



Expression of Interest

For

Empanelment of EPC Partners for “Setting up Battery Energy Storage Systems (BESS) for 2,000 MW / 4,000 MWh (1 cycles) under Tariff Based Global Competitive Bidding for RfS invited by MSEDCL vide RfS no. MSEDCL/BESS/PHASE-2/25-26/001 DATED 25/07/2025 and its subsequent amendments”

Ref. No. : MSETCL/CO/TBCB/BESS/EOI/01

Date: 17.10.2025

Expression of Interest for empanelment of EPC Partners for participation in MSEDCL's 2000 MW / 4000 MWh Battery Energy Storage System (BESS) Tender (RfS No. MSEDCL/BESS/Phase-2/25-26/001 dated 25.07.2025) as Battery Energy Storage System Developer (BESSD).

1.0 Introduction

Maharashtra State Electricity Transmission Company Limited (MSETCL), a wholly owned Government of Maharashtra Undertaking and the State Transmission Utility (STU), is engaged in planning, development, operation, and maintenance of the Intra-State Transmission Network across Maharashtra.

In line with the Government of India's and Government of Maharashtra's initiatives to enhance grid flexibility and integrate large-scale renewable energy through energy storage systems, Maharashtra State Electricity Distribution Company Limited (MSEDCL) has invited bids for Selection of BESS Developer(s) for setting up 2000 MW / 4000 MWh Battery Energy Storage System Projects through the Tariff Based Competitive Bidding (TBCB) route vide RfS no. MSEDCL/BESS/PHASE-2/25-26/001 dated 25.07.2025 and its subsequent amendments.

MSETCL intends to participate in the said bidding process as a Bidder / BESS Developer and is therefore inviting Expressions of Interest (EOI) to empanel reputed and experienced firms, EPC contractors, technology providers, and system integrators for jointly participating in the above tender on a back-to-back basis.

Further, empanelled EPC partners shall be subject to penalty/debarment if they bid directly or indirectly in the same RfS. Explicit restriction shall apply to participation via consortiums, affiliates, JVs, SPVs, or OEM routes.

2.0 Objective of EOI

- The objective of this EOI is to identify and shortlist competent partners for forming a strategic association with MSETCL to jointly bid, develop, implement and undertake the Comprehensive Annual Maintenance Contract (CAMC) for Battery Energy Storage System (BESS) projects under the MSEDCL tender through the TBCB framework.
- The association shall cover aspects such as:
 - a) Technical partnership for design, engineering, execution and Comprehensive Annual Maintenance Contract (CAMC) of the BESS system.

- b) Commercial participation, as mutually agreed, during the bid submission and project execution stages.
- c) Support in providing technical documentation, inputs, and price discovery for bid preparation.
- Short-listed EPC partners will be considered for formal pre bid tie-up with MSETCL for participation in the aforementioned MSEDCL BESS tender, on mutually agreed commercial and technical terms.
- The bidder shall have to confirm non-participation as a bidding company directly or indirectly, through their Subsidiaries, Partnership, Ownership, Individual firm; or Consortium, for the BESS Project under TBCB route referred to at S.No. 1 above if pre-selected for associating with MSETCL for the purpose of tariff bidding by MSETCL in the RFS process of the MSEDCL.

3.0 Scope of work:

- As per MSEDCL RfS tender, the Battery Energy Storage System Developer (BESSD) shall be required to set up Battery Energy Storage Systems (BESS) with a total aggregate storage capacity of 1000 MW / 2000 MWh at MSETCL substations. The exact bidding capacity (MW) to be quoted by MSETCL will be intimated to the empanelled EPC partners prior to commercial bid submission.
- The selected EPC partner shall be responsible for the Design, Engineering, Supply, Construction, Erection, Testing & Commissioning, and Comprehensive Annual Maintenance Contract (CAMC) of the BESS facilities at identified MSETCL substation locations on a single-point responsibility basis, covering all activities and services related to equipment and works specified in the MSEDCL RfS (including subsequent amendments). The detailed scope shall include, but not be limited to, the following:
 - a) Basic Engineering of the complete system
 - b) Detailed design of all the equipment and equipment system(s) including civil, & structure steel works included in bidder's scope.
 - c) Providing engineering drawings, equipment sizing & performance data, instruction manuals, as built drawings and other information.
 - d) Compliance with statutory requirements and obtaining clearances from statutory authorities, wherever required.
 - e) Complete manufacturing including shop testing/type testing (as applicable).

- f) Complete Civil, Structural and Architectural works, including survey, Geotechnical Investigation, providing construction offices, and construction Equipment, construction water supply, etc. from owner's Terminal Point, infrastructure works etc.
- g) Packing and transportation from the manufacturer's works to the site including logistic studies, customs clearance & port clearance, port charges, if any.
- h) Receipt, storage, preservation, handling and conservation of equipment at the site.
- i) Fabrication, pre-assembly, if any, erection, testing, commissioning and completion of facilities including putting into satisfactory operation all the equipment including successful completion of initial operation.
- j) Performance/Demonstration tests after commissioning.
- k) Reconciliation with customs authorities, as required.
- l) Completion and closure of the contract including all documentation and handover formalities.
- m) Insurance and other requirements for the BESS deployment in each of the identified project location.
- n) Comprehensive Annual Maintenance Contract (CAMC) of the BESS system for a period of 12 years from the date of successful completion of Performance Guarantee (PG) Test.

