

The Tata Power Company Ltd



CORRIGENDUM TO OPEN TENDER
NOTIFICATION

Tender Reference:
4100044502/CC25ADO034

Document Date: **22nd April 2025**

CORRIGENDUM -2 TO NOTICE INVITING TENDER (NIT) Dated 12th March 2025
(Tender Ref No: 4100044502/CC25ADO034 - Outline Agreement (OLA) for 2 years for Design, Supply, Installation, Testing & Commissioning of Battery Energy Storage system at various locations in Mumbai Distribution with cumulative capacity of 100MW/200MWh having 100MWh energy storage for two hours.)

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| The Tata Power Company Ltd |  | <i>CORRIGENDUM TO OPEN TENDER NOTIFICATION</i> |
| Tender Reference: 4100044502/CC25ADO034 | | Document Date: 22nd April 2025 |

CORRIGENDUM -2

Contents of Corrigendum – 2 are as follows:

- 1) Extension in Bid submission date
- 2) Reply to Prebid Queries
- 3) Revision in Qualification Requirement
- 4) Revision in Payment terms
- 5) Revision in Price Bid Format

1) Extension in Bid submission date

Vide this corrigendum, Bid Submission date stands revised as below

| | | Earlier Schedule | Revised Schedule |
|-----|---|--|--|
| (e) | Last date and time of receipt of Bids | 16.04.2025 up to 21:00 Hrs. | 05.05.2025 up to 21:00 Hrs. |
| (f) | Date & Time of opening of Price of qualified bids | Will be notified to the successful bidders through our website / e-mail. | Will be notified to the successful bidders through our website / e-mail. |

2) Reply to Prebid Queries

| Sr. No. | Detailed Reference to concerned Document. | Description as per Bid Document | Query / Clarification / Deviation | Tata Power Response |
|----------|---|---|--|---|
| 1 | 2 | 3 | 4 | 5 |
| 1 | Qualification Criteria | Supply & Experience The bidder should have installed BESS, with similar technology, in last 5 years in India, for cumulative capacity of 30 MWH with 1 installation of 10 MWH or higher. | India is new in adapting the BESS, so there are very less companies who has installed project in this capacity. So, we request you to allow Consortium where one of the consortium partners has executed this capacity project in India or Global. | Deviation Not acceptable. Terms and conditions as per the tender documents remain unchanged |
| 2 | Submission of Bid Document | BG of 180 days and further claim period of 180 days is needed. In case the same cannot be issued by your bank then BG valid for 365 days can be provided | We request you to reduce BG claim period to 60 Days in case of EMD. | Deviation Not acceptable. Terms and conditions as per the tender documents remain unchanged |

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|---------|--|--|---|---|
| 3 | PROJECT MATRIX AND SCHEDULE/Battery Life | Battery Life 12 Years, 8000 cycles or better whichever is earlier with 95-100 % DOD. (Bidder to specify DOD in between 95-100%) SOH_EOL: 70% | Battery Life 12 Years, 8000 cycles or better whichever is earlier with 95-100 % DOD. (Bidder to specify DOD in between 95-100%) SOH_EOL: 68% | As per specification Battery Energy at end of 12th year minimum 70 % is required |
| 4 | PROJECT MATRIX AND SCHEDULE/Min. Battery Capacity at the end of 12th Year (after degradation) at each container level. | Compensation banks to be provided for any degradation greater than specified in this document throughout the 12 year. The location of new bank installation shall be as per TPC requirement. Bidder can consider solutions to extend the useful life of the Batteries through intelligent smart technology to isolate the faulty battery cells and optimize useful life. Any Battery container should not degrade below 70 % of full capacity at the end of 12th year. | Our Understanding is as below BOL: Installed Capacity- 10MW/20MWh should deliver 9MW/18MWh at PCC at EOL: It should deliver 6.3MW/12.6MWh at PCC. If delivered capacity is less than this then only successful bidders need to provide the compensatory Battery Bank only at the executed site location. The rating of compensatory battery bank will be capacity difference of ideal(=12.6MWH) - actual(<12.6MWH). Please confirm | In any year BESS should not degrade beyond the limits specified in the table of clause no 9 (Battery Particulars). Penalty shall be levied every year as per clause 35. Faulty battery bank to be replaced by bidder at earliest, & duration of battery replacement & outage time shall have a recovery of opportunity cost which shall be calculated based on minimum tariff & peak tariff during duration of outage & capacity outage. Please ref. Annexure 1 & 2 for penalty calculation. |
| 5 | Site Visit | | As we need to addition of Switchgear in existing ss we request you to arrange a site visit. | Site visit done on 27/3/25 & 28/3/25. |
| 6 | Site Visit Reference | Tata Power has requested 100MW/200MWh | We can provide maximum mentioned size as per site visit report | OK. Noted. |
| 7 | Tree Cutting | As per Site visit, Tree cutting at Dharavi DSS required | TATA Power to take all the clearance from BMC & Environmental authorities. | Tree cutting/Tree trimming will be arranged by Tata Power. Bidder to ensure that the other works should not stop in the premises. |

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|---------|--|--|---|--|
| 8 | Approved Battery Manufacturer (Bidder to validate that proposed Battery complies the IS/IEC/UL/IEEE standards before proposing it to TPCL) | 1. Contemporary Amperex Technology Co., Limited. (CATL) 2. LG Energy Solution 3. Panasonic Corporation 4. BYD Company Ltd 5. SAMSUNG SDI CO., LTD 6. Gotion High tech Co Ltd 7. Shanghai Electric Gotion New Technology 8. Kore Power 9. EVE Energy Co. Ltd 10. Tianjin Lishen Battery Joint-Stock Co., Ltd | We request you to add Narada, Sunwoda, AESC & other IEC/UL compliant vendor in this list. | Bidders to consider makes as specified in specifications |
| 9 | Clause 2.7 / Page 9 | Price Variation Clause and Cap: Not Applicable. The prices shall remain firm during the entire contract period | Price Variation Clause is not acceptable. As discussed during Pre-Bid meeting, customer may not place the PO or contract in one go. The placement of Pos/ Contracts will be in staggered manner over a period of 24 Months. Hence owing the high volatility of battery prices and exchange rates, it will not be possible to have prices valid for 24 months. Suitable price variation clause linking the prices to applicable indices (like LME) has to be considered. | Deviation Not acceptable. Terms and conditions as per the tender documents remain unchanged |
| 10 | Technical specification: clause 17 | 24*7 Monitoring | Do we need to deploy people at TATA Power site? | Yes. Bidder to provide minimum one person 24*7 at central EMS Location to ensure charge, discharge from remote (SCADA) & availability & communication with all BESS. |

| Sr. No. | Detailed Reference to Document. | Description as per Bid Document | Query / Clarification / Deviation | Tata Power Response |
|---------|---|---|--|--|
| 11 | Technical specification: clause 7 | PCS Clause 7: Minimum power delivery Capacity of proposed PCS shall not be less than 2.4 MVA continuous (3.7 MVA for 15 minutes) Accordingly the design capacity to be provided by bidders. | Need Clarification on PCS Spec. | PCS shall have short time capacity of 3.7 MVA for 15 minutes. Bidder to submit maximum possible rating & duration & conditions if any. The same shall be reviewed during technical evaluation. Higher rating along with higher C rating of battery shall be given preference. PCS shall have LV breaker. |
| 12 | General | EMS BOQ | I/O approximation is necessary to estimate EMS BOQ | Bidder to do the desired Engineering as per the requirement to fulfil all application as per specification. |
| 13 | TECHNICAL SPECIFICATION FOR Energy Management System / CLAUSE 5.11.3/ PAGE 159 OF 328 | Automatic change-over between grid-tied & off-grid / grid forming at full load during operation. The above transitions between the On-grid and Offgrid state of operation shall be without any disturbance to loads. The transition shall be smooth, and the transition time shall be less than 200 milli second. | Depends on Communication distance and Switch time. | PCS shall have short time capacity of 3.7 MVA for 15 minutes. Bidder to submit maximum possible rating & duration & conditions if any. The same shall be reviewed during technical evaluation. Higher rating along with higher C rating of battery shall be given preference. PCS shall have LV breaker. |
| 14 | TECHNICAL SPECIFICATION FOR Energy Management System / CLAUSE 5.12.1.1./7.7 / PAGE 163 OF 328 | EMS shall support various open standard protocols such as IEC 60870-5-101/104, IEC 1850-7-420:2021, MODBUS RTU / TCP, MQTT, OpenADR, DNP3, SparkPlug 2.0b, SunSpecs, IEEE1815.2, etc for integration of various make DERMS on EMS Platform. | Spark plug, SunSpec, OPEN ADR and IEEE 815.2 IS NOT BUILT IN to EMS, in case of requirement necessary protocol gateway/converter can be arranged | OK. Noted. |

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|---------|--|--|---|---|
| 15 | 5.12.1.2 | EMS shall Interfaces with TPCL IT Systems (RTMS, SAP, Power BI etc) | can be integrated with REST API. Please confirm | Bidder to ensure communication to cloud, SCADA appropriately. |
| 16 | 1.7 Qualification Criteria - Supply and Experience / Page 7 | 1)The bidder should have installed BESS, with similar technology, in last 5 years in India, for cumulative capacity of 30 MWH with 1 installation of 10 MWH or higher. | As we do not have any such installation in India, our global references have to be considered. Clause has to be changed accordingly. | Please refer the revised Qualification Requirement |
| 17 | SPECIAL CONDITIONS OF CONTRACT - Clause 6 - Terms of Payment / Page No. - 1 of 3 | During the pre-bid meeting it was mentioned that a payment of 88% shall be released against supply. However balance 12% shall be released over a period of 12 years @ 1% year on year. | As we are submitting the PBG for 10% for entire 12 years, there is no need for holding this payment. All 100% has to be released against supply & completion of commissioning (Site acceptance test) in appropriate ratios (Say 90% against supply & 10% against SAT. | Deviation Not acceptable. Terms and conditions as per the tender documents remain unchanged |
| 18 | General Query | At locations with 22 KV and 33 KV point of connection, the bidder is required to build the complete infra including switchyard/Substation. | Whether it has to be a civil building only or can we consider pre -fab rooms/Suitable containers solutions? | Bidder can consider prefabricated rooms / suitable containers, etc suitable design for 12 years of use. |
| 19 | General Query | Statutory approvals | All kind of statutory approvals and any approvals required from local bodies, municipal corporations, electrical inspectorate etc. if any shall be in customer scope only. | All statutory approvals are required to be taken by bidder. Bidder to comply all design installation as per CEA (Safety & Electric Supply) Regulations, 2010 with latest amendment. |
| 20 | ENSE-DS-2048-R00, 1.3 - e, Page No 06/328 | Last date and time of receipt of Bids :02.04.2025 up to 15:00 Hrs | Considering the scope of work, we request TPC to extend the bid submission deadline by one month. | Please refer the corrigendum - 2 for the bid submission time details |

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|---------|---|--|---|--|
| 21 | Appendix 3 to CSCC Safety Terms and Conditions / Page 9 | Tree Trimming Procedure(R5): The objective of this procedure is to define guidelines and minimum requirements for Tree trimming. For complete procedure kindly refer Procedure Document No – TPSMS/GSP/TTRM/017 | If any tree cutting is required, necessary clearances required from respective government bodies shall be customer scope. Also, Procedure Document No – TPSMS/GSP/TTRM/017 Not available | Tree cutting/Tree trimming will be arranged by Tata Power. Bidder to ensure that the other works should not stop in the premises. |
| 22 | TECHNICAL SPECIFICATION FOR GRID CONNECTED BATTERY STORAGE SYSTEM (BESS) / Clause; 17, 18,19 / Page 38 of 328 | Round trip efficiency (AC-AC) is mentioned as “without auxiliary consumption” at page 121. At page 108 it is mentioned as “ With Auxiliary Consumption” | Need clarification. It has to be without Auxiliary consumption. | AC-AC RTE at pg. no 121 to be read as "AC-AC RTE without auxiliary consumption shall be 86 % & with Auxiliary consumption shall be 83 % " in line with pg. no 38 |
| 23 | General Query | Price validity for 2 Years | As discussed during Pre-Bid meeting, customer may not place the PO or contract in one go. The placement of Pos/ Contracts will be in staggered manner over a period of 24 Months. Hence owing the high volatility of battery prices and exchange rates, it will not be possible to have prices valid for 24 months. Suitable price variation clause linking the prices to applicable indices (like LME) has to be considered. | Deviation Not acceptable. Terms and conditions as per the tender documents remain unchanged |
| 24 | 1.Event Information 1.4 .7 Page No 06/328 | For vendor not registered with Tata Power, duly filled Vendor Registration form with all supporting documents is mandatory to participate in the Tender. | Does the Vendor Registration form need to be submitted along with the bid document, or should this formality be completed before the actual bid submission? Please clarify. | Bidder may submit the Vendor Registration Form with the Technical Submission. |

| Sr. No. | Detailed Reference to concerned Document. | Description as per Bid Document | Query / Clarification / Deviation | Tata Power Response |
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| 25 | FORMAT OF EMD – Bid Guarantee BG / Clause h | Notwithstanding anything herein contained, our liability under this guarantee is limited to Rs. _____/-(Rupees _____only) and the Guarantee will remain in force upto and including and shall be extended from time to time for such period or periods as may be desired by you. Unless a demand or claim under this Guarantee is received by us in writing within six months from (expiry date), i.e. on or before (claim period date), we shall be discharged from all liabilities under this guarantee thereafter. | We request the clause to be amended as : Notwithstanding anything herein contained, our liability under this guarantee is limited to Rs. _____/-(Rupees _____only) and the Guarantee will remain in force up to and including and shall be extended from time to time for such period or periods as may be desired by you. However, any such extension shall be done at the sole discretion of the bank. Unless a demand or claim under this Guarantee is received by us in writing within six months from (expiry date), i.e. on or before (claim period date), we shall be discharged from all liabilities under this guarantee thereafter. : Please note the same clause has been used in BG's issued to tata power in past By Bidder. | Deviation Not acceptable. Terms and conditions as per the tender documents remain unchanged |
| 26 | FORMAT OF EMD – Bid Guarantee BG / Clause i | Any claim/extension under the guarantee can be lodgeable at issuing outstation bank or at Mumbai branch and claim will also be payable at Mumbai Branch. (To be confirmed by Mumbai Branch by a letter to that effect) | We request the clause to be amended as: Any claim/extension under the guarantee can be lodged at Delhi branch and claim will also be payable at Delhi Branch. : Please note the same clause has been used in BG's issued to tata power in past By Bidder. | Deviation Not acceptable. Terms and conditions as per the tender documents remain unchanged |

