

RIB No : SEC/C&P/RIB/2020/CG/100/120					
Request for Bids for Design, Engineering, Supply, Construction, Erection, Testing & Commissioning of 100 MW (AC) Solar PV Project (160MWp DC capacity) along with 40MW/120 MWh Battery Energy Storage System having 10 years Plant O&M at District Rajhanda, Chhattisgarh, India					
Sl. No.	Section	Page No.	Clause	Original Version	Amendment
1	Annexure A.2 Technical Specifications	37 of 182	7.5 (i)	Maximum voltage drop in LT cable (from PCU to Transformer) shall be limited to 0.5% of the rated voltage. For HT cables, maximum voltage drop shall be limited to 0.5 % of the rated voltage. The Contactor shall provide voltage drop calculations in excel sheet.	In case of Central inverters, maximum voltage drop in LT cable (from PCU to inverter transformer) shall be limited to 0.5% of the rated voltage. In case of String inverters, maximum voltage drop (from string inverter to LT combiner panel and from LT combiner panel to Inverter duty transformer) shall be limited to 1.5%. For HT cables (from inverter transformer to <b>plant take off point</b> ), maximum voltage drop shall be limited to 0.5 % of the rated voltage. The Contactor shall provide voltage drop calculations in excel sheet.
2	Annexure A.2 Technical Specifications	15 of 182	3.5 (ii)	The average voltage drop in the cables (Modules to Inverter) shall be limited to 1.5 % of the rated voltage. The Contractor shall provide voltage drop calculations in excel sheet.	In case of central inverters, average voltage drop in the cables (from PV Modules to PCU) shall be limited to 1.5 % of the rated voltage. In case of string Inverters, average voltage drop (from PV module to string inverter) shall be limited to 0.5% of the rated voltage drop. The Contractor shall provide voltage drop calculations in excel sheet.
3	Annexure D - Mandatory Spares	Annexure 1 to Amendment 1	Mandatory Spares ,S. No. 6	Power Transformer - 1 No. 50 MVA	Void
4	Amendment 1		S. No. 35	Watt-Hour Rating (Dispatchable Capacity) 120 MWh ,dispatchable at the beginning of life (i.e. at the time of Commissioning) and minimum throughput capacity at the end of each year as per below table: Year 1 120 MWh Year 2 116.4 MWh Year 3 115.2 MWh Year 4 112.8 MWh Year 5 110.4 MWh Year 6 108 MWh Year 7 105.6 MWh Year 8 103.2 MWh Year 9 100.8 MWh Year 10 98.4 MWh Dispatchable capacity shall not be less than 80% of Beginning of Life capacity at any point of time up to End of Battery Life.	Watt-Hour Rating (Dispatchable Capacity) 120 MWh ,dispatchable at the beginning of life (i.e. at the time of Commissioning) and minimum throughput capacity at the <b>beginning of each year of operation</b> as per below table: Year 1 120 MWh Year 2 116.4 MWh Year 3 115.2 MWh Year 4 112.8 MWh Year 5 110.4 MWh Year 6 108 MWh Year 7 105.6 MWh Year 8 103.2 MWh Year 9 100.8 MWh Year 10 98.4 MWh Dispatchable capacity shall not be less than 80% of Beginning of Life capacity at any point of time up to End of Battery Life.
5	Section VIII - General Conditions of Contract	197 of 1149	Definitions	New Definition	"Final Acceptance" means acceptance of Facilities by the Employer at the end of one year from the date of Operational Acceptance and upon demonstration of minimum annual parameters (CUF and BESS availability) in respect of Functional and Plant Performance Guarantees of the Facilities and completion of Scope of Work as specified in the RIB. <b>Note:</b> Milestone payments linked to Final Acceptance can be released upon completion of Scope of Work as per RIB against submission of bank guarantee of the same amount and having validity for the period remaining from that date (i.e. Date of Completion of Scope) to 14 months from the date of Operational Acceptance. The submitted bank guarantee will be released after Final Acceptance.