The following BESS-specific elements shall also form part of the detailed scope:

- (i) PCS/Inverter integration
- (ii) EMS/BMS systems
- (iii) Grid compliance (CEA Tech Standards)
- (iv) Cybersecurity compliance (CERT-In / SLDC interface)
- (v) Seismic/fire safety norms
- (vi) Metering & telemetry obligations to SLDC/MSEDCL
- (vii) Battery augmentation/replacement protocol
- (viii) Interface responsibility at 132/220/400 kV bays of MSETCL

Additionally, the EPC partner shall ensure Charging/Discharging compliance (1 cycle daily), 12-year CAMC responsibilities, and Round Trip Efficiency monitoring.

4.0 Qualifying Requirements (QR):

Qualifying Requirement (QR) for subject package is Attached as Appendix-I

5.0 Performance Criteria of the Project:

Bidder is requested to refer to Clause 9: Performance Criteria of MSEDCL RfS document and subsequent amendments as per Sr.No.1 for detailed requirements and penalties related to system performance parameters and availability.

6.0 Codes and Standards:

All design, equipment, and system requirements for the Battery Energy Storage System (BESS) shall conform to the applicable standards and codes indicated in Appendix–II.

7.0 Commercial and Contractual Terms:

This empanelment is specifically for the MSEDCL RfS tender specified at Sr. No. 1 and subsequent amendments. All interested participants are required to review the MSEDCL tender documents to understand the project scope, technical requirements, and commercial framework.

7.1 Payment Terms: Milestone-based payment structure shall apply, including pass-through of duties/taxes (if appropriate), LD and performance deductions applicability.

7.2 Performance Security: The selected EPC Partner shall be required to furnish the following Bank Guarantees as performance securities to ensure due fulfilment of contractual obligations under the EPC and O&M scope:

(a) Contract Performance Guarantee (CPG):

- The EPC Partner shall submit a Contract Performance Guarantee (CPG) equivalent to 10% of the total EPC Contract Price in the form of an unconditional and irrevocable Bank Guarantee from any Nationalized / Scheduled Bank, in the format prescribed by the MSETCL.
- The CPG shall be independent of and in addition to any other guarantees, such as the Annual Maintenance Performance Bank Guarantee (AMPBG) or Advance Payment Guarantee, as applicable.
- The CPG shall be released without interest upon successful completion of all obligations under the EPC Contract and issue of the Completion Certificate by the MSETCL.

(b) Annual Maintenance Performance Bank Guarantee (AMPBG):

- The EPC Partner shall also furnish an Annual Maintenance Performance Bank Guarantee (AMPBG) equivalent to 4% of the total Contract Price (including Comprehensive Annual Maintenance Charges) in favour of the MSETCL, from a Nationalized / Scheduled Bank, in the prescribed format.
- The AMPBG shall remain valid for a minimum initial period of five (5) years and shall be renewed every five (5) years, maintaining continuous validity up to ninety (90) days beyond completion of the Comprehensive Annual Maintenance (O&M) period.
- The AMPBG shall secure the EPC Partner's obligations during the O&M period and shall be in addition to the CPG. The AMPBG amount may be reduced progressively by 25% after completion of the 3rd, 6th, 9th, and 11th years of the O&M period, subject to satisfactory performance.
- In case of failure to renew or meet O&M obligations, the MSETCL shall have the right to encash the AMPBG, partly or fully, without prior notice. The AMPBG shall be released without interest after successful completion of the full O&M period and settlement of all obligations.

Advance BG clause shall be applicable if advance is payable. Bid Security Declaration may be accepted in lieu of EMD (if allowed under State GR). AMPBG is independent and separate from PG test security.

7.3 Liquidity damages:

7.3.1 Time Schedule and Delay Penalty:

- The EPC Partner shall complete the entire scope of work, including engineering, procurement, supply, erection, testing, commissioning, and successful performance guarantee (PG) testing of the Battery Energy Storage System (BESS), within a period of fifteen (15) months (aligned to BESPAT timeline) from the date of issue of the Letter of Award (LoA).
- If the Contractor fails to complete the works or any part thereof within the stipulated period, or any extension granted by the Employer, the Contractor shall be liable to pay Liquidated Damages (LD) for delay at the rate of 0.5% (half percent) of the total contract value for each week or part thereof of delay, subject to a maximum of 5% (Five percent) of the total EPC contract value.

