

Clarification-II dated 04/06/2026 to the Bidding Document for Package AP-BESS-01 for Design, Supply, Erection, Testing & Commissioning of 150 MW/ 300MWh Battery Energy Storage System at Kalikiri, Andhra Pradesh under "Setting up of 1,000 MW/2,000 MWh Battery Energy Storage System (BESS) in Andhra Pradesh Under Tariff-Based Competitive Bidding with Viability Gap Funding supported through PSDF". Spec. No.: CC/T/W-BESS/DOM/A10/26/07004

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| 1 | | Technical Specifications – Battery System | Kindly confirm whether battery augmentation during the 12-year O&M period is mandatory to maintain guaranteed usable capacity and whether augmentation cost shall be considered under bidder scope. | Capacity augmentation during the project life may be permitted, subject to compliance with all specified technical requirements, performance guarantees, and contractual provisions. Bidders shall duly consider the above provisions while finalizing system design, technology selection, and lifecycle performance commitments. Accordingly, the provisions of the Bidding document shall remain unchanged. Please refer Clause 2.9.3 Guaranteed Dispatchable Capacity, Technical Specification: Section-Project Rev-00. |
| 2 | | Charging/Discharging Cycle Requirement | Kindly clarify whether the requirement of 2 cycles/day is applicable uniformly throughout the entire contract period or based on annual average dispatch profile. | Please refer Clause 2.0 Scope of Work, Section Project Rev-00. Accordingly, the provisions of the Bidding document shall remain unchanged. |
| 3 | | Partial Cycle Operation | Please clarify the methodology for accounting partial charge-discharge cycles for performance evaluation and degradation calculations. | Please refer Clause 2.0 Scope of Work, Section Project Rev-00. Accordingly, the provisions of the Bidding document shall remain unchanged. |
| 4 | | Grid Availability | Kindly confirm the guaranteed annual grid availability at the APTRANSCO interconnection point for charging/ discharging operations. | Please refer Clause 2.9.2 Guaranteed Monthly System Availability, Section Project Rev-00. Accordingly, the provisions of the Bidding document shall remain unchanged. |
| 5 | | Interconnection Scope | Please confirm whether all 33 kV line bays, protection panels and associated bay equipment at APTRANSCO end are completely under Employer/ APTRANSCO scope. | Please refer Clause 2.0 Scope of Work, Section Project Rev-00. Accordingly, the provisions of the Bidding document shall remain unchanged. |
| 6 | | Land Development | Kindly confirm whether geotechnical investigation reports and contour survey data shall be provided by Employer. | Please refer Clause 2.2 Civil Works, Section Project Rev-00. Accordingly, the provisions of the Bidding document shall remain unchanged. |
| 7 | | Land Condition | Please confirm whether the allocated land shall be handed over free from encumbrances, vegetation and major obstructions. | The land shall be made available on an 'as-is-where-is' basis. Bidders are advised to visit the site and satisfy themselves regarding the site conditions, including but not limited to encumbrances, vegetation, terrain, and any obstructions, prior to submission of bids. Accordingly, the provisions of the Bidding document shall remain unchanged. |
| 8 | | Cybersecurity Compliance | Kindly specify the exact cybersecurity standards/ guidelines applicable for imported BESS/ PCS equipment. | Existing provisions of bidding documents shall remain unchanged |
| 9 | | Approved Makes/OEMs | Please clarify whether there is any approved vendor list (AVL) for battery systems, PCS, transformers, SCADA and protection systems. | The Contractor shall procure the bought-out items from the sub vendors as per the list in "Compendium of Vendors" available on POWERGRID website www.powergrid.in after ensuring compliance to the requirements/ conditions mentioned therein. In case of unavailability / non-response, Contractor may propose additional/new sub-vendor for approval of Employer as per prevailing norms of Employer. |
| 10 | | Performance Guarantees | Kindly clarify the guaranteed round-trip efficiency (RTE) evaluation methodology and measurement point. | Please refer Clause 2.9.4 Guaranteed Roundtrip Efficiency, Section Project Rev-00. Accordingly, the provisions of the Bidding document shall remain unchanged. |
| 11 | | Battery Degradation | Please confirm the acceptable annual degradation profile and minimum guaranteed retained capacity at the end of 12 years. | Please refer Clause 2.9.3 Guaranteed Dispatchable Capacity, Section Project Rev-00. Accordingly, the provisions of the Bidding document shall remain unchanged. |