Declaration : The compiled Pre Bid Queries have been reproduced on as it is basis, without any modifications.						
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Request for Bids for Design, Engineering, Supply, Construction, Erection, Testing & Commissioning of 100 MW (AC) Solar PV Project (160MWp DC capacity) along with 40MW/120 MWh Battery Energy Storage System having 10 years Plant O&M at District Rajnandgaon, Chhattisgarh, India						
Sl. No.	Reference	Clause	Description as per Bidding Document	Queries	Category	Clarifications
1	Amendment 1 (Clarifications)-	S. No. 613, 179,136	Cumulative Inverter Capacity (Min.): 175	<b>Discrepancy:</b> Annexure 1 project particulars indicate minimum transformer capacity 120MVA (3 x 40 MVA)  Clarifications No's 613 indicate inverter transformer capacity 140 MVA  Clarification No 179, 136 indicate transformer capacity 100MVA (2 x 50 MVA)	Technical	Min. Inverter Transformer Capacity shall be 120 MVA. Power Transformer Capacity shall be 3 x 40MVA. Kindly refer the annexure 1 to amendment -1.
2	Amendment 1 (Clarifications)-	S. No. 568, 456	Watt-Hour Rating (Dispatchable Capacity)	<b>Discrepancy:</b> Clarification 568 indicate dispatchable energy are after meeting all auxiliary loads of BESS  Clarification 456 indicate year on year dispatchable energy is excluding auxiliary energy consumption	Technical	Dispatchable energy specified is after meeting all auxiliary loads of BESS
3	Amendment 1 (Clarifications)-	S. No. 112,114,339,613,425,179	Cumulative Inverter Capacity (Min.) 175 MW	<b>Discrepancy:</b> Clarification No's 112, 114, 339, Annexure 1 project particulars indicate minimum inverter capacity is 120MW  Clarification No's 613, 425, 179 indicate minimum inverter capacity as 140MW	Technical	Min. Inverter Capacity is 120 MW. Kindly refer the annexure 1 to amendment -1.
4	Amendment 1 (Clarifications)-	S. No.447,568,602,613	Proposed AC capacity (MW) of solar power plant - 100 MW Cumulative Inverter Capacity (Min.) = 175 MW Cumulative Inverter Transformer Capacity (Min.) = 175 MVA	<b>Discrepancy:</b> Clarification No's 447, 568, 602 & Annexure 1 project particulars indicate measurement at 33kV  Clarification No 613, indicate measurement at 132kV	Technical	For Solar Part: Cumulative Inverter Capacity (Min.) shall be <b>120</b> MW and Cumulative Inverter Transformer Capacity (Min.) shall be <b>120</b> MVA in accordance with the revised Project capacity. Kindly refer S.No. 57 of amendment 1.  For BESS Part: The (bidirectional) inverter Capacity shall be min. 40MW and BESS Transformer Capacity 40 MVA in accordance with the revised Project Capacity. The dispatchable Energy (Kindly refer S.No.57 of amendment 1 for revised BESS Energy Capacity) from BESS shall be measured at the <b>PCC on the MV side (33 kV)</b> .
5	Amendment 1 (Clarifications)-	S. No. 457,601	1. Reactive Power Rating: NA (mentioned in table 2) 2. The BESS shall be capable of dispatching both leading and lagging reactive power at the PCC, up to the rated VAR capacity specified in Table-2	<b>Discrepancy:</b> Clarification No 457 indicate reactive power to be provided by BESS Clarification 601 indicate No reactive power supply from BESS	Technical	BESS shall be designed for operating at Unity Power Factor. BESS is not required to supply Reactive power.
6	R/B – Appendix 1  Amendment 1-	S. No. 66, 67	Payment Terms: Last milestone payment (10%) for both Schedule 1 and 2 – within 45 days of receipt of invoice after final acceptance of plant facilities pursuant to submission of requisite documentation including submission of as-built drawings and document	Please suggest the definition of final acceptance of plant facilities. As this will impact planning of cash flow for the project.	Projects	"Final Acceptance" means acceptance of Facilities by the Employer at the end of one year from the date of Operational Acceptance and upon demonstration of minimum annual parameters (CUF and BESS availability) in respect of Functional and Plant Performance Guarantees of the Facilities and completion of Scope of Work as specified in the R/B.  However, the last milestone payment linked to Final Acceptance can be released upon completion of the Scope of Work as per R/B against submission of bank guarantee of the same amount and having validity for the period remaining from that date (i.e. Date of Completion of Scope) to 14 months from the date of Operational Acceptance. The submitted bank guarantee will be released after Final Acceptance.  Please Refer S. No. 5 of Amendment 2.
7	R/B- Section III Evaluation and qualification criteria  Amendment 1	S. No. 82	Evaluated bid value shall be calculated excluding BCD+SWS, SGD/ADD or any other duty or taxes  The ceiling amount of BCD+SWS & SGD/ADD is applicable only for the purpose of award	Please confirm whether the bid evaluation will be at price inclusive of taxes and duties	Contracts	The bid evaluation will be done <b>exclusive</b> of all taxes & duties.
8	Amendment 1 (Clarifications)- 112, 114  Amendment 1 (Clarifications)- 425	S. No. 112, 114, 425	Minimum cumulative inverter capacity is 120 MW  Minimum Solar Inverter Capacity shall be 140 MW as per revised capacity	Kindly confirm whether minimum solar inverter capacity to be considered is 120 MW or 140 MW	Technical	Minimum Solar Inverter Capacity is 120 MW. Please refer Annexure 1 to Amendment 1.
9	R/B- Section III – Financial Qualification  Amendment 1	S. No. 62	Minimum average annual turnover of INR 263 Cr calculated as total certified payments received for contracts in progress or completed within last 3 years. For Indian companies, 'Other Income' shall not be considered	Considering bid participation is allowed in developer mode, we request total income of entity be considered in qualification criteria. Since most of our projects are housed in project specific SPVs under a holding entity, it will be difficult to qualify with standalone financials. At the minimum, we request investment income from 100% owned subsidiaries be considered for qualification	Contracts	Terms & conditions of the bidding document shall prevail
10	R/B – Section I – Instructions to Bidders	S. No. 41	Unbalanced or Front loaded bids	Request to specify if there any minimum thresholds to be maintained between Price Schedules 1-5 (Plant and machinery- Abroad & domestic, Design services, Installation services, O&M)	Contracts	No, however bidders are required to distribute the price appropriately against the respective Goods or services accordingly.

11	Amendment 1 (Clarifications)-	S. No. 459, 636	Factory Acceptance Testing of BESS :	As per clarification no. 459, 636, and Annexure A.2 (Technical Specifications), Part E, Battery Storage Systems, Clause 2.3, system level testing requirements as per UL 9540 and 9540A, shall be carried out on fully assembled system at site as part of SAT.	Technical	Terms and conditions of the tender document prevail.
12	Annexure A.2 Technical Specification, Section B: Electrical System	3.5	The average voltage drop in the cables (Modules to Inverter) shall be limited to 1.5 % of the rated voltage.	The average voltage drop in the cables (Modules to inverter) shall be limited to 1.5% of the rated voltage for central inverter and 0.5% of the rated voltage for string inverter.	Technical	Please Refer S. No. 2 of Amendment 2
13	Annexure A.2 Technical Specification, Section B: Electrical System	7.5	Maximum voltage drop in LT cable (from inverter to inverter transformer) shall be limited to 0.5% of the rated voltage. For HT cables (from inverter transformer to interconnection point), maximum voltage drop shall be limited to 0.5 % of the rated voltage. The Contactor shall provide voltage drop calculations in excel sheet.	Maximum voltage drop in LT cable (from inverter to inverter transformer) shall be limited to 0.5% of the rated voltage for central inverter. Maximum voltage drop in LT cable (from string inverter to LT Panel, LT Panel to inverter transformer) shall be limited to 3.5% of the rated voltage for string inverter. For HT cables (from inverter transformer to interconnection point), maximum voltage drop shall be limited to 1.0 % of the rated voltage. The Contactor shall provide voltage drop calculations in excel sheet.	Technical	Please Refer S. No. 1 of Amendment 2
14	Amendment-1/Annexure-1,	Page 91	SECTION – VII, A. SCOPE OF WORKS 1. Project Particulars Cumulative Inverter Capacity (Min.) 120 MW Cumulative Inverter Transformer Capacity (Min.) 120 MVA	Pls clarify Solar AC Capacity whether it has to be 120 MW or 140 MW	Technical	Min. Inverter Capacity is 120 MW. Kindly refer the annexure 1 to amendment -1.
15	Amendment 1 (Clarifications)-	S. No. 613	For Solar Part: Cumulative Inverter Capacity (Min.) shall be 140 MW and Cumulative Inverter Transformer Capacity (Min.) shall be 140 MVA in accordance with the revised Project capacity. Kindly refer S.No. 57 of amendment 1.  For BESS Part: The (bidirectional) inverter Capacity shall be min. 40MW and BESS Transformer Capacity 40 MVA in accordance with the revised Project Capacity. The dispatchable Energy (Kindly refer S.No.57 of amendment 1 for revised BESS Energy Capacity) from BESS shall be measured at the PCC on the MV side (33 kV).	Pls clarify Solar AC Capacity whether it has to be 120 MW or 140 MW	Technical	Min. Inverter Capacity is 120 MW. Kindly refer the annexure 1 to amendment -1.
16	Amendment-1	Page 105	Power Conditioning Unit Spares as per OEM recommendation in case of central inverter/ 0.5% of total capacity in case of string inverters.	Pls inform the DC & AC cable losses in case of String Inverter	Technical	Please Refer S. No. 2 and 3 of Amendment 2
17	Amendment 1	Page 3	Technical Specification of Battery Energy Storage System, 3.1.1		Technical	BESS should be interconnected with the electricity grid at Voltage level of 11 kV or above.