7.3.2 Performance Guarantee Shortfall:

- Upon completion of installation and commissioning, the EPC Partner shall be required to demonstrate the guaranteed performance parameters during the Performance Guarantee (PG) Test, including but not limited to Round Trip Efficiency (RTE) and System Availability.
- If the guaranteed performance parameters i.e. Availability shortfall below 95% and Round Trip Efficiency shortfall below 85% are not achieved during the PG Test, Liquidated Damages shall be applied.
- In case the Contractor fails to achieve the guaranteed performance even after re-testing, the MSETCL reserves the right to encash the Performance Bank Guarantee (PBG), recover applicable damages, and terminate the Contract for default.

7.3.3 Operation and Maintenance (O&M) Performance:

- During the Operation and Maintenance (O&M) period, the Contractor shall ensure an annual system availability of at least 95%.
- If the actual annual availability falls below the guaranteed level, a penalty shall be imposed at the rate of 0.25% of the annual O&M (CAMC) payment for every 1% shortfall in availability.

7.3.4 General Conditions:

- All penalties and liquidated damages stipulated above shall be recoverable from any money due or which may become due to the Contractor under the Contract, including retention money or Performance Bank Guarantee.
- The application of liquidated damages shall be without prejudice to any other rights or remedies available to the MSETCL under law or contract, including termination and blacklisting.

7.4 Project Timeline:

- (i) The Effective Date of the project shall be considered as the date of signing of the Battery Energy Storage Purchase Agreement (BESPA) between MSEDCL and the selected BESS Developer. The EPC Partner shall complete the entire scope of work within the period specified from the date of issue of the Letter of Award (LoA). The LoA is targeted to be issued within 60 days of the BESPA signing.

- (ii) The Scheduled Commissioning Date (SCD) for achieving full commissioning of the project shall be within 15 months from the Effective Date.
- (iii) The tenure of the BESPA shall remain valid for a period of twelve (12) years from the date of full commissioning of the Battery Energy Storage System.

7.5 Insurance: The EPC Partner shall procure and maintain comprehensive insurance coverage during construction, commissioning, and O&M stages, including but not limited to:

- Erection All Risk (EAR) Insurance
- Third Party Liability (TPL) Insurance
- Workmen Compensation (WC) Insurance
- Operation & Maintenance (O&M) Insurance

Such insurance shall be as per RfS and shall remain valid till project handover / O&M completion. All insurance policies shall name MSETCL as co-insured and provide for full recovery in case of loss or damage.

7.6 Taxes:

- All applicable taxes, duties, levies, and statutory charges shall be included by the EPC Partner on a pass-through basis, in accordance with RfS Clause 8.2. Any variation in taxes or introduction of new levies during the project period shall be to the account of MSEDCL, to the extent admissible under the TBCB framework.
- The EPC Partner shall ensure full compliance with GST and other statutory regulations, maintaining proper documentation for input credit purposes.

7.7 Confidentiality:

- Both parties shall execute a Non-Disclosure Agreement (NDA) prior to sharing any project-related information. All technical, financial, or operational data shared by MSETCL shall remain its exclusive property and shall be used solely for the purpose of project execution.
- The EPC Partner shall not disclose or disseminate any proprietary or confidential information to third parties without prior written consent of MSETCL, both during and after completion of the project.

7.8 Intellectual Property Rights (IP):

- Project-specific as-built drawings and site-specific designs shall belong to MSETCL. EPC partner's proprietary engineering software and standard module designs shall

remain their property. MSETCL shall have a perpetual, royalty-free license to use such designs for project O&M.

- All project documents, technical designs, drawings, engineering data, software codes, and reports developed under this engagement shall be deemed the intellectual property of MSETCL.
- The EPC Partner shall not reproduce, reuse, or disclose any such materials without written authorization from MSETCL. Any technology or software provided by the EPC Partner under license shall remain its property but shall grant MSETCL unrestricted usage rights for project operation and maintenance.

7.9 Arbitration:

- All disputes or differences arising out of or in connection with this arrangement shall be resolved amicably through mutual discussion. Failing such resolution, the same shall be referred to arbitration under the provisions of the Arbitration and Conciliation Act, 1996 (as amended).
- The venue and seat of arbitration shall be Mumbai, and the proceedings shall be conducted in English. The award rendered by the arbitrator shall be final and binding on both parties. Jurisdiction for any disputes shall be under Mumbai Courts.

7.10 Termination:

- MSETCL reserves the right to terminate the pre-bid tie-up / MoU / contract in the event of breach of obligations, non-performance, misrepresentation, or any default by the EPC Partner.
- A fifteen (15) days' written notice shall be issued specifying the nature of default, and if not remedied within the notice period, MSETCL may terminate the arrangement without any liability other than settlement of dues for completed work.

7.11 Additional clauses:

- **Force Majeure:** Applicable as per standard government practice.
- **Sub-contracting:** The EPC Partner shall submit a list of Subcontractors/Sub-vendors for major equipment and services for MSETCL's approval. Any additions or deletions shall be submitted for approval in time to avoid delay in work. Approval by MSETCL shall not relieve the EPC Partner of its responsibilities and obligations under the Contract.

