



**RUBBER PARK INDIA (PVT) LTD**  
**(A JV of KINFRA & Rubber Board)**

2 A, “Kautileeyam”, Rubber Park, Valayanchirangara,P.O, Ernakulam, Kerala-683 556.  
Tel: (0484) 2657218/ 2655548 |Email: md@rubberparkindia.org | Web: [www.rubberparkindia.org](http://www.rubberparkindia.org)

---

**Corrigendum-2: Pre-bid Meeting**

---

**Tender No:** RP/E/T/03/2024-25.

**Tender ID:** 2024\_RPI\_690380\_2.

**Name of Work:** Design Supply Installation Testing and Commissioning of Grid Connected Battery Energy Storage System (BESS) of 500 kW/1 MWh at Rubber Park Irapuram., Ernakulam District.

**Date & Time:** 23/09/2024 at 11.00 AM.

**Venue:** Hybrid mode (Offline at the Office of Rubber Park India (P) Ltd at Irapuram and Online).

The pre-bid meeting was organized to address the queries raised by the bidders. It was informed all the participants in the meeting to submit any additional queries on or before 5 PM on 23.09.024.

The following Corrigendum/Addendum/Clarification in response to queries raised by prospective bidders shall form an integral part of bid document and it may amount to an amendment of relevant Para/clause of the bid document.

Sl. No.	Tender Clause No.	As per Tender	Query raised by the bidder	Clarification
1	1.02.	<p>1.02.1. The bidder shall have satisfactorily completed the work of Design, Supply, Installation, Testing and Commissioning of Grid Connected Battery Energy Storage System in India/abroad with in the last five years as on date of submission of bid ((Self attested/original performance certificate issued by the Client shall be submitted).</p>	<p>Given that BESS technology is still evolving, many potential bidders may not have the required technical credentials from the past five years to complete the BESS project.</p> <p>Further, to encourage wider participation and innovation, we request you to consider extending the time frame to ten years from five years. This adjustment could allow more bidders to showcase their relevant experience and contribute effectively to the project.</p> <p>Allow participation from International JV partners who specialize in the manufacturing of Battery Energy Storage Systems (BESS).</p>	<p>Cl. 1.02 and 3.05.1(v) are revised as “<i>Joint ventures and consortiums formed for the purpose of bidding are eligible to participate in this tender, including international partners*</i>”</p> <p>“*For Foreign Joint Ventures/Consortium, the client will deal with Indian partner only. Notarized agreement executed between Indian partner and foreign partner shall be submitted along with the tender. FEMA compliance shall be obtained by the Indian partner. Chartered documents of the foreign partner shall be submitted along with the bids (notarized). Payment should be in Indian Rupees only.”</p> <p>Considering the request of bidders and expertise in BESS technology, a single bidder is found difficult.</p> <p>Cl.1.02.1: five year is revised as ten years.</p>

2	3.04.	Scope of the Contract	<p>"The project scope, which states that the bidder shall provide an EMS system and its integration with the KSEBL SCADA system, request you please provide further details about the SCADA system.</p> <p>Specifically, information regarding its architecture, communication protocols, and any existing interfaces would be very helpful for our integration planning."</p>	<p>SCADA Signal List for SLDC– Double point status of RMU (VCB&amp; Load Break switches) and measurements of Voltage, Current, PF, MW, MVar, and Frequency. Communication Protocol: IEC 60870-104. Mini RTU shall be proposed for the same.</p>
3	3.04.	Scope of the Contract	<p>We request to provide the Cable length to consider from Transformer to GRID point of contact for costing purpose.</p>	<p>Distance from 11kV Transformer to RMU will be maximum of 10M</p>
4	1.02	<p>1.02.05. The average annual turnover of the firm / company for the last three years shall not be less than Rs.5 Crores (FY 2020-21, 2021-22 and 2022-23. (Self-attested/original documents of Turnover / Balance Sheet &amp; P&amp;L issued by Chartered Accountant shall be submitted).</p>	<p>Permit any one of the JV partners to meet the Average Annual Turnover criteria</p>	<p>1.02.05 is revised as <i>“The average annual turnover of the firm / company/JV Partners/Consortium for the last three years shall not be less than Rs.5 Crores (FY 2020-21, 2021-22 and 2022-23. (Self-attested/original documents of Turnover / Balance Sheet &amp; P&amp;L issued by Chartered Accountant shall be submitted).</i> Please refer Item no. 01.</p>