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भारत हेवी इलेक्ट्रिकल्स लिमिटेड

Bharat Heavy Electricals Ltd.,  
(A Government of India undertaking)  
Electronics Division

PB 2606 , Mysore Road Bangalore , 560026 INDIA

CE: PR: 003- Rev 02 dt:22.12.2020

**SPECIAL COMMERCIAL CONDITIONS OF CONTRACT**

*Reference is brought to BHEL's Instructions to Bidders (Document Ref: CE: PR: 001- Rev 03) and General Commercial Conditions for Contract (Document Ref: CE: PR: 002- Rev 02).*

*These two documents along with Special Conditions of Contract annexed to this RFQ will form an integral part of the contract as and when the RFQ culminates into a MOU/Purchase Order.*

**RFQ No.** : MGRM0000366/Pre-Bid Tie-up/BESS

**RFQ Date** : 26/11/2020

**RFQ Due Date** : 03/12/2020 initially postponed to 05/12/2020, 11:00 AM, further post-poned to 12/12/2020, 09:00 AM & subsequently post-poned to 28/12/2020, 13:00 AM.

**Customer/Project** : M/s. Solar Energy Corporation of India (SECI)

**Tender Description** : Site survey, Design, Engineering, Manufacturing, Testing, Supply, Erection, Commissioning followed by 10 years Operation & Maintenance of 40MW/ 120MWhr. Battery Energy Storage System.

**Type of Bid** : Three-Part Bid (Pre-Qualification Bid: Part-I; Techno-commercial bid: Part-II; Price-bid: Part-III)

The Evaluation currency for this tender shall be INR.

Offer can also be submitted through e-mail mode to following mail-IDs:

srinivasulu@bhel.in, sonal@bhel.in and mounishg@bhel.in

**Corresponding Executives:** Clarifications with regard to the tender shall be addressed to following e-mail IDs:

[srinivasulu@bhel.in](mailto:srinivasulu@bhel.in)  
[alokmandal@bhel.in](mailto:alokmandal@bhel.in)  
[mounishg@bhel.in](mailto:mounishg@bhel.in)  
[kamathnk@bhel.in](mailto:kamathnk@bhel.in)  
[vpshyam@bhel.in](mailto:vpshyam@bhel.in)

**Splitting of tendered quantity to MSE vendors:** Not Applicable.

**Destination:** For Indigenous scope of supply, items are to be directly despatched to 100 MW (AC) Solar PV Project (160MWp DC capacity) in Rajnandgaon district, Chhattisgarh state, India. Consignee details will be issued by BHEL along with Despatch Clearance.

**Customer-BHEL-Supplier back-to-back arrangements/commitments**

This MOU is proposed to valid for a period of 01 year, with the stipulation that in the event of price-reduction during negotiation by BHEL with the customer, corresponding reduction will be passed to the supplier.

Within 30 days of signing the MOU, 1% of the value of MOU shall be provided by contractor to BHEL as bid bond in the form of bank guarantee /security deposit etc. in order to ensure the supplier's continued commitment during the validity period of the MOU.

MOU may be converted into purchase order on receiving the order from customer, without going through the tender procedure. After the issuance of Purchase Order on pre bid tie-up partner, the Bid Bond (Bank Guarantee) shall be released after receipt of Contract Performance Security (CPS-1) for 10% Value as detailed in Clause: I.23 below.

**Terms of Delivery:**

- **Indigenous scope of supply:** FOR, customer designated location (including Packing & Forwarding charges but excluding Taxes).

However, the Pre-Bid tie-up tender scope is for complete BESS system on turnkey basis including associated civil works, Erection & Commissioning and 10 Years of O&M.

**Under-mentioned details shall be provided against indigenous supplies and services:**

- a. GSTIN (no.) of place of supply: \_\_\_\_\_
- b. HSN (Harmonized System of Nomenclature) code: \_\_\_\_\_  
Applicable tax and Rate: \_\_\_\_\_ & \_\_\_\_\_
- c. SAC (Service Accounting Code) no.: \_\_\_\_\_  
Applicable tax and Rate: \_\_\_\_\_ & \_\_\_\_\_
- d. GSTIN (no.) of place of supply of service: \_\_\_\_\_

**I. Bidder to note that Deviations shall not be permitted for the below mentioned terms and are deemed to be complied. In case of non-compliance/deviation, offer shall be liable for rejection:**

- (1) The contract shall be on turn-key basis. The entire work shall be completed within **18 months** (including delivery of materials and installation/civil works & commissioning) from the date of entering into contract. However, BHEL may in case of urgency ask to complete the work earlier, with the mutual consent of the contractor.

- (2) Delivery of materials: All the materials as specified in the purchase order should be delivered at the site of installation within **15 months** of issuance of firm Purchase order. Delay in contractual delivery will attract Penalty as per GCC Clause no.04.b.

Transit insurance and storage insurance till the handing over of all materials will be within the scope of vendor. It shall be the sole responsibility of the vendor to get verified the quality and quantity of the supplied material at the site of delivery.