The EPC Partner shall not engage any Subcontractor/Sub-vendor from countries sharing a land border with India unless they comply with Government of India guidelines for such bidders. This restriction does not apply to procurement of raw materials, components, or sub-assemblies. However, finished goods from such countries shall be sourced only from vendors registered with the Competent Authority.

The EPC Partner shall execute an Integrity Pact with all major Subcontractors/Sub-vendors.

For items or works not covered under the approved list, the EPC Partner may engage other agencies with prior concurrence of MSETCL.

- **Compliance & Approvals:** EPC Partner shall ensure all statutory and regulatory clearances.

8.0 General Instructions to participants:

- All annexures shall be duly filled in, providing complete and accurate details as required.
- In the event that the spaces provided in the prescribed forms are insufficient, or if the Participant wishes to furnish additional information, the same may be provided on separate sheets with appropriate references to the relevant annexures.
- The information furnished and the replies to all queries shall be complete in all respects. In cases where a response is not applicable, or where no information is available, the Participant shall clearly mention "NIL" or "NOT APPLICABLE," as the case may be.
- The Net Worth of the Company as on the date of EOI shall be certified by an authorized Chartered Accountant of the Company with UDIN number and submitted in original, based on the latest audited financial results of the previous financial year.
- **The last date and time for submission of proposals is 24.10.2025 upto 17:00 hrs.** In case the date of receipt or opening of documents happens to be a holiday, the due date shall automatically be extended to the next working day at the same time.
- MSETCL reserves the right to cancel/withdraw the EOI without assigning any reason for such decision. Such decision will not incur any liability whatsoever on the part of MSETCL consequently.

- **Proposal Validity:** Proposal shall remain valid for a period of 180 days from the date of opening of proposals and the empanelment will be for a period of two years from the date of issue of Letter of Empanelment.
- **EOI EMD:** The participants shall submit EOI EMD of Rs. **25,000/-** (Rupees Twenty Five Thousand only) to become eligible for empanelment through this EOI. EMD shall remain valid for the period of two years from the last date of bid submission.
The EOI EMD shall be submitted in the form of Bank Guarantee payable in favour of “Maharashtra State Electricity Transmission Company Limited”. Any EOI not accompanied by an original EOI-agreement and adequate EOI EMD with correct EOI reference in original shall be rejected by MSETCL.
- **Acceptance or Rejection of Proposals:** MSETCL reserves the right to accept or reject any proposal without assigning any reason whatsoever. The fact that an EOI is prima facie found qualified during the pre-qualification scrutiny shall not, in any manner, take away the right of MSETCL to carry out further detailed consideration and verification of the qualifications of the prospective Participants, such as their experience, financial stability, tools and plants, and all other relevant matters, even after the EOI is opened and considered but before a final decision is taken regarding the empanelment. The prospective Participant shall have no right to question the act or decision of MSETCL in considering or rejecting the qualification of any Participant.

9.0 Submission of EOI:

- i) The Participants are requested to submit their proposals as per qualification requirements, along with all supporting documents duly signed as a token of acceptance of the Terms & Conditions and the EOI process.
- ii) A Bank Guarantee (Hard copy) of Rs. 25,000/- (Rupees Twenty-Five Thousand only) towards EOI EMD, has to be submitted along with the bid.
- iii) Late submission of bid proposals, for whatsoever reasons, after the due date and time for submission shall not be considered. Offers sent by Fax / E-mail / Telegram etc. will not be considered.
- iv) In the event that the due date of receipt of bids, as stated above, is declared a holiday, bids shall be received at the scheduled time on the next working day.

- v) The hard copy of proposal, along with all supporting documents, a copy of this EOI duly signed and stamped on all pages, and the EOI EMD of Rs. 25,000/-, must be submitted in a sealed envelope. **The last date and time for submission of proposals is 24.10.2025 up to 17:00 hrs.** Address for submission of hard copy of proposals is as follows:

Address:

Chief Engineer (TBCB Cell)
Maharashtra State Electricity Transmission Co. Ltd. (MSETCL)
Prakashganga, 4th Floor, Plot No. C-19, E-Block,
Bandra-Kurla Complex, Bandra (E), Mumbai – 400051
Email ID: cetbcb@mahatransco.in, setbcb@mahatransco.in

QUALIFICATION REQUIREMENTS**FOR**

EOI for Empanelment of EPC Partners for “Setting up Battery Energy Storage Systems (BESS) for 2,000 MW / 4,000 MWh (1 cycles) under Tariff Based Global Competitive Bidding for RfS invited by MSEDCL vide RfS no. MSEDCL/BESS/PHASE-2/25-26/001 DATED 25/07/2025 and its subsequent amendments”.

QUALIFICATION OF THE BIDDER

Qualification of bidder will be based on meeting the minimum pass/fail criteria specified below regarding the Bidder’s Technical Experience and Financial Position as demonstrated by the Bidder’s responses in the corresponding Annexures. Subcontractors’ technical experience and financial resources shall not be taken into account in determining the Bidder’s compliance with the qualifying criteria. The EOI can be submitted by an individual firm.