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| 27 | 1.7 -Qualification Criteria Infrastructure :1, Page No 07/328 | Bidder must be an OEM/system integrator of the specified Battery Energy Storage System (BESS) registered in India with operational BESS in India. | We are integrator of BESS registered in India but don't have operational BESS in India. We have operational BESS of 12.5 MWh in United Kingdom. Request to consider the global experience of parent company. | Please refer to the revised Qualification Requirement |
| 28 | 1.7 -Qualification Criteria Infrastructure :2, Page No 07/328 | Bidder should have experience and infrastructure to carry out Routine and Breakdown maintenance during warranty and Comprehensive AMC duration. | Our UK based parent company have experience in BESS. Consider parent company global experience. To meet the technical qualifying criteria, can we take support of our parent company Edina Power Ltd. UK / Energy Efficiency Services Ltd. | Please refer to the revised Qualification Requirement |
| 29 | 1.7 - Qualification Criteria Supply and Experience - 2 Page No 07/328 | Out of the above, BESS installation of, at least 5 MWH must have been in successful operation for at least 1 year prior to the date of bid submission. | To meet the qualifying criteria, can we take support of our parent company Edina Power Ltd. UK / Energy Efficiency Services Ltd.. | Please refer to the revised Qualification Requirement |
| 30 | 1.7 - Qualification Criteria Testing Facility-1 Page No 08/328 | Bidder shall have an average annual turnover not less than Rs. 50 Cr. for last three financial years. | To meet the financial qualifying criteria, can we take support of our parent company Edina Power Ltd. UK / Energy Efficiency Services Ltd.. | Please refer to the revised Qualification Requirement |
| 31 | 1.7 - Qualification Criteria Supply and Experience - 4 Page No 07/328 | Bidder to submit Manufacturer Authorisation form (MAF) for all the major bought-out items from the respective OEM. (Power conditioning System, Battery, BMS and EMS) | Is it mandatory to provide the same make of equipment for which the MAF has been submitted? Can the winning bidder install any equipment from TPC's preferred makes, even if they did not submit an MAF for it during bid submission? | Yes. The make of equipment shall be as per the list mentioned in specifications. Bidder to submit undertaking or MAF for same. |

| Sr. No. | Detailed Reference to concerned Document. | Description as per Bid Document | Query / Clarification / Deviation | Tata Power Response |
|---------|---|--|---|--|
| 32 | 1.7 - Qualification Criteria Supply and Experience - 1 & 2 Page No 07/328 | The bidder should have installed BESS, with similar technology, in last 5 years in India, for cumulative capacity of 30 MWh with 1 installation of 10 MWh or higher. Out of the above, BESS installation of, at least 5 MWh must have been in successful operation for at least 1 year prior to the date of bid submission. | Our total contracted BESS capacity in the United Kingdom is 76.5 MWh, out of which 12.5 MWh has been operational for over a year, while the remaining 64 MWh is under execution. We have successfully designed, supplied, installed, and commissioned a 10 MWh BESS project, including civil works. Considering the evolving technology, we request TPCL to amend the cumulative capacity requirement from 30 MWh to 10 MWh, allowing the use of global installations and parent company credentials. | Please refer to the revised Qualification Requirement |
| 33 | 1.7 - Qualification Criteria Testing Facility-1 Page No 07/328 | The bidder must have a rated power container level testing facility under sample basis for Factory Acceptance Testing (FAT) in India or Global. | FAT facility will not be required at bidder's place as it is the OEM's responsibility. FAT and all related testing will be carried out at OEM's facility. Pls clarify. | FAT is required as specified in Tender documents. May be carried out at designated OEM's facility. All costs related to FAT will be borne by the Bidder except the cost of travel, airfare, accommodation of Tata Power Inspection officers, which will be borne by Tata Power |
| 34 | Annexure – 1 Schedule of Items Page No 16/328 | NOTE: Bidder to provide cost break up of components for all line items as a separate annexure. In absence of the cost break up the bid is liable for rejection. | Our understanding is: Provide the price only in the format provided. No further detailed price breakup for each line item will be required. | Bidder to submit price Bid as per the price bid format provided. Bidder to also submit the detailed price break up of each item considered for arriving at the total price for a line item in as separate sheet. |

| Sr. No. | Detailed Reference to concerned Document. | Description as per Bid Document | Query / Clarification / Deviation | Tata Power Response |
|---------|---|---|--|---|
| 35 | Technical Specification: 3. GENERAL TERMS AND CONDITIONS: 16, Page No 31/328 | Bidder shall make his own arrangement for water and electricity only for Project execution / Site and cost towards the same shall be part of the bid. | Please confirm our understanding that the employer will provide metered power and water supply at the proposed site. Accordingly, we will not consider expenses for DG-based power in our proposal. | Wherever TPC supply is available, same shall be provided. DG-based power supply, if required, to be considered by bidder based on site survey. |
| 36 | Annexure – 1 Schedule of Items Page No 16/328 | 130 MW/ 260 MWh for 12 location + 1 CEMS | Information provided in two different sections of the tender document is not in line with each other. TPC is requested to provide consistent data regarding location, capacity, PoC voltage level, feeder, etc. Kindly confirm the proposed location for CEMS. | Tender is for cumulative 100MW BESS. Proposed locations list is attached in Annexure. The rating quantity shall vary based on selection of site & size. Overall cumulative 100MW capacity shall be offered. Bidder can select site & size as per feasibility. CEMS proposed location is at Tata Power Trombay Thermal Power station, Mahul Road, Chembur, Mumbai – 400074 |
| 37 | Annexure 1 Page No 127/328 | Tentative Location and site-specific requirement list for 11 location with capacity of 135 MW / 270 MWh | | |
| 38 | General | | Employer will award job to any one or multiple bidder | The Tata Power Co. Ltd. Reserves the right to split the contract between multiple Bidders. |

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|---------|---|--|---|---|
| 39 | 35: WARRANTY AND SUPPORT TERMS & CONDITIONS Page No 35/121 | Bidder shall guarantee a minimum AC to AC RTE of 83% on monthly basis at Grid Point level without Aux Consumption | Maintaining an RTE of 83% until the end of the 12th year is challenging. While the auxiliary power requirement for BESS will remain constant throughout its lifespan, the battery will degrade year over year, leading to a reduction in RTE by the 12th year. We request TPCL to provide the year-on-year (YoY) RTE as well as the deliverable capacity at the PoC, considering RTE and DoD over the 12-year period. | AC-AC RTE at pg. no 121 to be read as "AC-AC RTE without auxiliary consumption shall be 86 % & with Auxiliary consumption shall be 83 % " in line with pg. no 38. |
| 40 | 6.19 Page No 38/328 | Round Trip Efficiency without Auxiliary Consumption: > 86% | | RTE greater than 83 % with Aux to be considered for first year. Refer attached table for RTE Year-on-year |
| 41 | 5: PROJECT MATRIX AND SCHEDULE : 17 Page No 36/328 | DSITC Centralized EMS Control Room Infra including EMS, Control Panel, network Racks, firewalls, Gateways, local network Connectivity, data cables, Dedicated MPLS cloud connectivity, Master clock, Desk, LCD Screen, etc | Please confirm our understanding that the CEMS location is different from the BESS location and that the client is responsible for the required civil work. | CEMS proposed location is inside the existing load despatch centre building at TATA power Trombay (Chembur) which is different location than distributed BESS site locations and for CEMS separate civil work is not required other than specified. |
| 42 | 6. GENERAL DESIGN FEATURES OF BESS Page No 39/328 | The Bidder shall be responsible for deployment of installed capacity of 10 MW / 20 MWH and estimated delivery of 9 MW / 18 MWH BESS at various locations in TPCL having following design features | Please confirm our understanding that TPCL requires 9 MW for 2 hours at the Point of Connection (PoC), considering the Round-trip Efficiency (RtE) and Depth of Discharge (DoD) of the battery. | Bidder to consider design of BESS for 10 MW demand & 20 MWH Energy for 2 hrs. The energy delivery at the point of connection / coupling with 100% DOD with AC-AC RTE. Yearly per cycle energy in terms of units delivery at POC calculation example given as per annexure 2. Example is for 5 MW/10MWh capacity, other rating shall be similarly derived. |

| Sr. No. | Detailed Reference to concerned Document. | Description as per Bid Document | Query / Clarification / Deviation | Tata Power Response |
|---------|---|---|---|---|
| 43 | Technical Specification 5.7 Page No 37/328 | Min. Battery Capacity at the end of 12th Year (after degradation) at each container level. Compensation banks to be provided for any degradation greater than specified in this document throughout the 12 year. The location of new bank installation shall be as per TPC requirement. Bidder can consider solutions to extend the useful life of the Batteries through intelligent smart technology to isolate the faulty battery cells and optimize useful life. Any Battery container should not degrade below 70 % of full capacity at the end of 12 the year. | If the battery containers we are proposing have a degradation of below 65% of BoL at the end of the 12th year, can we meet TPC's requirement of 70% output at the end of the 12th year by installing additional battery container capacity? | In any year BESS should not degrade beyond the limits specified in the table of clause no 9 (Battery Particulars). Penalty shall be levied every year as per clause 35. Faulty battery bank to be replaced by bidder at earliest, & duration of battery replacement & outage time shall have a recovery of opportunity cost which shall be calculated based on minimum tariff & peak tariff during duration of outage & capacity outage. |
| 44 | Clause 6.7 Page No 37/328 | Compensation banks to be provided for any degradation greater than specified in this document throughout the 12 year. The location of new bank installation shall be as per TPC requirement. Bidder can consider solutions to extend the useful life of the Batteries through intelligent smart technology to isolate the faulty battery cells and optimize useful life. Any Battery container should not degrade below 70 % of full capacity at the end of 12th year. | How to mitigate if our proposed solution does not meet the degradation criteria of 70% after 12 years | In any year BESS should not degrade beyond the limits specified in the table of clause no 9 (Battery Particulars). Penalty shall be levied every year as per clause 35. Faulty battery bank to be replaced by bidder at earliest, & duration of battery replacement & outage time shall have a recovery of opportunity cost which shall be calculated based on minimum tariff & peak tariff during duration of outage & capacity outage. |

The Tata Power Company Ltd



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NOTIFICATION

Tender Reference:
4100044502/CC25ADO034

Document Date: 22nd April 2025

| Sr. No. | Detailed Reference to concerned Document. | Description as per Bid Document | Query / Clarification / Deviation | Tata Power Response |
|---------|---|---|---|--|
| 45 | 9. Battery Particulars | Battery Discharging Rate: C/2 Continuous, (0.75 C for 15 minutes) | The plant can deliver output as per its optimum design conditions. Any deviation from these conditions may violate the warranty and lead to increased capital costs and losses. | Infrastructure Design should be such that 0.75C for 15 minutes can be handled. Bidder to submit maximum possible rating & duration & conditions if any, for getting more than 0.5C rating of battery. The same shall be reviewed during technical evaluation. Higher C rating shall be given preference. |
| 46 | 30: MANDATORY SPARES Page No 104/328 | Bidder shall supply the spares of BESS and its components as mentioned below. | As the bidder is responsible for CATS for 12 years, there is no requirement to maintain spare parts at the site. Spare parts may expire while in storage, and the bidder can manage spare inventory based on their experience. Additionally, spare battery module capacity may degrade without utilization. | OK. Noted. SLA to be adhered by bidder ensuring faster restoration & penalty shall be calculated as per annexure 2. |
| 47 | General Terms and Conditions : 6 Page No 217/328 | Payment Terms: 100% payment shall be made within 60 days from the receipt and acceptance of the material at the Consignee Stores/ Site/ Location as per the Contractual terms and conditions herein. | Information provided in two different sections of the tender document does not match. TPC is requested to align the payment terms consistently. Additionally, we request to make arrangement of an advance payment along with the Purchase Order/LoA to facilitation of vendor payments. | Please refer to the revised Payment terms. |

| Sr. No. | Detailed Reference to concerned Document. | Description as per Bid Document | Query / Clarification / Deviation | Tata Power Response |
|---------|--|---|--|---|
| 48 | SPECIAL CONDITIONS OF CONTRACT -6 Page No 255/328 | Terms of Payment: 88% of the invoice value shall be paid with a credit period of 60 days. Rest 12% of the invoice value shall be paid in 12 equal tranches at the start of each year of the Warranty. Credit period for MSME vendors is 45 days. Credit period shall start after acceptance of Invoice. The aforesaid payments shall be subject to receipt of invoices along with enclosures / supporting documents for having completed the Job according to the Scope and duly verified/certified by Owner's Order Manager against which payment is being claimed. Payments due to the Contractor shall be made after deduction of the Liquidated Damages (LD) amount, TDS, Safety Retention etc. as applicable. | | Please refer to the revised Payment terms. |
| 49 | SPECIAL CONDITIONS OF CONTRACT: 5 Page No 254/328 | CONTRACT PERFORMANCE BANK GUARANTEE (CPBG) Vendor shall submit an unconditional and irrevocable Contract Performance Bank Guarantee (CPBG) cum performance Bank Guarantee (PBG) for a value equal to 5% of the total Outline Agreement value. | Bidder is submitting PBG of 5%. Request TPCL to release 12% yearly payment against the successful commissioning. | Deviation Not acceptable. Terms and conditions as per the tender documents remain unchanged |

| Sr. No. | Detailed Reference to Document. | Description as per Bid Document | | Tata Power Response |
|---------|--|--|---|---|
| 50 | SPECIAL CONDITIONS OF CONTRACT -6 Page No 255/328 | Terms of Payment: 88% of the invoice value shall be paid with a credit period of 60 days. Rest 12% of the invoice value shall be paid in 12 equal tranches at the start of each year of the Warranty. Credit period for MSME vendors is 45 days. | | Deviation Not acceptable. Terms and conditions as per the tender documents remain unchanged |
| 51 | General | BESS Offer | Can bidder submit offer for partial project | No partial submission. |
| 52 | Site Visit | BESS location | We request TPCL to provide the SLD and layout for all proposed sites, clearly marking the hookup points on the SLD and the allocated area for BESS at each respective site. | SLD and Layout has been shared on 25-03-2025 |
| 53 | Site Visit | Mira Road DSS, 10MW/20MWh | There are existing trees within the proposed BESS premises. If tree removal is required, it will be the responsibility of TPCL, and the bidder shall bear no obligation in this regard. | Tree cutting/Tree trimming will be arranged by Tata Power. Bidder to ensure that the other works should not stop in the premises. |
| 54 | Site Visit | Reservoir Plot DSS | There are existing trees within the proposed BESS premises. If tree removal is required, it will be the responsibility of TPCL, and the bidder shall bear no obligation in this regard. | Tree cutting/Tree trimming will be arranged by Tata Power. Bidder to ensure that the other works should not stop in the premises. |
| 55 | Site Visit | Carnac DSS | i) After the site visit, it was determined that the required space for the proposed 10MW/20MWh BESS is not adequate. Kindly consider a 5MW/10MWh BESS instead. Please Confirm. ii) Kindly confirm the provision of "Auxiliary Load." | 1) Bidder to propose BESS capacity based on site survey & available space. 2) Auxiliary supply from TPC will be provided through separate meter. |

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| 56 | Site Visit | Dahisar DSS, 10MW/20MWh BESS | <p>i) After the site visit, it was determined that the required space for the proposed 10MW/20MWh BESS is not adequate. Kindly consider a 5MW/10MWh BESS instead. Please Confirm.</p> <p>ii) If the PCS is installed on the existing switchgear building, please provide the building's load-bearing capacity. The available space inside the switchgear room is insufficient for the proposed BESS project PCS.</p> <p>iii) There are existing trees within the proposed BESS premises. If tree removal is required, it will be the responsibility of TPCL, and the bidder shall bear no obligation in this regard.</p> | <p>1) Bidder to propose BESS capacity based on site survey & their design feasibility. Same shall be reviewed during technical evaluation.</p> <p>2) PCS to be installed outdoors or indoors. Load bearing capacity is 150 KG/sqm.</p> <p>3) Tree cutting/Tree trimming will be arranged by Tata Power. Bidder to ensure that the other works should not stop in the premises.</p> |
| 57 | Site Visit | SEEPZ DSS | <p>i) In the submitted photograph and AutoCAD drawings, the proposed location for the 20MW / 40 MWh BESS installation is not clearly indicated. Kindly confirm ii) There are existing trees within the proposed BESS premises. If tree removal is required, it will be the responsibility of TPCL, and the bidder shall bear no obligation in this regard.</p> | <p>1) The available area is shown the AutoCAD layout.</p> <p>2) Tree cutting/Tree trimming will be arranged by Tata Power. Bidder to ensure that the other works should not stop in the premises.</p> |
| 58 | Site Visit | BARC DSS | As per our discussion with TPCL, BARC site approval is still pending. At this stage, we are not factoring in the BESS pricing proposed by BARC. Please confirm. | BARC site is like Mahalaxmi site with voltage level. Same to be considered for bidding & design. |

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| 59 | Site Visit | Godrej DSS | <p>i) There are existing trees within the proposed BESS premises. If tree removal is required, it will be the responsibility of TPCL, and the bidder shall bear no obligation in this regard.</p> <p>ii) In the submitted photographs and AutoCAD drawings, the proposed 5MW/10MWh BESS appears insufficient. There is no adequate space for the installation of the transformer. iii) If sufficient space for the power transformer is available, we can proceed with the installation of the proposed BESS. Kindly confirm. iv) If the PCS is installed on the existing switchgear building, please provide the building's load-bearing capacity. Kindly confirm.</p> | <p>1) Tree cutting/Tree trimming will be arranged by Tata Power. Bidder to ensure that the other works should not stop in the premises.</p> <p>2) In the AutoCAD layout it is mentioned that 1 no Transformer can be removed. Space is available for installing Transformer.</p> <p>3) Space is available for installing 1 no 5 MVA Transformer.</p> <p>4) PCS can be installed in existing switchgear room. Load bearing capacity is 150 KG/sqm.</p> |
| 60 | Site Visit | Dharavi DSS | <p>i) The proposed site is insufficient to support a 20MW/40MWh BESS project. We recommend considering a 10MW / 20 MWh alternative. Please confirm. ii) There are existing trees within the proposed BESS premises. If tree removal is required, it will be the responsibility of TPCL, and the bidder shall bear no obligation in this regard. iii) We consider, the bidder is responsible solely for the cabling work up to the switchgear. Rest of the cabling falls under TPCL's responsibility. Kindly confirm.</p> | <p>1) Bidder to propose BESS capacity based on site survey & available space.</p> <p>2) Tree cutting/Tree trimming will be arranged by Tata Power. Bidder to ensure that the other works should not stop in the premises.</p> <p>3) 33 KV cable laying work from BESS switchgear to TPC-Transmission 33 KV panel is not in bidder scope.</p> |