Warehousing and storage of all components will be in the scope of vendor till the commissioning of all systems as per the contract agreement.

- (3) The time and the date of installation of system stipulated in the Purchase Order shall be the essence of Contract, and installation/ civil works and successful commissioning must be completed within 18 months of issuing PO.
- (4) In case the vendor fails to execute the said work within the stipulated time, 'BHEL' will be at liberty to get the work executed from the open market without calling any tender/e-tender but with a prior notice to the vendor, at the risk and cost of the vendor (with proof of actual cost incurred).

Any additional cost incurred by 'BHEL' in the process of executing the work from third party shall be recovered from the vendor. If the cost of executing the work as aforesaid shall exceed the balance due to the vendor, and the vendor fails to make good the additional cost, 'BHEL' may recover it from the vendor pending claims against any work in 'BHEL' or in any lawful manner.

- (5) The vendor will have the sole responsibility to execute order placed as per time schedule, and to ensure quality parameters, specifications and other requirements provided in the tender document and purchase order terms. The vendor should provide the manufacturer's warranty certificate for all components supplied.
- (6) Warranty period: The material supplied shall be under on-site warranty for the period up to issuance of operational acceptance certificate by M/s.SECI. During warranty period, the total responsibility of the BESS lies with vendor and all the repairs and replacements have to be made without any additional cost to BHEL/SECI.

The Bidder will be responsible to operate and maintain the Plant after Commissioning till the Operational acceptance of Plant Facilities, without any additional cost to the Employer.

For warranty period, after system installation, the vendor shall be responsible for any defects that may occur due to faulty materials, design or workmanship. During the Warranty period, the repair works will have to be carried out at the premise except in exceptional circumstances where the equipment or any component may be required to be taken out for repair, for which specific written permission should be obtained from BHEL/SECI. In such cases, standby arrangements are required to be made by vendor so that the BESS remains in functional state. All products have valid product warranty and hence on-site repair and maintenance service needs to be provided after getting replenishment of spares from respective product manufacturer.

The vendor shall provide to its service station all normal tools and testing equipment needed for all preventive & breakdown maintenance and repair activities associated with Battery Energy Storage System, at its own cost.

If the work of the vendor is found unsatisfactory or if the vendor dishonors the purchase order or fails to perform as per purchase order terms, BHEL shall be entitled to terminate the purchase order after discussion with the vendor and BHEL's decision will be final and binding on the vendor. In that case, the payment of last invoice amount will not be done in addition to forfeiting the Performance Security or any other remedial measures as been deemed fit by BHEL.

**(7) Inspection:**

- a) The 'BHEL' / 'SECI' or their representative shall have the right to anytime inspect and/or to test the goods to confirm their conformity to the purchase order/contract.
- b) The 'BHEL' / 'SECI' or their duly authorized representative shall have at all reasonable times access to the vendor premises or works and shall have the power at all reasonable time to inspect and examine the materials and workmanship of the works during its manufacturing or assembling stage.
- c) The vendor shall give the 'BHEL', 15 days prior written notice of any material being ready for testing. Such tests shall be on the vendor's accounts/ expenses except for the expenses of the inspector. 'BHEL' reserves the full rights, to waive off inspection of material.
- d) The vendor is required to get the entire lot of the ordered material inspected, before the supply of the materials.
- e) All arrangements for the inspection of materials will be done by vendor.

- (8) Replacement of rejected material:** Any material supplied against order placed on basis of this tender and found to be defective at any time during the project life on inspection or differing from approved samples or make or specifications will be replaced by the vendor free of cost or full refund made for the amount paid by BHEL.

- (9) Road permit and entry taxes:** To be facilitated and arranged by vendor.

- (10)** The vendor shall have to comply with all the rules, regulations, laws and by-laws for the time being in force and the instructions if any, of the organization, in whose premises the work has to be done. 'BHEL' shall have no liability in this regard.

- (11) Insurance:** Transit Insurance, storage insurance and erection insurance of the materials and equipment's for setting up the BESS shall be arranged by the vendor for the total supply. The goods supplied under the purchase order shall be fully insured till the end of O&M period of 10 years against loss or damage incidental to manufacture or acquisition, transportation, storage during transportation. Complete BESS has to be insured and insurance copy stating indemnification to be furnished by the vendor before release of

supply payment. In case of any damage/ loss/ pilferage/ non-delivery during transit, the vendor shall lodge and settle the claim with the insurance agency. The vendor shall also arrange replacement of the damaged/ lost/ pilfered items expeditiously pending settlement with insurance agency, if any, so as not to hamper the erection and commissioning work of the BESS. The resultant loss if any due to failure of sub-vendor of the vendor to comply with the above shall be to the account of vendor. The insurance copy is required to be submitted along with the invoices.

**(12) Labour Engagement:** The vendor shall be responsible to provide all wages and allied benefits (including PF/ESI etc.) to the labour engaged for execution of the project work. The vendor shall remain liable to the authorities concerned for compliance of the existing rules and regulations of the government for this purpose including regulations against employing child labour, etc. and shall also remain liable for any contravention thereof. The vendor shall submit the proof of PF /ESI paid to the employees along with invoices.

**(13) Safety Codes and Regulation:** The vendor shall adhere to safe construction practices and guard against hazardous and unsafe conditions and shall comply with safety rules of the Government of India and adhere to standards mentioned in the tender specification. In addition, the vendor shall adhere to and be bound by the applicable safety codes, rules and regulation for the work to be carried out. A separate log to be maintained by vendor.

**(14)** The vendor shall not, without the consent in writing of 'BHEL', transfer, assign or sublet the work under the purchase order or any substantial part thereof to any other party. 'SECI' and 'BHEL' shall have at all reasonable time access to the works being carried out by the vendor under the purchase order. All the work shall be carried out by the vendor to the satisfaction of BHEL and 'SECI' in-line with mutually agreed contractual terms.

**(15)** BHEL may at any time by notice in writing to the vendor either stop the work all together or reduce or cut it down. If the work is stopped all together, the vendor will only be paid for work done and expenses distinctly incurred by him as on preparation or the execution of the work up to the date on which such notice is received by him. Such expenses shall be assessed by 'BHEL', whose decision shall be final and binding on the vendor. If the work is reduced, the vendor will not be paid any compensation what so ever for the loss or profit which he might have made if he had been allowed to complete all the work included in the purchase order.