The MSETCL reserves the right to waive minor deviations if they do not materially affect the capability of the Bidder to perform the contract.

1.0 STATUTORY QUALIFYING CRITERIA**Statutory Licenses/Registration**

- 1.1 The bidder should be a Pvt. Ltd /Limited Company/State PSU/Central PSU.
- 1.2 The bidder or his associate should have a valid Govt. Electrical Contractor’s License. If not at the time of bidding the same should be produced before starting of the work. The lead bidder should be registered under GST.
- 1.3 The bidder should be registered under P.F. Act.

2.0 TECHNICAL QUALIFICATION CRITERIA

- 2.1 The bidder should have manufactured and supplied Batteries of cumulative capacity of minimum 20 MWh for battery energy storage system(s), out of which at least one reference battery energy storage system, where minimum 5 MWh capacity has been supplied in a single order, which should have been successfully commissioned at least six (6) months prior to the date of techno-commercial bid opening.

OR

- 2.2 The bidder should have supplied, installed/ supervised installation and commissioned/ supervised commissioning of Battery energy storage system(s) of cumulative installed capacity of minimum 20 MWh, out of which at least one reference battery energy storage system, where minimum 5 MWh capacity has been supplied in a single order, which should have been successfully commissioned at least six (6) months prior to the date of techno-commercial bid opening.

OR

- 2.3 The bidder must have experience in the following :
- (i) Supply, erection, testing, and commissioning of at least Two (02) nos of EHV Substations of 220 kV or higher voltage level under EPC (Engineering, Procurement, and Construction) or turnkey contracts.
 - (ii) Each substation must comprise at least Four (04) nos. of 220 kV or higher voltage level bays, which includes at least two (02) nos. of Circuit Breaker-equipped ICT/TF bays and two (02) nos. of Circuit Breaker-equipped EHV bays.
 - (iii) The bidder must have executed this work within the last seven (07) years, with the substation being in satisfactory operation for at least One (01) year before the originally scheduled bid submission date.

Note: The substation constructed on EPC/ turnkey basis with owner's supply of Transformer will also be considered.

AND

- 2.4 The Bidder who meets the requirement of Clause 2.3 above only, shall associate/collaborate or have manufacturing license agreement with a Battery manufacturer meeting the requirements stipulated at Clause 2.1 above.

In case of association/collaboration or license, the bidder shall furnish along with the techno-commercial bid a copy of such license or association/collaboration agreement done with the battery manufacturer.

The Bidder shall be required to furnish a letter of support from the associate/collaborator or licensing company meeting the requirements stipulated at clause 2.1 above for successful performance of the battery energy storage system(s).

The Letter of Support along with such license or association/collaboration agreement shall be submitted along with the techno-commercial bid, failing which the Bidder shall be disqualified, and its bid shall be rejected.

- 2.5 The bidder is required to submit a user's certificate confirming the successful commissioning and satisfactory operation of the executed works, specifying the commissioning date along with a detailed copy of the work order.
- The experience certificate must be issued by an officer holding the rank of Executive Engineer or equivalent/higher from State Power Utilities, Central Power Utilities, or private entities operating in the Power sector.

Notes for clause:

- a) For clause 2.1, The reference projects for meeting cumulative manufacturing and supply experience of 20 MWh, may or may not be commissioned. Bidder shall provide relevant support documents to establish that reference projects are Grid Connected.

- b) For clause **2.2**, Projects with Battery supplied by developer/owner as free issue item to bidder shall also be considered eligible for QR purpose.
- c) For clause **2.1** and **2.2**, the reference grid interactive battery energy storage system of minimum 5 MWh capacity should be at a single location developed by Bidder for itself or any other client.

3.0 FINANCIAL QUALIFYING CRITERIA

- 3.1 The Average Annual Financial Turnover of the bidder during the last three Financial Years shall not be less than **Rs. 200 Crores**. The bidder should submit the Turnover certificate duly certified by Chartered Accountant along with UDIN (Unique Document Identification Number).
- 3.2 a) Net worth of the bidder for last 3 financial years should be positive.
The bidder should submit the Net-worth certificate for last Financial year duly certified by Chartered Accountant along with UDIN (Unique Document Identification Number).

Note: 1) An Indian company shall be considered eligible to bid if its parent company, holding company, sister concern, or group company meets the qualifying criteria specified under Clause Nos. 2.1 and 3.
2) The duly audited, verified & certified figures from Chartered Accountant will be considered for Annual Turnover & Net worth.
3) For the purpose of bid evaluation and comparison, all bid prices quoted in different currencies shall be converted into a single currency, i.e., Indian Rupees (INR), using the selling exchange rate. The applicable exchange rate shall be the rate prevailing on the last date of the respective financial year.