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| 61 | Site Visit | Proposed BESS | For all the proposed BESS sites, we assume that an auxiliary transformer is not required for the auxiliary load, except at the Mahalaxmi DSS BESS site. Auxiliary is in TPCL scope. Kindly confirm. | Auxiliary supply at all the proposed locations will be provided by Tata Power. |
| 62 | Site Visit | Local EMS Infrastructure | We assume existing infrastructure will be used for local EMS. At this stage, we are not factoring in the BESS pricing. Kindly confirm. | Local EMS to be accommodated in existing infrastructure. Local EMS shall be on panel with HMI either indoor or outdoor. |
| 63 | Site Visit | CCTV & Lightning | We assume existing infrastructure will be used for local CCTV & lightning. At this stage, we are not factoring in the BESS pricing. Kindly confirm. | Existing lighting & CCTV to be used in existing premises. In case any additional lighting required, bidder to provide the same. At SEEPZ & Mahalaxmi sites bidder has to provide sufficient required Lighting. |
| 64 | Site Visit | Scrap Removal | We assume that the bidder will not be responsible for the removal of scrap present at the proposed BESS project sites. Kindly confirm. | Removal of existing material at site will be removed by The Tata Power Co. Ltd. & land will be handed over. |
| 65 | Site Visit | Statutory Approval | We request TPCL to take care of the statutory approvals required from govt. authority like Forest approval, BMC development, CRZ etc. | All statutory approvals are required to be taken by bidder. Approval for access up to land in SEEPZ, Godrej shall be arranged by The Tata Power Co. Ltd. Tree cutting/Tree trimming will be arranged by Tata Power. Bidder to ensure that the other works should not stop in the premises. |

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| 66 | Site Visit | | Kindly confirm the space available at proposed Mahalaxmi 20 MW/40 MWh BESS site | Bidder to consider the space shown during the site visit & propose GA accordingly |
| 67 | 1.1 - Scope of work | EMD 50.00 Lac | Become MSME, requesting for the waiver of EMD. | Deviation Not acceptable. Terms and conditions as per the tender documents remain unchanged |
| 68 | 1.7 Qualification criteria | Out of the above, BESS installation of, at least 5 MWh must have been in successful operation for at least 1 year prior to the date of bid submission. | Total 307kWh execution available since more than 6 months. Requesting to accept the deviation. | Please refer revised Qualification Requirement |
| 69 | 1.7 Qualification criteria | In last 5 Years minimum 10MWh installation done by the bidder | Total 307kWh execution available since more than 6 months. Requesting to accept the deviation. | Please refer revised Qualification Requirement |
| 70 | 1.7 Minimum testing facility | NABL level testing facility should available | Under the development | Noted. But the factory should have equipment & facility for performing FAT. Undertaking & evidence to be submitted along with bid. |
| 71 | 1.7 - Commercial Capability | Bidder shall have an average annual turnover not less than Rs. 50 Cr. for last three financial years. | Requesting Deviation against this clause. | Please refer revised Qualification Requirement |
| 72 | Battery life | 12 Years, 8000 cycles or better whichever is earlier with 95-100 % DOD. (Bidder to specify DOD in between 95 100 %) | DOD is between 90 to 95% | Bidder to provide DOD in between 95-100% |
| 73 | Transformer Efficiency | >98.9% | 96 to 98.9% | Transformer efficiency to be above 98.9% |
| 74 | RoundTrip Efficiency with Auxiliary Consumption | >83% | 80 to 83% | RoundTrip Efficiency with Auxiliary Consumption >83% |

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| 75 | BESS Auxiliary Consumption(%) (Discharging/) | BESS Auxiliary Consumption(%) (Discharging/) | BESS Auxiliary Consumption(%) (Discharging/Charging) | BESS Auxiliary Consumption(%) (Discharging/Charging) to be submitted by bidder. Bidder to ensure AC RTE else penalty shall be impose as per annexure 2. |
| 76 | Round Trip Efficiency without Auxiliary Consumption | >86% | 80 to 86% | RoundTrip Efficiency without Auxiliary Consumption >86% |
| 77 | Battery Discharging Rate | C/2 Continuous, (0.75 C for 15 minutes | It affect the battery life cycle | Infrastructure Design should be such that 0.75C for 15 minutes can be handled. Bidder to submit maximum possible rating & duration & conditions if any, for getting more than 0.5C rating of battery. The same shall be reviewed during technical evaluation. Higher C rating shall be given preference. |
| 78 | IP Rating for battery module / pack | IP67 or better | IP 65 OR IP67 | IP rating for battery module pack of IP 67 or better |
| 79 | Minimum power delivery Capacity of proposed PCS shall not be less than 2.4 MVA continuous (3.7 MVA for 15 minutes) Accordingly the design capacity to be provided by bidders | 3.7MVA power for 15 Minutes | Total capacity of the PCS is 5 MW and it affect the sizing of the PCS | PCS shall have short time capacity of 3.7 MVA for 15 minutes. Bidder to submit maximum possible rating & duration & conditions if any. The same shall be reviewed during technical evaluation. Higher rating along with higher C rating of battery shall be given preference. PCS shall have LV breaker. |

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| 80 | PCS should be suitable for parallel operation of multiple PCSs to scale energy storage installations for future expansion without any common mode voltage noise | | Maximum 5 Parallel PCS communication can be done | Ok Noted |
| 81 | User Interface HMI | Min 8 inch Touchscreen LCD | 7 inch or Bigger | Min 7 inch HMI Touchscreen LCD is also acceptable |
| 82 | PCS | Lightening Protection | Additionally provided | Ok Noted |
| 83 | Control Panels | Schneider electric , Rittal or equivalent | Provide MHU | Bidder to adhere makes as per specification |
| 84 | | (LxBxH) of PCS (Limiting Dimensions of L= 2260 mm, D=1350 mm and H=2125mm) | Might be Increase | Dimension of the PCS to be ensure as mentioned in the specifications. Bidder to submit GA layout of each site with feasibility of desire MW rating, same shall be reviewed during technical evaluation. |
| 85 | Clause - 1.7 Qualification Criteria Supply & Experience | 1. The bidder should have installed BESS, with similar technology, in last 5 years in India, for cumulative capacity of 30 MWH with 1 installation of 10 MWH or higher | The bidder should have installed BESS, with similar technology, in last 5 years in Asia, for cumulative capacity of 30 MWH with 1 installation of 5 MWH or higher | Please refer revised Qualification Requirement |
| 86 | Financial PQR | | For financial eligibility, as before FY 22 the market was affected by covid times so would request to kindly consider the following years: FY 2022- 23 FY 2023- 24 FY 2024- 25 (Provisional , we will submit the audited one during detail process) | Please refer revised Qualification Requirement |

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|---------|---|---|--|--|
| 87 | EMD | | As we are MSME registered so would request for the waiver from the EMD. | Deviation Not acceptable. Terms and conditions as per the tender documents remain unchanged |
| 88 | Battery Particulars Page - 45 Point - | Battery Discharging Rate - C/2 Continuous, (0.75 C for 15 minutes) | As an Industrial Standard LFP Battery Chemistry operates at max 0.5 C so would request to change it. | Infrastructure Design should be such that 0.75C for 15 minutes can be handled. Bidder to submit maximum possible rating & duration & conditions if any, for getting more than 0.5C rating of battery. The same shall be reviewed during technical evaluation. Higher C rating shall be given preference. |
| 89 | Battery Particulars Page - 45 Point - | Battery cell discharge efficiency - >96% | Our understanding is that Battery cell Discharge efficiency is at start of project i.e. validated at time of commissioning. | Ok Noted. As per table attached. |
| 90 | Power Conditioning System (PCS) Page - 58 Point – 7 | Minimum power delivery Capacity of proposed PCS shall not be less than 2.4 MVA continuous (3.7 MVA for 15 minutes) Accordingly the design capacity to be provided by bidders. | We would request Tata Power to relax this option considering following two options: Option 1 - Overloading capacity for each PCS is 120% for 10s. Option 2 – for continuous operation at 3.7MVA for 15 mins, 3 PCS of 2.4MVA would be required which will increase the upfront cost and will result in under utilization for rest of the time. | PCS shall have short time capacity of 3.7 MVA for 15 minutes. Bidder to submit maximum possible rating & duration & conditions if any. The same shall be reviewed during technical evaluation. Higher rating along with higher C rating of battery shall be given preference. PCS shall have LV breaker. |

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| 91 | Power Conditioning System (PCS) Page - 59 Point - 17 | PCS Shall be also have adequate protection against earth leakage faults. Internal Surge Protection Device (SPD – Type 1+2) shall be provided in the PCS on both DC and AC side. It shall consist of MOV Type arrester. The discharge capability of the SPD shall be at least 10kA at 8/20 microsecond wave as per IEC 61643-12. During earth fault and failure of MOV, the SPD shall safely disconnect the healthy system | In the PCS Specification Page 63 , it is mentioned that PCS has Type 2 SPD which I standard offering for PCS, Kindly clarify if there is a need for Type 1 SPD if needed it needs to be added external to the PCS. | Bidder to provide Type 2 SPD on both DC and AC side of PCS |
| 92 | Power Conditioning System (PCS) Page - 60 Point - 27.a | Active/ Reactive Power Control: PCS shall have capability to provide both active and reactive power separately as per requirement limited to rated MVA capacity of system and provide power in all four quadrants complied to IEEE 1547 and IEEE 519 . Change in delivery of active/reactive power towards load side should be smooth over the range of 0~100%. Similarly, the change in charging current of batteries should also be smoothly controllable. PCS output power shall remain within 1% of the set value, for AC input variation of +/- 10%. PCS shall be able to provide 0.8 lead to 0.8 lag reactive power support without curtailing the active power | As per CEA it is ±5% voltage variation and 0.95 power factor , without curtailing active power. The guaranteed deliver power will be as per CEA requirements. As per the Specification of the Tender Pg 38 ,9. Power Factor at PCC 0.95 lead or lag in Four Quadrant Operation. So we will go with these specifications. | ±5% voltage variation and 0.95 power factor , without curtailing active power is accepted |

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| 93 | Pg 77, Point 13.11 EMS Hardware, Control Panel and Communication for BESS Site | EMS system shall have open control system API in order to integrate the same with Tata Power custom applications (like Power Manager) to accept control commands from Tata Power custom applications. It shall also be possible to fetch required reports from EMS, through custom applications | What is "open control system API". | API of central EMS shall be made available to The Tata Power Co. Ltd. for any future expansion development/interconnection of new additional BESS. |
| 94 | Pg 85 Clause 5.7 | Vendor shall consider minimum 20% spare ports for the L2 switch to take care of the failure of the port. Vendor shall consider configuration of RTCC (remote tap changer controller), battery charger, fire alarms, ACDB energy meter configuration in the scope of the project. And ensure availability of the hardware required for the same. | The Configuration of RTCC needs to be in Client scope as it supplied by TATA power. | RTCC is not required as the transformer is without taps |
| 95 | Pg 85 Clause 6 | All Digital Inputs shall be reported with a resolution of 1 ms. | This is not required for the project the resolution of the data is 1 sec | The resolution of digital inputs 1 sec is acceptable |
| 96 | Pg 86 Clause 8c | c. Timing Accuracy: The RTU shall time-tag event reports to an absolute accuracy of 1ms or better. | Kindly relax it to 1Sec | Timing Accuracy: The RTU shall time-tag event reports to an absolute accuracy of 1ms or better is required |
| 97 | Pg 87 Clause 10 | Table: Alarm list on SCADA | The Requirement of RTU in the Table is different from the Specification of RTU with defined DI /DO mentioned above so would request client to define firm specs for RTU | DI: 16 and DO: 8 required as per specs and SPI mentioned in the table are the soft signals to be fetched from relay |

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| 98 | Pg 86 Clause 7c | The RTU shall maintain a clock and shall time-stamp the digital status data. Any digital input data in the RTU shall be assignable as an SOE point. Each time a SOE status indication point changes the state, the RTU shall time-tag the change and store in SOE buffer within the RTU. SOE shall be transferred to Master Station through RTU as per IEC 60870-5-104 protocol. d. It shall be possible to retrieve the recorded event on the Purchaser's SCADA system. | Kindly clarify if we are looking at RTU as SOE ? | SOE is a functionality of RTU. |
| 99 | Pg 97 Clause 26 | EMS CONTROL ROOM INFRASTRUCTURE | Our understanding is that we can use existing Control room / if new control room is required that it will be provided by TATA Power | Central EMS will be located at existing building of Tata Power Trombay (Chembur) & no separate control room is required |
| 100 | Pg 103 Clause 7.2 | Switches make | Kindly add Oring/ Advantech / Atop in the makes which offer similar specifications | Can be considered being reputed BA. Warranty to be ensured of 5 years. |
| 101 | Clause 7.5 | Routers | Kindly add Add Webdyn/ Advantech/ Santelequip | Can be considered being reputed BA. Warranty to be ensured of 5 years. |
| 102 | Clause 7.6 | RTU / PLC | Kindly add ABB/ Wago / Mitsubishi | Can be considered being reputed BA. Warranty to be ensured of 5 years. |
| 103 | Pg 163 Clause 5.12.1.2. | EMS shall Interfaces with TPCL IT Systems (RTMS, SAP, Power BI etc) | Is any dedicated tool required eg SAP connector? | SAP integration is not required. |
| 104 | Pg 173 Clause 7.5 | EMS shall be interoperable and scalable with any other EMS or Distributed Energy Resources Management System (DERMS) in future. | It can done if it is in the existing protocols of EMS if any additional protocol is introduced then at later stages it needs to accounted as a new work order. | Bidder to specify the protocols so that integration & interoperability can be ensured. |

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| 105 | Pg 173 Clause 7.6 | The system shall be Cloud Agnostic, OS Agnostic and Different BESS Agnostic and works with multiple BESS and DERMS technologies | We will be able to provide OS: Windows Only | Bidder to specify the cloud service provider considered, OS considered in the bid. |
| 106 | Pg 208 Point 1 EMS performance | Report Generates at 2 sec interval | The data can be visualized for 2 sec but the frequency of report or data value change can be at min 30 sec time interval | Ok Noted |
| 107 | Pg 209 Generation of Reports | Reports Generation within 5sec | The data can be visualized for 5 sec but the frequency of report or data change can be at min 30 sec time interval | Ok Noted |
| 108 | | Warranty of Balance of system | The standard warranty of bought out components like Transformer / switchgears and other BOP equipments comes at 18 months warranty, also back to back warranty of 12 years from OEM may not be possible. | Transformer warranty of 5 years, switchgear warranty of 18 months is accepted provided reputed makes as per specifications ensured. For other BOP including GPS time master, warranty of bidder (no back to back) for 12 years is accepted. EMS, PCS, BESS, Centralised EMS (perpetual license) shall be covered under 12-year warranty. There is no separate AMC or subscription charges. Bidder to ensure arrangement for the required spares. Th non-availability shall be applicable as per annexure 2 if not attained timely. |

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| 109 | | Tree Cutting | Tree cutting is required in most of the sites, TATA Power will help with the due permissions and cutting of the trees. | Tree cutting/Tree trimming will be arranged by Tata Power. Bidder to ensure that the other works should not stop in the premises. |
| 110 | | Access / approach for long tail vehicles into DSS | Most of the sites have limited access for trailer movements in DSS, TATA Power to help in breaking the gates & boundary walls wherever required and re-build the same. | Breaking of gates & boundary wall if required during material movement shall be in bidder scope including re-building. Bidder to inform TPC if during excavation any existing utility comes in between same has to be diverted along with the project work. Any cable diversion shall be done by TPC. |
| 111 | | Termination with the main DSS 33KV Transformer | Bidder shall supply and install the electrical infra till the 33kV adapter panel. The cabling and terminations from 33kV adapter panel to DSS Trafo shall be in TATA Scope. | Bidder has to lay cable from BESS Power Transformer to 33 KV switchgear of BESS along with terminations at both the ends. Source side cabling & termination into 33 KV BESS switchgear shall be done by TPC. |
| 112 | | Auxiliary Feeder for BESS | TATA to provide the auxiliary supplies for the BESS, the aux power calculations and requirements shall be conveyed to TATA while detailed engineering. | AC 415V Auxiliary power supply at all the proposed locations will be provided by Tata Power. |
| 113 | | Vehicular movement in Mumbai City & Mumbai Suburban | TATA Power to help & guide the bidder with the concerned authorities for heavy loaded truck movements within the city premises. | Bidder to fulfil transport authority guidelines & regulation as applicable to reach at site. |