**(16) Risk, Accident and Damages:** The vendor shall take due precaution to avoid damages to any pipelines, Railway lines, roads, canals, cables, culverts, bridges, drains, sewer, telegraph and telephone lines, water mains, dykes, poles, pillars, fences, wires, supports and embankments and other underground or over ground works, structural or constructions whatsoever and shall at his own cost and initiative forthwith restore and repair any damage thereto to the satisfaction of SECI and / or the person or authority concerned relative to the line, pipe or other works, construction of installation as the case may be.

**(17) Observation of Environmental Regulations and Protection:** The vendor shall ensure that its servants and agents and sub-vendors and their servants and agents shall duly



comply with all environmental laws, applicable rules and regulations and the conditions of any permit, permission, consent and or no-objection granted in this behalf by any authority with respect to or concerning the work and shall independently so organize and conduct their operations as not to cause any hazard or pollution to health, life, property or environment including (but not limited to) discharge of any noxious substance or effluent into the atmosphere or into the earth or into any drain, canal, stream, river, pond, lake or other water body.

**(18) Compliance with regulations:** The vendor shall comply with all applicable laws or ordinances; codes approved technical standards, rules and regulations and shall procure all necessary Government permits & licenses etc. at its own cost. All compliances (State Govt. /Central Govt. /Local - VAT/WCT/ESI/PF/Labour law etc.) is to be met by the vendor and the same is to be produced by the vendor at the time of payment.

**(19) Dismantling:** At the end of the life of batteries, final dismantling, removing and recycling batteries from the site is the complete responsibility of vendor.

**(20) Recycling:** Once batteries have reached the end of its useful life, it is the complete responsibility of vendor to remove batteries and recycle the batteries. Batteries should be in completely discharged condition prior to their disposal and disposed as per the brief plan presented at the time of quality assurance program. The DC connection terminals of the batteries must be insulated with electric tape to prevent accidental contacts. Incineration must be performed by an approved and permitted waste treatment facility that handles lithium ion batteries. It shall be the responsibility of vendor to

- ensure that used batteries collected are sent to the registered recycling agencies or for disposal
- ensure that necessary arrangements are made for safe transportation from site to the premises of recyclers or for disposal
- ensure that no damage to the environment occurs during transportation;
- ensure that batteries are recycled according to relevant guidelines prevailing at the time of disposal.

**(21) Demurrage Wharfage etc.:** All demurrage, wharfage and other expenses incurred due to delayed clearance of the material or any other reason shall be to the account of the vendor.

**(22) Indemnity:** Vendor shall indemnify and at all times keep BHEL indemnified and hold SECI and BHEL harmless against any direct loss to it or any claims by any third person, for any personal injury to anybody or loss to property, movable or immovable, caused by or attributable to any act or omission of the vendor or any of his officer, employee, agent or professional etc. in connection with this purchase order. The vendor shall be responsible for the safety of the BESS systems installed at site and shall indemnify SECI and BHEL for any direct or indirect loss due to any fire, explosion or any other safety issue arising due to operation of BESS systems.

**(23)Performance Security:** Within 28 days of receipt of PO from BHEL, the vendor shall furnish a Contract Performance Security (CPS-1) in the form of a Bank Guarantee (BG-1) with a validity period of 20 months (+ claim period of 03 months) from the date of PO and for the value equaling 10% of the purchase order price which will include all components of the purchase order and will exclude only taxes/duties and O&M charges. Any delay in submission of CPS-1 shall be deemed as accruing of financial benefit to the supplier and BHEL shall take necessary interest penalty recovery action (interest @ State Bank of India's MCLR + 2%) from the payments due to the supplier for the period of delay.

BHEL shall at its discretion have recourse to the said Bank Guarantee for the recovery of any or all amount due from the bidder in connection with the contract including of Warranty obligations.

In case operational acceptance does not take place within 20 months of PO placement, the Performance Security has to be initially extended for a period of 06 months. BHEL is however liable to return 10% Performance Security within 15 days after successful completion of 03 months post operational acceptance of plant facilities provided contract Performance Security (CPS-2) in the form of a Bank Guarantee (BG-2) amounting to 05% of the purchase order price (which includes all components of the purchase order and will exclude only taxes/duties and O&M charges) is submitted to BHEL. The BG-2 shall be valid till the end of 10<sup>th</sup> year of the O&M period with claim period of 03 months. Envisaging the difficulty in obtaining the longer tenure of CPS-2 in the form of BG, the successful bidder can submit Contract Performance Security in the form of Bank Guarantee with an initial validity period of 36 months and the same may be extended for the balance period or further 36 months, just prior to expiry of the original CPS-2.

Contractor needs to furnish the revised Contract Performance Security (CPS-2) in the Second Stage amounting to 5% of the total Contract Value as mentioned above within the validity period of the Contract Performance Security (CPS-1) submitted at First Stage. In case the Contractor fails to furnish the Contract Performance Security (CPS-2) mentioned under the Second Stage within the due validity period of the CPS-1, BHEL at their sole discretion will forfeit the Contract Performance Security furnished at the respective stage.

The Contract Performance Guarantee/s shall be returned to the supplier, without payment of any interest, on successful completion of all the contractual formalities.

Refer Clause "H" of Instructions to Bidders. Also note that PBG should be in the format specified in Annexure VII of ITB and no deviation to this format will be allowed. The bank guarantee shall be issued in favor of BHEL.

**(24)Installation/ civil works & commissioning and operation & maintenance of the system shall be done by vendor as per contract specifications.**

**(25) Termination:** BHEL by written notice, may terminate this Order for default, in whole or in part, if the vendor: (a) fails to make a delivery in accordance with the Order's schedule, (b) fails to comply with any of the terms of this Order, (c) fails to make progress so as to endanger performance of this Order, (d) fails to provide adequate assurances of future performance, (e) ceases to conduct its operations, or (f) has any proceeding or lawsuit under bankruptcy, liquidation, or insolvency law brought against it.

**(26) Warranty:** The vendor shall warrant as per standards for quality that anything to be furnished shall be new, free from all defects and faults in material, workmanship and manufacture, shall be of the highest grade and consistent with established and generally accepted standards for material of the type ordered, shall be in full conformity with the specifications, drawing or samples, if any and shall if operable, operate properly.