5	3.04.	Detailed design, engineering, Manufacturing, fabrication, Supply, transport, shipping, assembling, installation, erection, commissioning, testing (including pre commissioning and commissioning) of all the equipment and system(s) including civil works. Warrant and make ready for service a fully functional battery energy storage system on turnkey basis, including but not limited to: - Lithium-ion Battery modules, Battery Racks, Containers, Rack Control Boxes, Battery module connectors, DC Combiner Panel, DC Cables along with cable trays / trenches, cable terminations and earthing system.	We shall offer Lead acid AGM Valve regulated lead acid battery banks	Scope of the contract needs to be complied as per CI 3.04
6	3.04.	Compatible and redundant Liquid / Air Cooling System for BESS including indoor or Outdoor Units, Controllers, Ducts & Piping system.	We shall offer standard split AC fitted in the container	Noted

7	3.04.	Compatible Fire Detection & Suppression System for BESS including smoke detectors, Gas Detectors, Fire Dampers, Manual Call Points, Fire Controller, Abort & Emergency release switches, Cabling & integration along with Trays, Switches & Racks, etc. complete. Firefighting system shall be provided as per NFPA.	To refer to Any Fire protection system vendor	Scope of the contract needs to be complied as per CI 3.04
8	3.04.	Metering in AC & DC System for energy accounting purpose at requisite points (11 kV breakers, ACDBs, Auxiliary Distribution boards, DT, PCS, DCP, Battery Containers etc.	It will be provided at AC input point. EMS will record Power in / out of BESS	Scope of the contract needs to be complied as per CI 3.04
9	3.04.	Supply of major spares required for a period (10 Yrs) - Price for the same may please be submitted along with Price Bid- cover 2.	It would require replacement of battery banks after 5 years. We shall indicate detailed in price bid	“Supply of major spares required for a period (10 Yrs) - Price for the same may please be submitted along with Price Bid- cover 2” is amended as <i>“List of major spares required for O&amp;M for a period (10 Yrs) shall be submitted along technical bid (Cover 1)”</i> .
10	3.04.	Instrumentation & Communication cables, terminations and all other communication devices (hardware at both end) required for successful and cybersafe integration of BESS.	Please indicate suggestive layout, location of 11KV S/S - to determine length of cable required	Scope of the contract needs to be complied as per CI 3.04. Detailed design and Engineering are in the scope of the bidder.

11	Annexure-3 (Detailed specifications)	5) Earthing System:	To refer to Any local electrical contractor	Scope of the contract needs to be complied as per Cl 3.04
12	Annexure-3 (Detailed specifications)	The bidder shall obtain necessary safety clearances from the Central Electricity Authority	All approval shall be under the scope of project owner	As per tender conditions
13	Annexure-3 (Detailed specifications)	6) Commissioning of the Project - Bidder shall make his own arrangement for water and electricity for Project execution / Site and cost towards the same shall be part of the bid.	To refer to Any local contractor	As per tender conditions
14	Annexure-3 (Detailed specifications)	BESS Type	Containerized	As per tender conditions
15	Annexure-3 (Detailed specifications)	Guaranteed complete charge and discharge cycles - 7500 Cycle	Max 4000 Cycle with one replacement of battery	As per tender conditions
16	Annexure-3 (Detailed specifications)	Battery cell discharge efficiency $\geq$ 95%	A-Hr efficiency min 90%, Watt-Hr efficiency Min. - 80%	As per tender conditions
17	Annexure-3 (Detailed specifications)	PCS Efficiency >98.5%	Max 96.5%	As per tender conditions
18	Annexure-3 (Detailed specifications)	Transformer Efficiency >98.9%	To check	As per tender conditions
19	Annexure-3 (Detailed specifications)	HV Cable efficiency between Transformer to 11 kV Switchgear & 11 kV Switchgear to Grid Point of Connect (PoC) > 99.8	Our scope is upto Poc	As per tender conditions