4.0 Special terms and conditions:-

- 4.1 Bidders are strongly advised to thoroughly review MSEDCL RfS No. MSEDCL/BESS/Phase-2/25-26/001 dated 25.07.2025 along with all subsequent amendments, specifications, and clarifications, before submitting their bids. Bidders should also prepare their price bids in advance, strictly in accordance with the scope defined in the RfS document. Please note that only 24 hours will be provided for submission of the price bid following the shortlisting of technically qualified bidders.

TECHNICAL AND REGULATORY REQUIREMENTS TO BE FOLLOWED FOR BATTERY ENERGY STORAGE SYSTEMS

1. Codes and Standards

The BESS shall comply with the following Codes and Standards or equivalent Indian Standards, as applicable.

Standard / Code	Description	Certification Requirements
IEC 62485-2	Safety requirements for secondary batteries and battery installations — covering erection, use, inspection, maintenance, and disposal. Applicable for Lead Acid and NiCd/NiMH batteries.	Applicable only for Lead Acid and NiCd/NiMH batteries
UL 1642 or UL 1973 (Appendix E) or IEC 62619 + IEC 63056 (cell level)	Secondary cells and batteries containing alkaline or other non-acid electrolytes – Safety requirements for secondary lithium cells and batteries, for use in industrial applications.	Required for Cell level certification
UL 1973 (battery level) or IEC 62619 + IEC 63056 (battery level)	Batteries for Use in Stationary, Vehicle Auxiliary Power and Light Electric Rail (LER) Applications / Secondary cells and batteries containing alkaline or other non-acid electrolytes – Safety requirements for secondary lithium cells and batteries, for use in industrial applications	Either UL 1973 or (IEC 62619 + IEC 63056) required for Battery level
IEC 62281 / UN 38.3	Safety of primary and secondary lithium cells and batteries during transport: Applicable for storage systems using Lithium Ion chemistries	Required for both Battery and Cell during transport
IEC 61850 / DNP3	Communication standards for BESS control systems.	
UL 9540 or (IEC TS 62933-5-1 + IEC 62933-5-2)	Electrical energy storage (EES) systems - Part 5- 1: Safety considerations for grid-integrated EES systems – General specification / Standard for Energy Storage Systems and Equipment	Either UL 9540 or (IEC TS 62933-5-1 + 62933-5-2) is required for BESS system level
IEC 62933-2-1	Electrical energy storage (EES) systems - Part 2- 1: Unit Parameters and testing methods - Specification	Tests for Class B applications: 1. Duty Cycle Round Trip Efficiency Test 2. Equipment and Basic Function Test 3. Available energy Test 4. Insulation test
Power Conditioning Unit Standards for BESS		
IEC 62477-1	Safety requirements for power electronic converter systems and equipment - Part 1: General	
IEC 62477-2	Safety requirements for power electronic converter systems and	

	equipment - Part 2: Power electronic converters from 1 000 V AC or 1 500 V DC up to 36 kV AC or 54 kV DC
IEC 62909-1	Bi-directional grid-connected power converters - Part 1: General requirements
IEC 62909-2 (<i>if applicable</i>)	Bi-directional grid-connected power converters - Part 2: Interface of GCPC and distributed energy resources
IEC 61683 Ed.1	Photovoltaic systems - Power conditioners - Procedure for measuring efficiency
IEC 61000-6-2 Ed.2	Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity standard for industrial environments
IEC 61000-6-4 Ed.2.1	Electromagnetic compatibility (EMC) - Part 6-4: Generic standards - Emission standard for industrial environments
IEC 62116 Ed.2	Utility-interconnected photovoltaic inverters - Test procedure of islanding prevention measures
IEC 60068-2-1:2007	Environmental testing - Part 2-1: Tests - Test A: Cold
IEC 60068-2-2:2007	Environmental testing - Part 2-2: Tests - Test B: Dry heat
IEC 60068-2-14:2009	Environmental testing - Part 2-14: Tests - Test N: Change of temperature
IEC 60068-2-30:2005	Environmental testing - Part 2-30: Tests - Test Db: Damp heat, cyclic (12 h + 12 h cycle)

2. System Testing and Commissioning

The BESS shall be commissioned as per commissioning criteria and procedures specified by the CEA.

3. Identification and Traceability

Cells/Racks/Packs Assembly shall meet seismic requirement for the plant location of the BESS. Labelling of cells/batteries shall include manufacturer's name, cell type, name-plate rating, date of manufacture and date of expiry of parts and labour warranty.

4. Other Sub-systems/Components

Other subsystems/components used in the BESS must also conform to the relevant international/national Standards for Electrical Safety for ensuring Expected Service Life and Weather Resistance. Working in MSETCL compound shall comply with MSETCL Safety Manual, Battery disposal/EPR compliance, and ESG/CSR norms as per State GR.

5. Fire Protection

The BESSD shall design and install a fire protection system that conforms to national and local codes. The fire protection system design and associated alarms shall take into account that the BESS will be unattended at most times. For high energy density technologies, the BESSD shall also obtain thermal runaway characterization of the battery storage systems.