| 12 | | Liquidated Damages | Kindly clarify whether cumulative LD for delay and performance shortfall shall be capped separately or jointly. | LD for Delay and performance shortfall shall be worked out separately as per provisions of bidding documents. |

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| 13 | | O&M Scope | Please confirm whether replacement of consumables, HVAC gas, fire suppression agents and auxiliary batteries are included in comprehensive O&M scope. | Yes, As per provisions of Clause 7.18 Operation & Maintenance, Section Project Rev-00, "The Contractor shall be responsible for supply of all spare parts, repairs / replacement of any defective equipment at his own cost as required from time to time during the O&M period". Accordingly, the provisions of the Bidding document shall remain unchanged. |
| 14 | | Spare Parts | Kindly clarify the minimum mandatory spare inventory to be maintained at site during O&M period. | The bidder shall be responsible for maintaining adequate spares to ensure system availability as specified in the bidding documents. |
| 15 | | Import Content | Kindly confirm whether imported battery cells/modules are permissible under Class-I / Class-II local content calculations. | Please refer Annexure-B (BDS), Bid Data Sheets, Section-III, Volume-I of Bidding Document |
| 16 | | Local Content Calculation | Please clarify the methodology/formula for calculation of local content percentage under Make in India policy. | Please refer Annexure-B (BDS), Bid Data Sheets, Section-III, Volume-I of Bidding Document |
| 17 | | Site Access | Kindly confirm availability of approach roads and heavy equipment movement accessibility up to project site. | Bidders are advised to visit the site and satisfy themselves regarding the site conditions, including but not limited to encumbrances, vegetation, terrain, and any obstructions, prior to submission of bids. Accordingly, the provisions of the Bidding document shall remain unchanged. |
| 18 | | SCADA Integration | Please clarify whether communication protocol and SLDC/APTRANSCO SCADA integration specifications shall be provided during detailed engineering stage. | Please refer Clause 7.1.5 Energy Management System (EMS) with SCADA, Section Project Rev-00. Accordingly, the provisions of the Bidding document shall remain unchanged. |
| 19 | | Testing Requirements | Kindly confirm whether third-party testing/witnessing agency is mandatory for FAT/SAT activities. | Existing provisions of bidding documents shall remain unchanged |
| 20 | Qualification Requirements (Annexure-A), Note 1 & Note 2 | Note 2 allows a bidder to use its Parent Company's financial experience. However, Note 1 only allows a bidder to use the technical experience of its Subsidiary. It does not state a Subsidiary can use the Parent's technical experience. | Request the Employer to amend Note 1 to allow subsidiary to utilize the Technical Experience of its Parent Company, provided the Parent Company submits a legally binding Letter of Undertaking to provide unconditional technical support for the project execution. | Existing provisions of bidding documents shall remain unchanged |
| 21 | Section III: BDS, ITB 2.1 | The clause restricts procurement from land-border sharing countries but exempts 'procurement of raw materials, components, sub-assemblies etc.'. | Please confirm that Battery Cells and Battery Racks imported from countries sharing a land border with India are classified as 'components/ sub-assemblies' under this clause, and therefore the OEM/ Supplier of these specific items is NOT required to be registered with the Competent Authority, provided the final BESS container integration/ manufacturing happens in India. | Bidder's understanding is in order. |
| 22 | Annexure-B (BDS), Purchase Preference | Class-I Local Supplier requires a minimum of 50% local content. | Considering the nascent stage of domestic advanced-chemistry cell manufacturing in India, request the Employer to relax the Minimum Local Content (MLC) requirement for 'Class-I Local Supplier' from 50% to 30% for this specific BESS package, aligning with the current market reality. | Existing provisions of bidding documents shall remain unchanged |

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| 23 | Appendix-8(a), Guarantees, Liquidated Damages | These guaranteed loss figures shall be without any tolerance. | Auxiliary consumption (especially HVAC loads) is highly dependent on ambient site conditions which can vary significantly from factory test environments. Request the Employer to provide a standard engineering tolerance band (e.g., +/- 3%) before the heavy differential loss LDs (₹ 1,84,807/kW and ₹ 3,69,614/kW) are levied. | Existing provisions of bidding documents shall remain unchanged |
