officer will issue Final Acceptance Certificate (FAC) within 30 (Thirty) days from the date of expiration of 5 (Five) years comprehensive operation & maintenance or the date of rectification of deficiencies/damages/ defects, if any, whichever is later.