6. Authorized Test Centres

Batteries/ Power Conditioning Units deployed in the power plants must have valid test certificates for their qualification as per above specified IEC/ BIS Standards by one of the ILAC

member signatory accredited laboratories. In case of module types/ BESS/equipment for which such Test facilities may not exist in India at present, test certificates from reputed ILAC Member body accredited Labs abroad will be acceptable.

7. Warranty

BESSD shall procure performance guarantees from the OEM to ensure minimum performance levels for predefined application(s) as per the terms of the RfS. OEM shall provide warranty for performance parameters of minimum dispatchable capacity and RTE to BESSD. The Warranty shall clearly indicate life expectancy given discharge profiles provided for the application. BESSD is responsible for Availability and in case of any product damage.

8. Performance Monitoring

As part of the performance monitoring, the following shall be carried out:

- a) The BESSD must install necessary equipment to continuously measure BESS operating parameters (including but not limited to voltage, current, ambient conditions etc.) as well as energy input into and energy output from the BESS along with Metering arrangement in accordance with extant regulations. They will be required to submit this data to MSEDCL/SLDC online and/or through a report on regular basis every month for the entire duration of contract.
- b) The BESSD shall provide access to MSEDCL/MNRE or their authorized representatives for installing any additional monitoring equipment to facilitate on-line transfer of data.
- c) All data shall be made available as mentioned above for the entire duration of the Contract.
- d) The plant SCADA should be OPC version 2.0a (or a later version including OPC UA) compliant and implement appropriate OPC-DA server as per the specification of OPC Foundation. All data should be accessible through this OPC server for providing real time online data (BESS parameters) to MSEDCL/ MNRE. This time series data shall be available from the Project SCADA system to facilitate monitoring and should include among others as stated before, below parameters to facilitate daily, monthly and annual Report for performance monitoring.
- e) Web-based monitoring should be available, which should not be machine dependent. The web-based monitoring should provide the same screens as available in the plant. Also, it should be possible to download reports from a remote web-client in PDF or Excel format.

9. Other necessary criteria

- a) BESS shall be capacity of operating in the frequency range of 47.5 Hz to 52 Hz and be able to deliver rated output in the frequency range of 49.5 Hz to 50.5 Hz.
- b) BESS shall be capacity of operating when voltage at the interconnection point on any or all phases dips/rises to the high or low levels. The levels applicable for wind/solar inverter-based generation may be referred as available in Central Electricity Authority (Technical Standards for Connectivity to the Grid) Regulations.
- c) The BESS performs regulations in one or several pre-defined ways (e.g. regulating its own output power according to the orders given by SCADA system) to achieve an active

power balance between generation and demand to maintain the power system frequency within a reasonable range.

- d) BESS shall operate to maintain voltages as per specified voltage ranges in Grid standards. BESS shall have feature to detect the voltage of interconnection point, and regulate voltage independently. The response time of the BESS shall not exceed the value specified in relevant standards or grid codes.
- e) BESS shall operate in a manner to promote the power system reliability and improve the power quality. When power quality problems, such as voltage dip, flicker, unsatisfactory power factor, etc., occur in power system, the BESS could eliminate these problems by flexible active and reactive power output in this function.
- f) f) The BESS shall provide reliable protection and not be limited to as an overvoltage/under-voltage protection, overcurrent protection, low-temperature/over-temperature protection of battery, DC insulation monitoring, etc.
- g) BESS is required to have the following basic functions:
 - i) Monitoring: Monitor operational parameters, equipment status and communication status, alarm and faults of main equipment and BESS system, etc.
 - ii) Information exchange: Receive and process information with SLDC /MSEDCL including operation parameters, switching information, various alarms and alerts, protective action signals, control information, etc.
 - iii) Control: Including control mode and parameter setting with SLDC/MSEDCL.
- h) The static information like detailed write-up on present operation methodology of BESS, forbidden zones, number of cycle limits, Auxiliary consumption details, capability curve, simulation models (RMS/PSCAD) alongwith description or any specific information about BESS shall also be furnished as and when required by SLDC/MSEDCL.

10. Safe Disposal of unit Batteries from the BESS:

The Developer will comply with the requirements under Hazardous & other Waste (Management and Trans boundary Movement) Rules, 2016, as amended from time to time, as applicable. The BESSD shall ensure that all Unit Battery modules from the plant after their end of life (when they become defective/ non-operational/ non-repairable) are disposed in accordance with the “e-waste (Management and Handling) Rules, 2016” notified by the Government and as revised and amended from time to time and Battery Waste Management Rules, as and when notified by the Government of India.