**(27) Force majeure:**

- a) Notwithstanding the provisions of clauses contained in this purchase order, the vendor shall not be liable for forfeiture of its performance security, liquidated damages, termination for default, if he is unable to fulfill his obligation under this deed due to event of force majeure circumstances.
- b) For purpose of this clause, 'Force majeure' means an event beyond the control of the vendor and not involving the vendor's fault or negligence and not foreseeable. Such events may include, but are not restricted to, acts of Government either in its sovereign or contractual capacity, wars or revolutions, fires, floods, epidemics, pandemics, quarantine restrictions, and freight embargoes.
- c) However, if a force majeure situation arises, the vendor shall immediately notify 'BHEL' in writing. Any time extension on delivery or project completion to the extent of delay due to force majeure may be granted to the vendor based on mutual discussion and agreement. The decision of the competent authority of BHEL in above conditions shall be final.

**(28) Others :**

- a) The vendor in consultation with BHEL will conduct training programme for users, focusing on main features, operation and maintenance of the systems.
- b) The vendor shall continue to provide spare parts during warranty and O&M period at their own cost to keep the systems in good operating conditions. After the expiry of O&M period, the vendor shall continue to provide spare parts at the users cost till the product life. If the vendor fails to continue to supply spare parts and services to users, BHEL shall take appropriate action against the vendor.
- c) The supplies of battery cells/modules/pack shall be supported by an extended producer responsibility certificate as and when available, authorization from the battery

manufacturer. 'Extended Producer Responsibility' (EPR) means responsibility of any producer of batteries for their products beyond manufacturing until environmentally sound management of their end-of-life products; for channelization of waste batteries to ensure environmentally sound management of such waste.

Extended Producer Responsibility may comprise of implementing take back system or setting up of collection centres or both and having agreed arrangements with registered recycler either individually or collectively through a Producer Responsibility Organization recognized by producer or producers in their Extended Producer Responsibility.

- d) All batteries that have completed the useful life (battery waste) at the location installed shall be managed in an environmentally sound manner. 'Environmentally sound management of battery waste' means taking all steps required to ensure that batteries are managed in a manner which shall protect health and environment against any adverse effects, which may result from hazardous substance contained in such wastes.

#### **(29) PAYMENTS:**

The payments shall be effected as per the following terms and conditions:

- a) 85% supply payment (excluding I&C and O&M) with taxes and freight will be paid in 45 days from the date of receipt of materials or 15 days from the date of submission of complete set of documentation, whichever is later.

Following documents need to be submitted to BHEL for processing of 85% supply payment:

1. Invoice (02 sets of original) for complete material supplied along with proof of delivery at site (sign and stamp of person who has received and verified the materials)
  2. Delivery challan(s) & E way bill
  3. Packing list and Consignee copy of Lorry Receipt (Packing List shall be detailed indicating package-wise content details along with Net weight & Gross weight of each package).
  4. Inspection report/ Test Reports issued by the inspection authority
  5. NIL Short-Shipment Certificate
  6. Warranty Certificate
  7. Insurance policy (covering insurance scope as mentioned in clause: 11 above).
- b) Out of Balance 20% supply retention payment (excluding I&C and O&M), 10% payment will be paid in 45 days from the date of submission of supplementary invoice against proof of successful commissioning/operational acceptance of plant facilities and final 10% payment will be paid in 45 days from the date of submission of supplementary invoice against 'Final Acceptance'.

'Final Acceptance' means acceptance of Facilities by the Employer at the end of one year from the date of Operational Acceptance and upon demonstration of minimum annual parameters (CUF and BESS availability) in respect of Functional and Plant Performance Guarantees of the Facilities and completion of Scope of Work as specified in the RfB. However, the last milestone payment linked to Final acceptance can be released upon completion of the Scope of Work as per RfB against submission of bank guarantee of the same amount and having validity for the period remaining from that date (i.e., Date of Completion of Scope) to 14 months from the date of Operational Acceptance. The submitted bank guarantee will be released after Final Acceptance.

**Payment term for I&C charges:** 100% I&C charges along with tax as applicable, will be paid in 45 days from the date of submission of supplementary invoice against proof of completion of civil works, Installation & Commissioning of the BESS.

**Following documents need to be submitted to BHEL for processing of respective Service payments:**

- (i) The warranty certificates for complete system (as per Purchase Order):
  - (a) Complete system warranty certificate.
  - (b) Manufacturer warranty card / letter for all components and data sheet for lithium ion/various technologies battery cells/modules, inverter and PCS.
  - (c) All reports should be stamped and signed by the vendor / authorized representative of the vendor.
  - (d) Insurance copy of the complete system.
  - (e) Proof for the establishment of service center at the site.
  - (f) Proof of submission of PF/ESI.
  - (g) Extended Producer will provide proof of document for EPR and share the waste battery handling report. (As per the Ministry of Environment, Climate and Forest Change released the Draft Battery Waste Management Rules, 2020. The Draft Rules seek to replace the Batteries (Management and Handling) Rules, 2001, which provide details for handling and management of batteries under the Environment (Protection) Act, 1986)
- (ii) Original certificate issued by SECI confirming Installation, testing and commissioning of material at site and acceptance of the same by Site In charge.

- (iii) Commissioning and handover certificate / Operational Acceptance declaration, counter-signed by SECI/ BHEL.
- c) After expiry of warranty period (Operational acceptance by SECI), Operation & Maintenance charges will be paid in 45 days from the date of submission of supplementary invoice/documents against proof of completion of O&M on quarterly basis; invoice certification shall be done by project In-charge.
- (a) Detailed complaint log of all the complaints received during the period.
  - (b) Rectification log of all complaints attended and remedial measures taken.
  - (c) Verification report signed by user / SECI representative.
  - (d) If the documents are not submitted within the specified stipulated time period, (at quarterly frequency) the purchase order will deem to be completed and the vendor will not have any claim for the payment.
  - (e) Complete records for complaint and rectification log should be maintained and available during any visit.
  - (f) Category wise quarterly monitoring report.

**Payment terms for O&M charges:** 100% O&M charges along with tax as applicable, will be paid in 45 days from the date of submission of supplementary invoice/documents against proof of completion of O&M on quarterly basis.

**Penalty for delay for Delay in Completion:** Applicable rate for Penalty shall be 0.5% per Week for delay in delivery/ completion of facilities from the Schedule Date of Completion/Contract Period. Maximum deduction for penalty for delay shall be 10% of the contract value. Further, refer GCC Clause no.04.b.

No bonus will be given for earlier Completion of the Facilities or part thereof.

**Liquidated Damages for Functional Guarantees (FGs):** Functional Guarantees for Performance Ratio (82%), Capacity Utilization Factor (36.5%) and BESS Availability (99%) shall be applicable for the project. Further, refer Cl. 1.8/ Section C.

**(30) Materials –Quality & Workmanship:**

- a) Immediately on award of contract, the vendor shall submit a detailed project report along with valid external ISO audit report of the company and Implementation plan report within 20 working days having planning and testing strategy with provisions for quality check performance at various stages of the project. The report shall also furnish details of method of checking and inspection and acceptance standards / values.
- b) The vendor has to provide quality assurance certificates to BHEL/SECI for required components of BESS and shall comply with appropriate codes & standards. Failure to abide by the same may result in rejection of purchase order by BHEL. BHEL reserves the right to request for any additional information and also reserves the right to reject the

proposal of any vendor, if in the opinion of BHEL, the data in support of tender requirement is incomplete.

- c) The vendor shall comply with the purchase order terms in all respects to the satisfaction of SECI and BHEL.
- d) For a period of 10 years, after system installation, the vendor shall be responsible for any defects that may occur due to faulty materials, design or workmanship. If it becomes necessary for the vendor to replace or repair any defective portion of the system, the vendor shall address the issues within 2 working days and any replacements or renewals can be completed within 10 working days of intimation without any extra cost to SECI/ BHEL. However, the system must be in running condition within 2 working days of intimation.
- e) It has to be noted by vendor that prior to expiry of this agreement which is 10 years from the date of operational acceptance of BESS, the health assessment of the asset shall be carried out to assess the performance of associated components (i.e. cells, modules, PCS etc.) during last six months of the O&M.

**(31) Validity of offer:** The offer will be valid for a period of 90 days from the date of part-I bid opening and in case of Negotiation, price validity will apply afresh for a period of 30 days from the date of according final price by bidder (or) up to original validity period, whichever is later.

**(32) Inland transportation including loading, un-loading, insurance and other costs incidental to delivery (demurrage, wharfage, etc.):** The supplier is required under the Contract to transport the Goods to place of destination defined as Site. Transport to such place of destination in India including insurance, as shall be specified in the Contract, shall be arranged by the supplier, and the related cost shall be included in the Contract Price. Vendor shall book the consignment through vendor's approved Road carriers on "Freight pre-paid" basis & to be claimed from BHEL through a separate invoice against proof of acknowledged L/R.

**(33) Evaluation criteria for tendered item/s:** Items will not be split on item-wise lowest offer. Items shall be evaluated and procured as a combined package.

Note: No margin of domestic preference shall apply.

**(34) Reverse Auction:** Not applicable.

**(35) Integrity Pact:** The IP as enclosed with the tender is to be submitted (duly signed by authorized signatory) along with Pre-Qualification bid (Part-I).

Following independent External Monitors (IEMs) on the present panel have been appointed by BHEL with the approval of CVC to oversee implementation of IP in BHEL.

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

Email: acverma1@gmail.com

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

Email: vbsinghips@gmail.com

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.

**(36) Installation/Civil works and Commissioning :**

In case the quoted total Installation/Civil works & Commissioning value is less than 05% of the basic material value (excluding taxes/duties, in-land freight), BHEL shall evaluate Bidders Price deducting differential amount from main supply price and apportioning towards Installation/Civil works & Commissioning charges.

**(37) Operation & Maintenance for 10 years:** In case the quoted total O&M value is less than 05% of the basic value (which will include all components of the purchase order and will exclude only taxes/duties), BHEL shall evaluate Bidders Price deducting differential amount from main supply price and apportioning towards O&M charges. It shall also be noted that year-wise O&M charges shall be either quoted uniformly/in increasing trend.

**(38) Tax/ Duty Benefits:** Bidders may like to ascertain availability of tax/duty exemption benefits available in India. They are solely responsible for obtaining such benefits which they have considered in their bid and in case of failure to receive such benefits for reasons whatsoever, the Employer will not compensate the bidder (contractor). The bidder shall furnish along with his bid a declaration to this effect in the Declaration Format provided in attached 'Appendix' to the bidding documents. Where the bidder has quoted taking into account such benefits, it must give all information required for issue of certificates in terms of the Government of India's relevant Notifications as per the declaration format. In case the bidder has not provided the required information or has indicated to be furnished later, the same shall be construed that the goods/plant and equipment for which certificate is required is Nil. If the bidder has considered the tax/duty exemption for materials/plant and equipment to be bought for the work, the bidder shall confirm and certify that the Employer will not be required to undertake any responsibilities of the Government of India Scheme or the said exemptions being available during the contract execution, except issuing the required certificate. The bids which do not conform to the above provisions or any condition by the bidder which makes the bid subject to availability of tax/duty exemption for materials/plant and equipment or compensation on withdrawal of any variations to the said exemptions will be treated as non-responsive and rejected. Any delay in procurement of the materials/plant and equipment as a result of the above shall not be a cause for granting any extension of time.

Custom Duty for Solar Photo Voltaic Power Generation Projects: As per relevant Notifications of Govt. of India, the benefits of concessional rate of custom duty (applicable for Solar Photo Voltaic Power Generation Projects) may be available for the import of raw materials, components, sub-assemblies and Equipments, if any, required for manufacture of equipment/ plant/ spares to be supplied under the contract. Bidder may appraise itself of the relevant policies and quote accordingly. The Employer shall issue the requisite certificate as specified in the relevant policy of Govt. of India. However, if the certificate is required to be issued by any department/ministry of Government of India or State Government where the Project is located other than Employer, the Bidder shall itself be responsible for obtaining such certificate from the concerned department/ministry. In such



a case, the Employer may issue recommendatory letter to the bidder. To enable the Employer to issue such certificate / recommendatory letter, the Bidder shall furnish the requisite data. In addition, the Bidder may also like to ascertain availability of Custom Duty benefits available for import of construction equipment, if any, as per the extant Customs Acts & Notifications of Govt. of India. Where the bidder has quoted taking into account the Custom Duty benefits available for import of Construction Equipment, he must give all information required for issue of relevant Certificate by Employer along with its bid. However, the bidders shall themselves be solely responsible for availing such benefits, which they have considered in their bid. In case of failure of the bidder to receive the benefits partly or fully from the Govt. of India and/or in case of delay in receipt of such benefits and/or withdrawal of such benefits by the Govt. of India, the Employer shall neither be responsible nor liable in this regard in any manner whatsoever.

Exemption of GST or any other taxes and duties (if applicable) on Items Manufactured for Grid Connected Solar Photo Voltaic Power Generation Projects. As per extant guidelines of Department of Revenue, Ministry of Finance, Govt. of India, the benefits of exemption of GST or any other taxes and duties (if applicable on items manufactured for grid connected Solar Photo Voltaic Power Generation Projects) may be available for the items to be supplied under the contract, Bidder may appraise itself of the relevant policies and quote accordingly. The Employer shall issue the requisite certificate (if required) as specified in the relevant policy of Govt. of India. However, if the certificate is required to be issued by any department/ ministry of Government of India or State Government where the Project is located other than Employer, the Bidder shall itself be responsible for obtaining such certificate from the concerned department/ministry. In such a case, the Employer may issue recommendatory letter to the bidder. The Bidder shall be solely responsible for obtaining the benefits of exemption on excise duty GST or any other taxes and duties (if applicable) on the items to be supplied under the contract from the Govt. of India. In case of failure of the bidder to receive the benefits partly or fully from Govt. of India or in case of delay in receipt of such benefits, the Employer shall neither be responsible nor liable in this regard in any manner whatsoever.

(39) **ESMP, EHS AND CODE OF CONDUCT**

**Contractor's Environmental and Social Management Plan (C-ESMP)**

In line with the environmental and social norms requirements of the Projects, the contractor will appoint/hire suitable Environmental and social development officers/Experts (as described in "Contractor's Representative and Key Personnel", so as to execute the laid down ESMP effectively. The contractor will be overall responsible for ESMP implementation, coordinating and liaising, sub-contractors and other agencies, with respect to different social and environmental issues.

The Contractor shall not carry out mobilization to Site unless the Project Manager gives approval, an approval that shall not be unreasonably delayed, to the measures the Contractor proposes to address environmental and social risks and impacts including the code of conduct. The Contractor shall submit, to the Project Manager for Review, any additional Management Strategies and Implementation Plans as are necessary to manage the ES risks and impacts of the Facilities. These Management Strategies and

Implementation Plans collectively comprise the Contractor's Environmental and Social Management Plan (C-ESMP). The Contractor shall review the C-ESMP, periodically (but not less than every six (6) months), and update it as required to ensure that it contains measures appropriate to the Facilities. The updated CESMP shall be submitted to the Project Manager for its approval. The Contractor shall provide appropriate training to relevant Contractor's Personnel on ES aspects of the Contract, including appropriate sensitization on prohibition of SEA and health and safety training. As stated in the Employer's Requirements or as instructed by the Project Manager, the Contractor shall also allow appropriate opportunities for the relevant Contractor's Personnel to be trained on ES aspects of the Contract by the Employer's personnel and/or other personnel assigned by the Employer.

### **Code of Conduct for Contractor's Personnel (ES)**

The Bidder shall submit its Code of Conduct that will apply to the Contractor's Personnel employed for the execution of Installation Services at the Site (or other places in the country where the Site is located), to ensure compliance with the Contractor's Environmental and Social (ES) obligations under the Contract.

The Bidder shall submit Management Strategies and Implementation Plans (MSIPs) to manage the Environmental and Social (ES) risks ((including Sexual Exploitation and Abuse (SEA), and Sexual Harassment (SH)) as elaborated in Contractor's C-ESMP and Sexual Exploitation, and Abuse (SEA) prevention and response action plan. These strategies and plans shall describe in detail the actions, materials, equipment, management processes etc. that will be implemented by the Contractor, and its subcontractors.

Environmental and Social Management Framework (ESMF) of Innovation in Solar Power and Hybrid Technologies (ISHTP) Project:

<http://documents1.worldbank.org/curated/pt/406541534751743414/pdf/SFG4529-REVISED-EA-P160379-PUBLIC-Disclosed-11-16-2018.pdf>

WBG Safeguard Policies / Performance Standards:

<https://policies.worldbank.org/sites/PPF3/Pages/Manuals/Operational%20Manual.aspx>

WBG Guidance Note on Project Induced Labor Influx:

<http://pubdocs.worldbank.org/en/497851495202591233/Managing-Risk-of-Adverse-impact-from-project-labor-influx.pdf>

EHS Guidelines: The Contractor (or whatever is the Term in the Contract) shall follow the World Bank Group Environmental, Health and Safety Guidelines (WBGEHSG) during the execution of the Contract to the extent that their activities are covered in these operations. These are available at:

<https://www.ifc.org/wps/wcm/connect/554e8d80488658e4b76af76a6515bb18/Final%2B%2BGeneral%2BEHS%2BGuidelines.pdf?MOD=AJPERES;>

<https://www.ifc.org/wps/wcm/connect/66b56e00488657eeb36af36a6515bb18/Final%2B%2BElectric%2BTransmission%2Band%2BDistribution.pdf?MOD=AJPERES&id=1323162154847>

In developing these strategies and plans, the Contractor shall have regard to the EHS provisions of the Contract Agreement including those as may be more fully described in the following:

a. ESMF

b. Environmental and Social Due Diligence Report (ESDDR) which also includes Environmental and Social Management Plan (ESMP).

Note:

1. The vendor is mandatorily required to open service center to carry out on-site warranty services at site.

2. Non-tearable Logo (BHEL) pasting has to be done on each BESS Unit.

***With this, we hereby confirm that all the terms & conditions as indicated in Instructions to Bidders (Document Ref: CE: PR: 001- Rev 03) & General Commercial Conditions for Contract (Document Ref: CE: PR: 002- Rev 02) are accepted without any deviation.***

**Vendor's Signature with Seal**

Note: This document has to be mandatorily filled & furnished as part of Part-II bid.