The Tata Power Company Ltd



CORRIGENDUM TO OPEN TENDER
NOTIFICATION

Tender Reference:
4100044502/CC25ADO034

Document Date: 22nd April 2025

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| 114 | | Cable Layout | Cable lay out details of each DSS to be shared, along with the cabling guidelines if any. | Existing cable trenches were shown during the site visit. The existing cable route from Transformers to switchgear room were shown during site visit. The AutoCAD layouts is also showing cable trench marked on it. Cable laying guidelines shall be shared by Tata Power at the time of execution. |
| 115 | ENSE-DS-2048-R00/ 9. BATTERY PARTICULARS/ 45 | Battery Discharging Rate- C/2 Continuous, (0.75 C for 15 min | we request for deviation to 0.5p absolute maximum discharge rate. | Infrastructure Design should be such that 0.75C for 15 minutes can be handled. Bidder to submit maximum possible rating & duration & conditions if any, for getting more than 0.5C rating of battery. The same shall be reviewed during technical evaluation. Higher C rating shall be given preference. |
| 116 | ENSE-DS-2049-R00/ 1. Introduction/ 137 | EMS shall be able to acquire real time data of various equipment of BESS system and have in built logic/programming to monitor, control and optimize the performance of BESS as per specification. | We are requesting you to discuss the feasibility of real-time data acquisition during the detailed engineering phase. We anticipate that there may be some delay, and we would appreciate the opportunity to explore this further with you. | The realtime acquisition of data frequency data value change at min 30 sec time interval accepted |

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| 117 | ENSE-DS-2049-R00/ Scope 2.1/138 | 2.1. Bidder shall provide subscription-based EMS Software (12 year licensing for Cloud services under SaaS model) – including managed services Cost (Web Applications, DR system, Yearly operation, FMS, Comprehensive Support services) including integration with TPCL IT System | Could you kindly specify the type of integration required between the Energy Management System (EMS) and the TPCL IT. EMS is a dedicated application specifically designed to handle Battery Energy Storage System (BESS) data, and we would greatly appreciate your guidance on this clause. | Local EMS & Centralised EMS shall have perpetual license be covered under 12-year warranty of BESS including PCS. The communication shall be ensured as per the architecture. Centralised EMS should communicate with SCADA for signals such as SOC, available cumulative capacity & taking charge discharge command from SCADA. |
| 118 | ENSE-DS-2049-R00/ Scope 2.17/140 | Provide training to TPCL users for operating, administrative and developing of cloud services for proposed EMS. | We would like to offer training to TPCL users on how to operate and administer cloud services for the proposed EMS. However, due to safety considerations, we respectfully request that we focus on operational training and not on the development aspects of cloud services for the EMS. Please approve deviation in this clause. | Training to The Tata Power Co. Ltd. users for operating, administrative control of cloud services, EMS, & centralised EMS to be provided. |
| 119 | ENSE-DS-2049-R00/ Scope 2.20/140 | Solution should be architected to run on cloud services offered from multiple data centre facilities to provide business continuity with no interruptions in case of any disruptions / disaster to one of the data centres. In case of failure, automated processes should move customer data traffic away from the affected area. | The clause appears unclear, and we would greatly appreciate it if you could provide more detailed information about the specific requirements. Your clarification will help us better understand the requirements and ensure that we meet your needs effectively. | Bidder to provide Primary and secondary EMS server at different locations as per the architecture mentioned in the specification |

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| 120 | ENSE-DS-2049-R00/ Scope 2.27/ 141 | The proposed system (web portal) shall be scalable and extendable. | Please note that Following commissioning, any changes or expansions will incur a commercial impact. This impact will be communicated at the time of implementation and will be tailored to the specific changes or expansions requested by the client. | Noted. But any additional BESS to compensate degradation from the guaranteed performance shall have to be accommodated in the provided infrastructure itself including cloud & centralised EMS. Any deviations shall attract penalty as per annexure 2 |
| 121 | ENSE-DS-2049-R00/ Scope 2.28/ 141 | Includes a Disaster Recovery support in a separate Data Centre. The DR site should be providing for a one-minute RPO and 15 minutes RTO in event of a disaster. | Pls permit us to finalize the RPO and RTO times during the detailed engineering phase. Your feedback and collaboration during this phase would be invaluable in helping us tailor these objectives to best support your needs and ensure they align with your project goals. Please approve deviation in this clause. | Bidder to provide Primary and secondary EMS server at different locations as per the architecture mentioned in the specification. The communication rate of 15 minutes seems to be achievable. |
| 122 | ENSE-DS-2049-R00/ Scope 2.31/ 141 | Bidder shall provide all documentations related to EMS solution | We will provide necessary documents. We kindly request that you inform us necessary documents list which you would like to receive from us. Please approve deviation in this clause. | OK. Noted. Manual & operator training to be provided. |
| 123 | ENSE-DS-2049-R00/ Scope 2.33/ 141 | Bidder shall provide all software updates, patch management, free of cost during warranty and CATS period. | This shall be covered under AMC. Customer to re-confirm the AMC | EMS, PCS, BESS, Centralised EMS (perpetual license) shall be covered under 12-year warranty. There is no separate AMC or subscription charges. |

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| 124 | ENSE-DS-2049-R00/ Scope 2.32/ 141 | Bidder shall provide warranty and Comprehensive Annual maintenance (CATS) support after Go-Live/UAT of the system for 12 Years | This shall be covered under AMC. Customer to re-confirm the AMC | Transformer warranty of 5 years, switchgear warranty of 18 months is accepted provided reputed makes as per specifications ensured. For other BOP including GPS time master, warranty of bidder (no back to back) for 12 years is accepted. EMS, PCS, BESS, Centralised EMS (perpetual license) shall be covered under 12-year warranty. There is no separate AMC or subscription charges. Bidder to ensure arrangement for the required spares. Th non-availability shall be applicable as per annexure 2 if not attained timely. |
| 125 | ENSE-DS-2049-R00/ Scope 2.34.2/ 142 | Central & Single data repository for BESS & metering devices. | We kindly request that you make the necessary arrangements for metering. Your support in providing these arrangements will be invaluable in ensuring that all metering needs are fulfilled according to the required standards. | Bidder to install bidirectional energy meter for import and export energy of BESS and in AC and DC system for energy account purpose at register points |

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| 126 | ENSE-DS-2049-R00/ Scope 2.35.1/ 142 | EMS shall Interfaces with TPCL IT Systems | <p>Please explain requirement in detail. the EMS is a specialized application tailored to manage BESS data.</p> <p>Please approve deviation in this clause.</p> | Local EMS & Centralised EMS shall have perpetual license be covered under 12-year warranty of BESS including PCS. The communication shall be ensured as per the architecture. Centralised EMS should communicate with SCADA for signals such as SOC, available cumulative capacity & taking charge discharge command from SCADA. |
| 127 | ENSE-DS-2049-R00/ Scope 2.35.2/ 142 | <p>EMS – TPCL SCADA Integration – TPCL proposes a control philosophy where power flow on 33 kV BESS GIS switchgear shall be monitored and controlled by relevant divisional SCADA Operators whereas EMS operator at local / centralized system shall only able to monitor the power flow at BESS 33 kV GIS Panel. Bidder shall sent SoS (Emergency Stop) signal from EMS Software to SCADA System through secured communication protocol to switch off BESS 33 kV GIS Panel and isolate BESS.</p> | <p>Please provide a control philosophy for the Energy Management System (EMS).</p> <p>We are requesting you to be aware that - EMS will control the devices within BESS package only. EMS will not control any field device out of BESS SCOPE. Please specify the communication protocol for SOS signal & specify the event's for SOS signal.</p> <p>We are requesting you to do necessary arrangements at client end for communication & approve deviation regarding control filed devices.</p> | Communication architecture to be adhered by bidder as per the specifications. In case of mis-happening in BESS, the PCS to cut-off & same signal to be communicated to EMS & centralised EMS. |

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| 128 | ENSE-DS-2049-R00/ Scope 2.35.3/ 142 | EMS – Real Time Monitoring System of TPCL. Real Time monitoring System is web based application used by TPCL to optimize Power purchase cost as well as monitor the TPCL Grid performance (Scheduled Vs Actual demand linked with frequency) under frequency based Deviation Settlement Mechanism (DSM). | We will like to inform the system will not operate in real-time; instead, it will have a delay, which we will specify during the detailed engineering phase. Please note that power purchase costs and other related requirements are non-standard for BESS and cannot be provided by us. Please approve deviation in this clause. | The real time acquisition of data frequency data value change at min 30 sec time interval accepted |
| 129 | ENSE-DS-2049-R00/ Scope 3.1.2/ 144 | EMS Solution on Cloud – EMS is scalable cloud-based platform having integrations with multiple site BESS-EMSs deployed across various locations to optimize energy storage, distribution, and utilization. The centralized EMS acts as an overall energy management system that balances multiple BESS based on grid requirement. It comprises of Software on Cloud having features such as Site data collection and storage, and load balancing, optimize BESS Operation, Energy dispatch and scheduling etc. EMS Software shall be deployed at Local & Centralised Control Room. | We would like to inform you that Local EMS software and cloud EMS solutions should not be identical. We will establish a local database using SQL, MySQL, etc., and integrate it with a cloud service for data storage & monitoring. So approve deviation in this clause. | Noted. Local EMS & Centralised EMS may have different functionality. The centralized EMS acts as an overall energy management system that balances multiple BESS based on grid requirement including Energy charging & discharging and available capacity. |

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| 130 | 5. EMS function al requirement ENSE-DS-2049-R00/ Scope 5.1.8/148 | Remote database downloading, diagnostics & configuration | we would request you to specify what type of configuration client required. | Local EMS should communicate to centralised EMS placed at a remote end & all data & diagnostic signal shall be available at centralised EMS. |
| 131 | ENSE-DS-2049-R00/ Scope 5.2/148 | EMS shall provide complete Distributed Energy Resources Management Solution in terms of Energy Management System, Power Management, real time monitoring System, receiving and scheduling Communication data and event execution, environmental control system, peak load shaving system, safety management and protection mechanism system, early warning management, data analysis, energy analysis, exception management and Electric Power Ancillary Services (AFC/FRR). | Early warning management, data analysis, energy analysis, exception management, and similar requirements are highly unique, non-standard, and appear to be AI-based data analysis functionalities. Please approve the deviation in this clause. | Noted. To be submitted as a deviation for local EMS. Bidder to arrange for these requirements in centralised EMS. |
| 132 | ENSE-DS-2049-R00/ 5.4. Data Processing/ 149 | 5.4.2.2. Zero dead band processing - The acquired value, if falls between the dead band range around zero then it shall be considered as clamped zero value else the actual value shall be considered. | We kindly request that guide us the application of 'zero deadband process' in EMS, as it is a specialized term used in process automation. We would appreciate your understanding that this requirement is non-standard and unique for our EMS systems. Please approve the deviation in this clause. | Bidder to explain how data is treated if data is near zero values. |

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| 133 | ENSE-DS-2049-R00/ 5.3. Data Acquisition/ 148 | <p>5.3.1. EMS shall support following standard protocols but not limited, to integrate various equipments and Systems</p> <p>5.3.1.1. Modbus (TCP / IP, RTU)</p> <p>5.3.1.2. Substation Control such as IEC 61850, IEC 60870-5-/104</p> <p>5.3.2. Digital status and Analog Values data shall be reported by exception and shall be updated and displayed within 5 seconds</p> <p>5.3.3. Digital status data shall have higher priority than the Analog data.</p> <p>5.3.4. The system shall have dead band for data by exception.</p> <p>5.3.5. All analog values except energy values shall be reported by exception</p> <p>1 6</p> <p>5.3.6.5.3.4. Apart from the periodic integrity scan, the integrity scan shall also be initiated automatically whenever the following situations arise:</p> <p>5.3.6.1.5.3.4.1. Upon startup of the system</p> <p>5.3.6.2.5.3.4.2. RTU/ Controller status change is detected such as restart, Communication Link</p> | <p>We kindly request that you make the necessary arrangements for communication and data acquisition with field devices not included in the BESS package. We would be grateful if you could use either Modbus TCP/IP or Modbus RS485 as the communication protocols for these devices. Your cooperation in this regard would be valuable.</p> | <p>Communication architecture along with protocol mentioned in BESS specifications page no 76 shall be followed by the bidder. Operation of BESS should be possible from both Local & central EMS.</p> |

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| | | <p>restoration</p> <p>5.3.6.3.5.3.4.3. On demand by EMS functions</p> <p>5.3.6.4.5.3.4.4. On request by the user</p> <p>5.3.7.5.3.5. EMS shall be able to acquire the real time data, status, alarms & warning signals generated by following equipment (but not limited).</p> <p>5.3.7.1.5.3.5.1. 33 kV GIS Switchgear Panels (Relays, MFM, Energy Meters, Transducers, Contacts)</p> <p>5.3.7.2.5.3.5.2. Auxiliary Power System Comprising of UPS, Battery, Battery Charger, Distribution Board (MFM) and contacts</p> <p>5.3.7.3.5.3.5.3. Energy Meters</p> <p>5.3.7.4.5.3.5.4. Power Conditioning System (PCS)</p> <p>5.3.7.5.3.5.5. Fire Detection & Suppression System (FSS) for all BESS Components</p> <p>5.3.7.6.5.3.5.6. Temperature Scanning System (TSS)</p> <p>5.3.7.7.5.3.5.7. GPS Time Synchronization Unit</p> <p>5.3.7.8.5.3.5.8. Battery BMS</p> <p>5.3.7.9.5.3.5.9. Breakers</p> <p>5.3.7.10.5.3.5.10. HVAC Control System</p> <p>5.3.7.11.5.3.5.11. Any other equipment as offered by Bidder</p> | | |
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| 134 | ENSE-DS-2049-R00/ 5.4.2.3. Reasonability limit check/ 150 | All analog values shall be compared against defined high and low reasonability limits. The comparisons shall be performed at the scan rates of the analog values. An alarm shall be generated the first time a reasonability limit violation is detected. The last valid value of the variable shall be maintained in the database and marked with a quality code indicating the reasonability limit violation'. When data returns to a reasonable value, the new value shall be accepted, and a return-to-normal message shall be generated. | We kindly inform you that we will provide the only minimum and maximum value limits for the necessary signals. This will enable effective monitoring and control within the specified ranges. Please approve deviation. | Bidder to explain how data is treated for unreasonably high values of garbage data. |
| 135 | ENSE-DS-2049-R00/ 5.6.7/ 156 | BESS operation should be controlled by one operator at a time, positioned at centralized location thus it must have suitable interlock features. | Please note that the centralized location will be used for monitoring purposes only, with no control capabilities. To ensure safety, control functions should be maintained at the local level, please approve deviation in this clause. | Local EMS & Centralised EMS may have different functionality. Operation (Charger/Discharge & application mode selection) of BESS should be possible from both Local & central EMS. |
| 136 | ENSE-DS-2049-R00/ 5.4.2.4. Limit monitoring / 150 | 5.4.2.4.1. For bi-directional quantities (positive or negative) there shall be a set of five limits for each direction. For unidirectional quantities there shall be a set of three limits in one direction. emergency limit shall necessarily be assigned as audible alarm. | We kindly request that you clarify the distinction between bi-directional and uni-directional communication. We would also appreciate your understanding that we cannot provide audible alarms, as this is not a standard feature for our BESS systems. Please approve deviation. | Consider this clause as deleted |

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| 137 | ENSE-DS-2049-R00/ 5.4.4. Calculated Data Processing/ 153 | 5.4.4.4. Functions such as addition, subtraction, multiplication, division, maximum value, minimum value and average value, count, integration, square root extraction, exponentiation, trigonometric functions, logarithms and logical & comparative operators etc. shall be provided. | EMS is developed and tested based on multiple years of experience and with compliance to related standards hence changing the logic is not recommended, please approve the deviation | OK. Noted. |
| 138 | ENSE-DS-2049-R00/ 5.4.4.5/153 | It shall be possible to calculate running maximum value, minimum value and average value over a time interval (time interval configurable from 5 minutes to 60 minutes). The value shall be reset after the elapse of defined time interval. These values shall be stored with time of occurrence for maxima and minima and the time for averaging. | We would like to inform you that the point is unclear please elaborate in detailed. | EMS should be free from all garbage values & shall capture the critical alarms accurately. |
| 139 | ENSE-DS-2049-R00/ 5.6.9/ 156 | The control features in Local as well as centralized EMS shall be customizable. | Please note that after commissioning, any customization requests will be addressed separately, as they may involve additional costs. The cost implications will be communicated at the time of customization, based on the specific requirements and scope of the changes. Centralized EMS doesn't have any controll capability monitoring only provided, Please approve deviation in this clause. | Local EMS & Centralised EMS shall have perpetual license be covered under 12-year warranty of BESS. Any changes required for better operations; functionality & utilisation shall be provided without any cost implications in the updated version of firmware. |

| Sr. No. | Detailed Reference to Document. | Description as per Bid Document | Query / Clarification / Deviation | Tata Power Response |
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| 140 | ENSE-DS-2049-R00/ 5.4.6. Quality Codes/ 154 | <p>5.4.7.1.5.4.6.1. Quality codes indicate the presence of one or more factors that affect the validity of a data value. All quality codes that apply to a data value shall be maintained in the database for that data value.2 2</p> <p>5.4.7.2.5.4.6.2. The quality of the calculated value shall be the quality of its "worst" component of its arguments. The presence of a quality code on any of the component data values shall not disrupt the calculation using that value.</p> <p>5.4.7.3.5.4.6.3. Results of calculations that are manually overridden by the user shall be denoted with a quality code that can be differentiated from the propagation of a manual replaced quality code from one of its component values.</p> | <p>We would like to inform you that the point is unclear please elaborate in detailed.</p> | <p>EMS should be free from all garbage values & shall capture the critical alarms accurately.</p> |
| 141 | ENSE-DS-2049-R00/ 5.6. BESS Control/ 155 | <p>BESS Control</p> <p>5.6.3. Manual Mode – Operator shall be able to provide grid power set point to EMS Controller through Local / Centralized EMS of TPCL System. BESS shall charge/ discharge the power within the band of 5% of reference target power. BESS shall remain into designated input / Output level until terminated by operator through Local / Centralized EMS System or battery charging / discharging limits reached</p> | <p>We would like to inform you that the Local EMS software and cloud EMS solutions should not be identical. We will establish a local database using SQL, MySQL, etc., and integrate it with a cloud service for data storage & monitoring. Controll available only at local EMS. Please approve deviation in this clause.</p> | <p>Local EMS & Centralised EMS may have different functionality. Operation (Charger/Discharge & application mode selection) of BESS should be possible from both Local & central EMS.</p> |

| Sr. No. | Detailed Reference to concerned Document. | Description as per Bid Document | Query / Clarification / Deviation | Tata Power Response |
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| 142 | ENSE-DS-2049-R00/ 5.6.11/ 156 | <p>A control request shall be sent from control center only after the controlled point was checked for proper conditions. The request shall be rejected by the System if :</p> <p>5.6.11.1. The requested control operation is inhibited by a tag placed on the device;</p> <p>5.6.11.2. The device or BESS in local manual control mode</p> <p>5.6.11.3. The Operating Mode/ user permission of the workstation/console attempting control does not permit control</p> <p>5.6.11.5.5.6.11.4. The device is already selected for control request or control execution is from another workstation / user/window /console or control request is progressing</p> <p>5.6.11.6.5.6.11.5. Time out after selection</p> | <p>Please note that local EMS software and cloud EMS solutions should not be identical. We will establish a local database using SQL, MySQL, etc., and integrate it with a cloud service for data storage & monitoring. Control available only at local EMS. Sp, please provide deviation in this clause.</p> | <p>Local EMS & Centralised EMS may have different functionality. Operation (Charger/Discharge & application mode selection) of BESS should be possible from both Local & central EMS.</p> |
| 143 | ENSE-DS-2049-R00/ 5.11.2 / 159 | <p>Emergency back-up and slandering scheme - In the event of grid failure, Battery energy storage shall sland from the Grid and cater the electricity requirement of load, critical load connected on BESS 33 kV GIS Panel without any manual intervention. System shall manage and operate the load / critical load depending upon BESS</p> | <p>We would like to request you for provide the necessary arrangements for the sensing of grid failure event.</p> | <p>Grid failure event shall be provided from SCADA input to centralised EMS. Alternately at some location, we may keep based on PT sensing logic - both incomer supply failure.</p> |

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| | | Operating Parameters in Isolated Mode. BESS shall set and automatically control the voltage and frequency within acceptable limit. BESS shall have all the required hardware, Control and Protection feature for safe operation of islanding scheme / Microgrid. | | |
| 144 | ENSE-DS-2049-R00/ 5.11.3/ 159 | Automatic change-over between grid-tied & off-grid / grid forming at full load during operation. The above transitions between the On-grid and Offgrid state of operation shall be without any disturbance to loads. The transition shall be smooth, and the transition time shall be less than 200 milli second | Please note that within 200 milliseconds communication to related protections devices and ensuring it is not a fault and then making sure to shift from grid-tied to off-grid mode including isolation of upside grid as PCS cannot back feed entire grid network. this much of urgency may lead to fault current feeding if the issue is still present and from safety perspective it is not recommended to have such <1sec transfer time for MW scale projects. Please approve the deviation for the same | PCS should have capability of seamless transition between grid following and grid forming mode with PCS transition from grid following to grid forming mode within 200 msec on the command for discharge in grid forming mode in the event of blackout. Grid failure event shall be provided from SCADA input to centralised EMS. Alternately at some location, we may keep based on PT sensing logic - both incoming supply failure. |
| 145 | ENSE-DS-2049-R00/ 5.11.5/ 160 | Voltage Regulation – BESS shall support voltage regulation feature thereby maintaining the voltage at Grid point within acceptable range to ensure that both real and reactive power production are matched with demand. BESS operator shall be able to provide reactive power / power factor set point to EMS controller through Local / Centralized EMS. The VAR output of the BESS may be limited based on remaining capacity left after providing real power output. | Please note that centralized/Cloud based EMS is for only the monitoring purpose so, please provide deviation in this clause. | Local EMS & Centralised EMS may have different functionality. Operation (Charger/Discharge & application mode selection) of BESS should be possible from both Local & central EMS. |

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| 146 | ENSE-DS-2049-R00/ 5.12. Integration / 163 | 5.12.1. EMS system Integration with TPCL IT/OT System 5.12.1.1. EMS shall support various open standard protocols such as IEC 60870-5-101/104, IEC 61850-7-420:2021, MODBUS RTU / TCP, MQTT, Open ADR , DNP3, SparkPlug 2.0b, Sunspecs, IEEE1815.2, etc for integration of various make DERMS on EMS Platform. | We are requesting you to inform us What type of integration client require please elaborate. MQTT, OpenADR , parkPlug 2.0b, Sunspecs, IEEE1815.2, Please specify where we are using this communication protocols? | In case required convertor to be provided by bidder. |
| 147 | ENSE-DS-2049-R00/ 5.12.1.2/ 163 | EMS shall Interfaces with TPCL IT Systems (RTMS, SAP, Power BI etc) | Please note that From cloud client can download data & can use it for their any application like SAP, PowerBI, etc. Directly interface is not possible. Please approve the deviation in this clause. | Integration with SAP is not required. |
| 148 | ENSE-DS-2049-R00/ 5.12.1.3/ 163 | EMS controller should be able to exchange the BESS 33kV AIS Switchgear and multiwinding transformer operation parameters with SCADA System independently on dedicated interface on IEC 60870-5-101/104 Protocol for monitoring and Control purpose. | Please note that EMS will monitor only not control any field device except BESS scope. So, Please approve deviation in this clause. | Communication architecture along with protocol mentioned in BESS specifications page no 76 shall be followed by the bidder. Operation of BESS should be possible from both Local & central EMS. |
| 149 | ENSE-DS-2049-R00/ 5.12.1.4/ 164 | Centralised EMS shall also exchange the parameters with TPCL Real Time monitoring System (RTMS) on real time basis to monitor BESS operational parameters through web services based on SOAP / RestAPI | Please note that Client can download historical data from website but it will not be real time it will have some delay. Delay time will be provided during detailed engineering. So, Please approve deviation in this clause. | The Realtime acquisition of data frequency data value change at min 30 sec time interval accepted |

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| 150 | ENSE-DS-2049-R00/ 5.12.2.3/ 164 | The EMS shall have REST APIs that can be exposed to external endpoints. These APIs can manage and operate EMS platform including managing flexibility, ingesting forecast data, scheduling delivery, dispatching assets, and retrieving the telemetry and other data associated with the operation of the system | Please note that cloud based EMS is for monitoring only. please provide us deviation regarding this clause due to this clause are very unique & non- standard for regular EMS requirement. | Yes. Cloud based EMS shall be for monitoring. Operation (Charger/Discharge & application mode selection) of BESS should be possible from Local & central EMS. |
| 151 | ENSE-DS-2049-R00/6. EMS Display Interactions/ 166 | EMS Display Interactions | EMS and its SCADA related display will be one-time developed and in O&M phase it will not be able to edit or change by user, user has to contact bidder only for any change as safety and warranty is to be kept intact. Please approve this deviation | Local EMS & Centralised EMS shall have perpetual license covered under 12-year warranty of BESS. Any changes required for better operations; functionality & utilisation shall be provided without any cost implications in the updated version of firmware. Integration with SCADA & parameterisation with SCADA shall be one time. |
| 152 | ENSE-DS-2049-R00/ 7.4/ 173 | EMS System should have capability to integrate Distributed Energy Resources (BESS, Roof Top Solar etc) of similar / different size and with different Technology in future. | Please note that Any changes after commissioning will be taken separately. | Local EMS & Centralised EMS shall have perpetual license be covered under 12-year warranty of BESS. Any changes required for better operations; functionality & utilisation shall be provided without any cost implications in the updated version of firmware. |

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| 153 | ENSE-DS-2049-R00/ 7.5./ 173 | EMS shall be interoperable and scalable with any other EMS or Distributed Energy Resources Management System (DERMS) in future. | Please note that Any changes after commissioning will be taken separately. | Local EMS & Centralised EMS shall have perpetual license be covered under 12-year warranty of BESS. Any changes required for better operations; functionality & utilisation shall be provided without any cost implications in the updated version of firmware. |
| 154 | ENSE-DS-2049-R00/ 7.6/ 173 | The EMS should be supporting open protocols capable of integrating multiple battery energy storage systems or DERMS at different locations in future as well. The system shall be Cloud Agnostic, OS Agnostic and Different BESS Agnostic and works with multiple BESS and DERMS technologies. | Requirement is unclear please elaborate simply. | Bidder to specify the cloud service provider considered, OS considered in the bid. |
| 155 | ENSE-DS-2049-R00/7.22.3/ 176 | Bidder shall provide Built-in diagnostics for faster fault detection | Please note that Only Fault alarm will be shown. Please approve deviation in this clause. | Self-diagnostic feature shall be required. |
| 156 | ENSE-DS-2049-R00/ 11.3/ 187 | Factory Acceptance Test (FAT) | Please note that FAT will be conduct as per Bidder's standard FAT procedure. Please approve deviation this clause. | FAT to be as per clause specified in the specifications. Bidder should arrange to submit their FAT standard. The same shall be reviewed during technical evaluation. |

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| 157 | ENSE-DS-2049-R00/15 EMS Hardware, Control Panel and Communication for BESS Site/ 75 | All hardware or devices deployed on BESS site for EMS system shall be compatible for remote firmware update and configuration from centralized location without affecting the operation or taking any outage of BESS and its components. | We would like to inform remote firmware update is not possible due to safety reason & it's not an standard requirement for BESS. Please provide deviation in this clause. | Local EMS & Centralised EMS shall have perpetual license be covered under 12-year warranty of BESS. Any changes required for better operations; functionality & utilisation shall be provided without any cost implications in the updated version of firmware. |
| 158 | ENSE-DS-2049-R00/15 EMS Hardware, Control Panel and Communication for BESS Site - Clause -11/ 77-78 | EMS system shall have open control system API in order to integrate the same with Tata Power custom applications (like Power Manager) to accept control commands from Tata Power custom applications. It shall also be possible to fetch required reports from EMS, through custom applications. | Please note that EMS SCADA is very curicial in refference of safety. please mention clearly what type of control client require. | Local EMS & Centralised EMS shall have perpetual license be covered under 12-year warranty of BESS. Any changes required for better operations, functionality & utilisation shall be provided without any cost implications in the updated version of firmware. |
| 159 | ENSE-DS-2049-R00/15 EMS Hardware, Control Panel and Communication for BESS Site - Clause -14/ 78 | EMS shall be able to automatically optimize priority of charging /discharging of individual batteries basis on operational efficiency. | We are requesting you that this is not possible provide deviation. EMS doesn't have any control on individual battery module. | Charged /discharged command & quantum (MW) shall be executed from SCADA. Accordingly centralised EMS shall take call based on status of bank for selection of individual based on SOC & capacity. |
| 160 | ENSE-DS-2049-R00/15 EMS Hardware, Control Panel and Communication for BESS Site - Clause -20/ 78 | 20.In case of power supply failure, hardware fault, loss of I/O communication link, the system shall be automatically switch tofail safe mode to avoid any maloperation. The fail-safe mode shall be finalized during detailed engineering. | The requirement's are very open ended please specify correct requirement | Bidder to ensure a mechanism designed to ensure a system reverts to a safe state or a reduced level of functionality when a fault or error is detected, minimizing potential damage or harm. |

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| 161 | ENSE-DS-2049-R00/15 EMS Hardware, Control Panel and Communication for BESS Site - Clause -21/ 79 | All proposed Output Modules shall be capable of switching ON/OFF inductive loads like auxiliary relays etc. Without any additional hardware. Analog output modules shall be able to drive a load impedance of 500 ohms minimum and Binary output modules shall have contact rating minimum 10Amp. Vendor shall evaluate and confirm this required contact ratings based on actual system requirements. | The requirements are very open ended please specify correct requirement | Bidder to provide the hardware to meet the desired functionality. |
| 162 | ENSE-DS-2049-R00/15 EMS Hardware, Control Panel and Communication for BESS Site - Clause -23/ 79 | Bidder shall provide Built-in diagnostics for faster fault detection and Communication errors along with correction facility at all levels of communication. | Please note that this is not possible in all levels of communication & its not a standard requirement. We can provide cold or hot redundant system instead of built in diagnostics at main PLC level. | Redundancy to be ensured at all levels of communication & in line with the architecture. The reason of the failure of communication should be recorded & addressed by bidder as per SLA penalty clause. Specification clause no 16-5.2 should be adhered by bidder. |
| 163 | ENSE-DS-2049-R00/15 EMS Hardware, Control Panel and Communication for BESS Site - Clause -24/ 79 | The design shall ensure that any single failure or physical removal of module connected to the system bus shall not affect the entire or part of BESS Communication function and only disrupted message gets transmitted automatically. | Please note that the design shall ensure any single point failure will not affect entire BESS function but only part will be affected. clause from the tender is very unrealistic. | Bidder should know the reason of any failure & address within the timelines mentioned as per SLA penalty clause. |

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| 164 | ENSE-DS-2048-R00/ 2. Scope 11.b/ 25-26 | Compatible Liquid Cooling System for BESS including indoor or Outdoor Units, Controllers, Ducts & Piping system a) Lithium ion Battery modules, Battery Racks, Containers, Rack Control Boxes, Battery module connectors, DC Cables along with cable trays / trenches, cable terminations and earthing system, b) Compatible Liquid Cooling System for BESS including indoor or Outdoor Units, Controllers, Ducts & Piping system | Request to approve the standard product design, however all the non IP related data can be shared. | The bidder to submit relevant documents of the product along with bid for review during technical evaluation. |
| 165 | ENSE-DS-2048-R00/ 4. CLIMATIC CONDITIONS OF THE INSTALLATION/ 33 | 1 Maximum ambient temperature-50 °C 2 Max. Daily average ambient temp-40 °C 3 Min Ambient Temperature-0 °C 4 Maximum Humidity-100% 5 Minimum Humidity-10% | Kindly provide confirmation on relative humidity 100% (non condensating). | The equipment is going to be installed in Mumbai city in open atmosphere & humidity is condensation type only. Bidder to ensure necessary arrangement for the same in view of warranty period. |
| 166 | ENSE-DS-2048-R00/ 5.2 Installed Power Capacity of Battery Bank and Container/ 37 | 5 MW / 10 MW / 20 MW / 40 MW as per site feasibility mentioned in annexure 1. Container of 5 MW in multiples to be used for achieving installed capacity. | Container is having energy of 5MWh, please correct | Container of 5 MWh in multiples to be used for achieving installed capacity. |
| 167 | ENSE-DS-2048-R00/ 11.3. Factory Acceptance Test (FAT)/ 187 | 11.3. Factory Acceptance Test (FAT) 11.3.1. EMS system shall be tested at the bidder's facility. All hardware and software associated with the EMS system shall be staged for the factory testing. | FAT shall only be applicable on individual product integrated testing shall be shown at site with availability of all the products. | Ok, Noted |

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| 168 | ENSE-DS-2048-R00/ 5. PROJECT MATRIX AND SCHEDULE/ 38 | 16. BESS Auxiliary Consumption (%) (Discharging) > 96.56% 17. RoundTrip Efficiency with Auxiliary Consumption > 83% 18. RoundTrip Efficiency with Auxiliary Consumption >83% 19. Round Trip Efficiency without Auxiliary Consumption>86% 20. Environment Conditions C5 corrosion resistance category 22. Ambient Humidity 5 to 95% as per AIS138 Part 1 section 11.2/IEC 60068-2-30 | 16. We request your clarification what is meant by BESS Auxiliary Consumption(%) (Discharging)>96.56% ? 17. With Auxiliary consumption 81% RtE can be met at CoD and 77% at 12th year end, please confirm. 20. Noted, C5 can be complied. 22. Please confirm if relative humidity is 5% to 95% without condensation. | Auxiliary consumption during discharging should be <= 3.4 %. Please refer attached annexure 1 & 2 for RTE Year on year & penalty calculations. Maximum Humidity is 100% with condensation. |
| 169 | ENSE-DS-2048-R00/ 7. CODES AND STANDARDS/ 40 | 1. UL1973 (For Cell and Battery) 2. IEC 62620 (For Cell) 3. IEC 62897 or NFPA 72.A or NFPA 855. 4. IEC 62281 or UN38.3 (For battery & Cell) 5. IEC 62933-5-1 + IEC 62933-5-2 or UL9540 and UL9540A (BESS Level) IS 17092 6. UL 9540A 7. IEC/TS 62933-5 8. IEC 61850 / DNP3 9. UL 1642 10. IEC 61508 (for EMS/OS and BMS) 11. IEC 60730 12. NFPA 855 13. IEC-60529 | Kindly provide deviation for following certifications 1. 62620 (cell) 2. UL 1642 3. IEC 61508 (for EMS / OS and BMS) 4. IEC 60730 5. IEC-60529 | Bidder to comply as per specification |

| Sr. No. | Detailed Reference to concerned Document. | Description as per Bid Document | Query / Clarification / Deviation | Tata Power Response |
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| 170 | ENSE-DS-2048-R00/ 10.9. Configure Type 2 Fault/ 57 | High Temp of BCU Power Connection Critical BAU & EMS Communication failure BCU & BAU Communication failure BCU & BMU Communication failure BMU Hardware failure Contactor failure BCU Hardware failure BAU Hardware failure Current Sensor Failure Insulation sampling failure Isolation switch Off | Kindly provide deviation from these alarms and fault as same are not considered in standard product | Bidder to adhere to the specifications requirement |
| 171 | ENSE-DS-2048-R00/ 11. POWER CONDITIONING SYSTEM (PCS)/ 57-58 | <p>1. Bidder to specify the Size Limiting dimensions (L = 2260 mm, D=1350 mm and H=2125mm) of the PCS during bid submission.</p> <p>2. Separate Tata Power Logo branding visible size min. 0.4mx0.5m on front and rear side</p> <p>7. Minimum power delivery Capacity of proposed PCS shall not be less than 2.4 MVA continuous (3.7 MVA for 15 minutes) Accordingly the design capacity to be provided by bidders.</p> <p>11. PCS enclosure & Waste heat removal - PCS enclosure must be designed with C5M coating with base Alu Zinc Material suitable to withstand the harsh environmental conditions for complete designed life. The cooling necessary to maintain</p> | <p>1. Specified dimesions are very small, kindly provide devaiation against the same.</p> <p>2. Tata Power branding and logo can be complied only if doesn't volates OEM's warranty directives.</p> <p>7. As per industry standard and chemistry limitation in BESS Battery P-rate usually cannot be greater than 0.5P.</p> <p>11. Kindly change the requirement from C5M to C5 only.</p> | <p>1. Bidder to meet the PCS dimensions as per specifications</p> <p>2. Tata Power Branding logo sticker to be provided</p> <p>3. Infrastructure Design should be such that 0.75C for 15 minutes can be handled. Bidder to submit maximum possible rating & duration & conditions if any, for getting more than 0.5C rating of battery. The same shall be reviewed during technical evaluation. Higher C rating shall be given preference.</p> <p>4. PCS enclosure shall be with C5 corrosion resistance category</p> |

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| | | <p>temperature of PCS within design limit will be in the Bidders scope. In air cooled system: Waste heat rejection shall be done to ambient air. Air handling system to have filters to stop entrance of dust inside PCS. In oil cooled system: Provision to monitor coolant leaks, alarming & protection. Weatherproof & dustproof enclosure/Container of IP-54 with provisions to prevent moisture condensation, water, airborne dust, rodents, insects etc. from air intake / exhaust ports and compliant to IEC-60529.</p> <p>28. PCS should have capability of seamless transition between grid following and grid forming mode with PCS transition from grid following to grid forming mode within 200 msec (Excluding sensing and switch opening time)</p> | | |
| 172 | ENSE-DS-2048-R00/ EMS/ 208 | <p>100% data to be retained in the system for 5 years, previous data to be achieved in a recoverable format with recovery time 30min</p> | Request you to change the data retention for 3 years and recovery time 60 min | OK. Noted. |
| 173 | ENSE-DS-2048-R00/ 7. Codes and Standard/ 40 | <p>At least one set of complete BESS with partial or full capacity should be offered for inspection, verification of BESS functionalities as per relevant IEC/International standards. The test facility should be NABL approved</p> | <p>We have dedicated assembly and testing line available where we did the FAT for our last Govt. project. but our facility is not NABL approved, please provide deviation to NABL accreditation point</p> | <p>Noted. But the factory should have equipment & facility for performing FAT.</p> |

| Sr. No. | Detailed Reference to concerned Document. | Description as per Bid Document | Query / Clarification / Deviation | Tata Power Response |
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| 174 | ENSE-DS-2048-R00/ Special condition of contract/ Terms of payment/ 255 | Payment Terms: 88% of the invoice value shall be paid with a credit period of 60 days. Rest 12% of the invoice value shall be paid in 12 equal tranches at the start of each year of the Comprehensive AMC. | <p>We request to change the payment term so that avoid financial strain on supplier</p> <p>Supply Payment: 20% Advance of total order value against submission CG. 20 % against drawing approval 45% of the invoice value for the supply of the Battery Energy Storage System (BESS) shall be released within 30 days from the date of receipt of material at site and GRN. 10% against commissioning and balance 5% against handover at the respective site. AMC Payment: The payment for the Comprehensive Annual Maintenance Contract (AMC) shall be released in 12 equal annual installments, with the first installment due at the start of the first year of the AMC period.</p> | Please refer revised Payment terms |
| 175 | | Penalty on AC to AC Round Trip Efficiency (RtE) shall be applicable for 1st year. Penalty on AC to AC Round Trip Efficiency (RtE) for subsequent years will be measured as per service level agreement (SLA) criteria mentioned under CATS Clauses. | Please clarify the formula for calculating the penalty against shortfall of RTE | Refer attached Annexure 1 & 2 table for RTE year on year & penalty calculation sheet for shortfall & non availability of capacity. |

| Sr. No. | Detailed Reference to concerned Document. | Description as per Bid Document | Query / Clarification / Deviation | Tata Power Response |
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| 176 | ENSE-DS-2048-R00/ SLA/ 120 | Maintain / Augment* the residue capacity of BESS at its own risk and cost within 90 days of demonstration made, failing which cost estimated by TPCL or OEM for such augmentation of BESS shall be recovered from the Performance Bank Guarantee / CATS Cost. | Please define the amount or % for this clause | Refer attached Annexure 1 & 2 table for RTE year on year & penalty calculation sheet for shortfall & non availability of capacity. |
| 177 | ENSE-DS-2048-R00/ SSC/ 254 | CONTRACT PERFORMANCE BANK GUARANTEE (CPBG): Vendor shall submit an unconditional and irrevocable Contract Performance Bank Guarantee (CPBG) cum performance Bank Guarantee (PBG) for a value equal to 5% of the total Outline Agreement value. Such CPBG shall be valid till the expiry of the Comprehensive Warranty period of 12 Years with a further claim period of 6 months. | Request you please consider it to 5% Coporate Guaruantee (CG) the total PO contract value. | Deviation Not acceptable. Terms and conditions as per the tender documents remain unchanged |
| 178 | ENSE-DS-2048-R00/ GTC Service/ 236 | 8. Contract Price and Payment | Request you to please confirm the Milestone wise payment schedule for service | Please refer revised Payment terms |
| 179 | ENSE-DS-2048-R00/SLA/ 120 | Penalty of availability shortfall: 2% penalty on the Support/CATS charges for every 1% of non availability below 95%, subject to a maximum of 50% of the value of CATS charges as mentioned in the payment schedule shall To be recovered from CPBG /CATS Cost. | Request you to please revise it to 1% for non availability below 90% | Refer attached Annexure 1 & 2 table for RTE year on year & penalty calculation sheet for shortfall & non availability of capacity. |

| Sr. No. | Detailed Reference to concerned Document. | Description as per Bid Document | Query / Clarification / Deviation | Tata Power Response |
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| 180 | ENSE-DS-2048-R00/ Evaluation Criteria/ 9 | Price Variation Clause and Cap: Not Applicable. The prices shall remain firm during the entire contract period. | Considering the volatile market, It is difficult to hold Raw material prices for more than 3 months. Hence request you to issue the CRO/PO within 3 months from OLA finalization | Deviation Not acceptable. Terms and conditions as per the tender documents remain unchanged |
| 181 | ENSE-DS-2048-R00/SCC/ 155 | Liquidated Damages (LD): This is further to General Terms and Conditions – indigenous Supply – Clause No. 10 Price Reduction. LD shall be applicable, @1% per week Maximum upto 10% of the Order Value, if the commissioning of Battery Energy Storage System along with all required support systems and auxiliaries at a site is delayed beyond 11 months from the date of intimation from The Tata Power Co. Ltd. to go ahead. | Request you to please change it to 0.5% per week maximum upto 5% of order value | Deviation Not acceptable. Terms and conditions as per the tender documents remain unchanged |
| 182 | ENSE-DS-2048-R00/SCC/ 155 | Delivery Schedule: Commissioning Schedule per site from the date of intimation from The Tata Power Co. Ltd. to go ahead will be as follows: Layout Finalization: 1 month Material Planning and Procurement: 5 Months Delivery Schedule: Completion of Supply, Installation, Testing, Commissioning: 3 Months Final Integration with Central control room: 2 Months Overall, either ten sites or commissioning of 100MWh energy for two hours shall be completed within a period of 2 years. | Request you to please change as below Layout Finalization: 1 month Material Planning and Procurement: 7 Months Delivery Schedule: Completion of Supply, Installation, Testing, Commissioning: 3 Months Final Integration with Central control room: 2 Months | Deviation Not acceptable. Terms and conditions as per the tender documents remains unchanged |

| Sr. No. | Detailed Reference to concerned Document. | Description as per Bid Document | Query / Clarification / Deviation | Tata Power Response |
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| 183 | | | <p><u>SITE 1: Mira Road:Site survey Queries</u></p> <ol style="list-style-type: none"> 1. There is no access to transport the container into the proposed substation. 2. The available road width is insufficient for a heavy trailer to maneuver from the main gate and navigate around the building. 3. Water stagnation issues have been observed on the ground floor, with water levels reaching up to 1 meter, as indicated by visible watermarks. An emergency evacuation boat was also noted at the site. 4. The allocated area of approximately 15m x 6m for BESS is inadequate. 5. The location is not feasible for positioning the container vehicle and crane for unloading and container placement. 6. Site Clearance: The site requires clearing of dumped materials, including cable drums, old electrical panels, a dummy transformer, and bricks, as seen in the photos. | <ol style="list-style-type: none"> 1, 2 & 5. Breaking of gates & boundary wall if required during material movement shall be in bidder scope including re-building. 3. Bidder has to consider foundation of equipment accordingly. 4. Bidder to propose BESS capacity based on site survey & their design feasibility. Same shall be reviewed during technical evaluation. 6. Removal of existing material at site will be removed by TPC & land will be handed over. 7. Bidder to inform TPC if during excavation any existing utility comes in between same has to be diverted along with the project work. Any cable diversion shall be done by TPC. |

| Sr. No. | Detailed Reference to concerned Document. | Description as per Bid Document | Query / Clarification / Deviation | Tata Power Response |
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| 184 | | | <p><u>SITE 2 : Dahisar DSS: Site Survey Queries</u></p> <p>1. Limited Access: There is no feasible access to transport the container into the proposed substation boundary.</p> <p>2. Road Constraints: The available road width is insufficient for maneuvering a heavy trailer from the main gate and around the building.</p> <p>3. Space Limitation: The allocated 12m x 10m area for BESS is inadequate for the required installation.</p> <p>4. The site is not suitable for positioning the container vehicle and crane for unloading and placement.</p> <p>5. Site clearance required as material are placed/dumped on the BESS allocated area.</p> | <p>1 & 3. Breaking of gates & boundary wall if required during material movement shall be in bidder scope including re-building.</p> <p>2. Bidder to propose BESS capacity based on site survey & their design feasibility. Same shall be reviewed during technical evaluation.</p> <p>4. Bidder has to consider 33KV switchgear in their scope. The switchgear also to be accommodated in the space shown during the site visit.</p> <p>5. Tree cutting/Tree trimming will be arranged by Tata Power. Bidder to ensure that the other works should not stop in the premises.</p> <p>6. Bidder to inform TPC if during excavation any existing utility comes in between same has to be diverted along with the project work. Any cable diversion shall be done by TPC.</p> |

| Sr. No. | Detailed Reference to concerned Document. | Description as per Bid Document | Query / Clarification / Deviation | Tata Power Response |
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| 185 | | | <p><u>SITE 3 : Reservoir DSS:Site Survey Queries</u></p> <p>1. Height Restriction: The flyover's bottom clearance is insufficient for the passage of a container-loaded vehicle.</p> <p>2. Road Constraints: The available road width does not allow a heavy trailer to maneuver from the main gate and around the building.</p> <p>3.Space Limitation: The allocated 13m x 10m area for BESS is inadequate for the required installation.</p> <p>4.Unloading Challenges: The location is not suitable for positioning the container vehicle and crane for unloading and placement.</p> <p>5.Site clearance required as material are placed/dumped on the bess allocated area.</p> | <p>1, 2 & 4. Breaking of gates & boundary wall if required during material movement shall be in bidder scope including re-building.</p> <p>3. Bidder to propose BESS capacity based on site survey & their design feasibility. Same shall be reviewed during technical evaluation.</p> <p>5. Removal of existing material at site will be removed by TPC & land will be handed over.</p> <p>6. Bidder to inform TPC if during excavation any existing utility comes in between same has to be diverted along with the project work. Any cable diversion shall be done by TPC.</p> |
| 186 | | | <p><u>SITE 4 : MIAL 2 DSS: Site Survey Queries</u></p> <p>1. The location can accommodate a maximum of two containers. PCS need to be placed inside the control room.</p> <p>2. Existing Concrete Fire wall (10mtr*9mtr*350mm approximate size) to be fully dismantled for developed the BESS proposed area</p> <p>3. An area of approximately 20m x 12m is available for container placement, while the PCS will be installed inside the hall/control room,</p> | <p>1. Bidder to propose BESS capacity based on site survey & their design feasibility. Same shall be reviewed during technical evaluation.</p> <p>2. Breaking of existing firewall if required shall be in bidder scope.</p> <p>3. BESS & Power Transformers to be installed outdoors; and PCS in the switchgear room.</p> <p>4. Breaking of gates & boundary wall if required during material</p> |

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| | | | <p>located 50 meters from the container and transformer area.</p> <p>4. Main road to Plant entry area Road turning radius not sufficient to move the container loaded vehicle. Area is near the airport boundary wall.</p> | <p>movement shall be in bidder scope including re-building.</p> <p>5. Bidder to inform TPC if during excavation any existing utility comes in between same has to be diverted along with the project work. Any cable diversion shall be done by TPC.</p> |
| 187 | | | <p><u>SITE 5 : Dharavi RSS:Site Survey Queries</u></p> <p>1. Road Width Constraint: The available road width is insufficient for a heavy trailer to maneuver from the main gate and navigate around the building.</p> <p>2. Space Limitation: The total allocated area is approximately 14m x 11m, which is inadequate for optimal container placement.</p> <p>3. Unloading Challenges: The site is not suitable for positioning the container vehicle and crane for unloading. While unloading outside the entrance gate is an option, the external road does not provide feasible parking space for the container trailer.</p> <p>4. Restricted Access: The switchyard/switchgear room was not surveyed due to access restrictions.</p> <p>5. Tree removal and building in the bess allocated area needs to be dismantle.</p> | <p>1 & 3. Breaking of gates & boundary wall if required during material movement shall be in bidder scope including re-building.</p> <p>2. Bidder to propose BESS capacity based on site survey & their design feasibility. Same shall be reviewed during technical evaluation.</p> <p>4. Bidder has to consider 33KV switchgear in their scope. The switchgear also to be accommodated in the space shown during the site visit.</p> <p>5. Tree cutting/Tree trimming will be arranged by Tata Power. Bidder to ensure that the other works should not stops in the premises.</p> <p>6. Bidder to inform TPC if during excavation any existing utility comes in between same has to be diverted along with the project work. Any cable diversion shall be done by TPC.</p> |

| Sr. No. | Detailed Reference to concerned Document. | Description as per Bid Document | Query / Clarification / Deviation | Tata Power Response |
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| 188 | | | <p><u>SITE 6 : Parel DSS:Site Survey queries</u></p> <p>1. The available road width is insufficient for a heavy trailer movement from main road to the site.</p> <p>2. Area allocated is approximately 25mtr x 9mtrs. Also, we can propose the area requirement for the placement of container & pcs as the Substation is not constructed. Tentative approval for the substation plan and building is there with tata power.</p> <p>3. Switchgear panel not available as the substation is in planning phase.</p> <p>4. Site clearance, site leveling required.</p> | <p>1. Breaking of gates & boundary wall if required during material movement shall be in bidder scope including re-building.</p> <p>2. BESS container to be installed outdoors. PCS to be installed indoors in switchgear building. The construction of building for substation is in Tata Power scope.</p> <p>3. Bidder to consider 11 KV switchgear & adaptor panel in their scope.</p> <p>4. Levelling of the area allocated to BESS shall be in bidder scope.</p> <p>5. Bidder to inform TPC if during excavation any existing utility comes in between same has to be diverted along with the project work. Any cable diversion shall be done by TPC.</p> |
| 189 | | | <p><u>SITE 7 : Carnac DSS:Site Survey Queries</u></p> <p>1. BESS Placement: The allocated BESS area is located within an enclosed room structure, not feasible to install battery containers.</p> <p>2. Structural Integrity Concern: The installation of the battery container unit and PCS inside the room raises concerns regarding the structural strength of the building.</p> <p>3. Distance to Switchgear</p> | <p>1 & 4. Bidder to propose BESS capacity based on site survey & their design feasibility. Same shall be reviewed during technical evaluation.</p> <p>2. The installation shall be done within the building.</p> <p>3. Laying of cables from BESS area to switchgear room is in bidder scope.</p> <p>4. Bidder to inform TPC if during excavation any existing utility comes in between same has to be</p> |

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| | | | Panel Room: The switchgear panel room is approximately 60-70 meters away from the designated BESS area. 4. Available Space: The allocated area for BESS installation measures approximately 10m x 15m. | diverted along with the project work. Any cable diversion shall be done by TPC. |
| 190 | | | <p><u>SITE 8 : Mahalaxmi RSS:Site Survey Queries</u></p> <p>1. Area available is approximately 30mtr x 30mtr, this area will be used for BESS and substation panel building. We need extra area required for BESS. (Area not sufficient for 20 MW / 40 MWh project).</p> <p>2. Switchgear panel not available as the substation is in planning phase.</p> <p>3. Site Clearance required, as materials are dumped on the BESS allocated area.</p> | <p>1) Bidder to propose BESS capacity based on site survey & their design feasibility. Same shall be reviewed during technical evaluation.</p> <p>2) Bidder has to consider 33 KV Switchgear panel in their scope.</p> <p>3) Removal of existing material at site will be removed by TPC & land will be handed over.</p> <p>4) Bidder to inform TPC if during excavation any existing utility comes in between same has to be diverted along with the project work. Any cable diversion shall be done by TPC.</p> |
| 191 | | | <p><u>SITE 9 : Godrej DSS Site Survey Queries</u></p> <p>1. Site visiting not permitted by the customer</p> | Site was shown to bidders over a video call. Autocad layout is shared with the bidders. |
| 192 | | | <p><u>SITE 10 : SEEPZ DSS Site Survey Queries</u></p> <p>1. Site visiting not permitted by the customer</p> | Site photos & autocad layout shared with the bidders. |
| 193 | | | <p><u>SITE 11 : BARC DSS Site Survey Queries</u></p> <p>1. Site visiting not permitted by the customer, also site was not handed over.</p> | BARC site is similar to Mahalaxmi site. Same to be considered for bidding & design. |

| Sr. No. | Detailed Reference to concerned Document. | Description as per Bid Document | Query / Clarification / Deviation | Tata Power Response |
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| 194 | Tender Document BESS in Mumbai Distribution, 1.3.e Last date and time of receipt of Bids, Pg 6 or 328 | 02.04.2025 till 1500 hrs | We humble request to extend the last date of bid submission by 3 weeks. | Please refer Corrigendum - 2 |
| 195 | Tender Document BESS in Mumbai Distribution, 1.7 Qualification Criteria Pg 7-8 or 328 | Infrastructure 2)Bidder should have experience and infrastructure to carry out Routine and Breakdown maintenance during warranty and Comprehensive AMC duration. | We request a minor modification in this clause as below: 2)Bidder should have experience to carry out Routine and Breakdown maintenance during warranty and Comprehensive AMC duration. | Please refer the Revised Qualification Requirement. |
| 196 | Tender Document BESS in Mumbai Distribution, 1.7 Qualification Criteria Pg 7-8 or 328 | Supply and Experience 1)The bidder should have installed BESS, with similar technology, in last 5 years in India, for cumulative capacity of 30 MWH with 1 installation of 10 MWH or higher. | We request a minor modification in this clause as below: 1)The bidder should have installed BESS, with similar technology, in last 5 years in India, for cumulative capacity of 20 MWH with 1 installation of 10 MWH or higher. | Please refer the Revised Qualification Requirement. |
| 197 | Tender Document BESS in Mumbai Distribution, 9 Battery Particulars Pg 47 or 328 | Approved Battery Manufacturer (Bidder to validate that proposed Battery complies the IS/IEC.UL/IEEE standards before proposing it to TPCL) | Please confirm if the bidder can propose additional battery manufacturers who comply to said standards but not yet listed within this clause. | Bidder to adhere makes as mentioned in the specification |
| 198 | Tender Document BESS in Mumbai Distribution, Annexure 1 Pg 127 or 328 | Annexure 1 Tentative Location and site specific requirement list | Kindly provide the site boundary coordinates, site studies report if available like geotech, hydrology, topology reports for all the proposed locations. | Site layouts is already shared on 25/3/25. Site visits were conducted on 27/3/25 & 28/3/25. |

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| 199 | Tender Document BESS in Mumbai Distribution, 1.7 Qualification Criteria Pg 7-8 or 328 | Testing Facility The bidder must have a rated power container level testing facility under sample basis for Factory Acceptance Testing (FAT) in India or Global. The facility should be capable of conducting comprehensive performance testing, including safety and functional tests, to ensure compliance. Additionally, the testing facility should have provisions for simulating operation and generating detailed test reports | We request a minor modification in this clause as below: The bidder or the OEMs listed by bidder in his bid must have a rated power container level testing facility under sample basis for Factory Acceptance Testing (FAT) in India or Global. The facility should be capable of conducting comprehensive performance testing, including safety and functional tests, to ensure compliance. Additionally, the testing facility should have provisions for simulating operation and generating detailed test reports | FAT is required as specified in Tender documents. May be carried out at designated OEM's facility. All costs related to FAT will be borne by the Bidder except the cost of travel, airfare, accommodation of Tata Power Inspection officers, which will be borne by Tata Power |
| 200 | Tender Document BESS in Mumbai Distribution, Annexure 1 Pg 127 or 328 | Annexure 1 Tentative Location and site specific requirement list | Kindly provide the KMZ files for all the proposed locations. | Google location is already shared with bidders. |
| 201 | Event Information - 1.7 - Infrastructure | 1) Bidder must be an OEM/system integrator of the specified Battery Energy Storage System (BESS) registered in India with operational BESS in India | As per our experience, most of the Indian EPC companies including us do not integrate BESS solution in house or manufacture batteries as OEM. Hence, in order to ensure higher participation from the market player, we request TPCL to kindly allow EPC players to participate in this bid basis their previous and establish BESS credentials within India. | Please refer the Revised Qualification Requirement. |

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| 202 | Event Information - 1.7 - Testing Facility | The bidder must have a rated power container level testing facility under sample basis for Factory Acceptance Testing (FAT) in India or Global. The facility should be capable of conducting comprehensive performance testing, including safety and functional tests, to ensure compliance. Additionally, the testing facility should have provisions for simulating operation and generating detailed test reports. | In continuation to our submission in Sr. No. 1, as the EPC companies do not manufacture batteries, we request TPCL to allow demonstrating the testing facility capability through their battery integrator partners. | Bidder to submit available credentials. The same shall be reviewed during evaluation. |
| 203 | Annexure – 1 Schedule of Items | Central EMS with servicers and desired infra as per specification and communication architecture | With reference to this clause, we request TPCL to clarify whether the Bidder requires to install an central EMS system for each substation or a common Central EMS system for all the substations at a centralized location | Central EMS for all the substations shall be at a centralised substation. For each substation there will be local EMS kiosk/panel with HMI either indoor or outdoor. |
| 204 | ENSE-DS-2048-R00: 31. Testing | Penalty on AC to AC Round Trip Efficiency (RtE) shall be applicable for 1 st year. Penalty on AC to AC Round Trip Efficiency (RtE) for subsequent years will be measured as per service level agreement (SLA) criteria mentioned under CATS Clauses | We request TPCL to kindly clarify the formula or methodology that will be used to calculate the penalty against any shortfall in AC-to-AC Round Trip Efficiency (RtE). | In any year BESS should not degrade beyond the limits specified in the table of clause no 9 (Battery Particulars). Penalty shall be levied every year as per clause 35. Faulty battery bank to be replaced by bidder at earliest, & duration of battery replacement & outage time shall have a recovery of opportunity cost which shall be calculated based on minimum tariff & peak tariff during duration of outage & capacity outage. |

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| 205 | ENSE-DS-2048-R00 5. PROJECT MATRIX AND SCHEDULE | 17. RoundTrip Efficiency with Auxiliary Consumption >83% | In our experience and with the current technology, given RTE requirement of more than 83% with Auxiliary and more than 86% without Auxiliary is not practically achievable. Moreover, similar tenders from other utilities (both EPC and Developer) have specified the RTE requirement to be more than 85% and the BESS Auxiliary consumption shall be cater through a separate and dedicated HT connection. | Refer attached Annexure 1 & 2 table for RTE year on year & penalty calculation sheet for shortfall & non availability of capacity. |
| 206 | ENSE-DS-2048-R00 5. PROJECT MATRIX AND SCHEDULE | 19. Round Trip Efficiency without Auxiliary Consumption > 86% | We request TPCL to kindly amend the clause to 85% RTE excluding Auxiliary consumption. We will be happy to have a detailed discussion on our request in offline mode. | |
| 207 | ENSE-DS-2048-R00: 35. WARRANTY AND SUPPORT TERMS & CONDITIONS | Min. Battery Energy at the end of Year (% of installed capacity & excl Aux. Consumption): Maintain / Augment* the residue capacity of BESS at its own risk and cost within 90 days of demonstration made, failing which cost estimated by TPCL or OEM for such augmentation of BESS shall be recovered from the Performance Bank Guarantee / CATS Cost | We request TPCL to kindly consider capping the penalty for shortfall in residual capacity augmentation at 1% of the respective Purchase Order (PO) value aligning with standard industry practices for penalties in the BESS contracts. | Refer attached Annexure 1 & 2 table for RTE year on year & penalty calculation sheet for shortfall & non availability of capacity. |

| Sr. No. | Detailed Reference to concerned Document. | Description as per Bid Document | Query / Clarification / Deviation | Tata Power Response |
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| 208 | ENSE-DS-2048-R00: 35. WARRANTY AND SUPPORT TERMS & CONDITIONS | AC to AC Round Trip Efficiency(RtE)**Including Auxiliary Power Consumption: A Penalty on additional losses incurred in BESS above18% shall be recovered from bidder at Twice the rate of ABR approved by MERC for TPCL in Tariff Order from the performance Bank Guarantee / CATS Cost | We request TPCL to kindly reconsider the penalty mechanism for Round Trip Efficiency (RtE) shortfall. Instead of applying the penalty at twice the ABR rate approved by MERC, we request that the recovery be made at the same rate as the ABR. This would ensure a more balanced and equitable approach | Refer attached Annexure 1 & 2 table for RTE year on year & penalty calculation sheet for shortfall & non availability of capacity. |
| 209 | SPECIAL CONDITIONS OF CONTRACT: 5. CPBG | Vendor shall submit an unconditional and irrevocable Contract Performance Bank Guarantee (CPBG) cum performance Bank Guarantee (PBG) for a value equal to 5% of the total Outline Agreement value. Such CPBG shall be valid till the expiry of the Warranty period of 12 Years with a further claim period of 6 months. | We request TPCL to kindly consider the following revisions to the CPBG requirement: <ul style="list-style-type: none"> • PO-specific CPBG: The Contract Performance Bank Guarantee (CPBG) should be linked to individual Purchase Orders (POs) issued against each location, rather than being applicable on the total Outline Agreement (OLA) value. • Pro-rata Reduction: The CPBG value should reduce on a pro-rata basis each year, aligned with the progressive completion of the warranty obligation over the 12-year period. <p>These revisions will help ease long-term financial blocking for the bidder, while still ensuring adequate performance security for TPCL.</p> | Deviation Not acceptable. Terms and conditions as per the tender documents remains unchanged |

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| 210 | SPECIAL CONDITIONS OF CONTRACT: 6. TERMS OF PAYMENT | Invoice shall be raised for a particular site, after successful commissioning and handover of Battery Energy storage system at that site. 88% of the invoice value shall be paid with a credit period of 60 days. Rest 12% of the invoice value shall be paid in 12 equal tranches at the start of each year of the Warranty. | We request TPCL to kindly consider revising the payment terms to ensure financial viability for the supplier and to avoid undue strain on working capital, especially given the capital-intensive nature of BESS procurement and integration. Suggested revised payment terms are as follows: Supply Payment: <ul style="list-style-type: none">• 10% of the total order value as advance against submission of equivalent amount of Advanc Performance Guarantee.• 20% upon approval of drawings and documentation.• 55% of the invoice value for the supply of Battery Energy Storage System (BESS) to be released within 30 days from the date of receipt of material at site and submission of Goods Receipt Note (GRN).• 10% upon successful commissioning of the BESS.• 5% upon final handover at the respective site. AMC Payment: The payment for the Comprehensive Annual Maintenance Contract (AMC) may continue to be released in 12 equal annual instalments, with the first instalment due at the start of the first year of the AMC period. | Please refer revised Payment Terms |

| Sr. No. | Detailed Reference to concerned Document. | Description as per Bid Document | Query / Clarification / Deviation | Tata Power Response |
|---------|--|--|--|---|
| 211 | SPECIAL CONDITIONS OF CONTRACT: 7. Safety Retention | Safety Retention as per the Tata Power General Terms and Conditions shall be applicable and shall be released based on safety performance score after work completion | We observe that the safety retention clause linked to safety performance score is not a standard industry practice, particularly in global contracts for energy storage projects. As this clause may lead to ambiguity in commercial closure and is not aligned with globally accepted norms, we kindly request TPCL to remove this clause. | Deviation Not acceptable. Terms and conditions as per the tender documents remain unchanged |
| 212 | SPECIAL CONDITIONS OF CONTRACT: 8. Delivery Schedule | Commissioning Schedule per site from the date of intimation from The Tata Power Co. Ltd. to go ahead will be as follows: Layout Finalization: 1 month Material Planning and Procurement: 5 Months Completion of Supply, Installation, Testing, Commissioning: 3 Months Final Integration with Central control room: 2 Months Overall, either ten sites or commissioning of 100MWh energy for two hours shall be completed within a period of 2 years. | We request TPCL to kindly consider revising the commissioning schedule as follows, in line with realistic procurement lead times observed in ongoing BESS projects: • Layout Finalization: 1 month • Material Planning and Procurement: 7 months • Completion of Supply, Installation, Testing, Commissioning: 3 months • Final Integration with Central Control Room: 2 months The proposed revision will help ensure timely procurement of critical BESS components, most of which are imported and have long manufacturing and shipping lead times. This change would facilitate smoother execution without compromising quality or timelines. | Deviation Not acceptable. Terms and conditions as per the tender documents remain unchanged |

| Sr. No. | Detailed Reference to Document. | Description as per Bid Document | Query / Clarification / Deviation | Tata Power Response |
|---------|--|---|--|--|
| 213 | SPECIAL CONDITIONS OF CONTRACT: 9. Liquidated Damages (LD) | This is further to General Terms and Conditions – Indigenous Supply – Clause No. 10 Price Reduction. LD shall be applicable, @1% per week Maximum upto 10% of the Order Value, if the commissioning of Battery Energy Storage System along with all required support systems and auxiliaries at a site is delayed beyond 11 months from the date of intimation from The Tata Power Co. Ltd. to go ahead | <p>We request TPCL to kindly consider revising the Liquidated Damages (LD) clause as follows:</p> <ul style="list-style-type: none"> • LD rate: 0.5% per week of delay • Maximum LD cap: 5% of the PO Value • Revised timeline: LD to be applicable only if commissioning is delayed beyond 13 months from the date of intimation to proceed, in line with our earlier proposed schedule. <p>This request is based on the realistic lead times and execution timelines associated with BESS projects, particularly where imported components and extensive integration efforts are involved. The proposed revision will help ensure practical and mutually fair contract execution.</p> | Deviation Not acceptable. Terms and conditions as per the tender documents remains unchanged |
| 214 | CORRIGENDUM -1 | Last date and time of receipt of Bids: 16.04.2025 up to 21:00 Hrs | We are organizing site visits to all substation to assess site-specific conditions and reflect ground realities in our techno-commercial offer. Post-visits, we will need time to incorporate feedback into our design and costing in consultation with internal teams and vendors, followed by management approvals for bid submission. Given this, we request two weeks extension to the current bid submission deadline of 16th April 2025, as the existing timeline may not allow adequate time for these essential activities. | Please refer Corrigendum 2 |

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| Additional clarification | | | | |
| 1 | Additional clarification | | Civil soil investigation. Civil foundation & suitable structure design is in bidder scope as per various site condition. | Project site work includes soil investigation, civil foundation, structure design, etc. for all equipment's. The civil design should consider maximum wind speed as 44 meter/second. and Minimum flooding height of 1.5 meter at each site. Civil design & drawing shall be submitted by bidder & along with soil investigation report. The complete responsibility of new civil work including design to commissioning is in bidder scope. |
| 2 | Clause 35, page no 120 SLA - penalty clause | 2% penalty on the Support / CATS charges for every 1% of non availability below 95%, subject to a maximum of 50% of the value of CATS charges as mentioned in the payment schedule shall be recovered from CPBG / CATS Cost. | Penalty for ensuring 95% availability of BESS | Each standalone BESS should be available with full capacity (as mentioned in the table of Annexure 2 for the year) at the point of common coupling for minimum 345 days in a year. Every lost day shall ensure penalty for total unit lost for the day as mentioned in Annexure 2 - Penalty table. For example, column "F" shall become zero for 5 MW / 10 MWH Container. This shall be calculated till the issue gets resolved & delivery of energy from BESS at the PoC is demonstrated. |

| | | | | |
|---|--|---|---|--|
| 3 | Clause 35, page no 120 SLA - penalty clause | Maintain / Augment the residue capacity of BESS at its own risk and cost within 90 days of demonstration made, failing which cost estimated by TPCL or OEM for such augmentation of BESS shall be recovered from the Performance Bank Guarantee / CATS Cost | Penalty for deviation in minimum Battery energy at the end of year against installed Capacity of BESS | Each standalone BESS should be available with full capacity (as mentioned in the table of Annexure 1 & 2 for the year) at the point of common coupling. For Differential reduced units delivered than the guaranteed delivery in Annexure 2 - Penalty table shall be applicable. This shall be calculated till the issue gets resolved & guaranteed delivery of energy from BESS at the PoC is demonstrated. |
| 4 | | A Penalty on additional losses incurred in BESS above shall be recovered from bidder at Twice the rate of ABR approved by MERC for TPCL in Tariff Order from the performance Bank Guarantee / CATS Cost | | Additional losses incurred in BESS shall be recovered from bidder at 1.5 times the rate mentioned in column "H" as per Annexure 2 - Penalty table shall be applicable. Complete sample calculation is as per Annexure 2. |
| 5 | DC auxiliary supply | | DC supply for switchgear | Bidder to consider arrangement for DC auxillary power supply for switchgears at Mahalaxmi, Dharavi, Seepz & BARC site locations along with DCDB. At all locations the relay/IED should be of 220V DC auxillary power supply. |

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Annexure – 1 to Reply to Prebid Queries – RTE Table

| Year | Battery bank Capacity | RTE with auxiliary | RTE without auxiliary |
|------|-----------------------|--------------------|-----------------------|
| 0 | 100% | 83.00% | 86.00% |
| 1 | 94% | 81.91% | 85.11% |
| 2 | 90% | 81.11% | 84.44% |
| 3 | 88% | 80.68% | 84.09% |
| 4 | 86% | 80.23% | 83.72% |
| 5 | 84% | 79.76% | 83.33% |
| 6 | 82% | 79.27% | 82.93% |
| 7 | 80% | 78.75% | 82.50% |
| 8 | 78% | 78.21% | 82.05% |
| 9 | 76% | 77.63% | 81.58% |
| 10 | 74% | 77.03% | 81.08% |
| 11 | 72% | 76.39% | 80.56% |
| 12 | 70% | 75.71% | 80.00% |

Annexure – 2 to Reply to Prebid Queries – Penalty Calculations & Table

For penalty mentioned in clause 35 SLA table to be read as below:

Example - For 5 MW / 10 MWh Container.

| Year | Capacity | MWh | RTE with auxiliary | Guaranteed Delivered units/cycle | Actual units delivered per cycle at PoC (Metered units) | Penalty per unit rate (Fixed ABR rate) | Daily Penalty = (Guaranteed Delivered units - Actual units delivered per cycle at PoC) * Per unit penalty * 1.5 [#] * 1.5 ^{\$} |
|------|----------|-------|--------------------|----------------------------------|---|--|--|
| 0 | 100% | 10.00 | 83.00% | 8300 | 8300 | 6.37 | 0.00 |
| 1 | 94% | 9.40 | 81.91% | 7700 | 7700 | 6.56 | 0.00 |
| 2 | 90% | 9.00 | 81.11% | 7300 | 7300 | 6.76 | 0.00 |
| 3 | 88% | 8.80 | 80.68% | 7100 | 7100 | 6.96 | 0.00 |
| 4 | 86% | 8.60 | 80.23% | 6900 | 6900 | 7.17 | 0.00 |
| 5 | 84% | 8.40 | 79.76% | 6700 | 6700 | 7.38 | 0.00 |
| 6 | 82% | 8.20 | 79.27% | 6500 | 6500 | 7.46 | 0.00 |
| 7 | 80% | 8.00 | 78.75% | 6300 | 6300 | 7.53 | 0.00 |
| 8 | 78% | 7.80 | 78.21% | 6100 | 6100 | 7.61 | 0.00 |
| 9 | 76% | 7.60 | 77.63% | 5900 | 5900 | 7.68 | 0.00 |
| 10 | 74% | 7.40 | 77.03% | 5700 | 5700 | 7.76 | 0.00 |
| 11 | 72% | 7.20 | 76.39% | 5500 | 5500 | 7.84 | 0.00 |
| 12 | 70% | 7.00 | 75.71% | 5300 | 5300 | 7.92 | 0.00 |

1.5[#] = For guaranteed cycle of 1.5 per day

1.5[§] = For 1.5 times ABR rate

Similarly for other size/rating calculations shall be done as per above table.

Example - For 5 MW / 10 MWh Container.

| Year | Capacity | MWh | RTE without auxiliary | Guaranteed Delivered units/cycle | Actual units delivered per cycle at PoC (Metered units) | Penalty per unit rate (Fixed ABR rate) | Daily Penalty = (Guaranteed Delivered units - Actual units delivered per cycle at PoC) * Per unit penalty * 1.5 [#] * 1.5 [§] |
|------|----------|-------|-----------------------|----------------------------------|---|--|---|
| 0 | 100% | 10.00 | 86.00% | 8600 | 8600 | 6.37 | 0.00 |
| 1 | 94% | 9.40 | 85.11% | 8000 | 8000 | 6.56 | 0.00 |
| 2 | 90% | 9.00 | 84.44% | 7600 | 7600 | 6.76 | 0.00 |
| 3 | 88% | 8.80 | 84.09% | 7400 | 7400 | 6.96 | 0.00 |
| 4 | 86% | 8.60 | 83.72% | 7200 | 7200 | 7.17 | 0.00 |
| 5 | 84% | 8.40 | 83.33% | 7000 | 7000 | 7.38 | 0.00 |
| 6 | 82% | 8.20 | 82.93% | 6800 | 6800 | 7.46 | 0.00 |
| 7 | 80% | 8.00 | 82.50% | 6600 | 6600 | 7.53 | 0.00 |
| 8 | 78% | 7.80 | 82.05% | 6400 | 6400 | 7.61 | 0.00 |
| 9 | 76% | 7.60 | 81.58% | 6200 | 6200 | 7.68 | 0.00 |
| 10 | 74% | 7.40 | 81.08% | 6000 | 6000 | 7.76 | 0.00 |
| 11 | 72% | 7.20 | 80.56% | 5800 | 5800 | 7.84 | 0.00 |
| 12 | 70% | 7.00 | 80.00% | 5600 | 5600 | 7.92 | 0.00 |

1.5[#] = For guaranteed cycle of 1.5 per day

1.5[§] = For 1.5 times ABR rate

Similarly for other size/rating calculations shall be done as per above table.

3) Revision in Qualification Requirement

Qualification Requirement is being revised as follows:

| Parameter | Tata Power Requirement | | Documents to be submitted by the Bidder |
|-----------------------|---|---|---|
| | Original Qualification Requirement | Revised Qualification Requirement | |
| Infrastructure | <ol style="list-style-type: none"> Bidder must be an OEM/system integrator of the specified Battery Energy Storage System (BESS) registered in India with operational BESS in India. Bidder should have experience and infrastructure to carry out Routine and Breakdown maintenance during warranty and Comprehensive AMC duration. | No Change. Same as Original Qualification Requirement. | Self-undertaking to be submitted in this regard. TATA Power reserves the right to inspect the said manufacturing facility as a proof of compliance to this parameter. |
| Supply and Experience | <ol style="list-style-type: none"> The bidder should have installed BESS, with similar technology, in last 5 years in India, for cumulative capacity of 30 MWH with 1 installation of 10 MWH or higher. Out of the above, BESS installation of, at least 5 MWH must have been in successful operation for at least 1 year prior to the date of bid submission. Indian Subsidiaries of global companies having operations in India are also eligible to bid if the qualification requirements stated above are met independently or in combination with the parent company. Declaration from parent company needs to be submitted. | <ol style="list-style-type: none"> The bidder should have installed BESS, with similar technology, in last 5 years, for cumulative capacity of 30 MWH with 1 installation of 10 MWH or higher. Out of the above, BESS installation of, at least 5 MWH must have been in successful operation for at least 1 year prior to the date of bid submission. Indian Subsidiaries of global companies having operations in India are also eligible to bid if the qualification requirements stated above are met independently or in combination with the parent company. Declaration from parent company needs to be submitted. | Supply List / Performance Certificates from the utilities / clients |

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| | 4) Bidder to submit Manufacturer Authorisation form (MAF) for all the major bought-out items from the respective OEM. (Power conditioning System, Battery, BMS and EMS) | 4) Bidder to submit Manufacturer Authorisation form (MAF) for all the major bought-out items from the respective OEM. (Power conditioning System, Battery, BMS and EMS) | MAF in given to be shared on letter head of equipment OEM |
| Testing Facility | The bidder must have a rated power container level testing facility under sample basis for Factory Acceptance Testing (FAT) in India or Global. The facility should be capable of conducting comprehensive performance testing, including safety and functional tests, to ensure compliance. Additionally, the testing facility should have provisions for simulating operation and generating detailed test reports. | No Change. Same as Original Qualification Requirement. | Details of testing facility such as type of tests that can be performed in the facility, location, shall be shared. NABL / International Accreditation details of the facility to be shared. |
| Commercial Capability | Bidder shall have an average annual turnover not less than Rs. 50 Cr. for last three financial years. | No Change. Same as Original Qualification Requirement. | Copy of audited Balance Sheet and P&L Account to be submitted in this regard. UDIN No. shall be mandatorily mentioned on the audited documents. |

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4) Revision in Payment terms

Payment terms are being revised as follows:

| Original Payment Terms | Revised Payment Terms |
|---|--|
| <p>Invoice shall be raised for a particular site, after successful commissioning and handover of Battery Energy storage system at that site.</p> <p>88% of the invoice value shall be paid with a credit period of 60 days. Rest 12% of the invoice value shall be paid in 12 equal tranches at the start of each year of the Comprehensive AMC. Credit period for MSME vendors is 45 days. Credit period shall start after acceptance of Invoice. The aforesaid payments shall be subject to receipt of invoices along with enclosures/supporting documents for having completed the Job according to the Scope and duly verified/certified by Owner’s Order Manager against which payment is being claimed. Payments due to the Contractor shall be made after deduction of the Liquidated Damages (LD) amount, TDS, Safety Retention etc. as applicable.</p> | <p>Revised Payment terms are as follows:</p> <p>Payment will be made for a particular site as per the milestones defined below:</p> <p><u>Milestone 1:</u> Layout Finalization: 10%</p> <p><u>Milestone 2:</u> Receipt of Material at site: 30%</p> <p><u>Milestone 3:</u> Commissioning of BESS at individual Site: 40%</p> <p><u>Milestone 4:</u> Final integration with Central Control Room: 8%</p> <p><u>Milestone 5:</u> Rest 12% shall be paid in 12 equal tranches at the start of each year of the Warranty period.</p> <p>Invoice shall be raised on Milestone basis.</p> <p>Credit period shall be 60 days for Non MSME vendors and 45 days for MSME vendors. Credit period shall start after acceptance of Invoice. The aforesaid payments shall be subject to receipt of invoices along with enclosures/supporting documents for having completed the Job according to the Scope and duly verified/certified by Owner’s Order Manager against which payment is being claimed. Payments due to the Contractor shall be made after deduction of the Liquidated Damages (LD) amount, TDS, Safety Retention etc. as applicable.</p> |

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5) Revision in Price Bid format

Price Bid format is being revised as follows:

Outline Agreement (OLA) for 2 years for Design, Supply, Installation, Testing & Commissioning of Battery Energy Storage system at various locations in Mumbai Distribution with cumulative capacity of 100MW/200MWh having 100MWh energy storage for two hours.

| Sr. No. | Description | UoM | Est. Qty. | Unit Rate | GST | Unit Rate with GST | Basic Total | Total with Taxes |
|---------|--|------|-----------|-----------|-----|--------------------|-------------|------------------|
| 1 | Site Survey, layout Design, soil investigation, civil design, Civil work, engineering design, Supply, Installation, testing and commissioning and integration with Central EMS, cloud and SCADA of 5 MW BESS with all required accessories and auxiliary systems such as transformer, 11kV HT panels, coupling panels, battery container, BMS, PCS, local EMS, cloud EMS and communication devices etc. Required for successful commissioning and Operation at any of locations. | Each | 2 | | | | | |
| 2 | Site Survey, layout Design, soil investigation, civil design, Civil work, engineering design, Supply, Installation, testing and commissioning and integration with Central EMS, cloud and SCADA of 5 MW BESS with all required accessories and auxiliary systems such as transformer, 33kV HT panels, coupling panels, battery container, BMS, PCS, local EMS, cloud EMS and communication devices etc. Required for successful commissioning and Operation at any of locations. | Each | 1 | | | | | |

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| Sr. No. | Description | UoM | Est. Qty. | Unit Rate | GST | Unit Rate with GST | Basic Total | Total with Taxes |
|---------|---|------|-----------|-----------|-----|--------------------|-------------|------------------|
| 3 | Site Survey, layout Design, soil investigation, civil design, Civil work, engineering design, Supply, Installation, testing and commissioning and integration with Central EMS, cloud and SCADA of 10 MW BESS with all required accessories and auxiliary systems such as transformer, 11kV HT panels, coupling panels, battery container, BMS, PCS, local EMS, cloud EMS and communication devices etc. Required for successful commissioning and Operation at any of locations. | Each | 6 | | | | | |
| 4 | Site Survey, layout Design, soil investigation, civil design, Civil work, engineering design, Supply, Installation, testing and commissioning and integration with Central EMS, cloud and SCADA of 10 MW BESS with all required accessories and auxiliary systems such as transformer, 22kV HT panels, coupling panels, battery container, BMS, PCS, local EMS, cloud EMS and communication devices etc. Required for successful commissioning and Operation at any of locations. | Each | 1 | | | | | |
| 5 | Site Survey, layout Design, soil investigation, civil design, Civil work, engineering design, Supply, Installation, testing and commissioning and integration with Central EMS, cloud and SCADA of 20 MW BESS with all required accessories and auxiliary systems such as transformer, | Each | 2 | | | | | |

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| | | | | | | | | |
|---|--|------|---|--|--|--|--|--|
| | 33kV HT panels, coupling panels, battery container, BMS, PCS, local EMS, cloud EMS and communication devices etc. Required for successful commissioning and Operation at any of locations. | | | | | | | |
| 6 | Central EMS with servicers and desired infra as per specification and communication architecture. | Each | 1 | | | | | |
| | Total | | | | | | | |

NOTE:

- Bidder to provide cost break up of components for all line items as a separate annexure. In absence of the cost break up the bid is liable for rejection.**
- The bidders are advised to quote prices strictly in the above format and for all the line items as mentioned above. Failing to do so, bids are liable for rejection.
- Mentioning "extra/inclusive" in any of the column may lead for rejection of the price bid. Please do not edit any other cell in the sheet

Rest all details remain same as per the NIT published on 12th March 2025 for this tender.