FORMAT FOR COVER LETTER AND ANNEXURES

FORMAT FOR COVERING LETTER
(To be printed on Company Letterhead)

To
Chief Engineer (TBCB Cell)
Maharashtra State Electricity Transmission Company Limited
Prakashganga, Plot No. C-19, E-Block,
Bandra-Kurla Complex, Bandra (E),
Mumbai – 400 051

Sub: Empanelment of EPC Partners for “Setting up Battery Energy Storage Systems (BESS) for 2,000 MW / 4,000 MWh under Tariff Based Competitive Bidding (TBCB) for RfS invited by MSEDCL vide RfS no. MSEDCL/BESS/PHASE-2/25-26/001 DATED 25/07/2025 and its subsequent amendments. MSETCL may participate for either full tender capacity (2000 MW/4000 MWh) or for 1000 MW/2000 MWh tranche under the 2000 MW RS.”.

We are pleased to submit our proposal along with the required documents (Annexure I to V) in response to the above-referred EOI for *Empanelment of EPC Partners for setting up Battery Energy Storage Systems (BESS) for 2,000 MW / 4,000 MWh (1 Cycle) under the Tariff Based Global Competitive Bidding process for RfS invited by MSEDCL vide RfS No. MSEDCL/BESS/PHASE-2/25-26/001 dated 25.07.2025 and subsequent amendments.*

We hereby confirm that neither we nor any of our Parent, Affiliate, or Ultimate Parent entities have submitted any other application, directly or indirectly, in response to the aforesaid EOI issued by MSETCL.

We further understand that if any applicant conceals material information, makes false or misleading statements, misrepresents facts, or furnishes incorrect details in any manner whatsoever to influence the consideration of its proposal, MSETCL reserves the right to reject such application without assigning any reason.

We also undertake that we have no connection, direct or indirect, with any employee of the Board, and that we are not blacklisted or debarred from undertaking any work by any Government / Government Company / Government Organization / Government Agency in India or abroad, Public Sector Undertaking, State Utility, or Overseas Financial Institution / Bank.

The details of our authorized contact person are furnished below:

Name
Designation
Company Address,
Phone Nos,
Fax Nos
E-mail Id

We are enclosing therewith the proposal with duly signed formats in original as required in the notice.

Date:

Thanking you,

Yours faithfully

Authorized Signatory:

Name:

Designation:

Company Name:

Seal & Date:

Annexure – I: Applicant Information

Sr. No.	Particulars	Details to be Furnished by Applicant
1	Name of the Applicant / Firm / Company	
2	Type of Entity (Public Ltd. / Pvt. Ltd. / LLP / Partnership / Proprietorship / PSU, etc.)	
3	Year of Incorporation	
4	Registered Office Address	
5	Correspondence Address	
6	Contact Person Name & Designation	
7	Contact Number (Mobile / Landline)	
8	Email Address	
9	Website (if any)	
10	Brief Description of the Organization, Core Business Areas	
11	Whether OEM / EPC Contractor / System Integrator / Technology Provider / Consortium	
12	PAN, GST, CIN, and other statutory registration details	
13	Name(s) of Authorized Signatory / Partner with Designation	
14	Authorization Letter / Power of Attorney enclosed (Yes / No)	

Annexure – II: Experience Details of BESS / Renewable / EPC Projects

(Attach copies of work orders / completion certificates / client references.)

Sr. No .	Project Name & Location	Client / Utility	Year of Commissioning	Technology Used (LFP / NMC / Other)	Capacity (MW / MWh)	Scope of Work (EPC / Supply / O&M / Turnkey)	Project Value (₹ Crore / USD)	Status (Completed / Ongoing)
1								
2								
3								
4								
5								

Annexure – III: Technical Capability and OEM Association

Sr. No.	Component / System	OEM / Technology Partner Name	Country of Origin	Nature of Association (Authorized Partner / Integrator / Licensee / MoU)	Duration of Association
1					
2					
3					
4					
5					

Annexure – IV: Financial Credentials

Sr. No.	Financial Year	Turnover (₹ Crore)	Net Worth (₹ Crore)	Audited / Unaudited (Specify)
1.	2023–24			
2	2022–23			
3	2021–22			

(Attach copies of audited financial statements or CA-certified summaries with UDIN number)

Annexure – V: Declaration

(To be printed on Company Letterhead)

To,

The Chief Engineer (TBCB Cell)

Maharashtra State Electricity Transmission Co. Ltd. (MSETCL)

Prakashganga, 6th Floor, Plot No. C-19, E-Block,

Bandra-Kurla Complex, Bandra (E), Mumbai – 400051

Subject: Declaration for empanelment of EPC Partners for participation in MSEDCL's 2000 MW / 4000 MWh Battery Energy Storage System (BESS) Tender (RfS No. MSEDCL/BESS/ Phase-2/25-26/001 dated 25.07.2025) as Battery Energy Storage System Developer (BESSD).

Sir,

We hereby declare that:

1. All information furnished in this proposal and annexures is true and correct to the best of our knowledge and belief.
2. We fully understand that submission of this EOI does not guarantee any award of work or commitment from MSETCL.
3. We agree that MSETCL reserves the right to accept or reject our EOI without assigning any reason.

Authorized Signatory:

Name:

Designation:

Company Name:

Seal & Date: