

ii) PVC and ORC will not applicable be for (i) above.

2.15 SUPPLEMENTARY ITEMS

2.15.1 For NON Civil Works

Supplementary items are items/works required for completion of entire work but not specified in the scope of work. Subject to certification of such items/works as supplementary items by BHEL Engineer, rates shall be derived on the basis of any one of the following on mutual agreement:

i) Based on percentage breakup/rates indicated for similar/nearby items

ii) In case (i) above does not exist, then BHEL/site may derive the percentage breakup/rates to suit the type of work

2.15.2 For Civil Works

i) Rates for Supplementary Works/Additional Works arising out due to additions/alterations in the original scope of works as per contract subject to certification of BHEL Engineer shall be worked out as under:

a) Item rates which are available in existing BOQ (Rate Schedule) shall be operated with applicable escalation derived from All India Consumer Price Index for Whole Sale Commodities

b) Items of works which are not available in existing BOQ shall be operated as an 'Extra Works' and rate shall be derived as per clause no 2.14

ii) Execution of Supplementary Works/Additional Works through the Contractor shall be at the sole discretion of BHEL, and shall be considered as part of executed contract value for the purpose of Quantity Variation as per clause 2.13

iii) BHEL Engineer's decision regarding fixing the rate as above is final and binding on the contractor.

iv) PVC and ORC will not be applicable for (i) above.

2.16 STRIKES & LOCKOUT

2.16.1 The contractor will be fully responsible for all disputes and other issues connected with his labour/employee. In the event of the contractor's labour/employee resorting to strike or the Contractor resorting to lockout and if the strike or lockout declared is not settled within a period of 15 days, BHEL shall have the right to get the work executed through any other

agencies and the cost so incurred by BHEL along with Overhead charges of 35% shall be deducted from the Contractor's bills along with overhead of 35%

2.16.2 For all purposes whatsoever, the employees of the contractor shall not be deemed to be in the employment of BHEL

2.17 FORCE MAJEURE

The following shall amount to Force Majeure:-

2.17.1 Acts of God, act of any Government, War, Sabotage, Riots, Strike, Civil commotion, Police action, Revolution, Flood, Fire, Cyclones, Earth quake and Epidemic and other similar causes over which the contractor has no control.

2.17.2 If the contractor suffers delay in the due execution of the contractual obligation due to delays caused by force majeure as defined above, the agreed time of completion of the job covered by this contract or the obligations of the contractor shall be extended by a period of time equal to period of delay, provided that on the occurrence of any such contingency, the contractor immediately reports to BHEL in writing the causes of delay and the contractor shall not be eligible for any compensation.

2.18 ARBITRATION & RECONCILIATION

2.18.1 In case amicable settlement is not reached in the event of any dispute or difference arising out of the execution of the Contract or the respective rights and liabilities of the parties or in relation to interpretation of any provision by the Contractor in any manner touching upon the Contract, such dispute or difference shall (except as to any matters, the decision of which is specifically provided for therein) be referred to the sole arbitration of the arbitrator appointed by BHEL/In charge.

The award of the Arbitrator shall be binding upon the parties to the dispute Subject as aforesaid, the provisions of Arbitration and Reconciliation Act 1996 (India) or statutory modifications or reenactments thereof and the rules made there under and for the time being in force shall apply to the arbitration proceedings under this clause. The venue of the arbitration shall be the place from which the contract is issued or such other place as the Arbitrator at his discretion may determine

2.18.2 In case of Contract with Public Sector Enterprise (PSE) or a Government Department, the following shall be applicable:

In the event of any dispute or difference relating to the interpretation and application of the provisions of the Contract, such dispute or difference shall be referred to by either party to the arbitration of one of the arbitrators in the department of public enterprises. The award of the arbitrator shall be binding upon the parties to the dispute, provided, however, any party aggrieved by such award may make further reference for setting aside or revision of the award to the Law Secretary, Department of Legal Affairs, Ministry of Law and Justice, Government of India. Upon such reference the dispute shall be decided by the Law Secretary or the Special Secretary or Additional Secretary when so authorized by the Law Secretary, whose decision shall bind the parties hereto finally and conclusively.

2.18.3 The cost of arbitration shall be borne equally by the parties.

2.18.4 Work under the contract shall be continued during the arbitration proceedings

2.19 PAYMENTS

Payments to Contractors are made in any one of the following forms

2.19.1 Running Account Bills (RA Bills)

i) These are for interim payments when the contracts are in progress. The bills for such interim payments are to be prepared by Contractor in prescribed formats (RA Bill forms).

ii) Payments shall be made according to the extent of work done as per measurements taken up to the end of the calendar month and in line with the terms of payments described in the Tender documents along with relevant statutory documents applicable for the work.

iii) Recoveries on account of electricity, water, statutory deductions, etc are made as per terms of contract

iv) Full rates for the work done shall be allowed only if the quantum of work has been done as per the specifications stipulated in the contract. If the work is not executed as per the stipulated specifications, BHEL may ask the contractor to re do the work according to the required specifications, without any extra cost. However, where this is not considered necessary 'OR' where the part work is done due to factors like non-availability of material to be supplied by BHEL 'OR' non availability of fronts 'OR' non availability of drawings, fraction payment against full rate, as is considered reasonable, may be allowed with due regard for the work remaining to be done. BHEL decision in this regard will be final and binding on the contractor.

v) In order to facilitate part payment, BHEL Site Engineer at his discretion may further split the contracted rates/percentages to suit site conditions, cash flow requirements according to the progress of work

2.19.2 Final Bill

Final Bill is used for final payment on closing of Running Account for works or for single payment after completion of works. *Final Bill* shall be submitted as per prescribed format after completion of works as per scope and upon material reconciliation, along with the following.

- i) *No Claim Certificate* by contractor
- ii) *Clearance certificates where ever applicable viz Clearance Certificates from Customer, various Statutory Authorities like Labour department, PF Authorities, Commercial Tax Department, etc*
- iii) *Indemnity bond as per prescribed format BHEL shall settle the final bills after deducting all liabilities of Contractor to BHEL*

2.20 PERFORMANCE GUARANTEE FOR WORKMANSHIP

2.20.1 Even though the work will be carried out under the supervision of BHEL Engineers the Contractor will be responsible for the quality of the workmanship and shall guarantee the work done for a period of as mentioned in the contract/NIT from the date of commencement of guarantee period as defined in Technical Conditions of Contract, for good workmanship and shall rectify free of cost all defects due to faulty erection detected during the guarantee period. In the event of the Contractor failing to repair the defective works within the time specified by the Engineer, BHEL may proceed to undertake the repairs of such defective works at the Contractor's risk and cost, without prejudice to any other rights and recover the same from the balance security deposit.

2.20.2 BHEL shall release the balance security deposit subject to the following

- i) Contractor has submitted *Final Bill*
- ii) *Guarantee period as per contract has expired*
- iii) Contractor has furnished *No Claim Certificate* in specified format
- iv) BHEL Site Engineer/Construction Manager has furnished the *No Demand Certificate* in specified format

v) Contractor has carried out the works required to be carried out by him during the period of Guarantee and all expenses incurred by BHEL on carrying out such works is included for adjustment from the Guarantee money refundable.

2.21 CLOSING OF CONTRACTS

The Contract shall be considered completed and closed upon completion of all contractual obligations and settlement of Final Bill or completion of Guarantee period whichever is later. Upon closing of Contract, BHEL shall issue a completion certificate as per standard format, based on specific request of Contractor.

2.22 REVERSE AUCTION/PRICE BID OPENING:

- BHEL reserves the right to go for reverse auction at any point of time before opening of Price Bid.
- Bids with non-acceptance of reverse auction will be liable for rejection.
- Opening of Price Bid at discretion of BHEL.
- BHEL shall be at liberty to cancel the tender at any time, before ordering, without assigning any reason.

2.23 SUSPENSION OF BUSINESS DEALINGS

BHEL reserves the right to take action against Contractors who either fail to perform or Tenderers/Contractor who indulge in malpractices, by suspending business dealings with them in line with BHEL guidelines issued from time to time.

2.24 OTHER ISSUES

2.24.1 Value of Non judicial Stamp Paper for Bank Guarantees and for Contract Agreement shall be not less than Rs 200/- unless otherwise required under relevant statutes.

2.24.2 In case of any conflict between the General Conditions of Contract and Special Conditions of Contract, provisions contained in the Special Conditions of Contract shall prevail.

2.24.3 Unless otherwise specified in NIT, offers from consortium /JVs shall not be considered.

2.24.4 BHEL may not insist for signing of Contract Agreements in respect of low value and short time period contracts

INTEGRITY PACT

Between

Bharat Heavy Electricals Ltd. (BHEL), a company registered under the Companies Act 1956 and having its registered office at “BHEL House”, Siri Fort, New Delhi – 110049 (India) hereinafter referred to as “The Principal”, which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the ONE PART

and

_____, (description of the party along with address), hereinafter referred to as “The Bidder/ Contractor” which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the OTHER PART

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 and regulations, and the principles of economic use of resources, and of fairness and transparency in its relations with its Bidder(s)/ Contractor(s).

In order to achieve these goals, the Principal will appoint Independent External Monitor(s), 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

- 1.1 The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:-
 - 1.1.1 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.
 - 1.1.2 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.
 - 1.1.3 The Principal will exclude from the process all known prejudiced persons.
- 1.2 If the Principal obtains information on the conduct of any of its employees which is a penal offence under the Indian Penal Code 1860 and Prevention of Corruption Act 1988 or any other statutory penal enactment, or if there be a substantive suspicion in this regard, the Principal will inform its Vigilance Office and in addition can initiate disciplinary actions.

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

- 2.1 The Bidder(s)/ Contractor(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.
 - 2.1.1 The Bidder(s)/ Contractor(s) will not, directly or through any other person or firm, offer, promise or give to the Principal or 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, immaterial or any 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.

- 2.1.2 The Bidder(s)/ Contractor(s) will not enter with other Bidder(s) into any illegal or 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 cartelization in the bidding process.
- 2.1.3 The Bidder(s)/ Contractor(s) will not commit any penal 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.
- 2.1.4 The Bidder(s)/ Contractor(s) will, when presenting his bid, disclose any and all payments he has made, and is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.
- 2.2 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 acts in any other manner such as to put his reliability or credibility in question, the Principal is entitled to disqualify the Bidders(s)/ Contractor(s) from the tender process or take action as per the separate “Guidelines for Suspension of Business Dealings with Suppliers/ Contractors” framed by the Principal.

Section 4 – Compensation for Damages

- 4.1 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.
- 4.2 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 equivalent to 5% of the contract value or the amount equivalent to Security Deposit/Performance Bank Guarantee, whichever is higher.

Section 5 – Previous Transgression

- 5.1 The Bidder declares that no previous transgressions occurred in the last 3 years with any other company in any country conforming to the anti-corruption approach or with any other Public Sector Enterprise in India that could justify his exclusion from the tender process.
- 5.2 If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

Section 6 – Equal treatment of all Bidders/ Contractors/ Sub-contractors

- 6.1 The Bidder(s)/ Contractor(s) undertake(s) to demand from his sub-contractors a commitment consistent with this Integrity Pact. This commitment shall be taken only from those sub-contractors whose contract value is more than 20% of Bidder's/ Contractor's contract value with the Principal.
- 6.2 The Principal will enter into agreements with identical conditions as this one with all Bidders and Contractors.
- 6.3 The Principal will disqualify from the tender process all bidders who do not sign this pact or violate its provisions.

Section 7 – Criminal Charges against violating Bidders/ Contractors /Sub-contractors

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 Vigilance Office.

Section 8 –Independent External Monitor(s)

- 8.1 The Principal appoints competent and credible Independent External Monitor for this Pact. 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.
- 8.2 The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the CMD, BHEL.
- 8.3 The Bidder(s)/ Contractor(s) accepts that the Monitor has the right to access without restriction to all contract documentation of the Principal including that provided by the Bidder(s)/ Contractor(s). The Bidder(s)/ Contractor(s) will grant the monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his contract documentation. The same is applicable to Sub-contractor(s). The Monitor is under contractual obligation to treat the information and documents of the Bidder(s)/ Contractor(s) / Sub-contractor(s) with confidentiality.
- 8.4 The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the contract 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.
- 8.5 As soon as the Monitor notices, or believes to notice, a violation of this agreement, he will so inform the Management of the Principal and request the Management to discontinue or

take corrective action, or heal the situation, 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.

- 8.6 The Monitor will submit a written report to the CMD, BHEL within 8 to 10 weeks from the date of reference or intimation to him by the Principal and, should the occasion arise, submit proposals for correcting problematic situations.
- 8.7 The CMD, BHEL shall decide the compensation to be paid to the Monitor and its terms and conditions.
- 8.8 If the Monitor has reported to the CMD, BHEL, a substantiated suspicion of an offence under relevant IPC / PC Act, and the CMD, BHEL has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Vigilance Office, the Monitor may also transmit this information directly to the Central Vigilance Commissioner, Government of India.
- 8.9 The number of Independent External Monitor(s) shall be decided by the CMD, BHEL.
- 8.10 The word 'Monitor' would include both singular and plural.

Section 9 – Pact Duration

- 9.1 This Pact begins when both parties have legally signed it. It expires for the Contractor 12 months after the last payment under the respective contract and for all other Bidders 6 months after the contract has been awarded.
- 9.2 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 as above, unless it is discharged/ determined by the CMD, BHEL.

Section 10 – Other Provisions

- 10.1 This agreement is subject to Indian Laws and jurisdiction shall be registered office of the Principal, i.e. New Delhi.
- 10.2 Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.
- 10.3 If the Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.
- 10.4 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.
- 10.5 Only those bidders/ contractors who have entered into this agreement with the Principal would be competent to participate in the bidding. In other words, entering into this agreement would be a preliminary qualification.

For & On behalf of the Principal
(Office Seal)

For & On behalf of the Bidder/ Contractor
(Office Seal)

Place-----

Date-----

Witness: _____

(Name & Address) _____

Witness: _____

(Name & Address)_____

ANNEXURE TO INTEGRITY PACT

INTEGRITY PACT (IP)

- (a) IP is a tool to ensure that activities and transactions between the Company and its Bidders/Contractors are handled in a fair, transparent and corruption free manner. Following independent External Monitors (IEMs) on the present panel have been appointed to oversee implementation of IP in BHEL.

1. Shri Arun Chandra Verma, IPS (Retd.)

Email: acverma1@gmail.com

AND

2. Shri Virendra Bahadur Singh, IPS (Retd.)

Email: vbsinghips@gmail.com

- (b) The IP as enclosed with the tender (total 7 sheets) is to be submitted (duly signed by authorized signatory who signs in the offer) along with techno-commercial bid. Only those bidders who have entered into such an IP with BHEL would be competent to participate in the bidding. In other words, entering into this Pact would be a preliminary qualification.
- (c) Please refer Section-8 of the IP for Role and Responsibilities of IEMs. In case of any complaint arising out of the tendering process, the matter may be referred to the IEM mentioned in the tender.

Note: No routine correspondence shall be addressed to the IEM (phone/post/email) regarding the clarifications, time extensions or any other administrative queries, etc. on the tender issued. All such clarification/issues shall be addressed directly to the tender issuing (procurement) department's officials whose contact details are provided below:

Details of the contact person:

Mr Chandrashekhar C Jaka
DGM, (SC&PV-PVSS)
5th Floor, New Engineering Building,
BHEL- Electronics Division
Mysore Road, Bangalore -560 026.

Phone: 080- 26998392/8232

PROFORMA OF BANK GUARANTEE FOR EARNEST MONEY
(On non-Judicial paper of appropriate value)

Bank Guarantee No.....
Date.....

To

(Employer's Name and Address)
.....

Dear Sirs,

In accordance with the terms and conditions of Invitation for Bids/Notice Inviting Tender No.....1(Tender Conditions), M/s. having its registered office at2 (hereinafter referred to as the 'Tenderer'), is submitting its bid for the work of.....3 invited by4.(name of the Employer) through its Unit at(

The Tender Conditions provide that the Tenderer shall pay a sum of Rs as Earnest Money Deposit in the form therein mentioned. The form of payment of Earnest Money Deposit includes Bank Guarantee executed by a Scheduled Bank.

In lieu of the stipulations contained in the aforesaid Tender Conditions that an irrevocable and unconditional Bank Guarantee against Earnest Money Deposit for an amount of5 is required to be submitted by the Tenderer as a condition precedent for participation in the said Tender and the Tenderer having approached us for giving the said Guarantee,

we, the[Name & address of the Bank]
..... having our Registered Office at(hereinafter referred to as the Bank) being the Guarantor under this Guarantee, hereby irrevocably and unconditionally undertake to forthwith and immediately pay to the Employer without any demur, merely on your first demand any sum or sums of Rs. 5(in words Rupees.....) without any reservation, protest, and recourse and without the beneficiary needing to prove or demonstrate reasons for its such demand.

Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs.

We undertake to pay to the Employer any money so demanded notwithstanding any dispute or disputes raised by the Vendor/Contractor/Vendors in any suit or proceeding pending before any Court or Tribunal, Arbitrator or any other authority, our liability under this present being absolute and unequivocal.

The payment so made by us under this Guarantee shall be a valid discharge of our liability for payment hereunder and the Tenderer shall have no claim against us for making such payment.

We Bank further agree that the Employer shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Tender or to extend the time of submission of from time to time or to postpone for any time or from time to time any of the powers exercisable by the Employer against the said Tenderer and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Tenderer or for any forbearance, act or omission on the part of the Employer or any indulgence by the Employer to the said Tenderer or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.

The Bank also agrees that the Employer at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Tenderer and notwithstanding any security or other guarantee that the Employer may have in relation to the Tenderer's liabilities.

This Guarantee shall be irrevocable and shall remain in force upto and including.....6 and shall be extended from time to time for such period as may be desired by the Employer.

This Guarantee shall not be determined or affected by liquidation or winding up, dissolution or change of constitution or insolvency of the Tenderer but shall in all respects and for all purposes be binding and operative until payment of all money payable to the Employer in terms hereof. However, unless a demand or claim under this Guarantee is made on us in writing on or before the⁷ we shall be discharged from all liabilities under this Guarantee.

We, Bank lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Employer in writing.

Notwithstanding anything to the contrary contained hereinabove:

- a) The liability of the Bank under this Guarantee shall not exceed.....5.....
- b) This Guarantee shall be valid up to6
- c) Unless the Bank is served a written claim or demand on or before⁷ all rights under this guarantee shall be forfeited and the Bank shall be relieved and discharged from all liabilities under this guarantee irrespective of whether or not the original bank guarantee is returned to the Bank

We, Bank, have power to issue this Guarantee under law and the undersigned as a duly authorized person has full powers to sign this Guarantee on behalf of the Bank.

For and on behalf of

(Name of the Bank)

Date.....

Place of Issue.....

Price-Bid

OPERATION AND MAINTENANCE OF GNFC 10MW(AC) SOLAR PV PLANT FOR 10 YEARS

SI No	Activity description	Scope of Work & Remarks	Unit	Qty	Estimate Unit rate excluding GST (Rs)	Total Estimate excluding GST (Rs)
1	Water cleaning of solar modules of approximately 40200 nos. (Three cycles per month, each cycle shall consist of cleaning of entire 40,200 appr Nos modules).	(i) Water shall be supplied by GPCL and will be stored in underground sumps constructed at site. Water charges to GPCL shall be borne by GNFC Water from sumps shall be pumped through already installed pipeline network and pumps to facilitate water flow for modules cleaning. (ii) In case water is not provided by GPCL due to non-availability of water in local canal, vendor shall arrange water using tankers and payment for supply of water through tankers shall be made by BHEL. (iii) All the consumables for cleaning of modules such as cleaning brushes, mopping sticks etc. shall be arranged by vendor. (iv) In case of natural cleaning of solar modules by rains and cleaning not carried out, no payment will be done for that cycle within the month. (v) Three cycles of cleaning of entire solar modules has to be completed in a month by the vendor. In case, lesser quantity of solar modules are cleaned, proportionate payment will be made for quantity of solar modules cleaned up to last day of each month. (vi) Each solar module is of 2m x 1m size and 40 solar modules are mounted on each structure.	Months	120	22180.50	2661660.00
2	Supply of water using tankers	Water shall be supplied using tankers from external source in case water is not provided by GPCL.	KL	2,412	222.22	535994.64
3	Grass cutting - maintenance of plant without grass (One cycle per month)	(i) Minimum 1 labourers to be allocated for this activity. (ii) Activity to be carried out with 1 nos of Petrol / Diesed operated Motorized Grass cutting machines. Repair and maintenance of grass cutting machines shall be in vendor's scope. (iii) Petrol/Diesel/electricity expenses shall be in vendor's scope for operation of the grass cutting machine. (iv) In case if grass is not grown and cutting is not carried out, no payment will be done for the month.	Months	120	10420.65	1250478.00
4	Supply of Motorized Grass cutting machines of reputed make with repair and maintenance for complete O&M period	Make shall be BOSCH / HONDA or equivalent. Approval shall be taken from BHEL before procurement.(Once in 5 years)	Nos	2	22222.35	44444.70
5	Deployment of Security persons for the entire plant in 3 shifts per day each of 8 hours with minimum 2 security persons in each shift (1 with arms and 1 without arms). One each of security persons with arms shall deployed at main gates at all times. Other security persons shall be patrolling the entire area	(i) Securing approx. 45 acres of plant area. (ii) In case of theft, FIR to be lodged by O&M vendor. (iii) If theft incidents are due to negligence of O&M vendor such as shortage of security, the loss recovery shall be done from vendor. (iv) one security cabins at main gates and 4 watchman cabins at corners are provided by BHEL in the plant.	Man Months	360	14440.03	5198410.98
				360	14100.77	5076275.40

OPERATION AND MAINTENANCE OF GNFC 10MW(AC) SOLAR PV PLANT FOR 10 YEARS

SI No	Activity description	Scope of Work & Remarks	Unit	Qty	Estimate Unit rate excluding GST (Rs)	Total Estimate excluding GST (Rs)
6	Management of complete O & M activities by O&M incharge	One engineer (B.Tech in Electrical Engg.) with 66 kV working experience to be appointed who will be the overall O&M incharge of the plant. Major responsibilities of O&M incharge : (i) Allotment of work to all the O&M staff and supervision of O&M works as per schedule approved by BHEL. (ii) Sending Daily, weekly and Monthly report to BHEL by mail. (iii) Interaction with customer / GETCO / SLDC / GPCL/QCA agency etc. (iv) Coordinating with sub-station upon grid failures /cable faults and implementing the needful steps to restore the plant to normal operation. (v) Monthly downloading of data from ABT meter using CMRI / as instructed by GETCO. (vi) Maintaining plant records and log books, stock register and reporting to BHEL. (vii) Trouble-shooting and Updation of SCADA system if required as instructed by BHEL. (viii) Theft incidents: immediate reporting to BHEL, filing FIRs at police stations on BHEL behalf, coordination for site inspection by insurance companies and clearance of insurance claims, logging of events (date, time) and maintaining records. (ix) Accidents: immediate reporting to BHEL, coordinating with hospitals, logging of events (data, time) and maintaining records.	Months	120	23333.47	2800016.10
7	Plant Operation works such as (i) Logging of DC, AC, grid parameters (current, voltage, power, energy) at PCUs, HT panels, 66KV switchyard, transformer temperatures, equipment tripping/ breakdown, grid outage as per BHEL formats. (ii) SCADA data station / HMI PC operations/ CCTV operation for daily monitoring of weather parameters, trend graphs and urgent reporting to BHEL in case of any problems / anomalies observed with any of the parameters, resolving communication issues between SCADA and other equipment,Co-ordination with QCA agency, healthiness of all equipment	Minimum 2 technicians (Diploma / ITI) to be allocated for this activity. The O&M works mentioned are indicative. All the activities required for O&M shall be carried out by technicians as instructed by BHEL. Monthly reports to be prepared and submitted by mail to BHEL for the various parameters including Earth resistance, String current, Energy exported etc. as per report formats finalized by BHEL. Atleast one technicians out of 2, shall be qualified for operating installations of 66KV and above. Certificate / license copy to be submitted to BHEL before commencement of O&M works. One technician to be posted in Night shift operation.	Months	120	24203.32	2904398.28

OPERATION AND MAINTENANCE OF GNFC 10MW(AC) SOLAR PV PLANT FOR 10 YEARS

SI No	Activity description	Scope of Work & Remarks	Unit	Qty	Estimate Unit rate excluding GST (Rs)	Total Estimate excluding GST (Rs)
8	<p>Carrying out Preventive and Breakdown maintenance as per O&M schedule / OEM guidelines / maintenance manual such as</p> <p>a) Cleaning, tightness checks, lubrication and other maintenance of equipment -PCUs, HT panels, 66KV Power transformers, Inverter transformers, C&R panels, Auxiliary transformers, ACDB, FCBC, UPS, Battery banks, OLTC, 66 KV Switchyard equipment, SMBs, SCADA, WMS, CCTV, Fire Alarm, ESE Lightning arresters, earthing, light fitting -indoor and outdoor etc.</p> <p>b) Replacement of Silica gel, gaskets, Rectification of Oil leakages in all transformers and 66KV Switchyard equipment.</p> <p>c) Repair/ replacement of failed 33KV cable inside plant and cable laid underground between plot B2 and plot C, replacement of failed 33 kV termination/ jointing kits.</p> <p>d) Trouble-shooting of solar array problems as DC earth fault, OFC/ communication cable faults, replacement of damaged PV modules, SMB components etc.</p> <p>e) Checking tightness of MMS and PV Modules</p> <p>(f) Monthly earth resistance measurement and recording value on the Earth chambers</p> <p>(g) Watering of earth pits</p>	<p>(i) Minimum 1 technicians (Diploma/ITI) and minimum 2 labourer to be allocated for this activity.</p> <p>(ii) List of equipment mentioned is indicative. Maintenance of all the equipments installed in plant is in vendor's scope.</p> <p>(iii) Periodic maintenance shall be preferably carried out during evening to avoid generation loss.</p> <p>(iv) Whenever a fault has occurred, the contractor has to attend to rectify the fault & the fault must be rectified within 48 hours from the time of occurrence of fault.</p> <p>(v) Major spares such as complete equipment failures of CT, PT, LA, Breaker, Isolator, SMB, PCU, transformer, cables, HT termination and jointing kits etc. if any will be supplied by BHEL.</p> <p>(vi) Minor spares and consumables such as MCBs, Fuses, peripheral and building Lights, fans, indication lamps, gaskets, silica gel, acid for battery, hardwares, lugs, glands, MC4 connectors, PCU dust filter, PEB room louver air filter, sanitary fittings etc. if required shall be supplied by vendor.</p> <p>(vii) In case of Maintenance activity / failure / damage / accident / replacement / repair required for any of the plant equipment such as Solar modules, 66KV Switchyard equipment, HT panels, all transformers etc. or for any other site related activities, unloading, erection, installation, charging, co-ordination with agencies involved, etc., shall be in O&M vendor's scope. Arrangement of Crane / hydra / JCB/ additional labour hiring / Ladder, etc., for arranging replacement of failed equipment shall also be in the scope of O&M vendor.</p> <p>(viii) All tools and tackles required for maintenance activities shall be arranged by O&M vendor.</p>	Months	120	35167.68	4220121.12
9	<p>General maintenance works such as Daily housekeeping activity for Inverter rooms and Control room including toilets, Garbage removal from solar array area, repair of plumbing works, minor civil repair works such as leakages, doors, windows, rolling shutters, ventilators, floor/ tiles/ wall cracks, cleaning of drains etc.</p>	<p>(i) Minimum 1 labourers to be allocated for this activity.</p> <p>(ii) All the buildings - Main Control room and Inverter rooms to be mopped daily and surroundings to be kept clean.</p> <p>(iii) All toilets to be cleaned daily.</p> <p>(iv) All consumables required for this activity shall be in vendor's scope.</p>	Months	120	11533.01	1383960.89

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SI No	Activity description	Scope of Work & Remarks	Unit	Qty	Estimate Unit rate excluding GST (Rs)	Total Estimate excluding GST (Rs)
10	(A) Annual maintenance of all transformers with respect to BDV measurement, Oil filtering as required, tightness of cables, earthing and hardwares, replacement of gasket, silica gel breather, paint touchup, arresting oil leakages and oil topup of all transformers (66KV, 33KV and aux transformers), CT, PT and other related electrical works. (B) Annual maintenance of underground water tanks, Sintex tanks, cleaning of sewerage lines, septic tanks, soak pits etc	Through OEM / competent testing agencies as approved by BHEL. All required tools, tackles, testing and measuring instruments, Oil filtration kit, DG set etc. to be arranged by vendor.	Years	10	90128.16	901281.60
11	Annual testing and calibration of 66 kV Switchyard equipment-SF6 Breakers, Isolators, CTs, PTs, LAs, ABT energy meters, NIFPS etc.	Through OEM / competent testing agencies as approved by BHEL. All required tools, tackles, testing and measuring instruments, DG set etc. to be arranged by vendor.	Years	10	88889.40	888894.00
12	Annual testing and calibration of 33 kV HT panel equipment as VCBs, CTs, PTs, Numerical relays, electromechanical relays, MFMs etc.	Through OEM / competent testing agencies as approved by BHEL. All required tools, tackles, testing and measuring instruments, DG set etc. to be arranged by vendor.	Years	10	35112.15	351121.50
13	Calibration of Weather Monitoring Station equipment	Weather monitoring station equipment to be calibrated at IMD or OEM recommended labs as per calibration period of individual equipment as recommended by OEM.	Years	10	44444.70	444447.00
14	Checking and re-filling of Fire extinguishers and sand buckets as required.	All the fire extinguishers to be checked for healthiness and re-filling to be carried out as and when required.(Appr Qty DCP Type 10 Kgs: 4 No's,CO2 type 9 Kgs:12 no's, Foam Type : 6 no's)	Months	120	1255.50	150660.00
15	Maintenance and Servicing of Airconditioners, Refrigerator, Furniture, Water purifier, fans, grass cutting machines etc.	Complete maintenance and servicing of equipment as and when required to be carried out by vendor.	Months	120	3348.00	401760.00
16	Painting of all metal structures (non-galvanized), rolling shutters, switchyard and transformer yards fencing and gates including PEB (Pre-Engineered Buiding) material, all rusted components etc.	Painting of all metal structures shall be carried out once in every year.	Years	10	8370.00	83700.00
17	Painting of Main Control room building using weather proof cement based acrylic emulsion paint (Exterior grade) for outside and oil bound distemper paint for inside the building	Painting of Control room building shall be carried out once in 5 years.	AU	2	8370.00	16740.00
18	Maintenance of Roads and drains such as: I. Crack repairing of the road surface. II. Pot-holes over the top road surface to be rectify. III. Maintenance of shoulders for the rain cuts or damage due to some external reasons. IV. Before and after the monsoon season the storm water drainage shall be maintained & cleaned for smoother flow of storm water.	Maintenance of roads and drains shall be carried out once in every year.	Years	10	40176.00	401760.00
19	Re-carpeting of the road surface (approx. 2.1 KMS)	Re-carpeting shall be carried out once in 5 years.	AU	2	803520.00	1607040.00

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SI No	Activity description	Scope of Work & Remarks	Unit	Qty	Estimate Unit rate excluding GST (Rs)	Total Estimate excluding GST (Rs)
20	Providing internet leased line connection of min. 2 MBPS speed including required hardware for 24 hours internet facility	Internet connection to be taken in the name of GNFC	Months	120	888.89	106666.80
21	Providing Landline Telephone connection in Control Room	Landline telephone connection to be taken in the name of GNFC	Months	120	443.61	53233.20
22	Coordination and liasoning with GETCO for rectification/ repair of failures in 66KV substation bay and 66KV Cable	Official O&M charges to GETCO will be paid by BHEL in the form of DD / EFT as per invoice/ demand note raised by GETCO. Required coordination and liasoning in getting invoice/ demand note etc. shall be in vendor scope.	Years	10	22222.35	222223.50
23	Coordination and liasoning with SLDC for interconnection of plant data with ALDC / SLDC	Official charges to SLDC will be paid by BHEL in the form of DD / EFT as per invoice/ demand note raised by SLDC. Required coordination and liasoning in getting invoice/ demand note etc. shall be in vendor scope.	Years	10	22222.35	222223.50
24	Coordination and liasoning with CEIG /GEDA for renewal of CEIG approval and other statutory bodies as applicable.	Vendor shall coordinate and liason with CEIG/ GEDA for renewal of complete plant approval including 66KV cable and GETCO side substation bays. Official charges if any to CEIG /GEDA will be paid by BHEL in the form of DD / EFT.	Years	10	22222.35	222223.50
25	Supply and installation of RO water purifier of reputed make with storage capacity of min. 8 Litres in Control room for drinking water for O&M staff	Make shall be KENT/ EUREKA FORBES / BLUE STAR or equivalent. Approval shall be taken from BHEL before procurement.(Once in 5 years)	No	2	22222.35	44444.70
26	Supply and installation of plant name boards -	Specification and design of name board shall be as approved by BHEL	No	1	4444.47	4444.47
27	Supply and installation of display board mentioning details of O&M personnel at Control Room	Specification and design of display board shall be as approved by BHEL	No	1	4444.47	4444.47
28	Deployment of QCA for Scheduling and Forecasting Approved Vendors: 1) Manikaranalytics 2) Reconnect energy 3) Tata Power 4) Statkraft	Deployment of QCA is in O&M vendor scope.QCA shall be registered with SLDC. Role of QCA is listed in Annexure-A .All cost towards scheduling and Fore-casting activity like charges for Qualified co-ordinating agency related to DSM regulation by GERC in existence and ammended time to time shall be in Vendor scope. (DSM charges will be borne by BHEL and GNFC)	Months	120	7150.28	858033.60
Total amount excluding GST (Rs.)						33,061,102
Total amount: Rupees Three Crore Thirty Lakhs Sixty One Thousand One Hundred and Two, Plus applicable GST						
QUOTE PERCENTAGE (%) ABOVE/BELOW (+/-) (OR) AT PAR WITH RESPECT TO TOTAL AMOUNT						
QUOTED PERCENTAGE (%) IN WORDS ABOVE/BELOW (OR) AT PAR WITH RESPECT TO TOTAL AMOUNT						
Plus Applicable GST						
NOTE: 1. CONTRACTOR SHOULD QUOTE PERCENTAGE (%) ABOVE/BELOW (OR) AT PAR WITH RESPECT TO TOTAL AMOUNT. 2. QUOTED PERCENTAGE (%) IS APPLICABLE ON ALL ITEM RATES UNIFORMLY. 3. Measurement of Services / Activities carried out at Site shall be as per O&M Log book records and deductions will be passed in case of services / activities not completed in the month / year.						
IMPORTANT NOTE: Monthly/Annual O&M payment to the contractor will be released on comparision of generation as per guaranteed paramenter vis-a-vis Actual generation. The shortfall (if any) w.r.t guaranteed generation shall be duly supported by documentary evidence. Incase of shortfall w.r.t guaranteed generation paramenter, BHEL Engineering department to certifiy that "the reasons submitted by contractor are beyond its reasonable control". The amount equivalent to shortfall in generation may be observed by BHEL on exceptional basis.						
*Manpower indicated is only minimum requirement. However, vendor to deploy required manpower to complete each activity in specified time duration.						
The value of the Contract will remain same throughout contract period and no escalation is allowed. Hence bidder has to quote the price, considering the revision of minimum wages by Government notifications from time to time.						