| 24 | Qualification Requirements (Annexure-A), Clause 1.1 (iii) and Note 5 | The Project(s) as per route 1.1 above, must have been in satisfactory operation as on the originally scheduled last date of Bid submission, i.e. 04/06/2026. | We have executed a 33/132kV Substation as a prime contractor for a Central PSU, where the ultimate end-client was a State Government Utility. The substation was energized over 6 months ago, and the final Taking Over Certificate (TOC) without any adverse remarks was issued by the end-client in May 2026. Will a Taking Over Certificate (TOC) issued prior to the bid submission deadline (04.06.2026) without any adverse remarks be considered fully compliant as proof of "satisfactory operation"? | Provisions of specified QR are amply clear. |
| 25 | Qualification Requirements (Annexure-A), Note 5 under Technical Experience | Satisfactory operation means Certificate issued by the Employer certifying the operation without any adverse remark. | Will a TOC issued directly by the ultimate end-client (State Utility) with a copy to the EPC Contractor be accepted as a "Certificate issued by the Employer" under Note 5?" | Provisions of specified QR are amply clear. |
| 26 | 2.0 SCOPE OF WORK, Other Details | 4. Approx. land allocation in sq. meters 18,000 | DDE if additional area is required same shall be in Powergrid scope. Ammendment for increase in quantity of related items like Road, fencing, gravel, cables, trenches etc shall be provided based on mutually agreed rates. | The land shall be made available on an 'as-is-where-is' basis. Bidders are advised to visit the site and satisfy themselves regarding the land area, site conditions, including but not limited to encumbrances, vegetation, terrain, and any obstructions, prior to submission of bids. Any scope with respect to increase in land area, cable length, trench etc. would be bear by bidder without any additional cost implications to POWERGRID. Accordingly, the provisions of the Bidding document shall remain unchanged. |
| 27 | 2.0 SCOPE OF WORK, 2.2 Civil Works | Construction of all required foundations and structure for BESS containers and associated equipment, including raised platform and PEB (Pre-Engineered building) canopy structures for PCS, RCC/PEB structures for auxiliary systems & HT switchgear building, Foundations/structures for any other components of the BESS system like firefighting system etc. shall be within the Contractor's scope. | HT Switchgear & Auxiliary system can be placed Outdoor on Raised platform with canopy structures instead of PEB /RCC structures. Kindly confirm. | Existing provisions document shall remain unchanged |

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| 28 | 2.0 SCOPE OF WORK, 11. Drains | i. Drainage system includes all drains, crossings and culverts. Storm water drains in BESS area to be connected with existing nearby drain. Design and construction of drainage system as per General Layout & topography | We assume the BESS yard work is within substation boundary and drain to be connected with switchyard drain. | The land shall be made available on an 'as-is-where-is' basis. Bidders are advised to visit the site and satisfy themselves regarding the land area, site conditions, topography, drain point etc. including but not limited to encumbrances, vegetation, terrain, and any obstructions, prior to submission of bids. Existing provisions of bidding document shall remain unchanged. |
| 29 | 2.0 SCOPE OF WORK, 11. Roads | a) Construction of approach road connecting to the existing nearby access road is in the scope of contractor. | Since the work is within Existing substation boundary , Approach road shall not be in Bidder scope. | Bidder have to construct the approach road to BESS area (if required) from access road of substation. Existing provisions of bidding document shall remain unchanged. |
| 30 | SECTION: CIVIL WORKS, 3.1 ROADS, ROAD CULVERTS AND RAIL CUM ROAD: | | As per our understanding rail cum road is not applicable for BESS yard. | Rail cum road envisaged for loading and unloading of Transformer during erection and O&M. Requirement of same shall be finalized during detail engineering based on manufacturers specifications. Existing provisions of bidding document shall remain unchanged |
| 31 | SECTION: CIVIL WORKS,3.3 BESS AREA FENCING AND MAIN GATE: 3.6 BOUNDARY WALL (if applicable) | | As per our understanding only rail cum chain link fencing is applicable for BESS yard boundary works. Kindly clarify if separate fencing for IDT is also required. | Chain link Fencing including gates along with guard room to be provided as boundary wall for BESS yard. Existing provisions of bidding documents shall remain unchanged |