20	Annexure-3 (Detailed specifications)	BESS Auxiliary Consumption (%) (Discharging) >98.8%	To check	As per tender conditions
21	Annexure-3 (Detailed specifications)	Round Trip Efficiency with Auxiliary Consumption $\geq 86\%$	80-85%	As per tender conditions
22	Annexure-3 (Detailed specifications)	Round Trip Efficiency without Auxiliary Consumption $\geq 85\%$	80-85%	As per tender conditions
23	Annexure-3 (Detailed specifications)	For a Contracted Capacity of 500 kW/1000 kWh, assuming an RtE of $\geq 85\%$	"Bidder understanding is 85% AC to AC RTE for three years. Starting date may be confirmed.  ABT meters fixed in 11KV HT panels will be taken as reference for RTE - kindly confirm."	Taking over by Client, as per tender conditions.
24	Annexure-3 (Detailed specifications)		Bidder understanding is there is no O&M linked - kindly confirm.	Defect liability period is three years. AMC period will be seven years and as per tender conditions.
25	Annexure-3 (Detailed specifications)		BESS DC bus voltage may be rated for 1500V DC. RPIPL may kindly accept.	As per detailed Engineering of the bidder and IEC 62619&63056
26	Annexure-3 (Detailed specifications)		Overall Average AC -AC RTE for three years shall be considered as 85%.	As per tender conditions
27	Annexure-3 (Detailed specifications)		RPIPL may allow 600 V to 690V / 11kV transformer.	DT shall comply with IEC/IS standards as per tender conditions including corrigendum.

28	Annexure-3 (Detailed specifications)		RPIPL may confirm the communication protocol.	Please refer Item No. 2
29	Annexure-3 (Detailed specifications)		RPIPL may confirm the LDC requirement.	Please refer Item No. 2
30	Annexure-3 (Detailed specifications)		Other standard cable makes may also be kindly accepted.	As per tender conditions
31	Annexure-3 (Detailed specifications)		PCS output shall be able to provide 0.95 lead to 0.95 lag reactive power support without curtailing the active power - RPIPL may accept the same.	As per tender conditions
32	Annexure-3 (Detailed specifications)		Non local content suppliers also allowed - RPIPL may kindly confirm.	As per tender conditions
33	Annexure-3 (Detailed specifications)		AMC start date may be considered from Date of operation - RPIPL may kindly accept.	Please refer item no.24
34	Annexure-3 (Detailed specifications)		Warranty will be provided for first three years inclusive AMC. Next seven years shall be only non-comprehensive AMC support - RPIPL may kindly confirm.	Please refer item no.24
35	Annexure-3 (Detailed specifications)		Inhouse BESS Design Supply, Installation, Testing and Commissioning of Grid Connected Battery Energy Storage System may also to be considered as PQC.	As per tender conditions



36	Annexure-3 (Detailed specifications)		RPIPL is requested to provide Soil test report.	Soil is lateritic strata.
37	Annexure-3 (Detailed specifications)		RPIPL is requested to provide Topography report.	<p>The general topographic strata of RPIPL are detailed as follows:</p> <p>Rainfall: 330 cm (avg)/annum  Height: 30 to 45 m from MSL  Wind velocity: 10 to 24 Kmph.</p> <p>However, as the above topographic details are general values, the bidders are advised to conduct a site-specific topography analysis during the project implementation phase for accurate design and planning purposes.</p>
38	Annexure-3 (Detailed specifications)		KSEBL SCADA System Details, in which form protocol details is required.	Please refer Item No. 2
39	Annexure-3 (Detailed specifications)		Any specification available for temperature scanning system ??	As per tender conditions
40	Annexure-3 (Detailed specifications)		Any specification with functionality of EMS please share?	As per tender conditions

41	Annexure-3 (Detailed specifications)		Any guide line or what we need to follow for cyber safe operation of the BESS, please inform?	CEA (Cyber security in Power Sector) Guideline 2021
42	Annexure-3 (Detailed specifications)	7.2: Useful Power Capacity at Grid Point: (11 kV)500 kW/1000kWh at 45 Deg C and 0.95 PF	BESS will be containerized and the optimum temperature will be kept within the container. Why the usable capacity 500 kW/1000 kWh required at 45 deg., Please clarify.	As per tender specification
43	Annexure-3 (Detailed specifications)	7.3: BESS Type: Indoor or outdoor	Please confirm the installation place availability, is it indoor or outdoor System design will be kept according to that placement availability.	Outdoor
44	Annexure-3 (Detailed specifications)	7.4: Installed Battery Capacity at 25 Deg Cel & Full Load: 1000kWh*	Please confirm about the required capacity. 1000 kWh is name plate capacity or dispatchable capacity.	As per tender requirement. 1000kWh shall be dispatchable capacity at the end of 10 <sup>th</sup> year
45	Annexure-3 (Detailed specifications)	7.5: BESS Cycles per day: Min 1 cycles per day Max 2 cycles per day	Please confirm the uses pattern, because uses pattern will affect the life cycle of the battery system?	As per tender conditions
46	Annexure-3 (Detailed specifications)	7.6: Guaranteed complete charge and discharge cycles: 7500 Cycles*	Cycle no. required at which uses pattern please confirm.	As per tender conditions
47	Annexure-3 (Detailed specifications)	7.10: BESS Life excluding Battery: 25 Years from Date of Commissioning	Please clarify on which component / equipment 25 years life required except battery.	Except Battery

48	Annexure-3 (Detailed specifications)	7.11: Min. Battery Capacity at the end of 10th Year (after degradation): 75% of Battery Capacity rating	Name plate capacity is 1000 kWh and EOL (10 <sup>th</sup> year name plate required 75 % i.e. 750 kWh, is this understanding, correct?? Please confirm the back-up hours support i.e. required from battery system as rating is given as 500 kW/ 1000 kWh so usable energy will be less than name plate capacity ??	As per tender conditions (Please refer item no. 44)
49	Annexure-3 (Detailed specifications)	9: Battery Particulars	Please confirm the rating tolerance for positive and negative ramp rate. Power/ time frame manner.	As per tender conditions
50	Annexure-3 (Detailed specifications)	17: General Requirements	Please confirm the guideline.	As per tender conditions
51	Annexure-3 (Detailed specifications)	30: Testing of BESS:	As per the clause it is indicating that the required energy is dispatchable energy. Please confirm the energy requirement 1000 kWh is name plate capacity or dispatchable capacity, in dispatchable capacity there are parameters like DoD, losses will be included and usable energy will be lesser than 1000 kWh. i.e actually required (500kW *2 hours)	As per tender conditions (Please refer item no. 44)
52	Annexure-3 (Detailed specifications)	29: Approved makes for BESS and Its Components	Please share the approved make list	As per tender conditions

53	1.02.1	Minimum Eligibility Criteria	<p>Kindly confirm whether the authorized partner of the Original Equipment Manufacturer (OEM) is allowed to participate in the tender as a bidder.</p> <p>An authorization certificate along with a copy of the agreement between the bidder and the Original Equipment Manufacturer regarding service and maintenance support shall be submitted by the Authorized bidder</p>	Please refer item no.1
54	1.02.1	The bidder shall have satisfactorily completed the work of Design, Supply, Installation, Testing and Commissioning of Grid Connected Battery Energy Storage System in India/abroad with in the last five years as on date of submission of bid.	As BESS relatively a new technology, we request you to consider experience in Lithium-Ion technology as well i.e. Design, Manufacture and Supply of Lithium-Ion batteries totaling to 250kWh. This will encourage the participation from OEMs.	As per tender conditions
55	1.02.1	The bidder shall have satisfactorily completed the work of Design, Supply, Installation, Testing and Commissioning of Grid Connected Battery Energy Storage System in India/abroad with in the last five years as on date of submission of bid	Deletion of the PQ condition	As per tender conditions

Dated: 24.09.2024  
Place: Irpauram

Sd/-  
**Managing Director**  
Rubber Park India (P) Ltd