

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 Rajhandgaon, Chhattisgarh, India					
Sl. No.	Section	Page No.	Clause	Original Version	Amendment
1	Annexure A.2 Technical Specifications	37 of 182	7.5 (ii)	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 plant take off point), 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 beginning of each year of operation 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. Note: 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.

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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	Discrepancy: 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)	Discrepancy: 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	Discrepancy: 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	Discrepancy: 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 120 MW and Cumulative Inverter Transformer Capacity (Min.) shall be 120 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).
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	Discrepancy: 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	RfB – 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 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. Please Refer S. No. 5 of Amendment 2.
7	RfB- 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 exclusive 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	RfB- 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	RfB – 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.