| 32 | SECTION: CIVIL WORKS, 3.5 CABLE TRENCHES (Under ground/ overground) | The construction drawings of underground cable trenches, cable trench crossing road and sump are enclosed with tender documents. The underground construction of cable trenches shall be cast in situ type or precast RCC as per drawings and meeting the technical specification. | As per our past experiences the control cables, cable from Battery container to PCS & PCS to IDT shall be laid on over Ground support structures and all cables from IDT to HT panel & HT panel to 33kV Line bays shall be buried cable trench type in place of cast in situ type or precast RCC . | Laying of cables shall be finalised during detailed engineering as per site conditions. Existing provisions of bidding documents shall remain unchanged |
| 33 | SECTION: CIVIL WORKS, 10.1 CONTROL ROOM BUILDING: | Control room building shall be of RCC framed structure & brickwork (Conventional). Minimum plinth area requirement shall be 10mX12m, layout of control room shall be finalized as per detailed engineering to suit project requirement. | Size considered as per tender drawing. If area increases during detailed engineering , suitable ammendment to be provided on sqm basis. We shall quote unit rate for same. | During the detailed engineering, any increase in control room area, length of cables etc. shall be included in the scope of bidder without any additional cost implications to employer. Existing provisions of bidding documents shall remain unchanged. |
| 34 | SECTION: CIVIL WORKS, 10.6 DESIGN OF TRANSFORMER AND REACTOR FOUNDATION: | The common oil collection pit shall have a void volume equal to 200% volume of maximum total oil of either Autotransformer. | As per CEA/CBIP Guidelines Common oil collection pit shall be 150% of largest transformer oil and void volume is not applicable in this case. | Existing provisions of bidding documents shall remain unchanged |

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| 35 | 2.0 SCOPE OF WORK | The present scope shall include termination of 33 kV cable, including associated support structures (as required), from 33 kV switchgear upto 33 kV line Bay(s) of APTRANSCO. Six (6) Nos. of 33 kV line bays are being provided by APTRANSCO to integrate the BESS with Grid. | 1. Kindly share existing substation layout effectively marked with 33kv Bay locations & BESS area. 2. Bidder scope at 33kV bay only termination of BESS feeder cables only. | Please refer Sr. No. 1 of Amendment-III. for 33 kV bays locations & BESS area. Existing provisions of bidding documents shall remain unchanged. |
| 36 | SLD | 1Nos. Bay for Aux. Trafo. For BESS | Kindly clarify as per RFP SLD 1Nos. 33kV Aux. supply bay is mentioned . But in RFP document N-1 redundant supply required. | Please refer Sr. no. 5 of Amendment-III. |
| 37 | 2.0 SCOPE OF WORK | 220V DC Supply | We shall provide Power pack in VCB panel board instead of dedicated 220V DC Battery & battery charger. | Existing provisions of bidding documents shall remain unchanged |
| 38 | Section-33 kV Switch Gear | | 1. Relay kit Supply is not applicable for present scope. 2. 33kV VCB Panel board Shall be outdoor type . | Existing provisions of bidding documents shall remain unchanged |
| 39 | Section_Switchyard Erection_Rev_10 | Earthing system | 1. Kindly provide the ERT value or existing earthing system details. 2. We shall consider Main earthmat as per sizing only instead of 40mm dia rod & 75x12mm GI flat. | It shall be finalised during detailed engineering. Accordingly, the provisions of the Bidding document shall remain unchanged. |
| 40 | Section_Switchyard Erection_Rev_10 | DSLPL | We shall consider LCLM method for DSLP of BESS plant. | Lighting protection of BESS Plant shall be finalized during detailed engineering as per requirement of Technical Specification. |
| 41 | Reactive power | | Please clarify Bidder to consider 33kV VCB for Reactive compenstation or it may be terminated at 33kV spare feeder bays. | Bidder have to design its system so that BESS system can operate as per requirements mentioned in Technical Specifications. Existing provisions of bidding documents shall remain unchanged |
| 42 | Integration | integration with existing switchyard SAS . | Please clarify the scope for BESS SCADA & PPC integration with existing switchyard SAS . | It shall be finalised during detailed engineering. Accordingly, the provisions of the Bidding document shall remain unchanged. |
| 43 | Aux. Tarfo. | | kindly clairfy the level of Aux. trafo. To be consider. | It shall be finalised during detailed engineering. Accordingly, the provisions of the Bidding document shall remain unchanged. |
| 44 | Emergancy Supply | | In case of black out emergancy/SEB supply not in bidder scope. | Please refer Clause 2.1 Battery Energy Storage System, Bidders have to provide 100 kVA Diesel generator for critical auxiliary power supply. Accordingly, the provisions of the Bidding document shall remain unchanged. |
| 45 | Spares | | Kindly provide the spare list. | The bidder shall be responsible for maintaining adequate spares to ensure system availability as specified in the bidding documents. |

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| 46 | | | In Annexure-K (Rev-01), the local content percentage for the DC System (DC Battery & Battery Charger) is mentioned as 60%. However, as per industry practice, the complete BESS system is generally divided into approximately 60% DC Block and 40% AC Block. Further, in most DISCOM BESS tenders, the minimum local content requirement for the project is specified as 20%. Kindly clarify the applicable local content requirement for the BESS package. | Local content as specified for DC system (DC battery & battery chargers) is mentioned as 60% is for 110/220 V DC system. However, for complete project you have to meet minimum local content requirement of either Class-I / Class-II |
| 47 | | | In the SLD of 400/220kV Kalikiri Substation, six (6) feeders are shown. Kindly clarify whether the BESS system shall be connected to all six feeders or only a single feeder shall be utilized for interconnection. | BESS system shall be connected with all six (6) Nos. of feeders for grid connectivity/interconnection. |
| 48 | | | Kindly provide the approximate distance between the identified BESS site location and the respective six feeders/bays at the substation. | Approximate distance would be around 700-850 metres for the offered land patches for BESS. However, it might changed depending upon final routing & layout designing in detailed engineering. Bidders are advised to visit the site and satisfy themselves regarding the land area, site conditions etc. |
| 49 | | | Please provide the detailed site plot plan along with site coordinates and boundary layout. | Please refer Sr. No. 1 of Amendment-III. for 33 kV bays locations & BESS area. Existing provisions of bidding documents shall remain unchanged. |
| 50 | | | The bidding document specifies minimum AC-AC Round Trip Efficiency (RTE) of 87%. Kindly clarify whether auxiliary consumption is included in the RTE calculation. | Bidders have to provide Minimum AC-AC Round Trip Efficiency (RTE) of 87% excluding auxiliary consumption. |
| 51 | | | Kindly confirm the source and scope of construction power and operational auxiliary power supply. | Please refer Sr. no. 5 of Amendment-III. |
| 52 | | | Please confirm the total available land area, site dimensions, and finished ground level (FGL) condition for the project site. | The total land area available for the project shall be as specified in the Bidding Document. Notwithstanding the above, detailed information pertaining to site dimensions, finished ground level (FGL), topography, soil conditions, and any other site-specific parameters shall not be provided by the Employer at this stage. The land shall be handed over on an "as-is-where-is" basis, and the Bidder shall be deemed to have satisfied itself, through its own independent investigations and site visit, regarding all relevant site conditions that may affect the execution of the Works. |
| 53 | | | Kindly confirm the applicable seismic zone, wind load criteria, and design standards for the project site. | Please refer 5.0 Physical and Other Parameters, Technical Specification: Section-Project Rev-00, & applicable IS code. |
| 54 | | | Please confirm whether the stipulated 15-month project completion schedule includes timelines required for statutory approvals and shutdown approvals from concerned authorities. | The stipulated project completion period of 15 (Fifteen) months shall be inclusive of all activities within the Contractor's scope, including but not limited to obtaining statutory approvals, clearances, and coordination for shutdown approvals from concerned authorities, wherever required |

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| 55 | | | Kindly confirm whether water supply and construction power shall be provided by the owner free of cost during project execution. | The Contractor shall be solely responsible for arranging and providing all necessary water supply and construction power required for the execution of the Works. All costs, permissions, infrastructure, distribution, consumption charges, and any incidental expenses related to water supply and construction power shall be deemed to be included in the Contractor's scope and contract price. |
| 56 | | | Kindly clarify whether executed BESS projects outside India shall be considered for meeting the qualification requirements. | Executed Battery Energy Storage System (BESS) projects located outside India shall be considered for the purpose of meeting the qualification requirements. However, acceptance of such overseas project experience shall be subject to due verification and validation by the concerned utility/Owner. |
| 57 | | | With reference to Clause 1.0 - Technical Experience of the Qualification Requirements, it is understood that the bidder qualifies under Route 1 or Route 2 criteria. In this regard, kindly clarify whether meeting the qualification criteria under Route 1 alone is sufficient for technical qualification or whether compliance with Route 2 criteria is also mandatory for bidder qualification. Your clarification in this regard will help us in proper interpretation of the qualifying requirements and submission of the bid accordingly. | Provisions of specified QR are amply clear. |
| 58 | | | The Layout & SLD for 150 MW/300 MWh BESS as per tendered scope may be provided. | The layout and Single Line Diagram (SLD) for the 150 MW / 300 MWh BESS system, corresponding to the tendered scope, shall be developed by the Bidder as part of their engineering responsibilities and submitted for review and approval by the employer. |
| 59 | | | Whether there are requirements of Boundary wall, fencing and drainage system? Any tentative layout may be provided for better Engineering. | Boundary wall/Chain-link fencing, drainage system, and all associated site development works shall be in the Contractor's scope. The Contractor shall carry out complete design and execution as per contract requirements, applicable standards, and site conditions. |
| 60 | | | Control Room Building (RCC) to be constructed as per present scope of 150 MW or 1000 MW? | The Control Room Building (RCC) shall be designed and constructed for the present project capacity of 150 MW / 300 MWh BESS, in accordance with the Contract requirements and applicable standards. |
| 61 | | | Whether the proposed land of 18,000 sq. m is adjacent to the proposed 33 kV Outgoing feeders under the scope of APTRANSCO in Kalikiri 400/220 kV GSS or away from the GSS? What shall be the distance from GSS to the proposed land for BESS? The land dimension and its layout may be provided for better Engineering prior to site visit. | Two (2) Nos. of land parcels measuring 4.23 Acre & 3.07 Acre available for the BESS project, which is at distance of about 700-850 metres from the 33 kV yard of APTRANSCO within the 400/220 kV susbtation. The stated distance is tentative and may vary during finalization of cable routing and detailed engineering. |
| 62 | | | The proposed 33 kV switchgear panel installed in the CRB shall be connected to the 33 kV outgoing feeders developed by APTRANSCO. How many such 33 kV outgoing feeders shall be dedicated for the present scope of 150 MW/300 MWh BESS? | BESS system shall be connected with all six (6) Nos. of feeders for grid connectivity/interconnection. |

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| 63 | | | The block of the proposed Battery Bank for BESS – shall it be containerised & outdoor type or shall PEB construction be considered? | The Battery Energy Storage System (BESS) shall comprise containerized battery systems suitable for outdoor installation as per Technical Specifications. No separate PEB structure is envisaged for battery containers. Accordingly, the provisions of the Bidding Document shall remain unchanged. |
| 64 | | | Shall the Auxiliary Transformers & PCS Transformers be outdoor type or any other arrangement may be provided? Whether any canopy for the system is required or not? | The Auxiliary Transformers and PCS Transformers shall be suitably designed and installed as per Technical Specifications and site requirements. The arrangement shall be finalized during detailed engineering by the Contractor to meet performance, safety, and reliability requirements. Accordingly, the provisions of the Bidding Document shall remain unchanged. |
| 65 | | | Whether the earthing mat shall be connected to the existing earth mat of GSS or not? What is the type of earth mat required for 150 MW/300 MWh BESS: Flat or Rod Type? The size shall be as per design based on earth resistivity and short circuit level. | The earthing system for the BESS plant shall be designed by the Contractor in accordance with applicable standards and site conditions. Interconnection with the existing earth mat of the GSS, type (flat / rod / hybrid) and sizing of the earthing system shall be finalized during detailed engineering based on soil resistivity, fault level, and design requirements. |
| 66 | | | What is the Short Circuit level & its duration for the earthmat calculation? | Please refer Sr. No. 1 of Amendment-III. |
| 67 | | | What is the short circuit level requirement for the entire proposed 150 MW/300 MWh BESS? | Please refer Sr. No. 1 of Amendment-III. |
| 68 | | | Please confirm whether the 50/75 MW battery in container shall be of single-block or multiple-block configuration. | Please refer 2.0 Scope of Work where it is specified as "#Additionally, the BESS must be capable of being charged or discharged either in blocks of 50MW/100MWh or 75 MW / 150 MWh upto the total rated capacity specified as above. Each BESS block must be operated / responded independently to comply DISCOMs/SLDC instructions. For operational purposes, each BESS block will be treated as a separate project and schedules and operating instructions will be issued accordingly." |
| 69 | | | Where shall the 33 kV switchgear system for BESS details be provided for detailed Engineering (to be installed in the proposed CRB)? | The 33 kV Switchgear system shall be designed, supplied, and installed as per the design and engineering proposed by the Contractor during detailed engineering, ensuring full compliance with the requirements of the Technical Specifications. Accordingly, the provisions of the Bidding Document shall remain unchanged. |
| 70 | | | Who will provide the Metering unit (Bidder or Client) & its location may be provided. | The Metering System at all grid connectivity points shall be in the scope of the Contractor. The same shall be designed, supplied, installed, tested, and commissioned in accordance with the requirements of the concerned DISCOM/ APTRANSCO, applicable Grid Code, and relevant regulations. Accordingly, the provisions of the Bidding Document shall remain unchanged. |

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| 71 | | | If the output capacity is less than 350 MWh after completion of design/engineering, what is its accountability and what action shall be initiated? | The BESS system shall be designed and engineered by the Contractor to meet the required output capacity as specified in the Technical Specifications at the delivery point. In case of any shortfall in meeting the guaranteed dispatchable capacity, the Contractor shall be liable for applicable penalties / Liquidated Damages as per relevant provisions of the Bidding Document. Accordingly, the provisions of the Bidding Document shall remain unchanged. |
| 72 | | | In case site visit is desired, the details of the Engineer concerned for extending details on the scope of the present tender requirement may be provided. | Bidder may contact following persons: 1. Sh. Yedukondalu Yendrapaty, Engineer, Contact No. 8004112345, email id: yyk@powergrid.in 2. Sh. Brahma Shankar, Sr. DGM, Contact No. 9001894229, email id: brahmashankar@powergrid.in |
| 73 | | | Whether the SCADA for the present scope of BESS is required to be integrated into the existing system. If yes, what is the make of SCADA so that integration can be considered? | The integration of SCADA/EMS system for the BESS with the existing substation/ grid control systems is required as per Clause 7.1.5 Energy Managment System with SCADA, Technical Specification: Section-Project-Rev-00. The detailed integration requirements, including communication interfaces and protocols, shall be finalized during detailed engineering in consultation with the Employer. |
| 74 | | ITB Clause 13.2 | It is observed that no Bid Security / EMD / Bid Bond provision has been stipulated in the tender. Since BESS is an emerging sector, the tender may attract participation from non-serious bidders who may participate without firm execution intent, thereby affecting the efficiency and timelines of the bidding process. Accordingly, Employer is requested to consider introducing a suitable Bid Security / EMD / Bid Bond requirement (for example, 1% of bid value or as per prevailing industry practice). This will help discourage non-serious participation, ensure involvement of committed bidders only, and save valuable time and effort of the Employer during bid evaluation and award process. | Existing provisons of bidding documents shall prevail. |

Clarification-II dated 04/06/2026 to the Bidding Document for Package AP-BESS-01 for Design, Supply, Erection, Testing & Commissioning of 150 MW/ 300MWh Battery Energy Storage System at Kalikiri, Andhra Pradesh under "Setting up of 1,000 MW/2,000 MWh Battery Energy Storage System (BESS) in Andhra Pradesh Under Tariff-Based Competitive Bidding with Viability Gap Funding supported through PSDF". Spec. No.: CC/T/W-BESS/DOM/A10/26/07004

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| 75 | | SCC: SI No. 18 Page 8 of 47 | Kindly amend the Contract Performance Guarantee requirement for Comprehensive Maintenance Period from 10% to 5% of the Contract Price. The maintenance phase carries substantially lower execution risk as the project would already have been successfully commissioned and handed over. Further, submission of 10% BG for the Comprehensive Maintenance Period results in significant blockage of contractor's banking limits and working capital for an extended duration. In line with prevailing industry practices for similar EPC/O&M contracts, a 5% Performance Guarantee is considered adequate to safeguard the Employer's interest while ensuring competitive participation and optimized project pricing. | Provisions of bidding documents shall remain unchanged. |
| 76 | | SCC: SI No. 67 Page 27 of 47 | The formula/methodology for calculation of Liquidated Damages (LD) related to Auxiliary Consumption differs between the Technical Specifications and the Special Conditions of Contract (SCC). | Please refer Amendment-I |
| 77 | | TS/Vol. II/ P2/Technical specifications of BESS/ Clause 2.9.7.1 | <p>"LD for shortfall in monthly System Availability (in ₹) = (A - B) × 0.022 E"</p> <p>Kindly specify a maximum cap/upper limit for LD applicable towards shortfall in Monthly System Availability. The present clause does not specify any upper ceiling for Availability LD. As per the given formula, non-operation of the system for an entire month may result in LD equivalent to approximately 2.09% of Contract Value per month, translating to nearly 25.08% on annualized basis, which is disproportionately high. Further, if dispatchable capacity shortfall is linked to the same LD provision, the contractual exposure becomes excessively onerous and commercially unviable for contractors. Hence, a reasonable cap on Availability LD is requested to maintain balanced risk allocation. We propose LD should be capped to maximum of Comprehensive Maintenance part or price quoted by the bidder whichever is higher.</p> | Existing provisions of bidding documents shall prevail. |
| 78 | | TS/Vol. II/ P2/Technical specifications of BESS/ Clause 2.9.7.3 | Industrial All Risk (IAR) Insurance during the Comprehensive Maintenance Period is not explicitly mentioned under the insurance requirements specified in SCC. Kindly clarify whether Industrial All Risk (IAR) Insurance is required to be maintained | Existing provisions of bidding documents shall prevail. |
| 79 | | TS/Vol. II/ P2/Technical specifications of BESS/ Clause 2.9.7.1 , Page no 11 | Layout shall also adhere to the latest CEA safety regulations/ guidelines regarding BESS. We understand that the current CEA guidelines for BESS are still under draft stage and are expected to become effective from April 2027. Therefore, we shall follow the applicable governing standards (IEC/NFPA) for the project layout design. | The layout shall comply with the applicable CEA regulations/ guidelines and other statutory requirements in force at the time of execution of the project. In case any new or revised guidelines are notified by CEA or other statutory authorities during the execution of the project, the same shall be complied with to the extent applicable. In absence of specific guidelines, relevant international standards (such as IEC/NFPA) may be adopted; however, these shall not supersede statutory requirements. Accordingly, the provisions of the Bidding Document shall remain unchanged. |

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| 80 | | TS/Vol. II/ P2/Technical specifications of BESS/ Clause 2.9.7.1, Page no 10 | As per the SLD shared by the Employer, a single feeder arrangement has been shown for the auxiliary supply. However, as per the tender document (Section 2.1 - Battery Energy Storage System, Page No. 10), an N-1 redundancy philosophy has been specified, which would require two feeders for the auxiliary transformer arrangement. This implies installation of two identical transformers with a 2 × 100% redundancy configuration, such that in case one transformer fails, the other transformer can support the complete critical auxiliary load. You are requested to kindly clarify the requirement. | Please refer Sr. no. 5 of Amendment-III. |
| 81 | Section III – Bid Data Sheets (BDS) under ITB Clause 2: | For this package, Bid from Joint Venture is not permitted. | Kindly allow participation through JV/Consortium. Allowing participation through JV/Consortium would promote wider competition and enable technically capable and financially organizations to combine their expertise and resources for effective execution of the project, especially for large and specialized infrastructure works. | Provisions of bidding documents shall remain unchanged. |
| 82 | Annexure – A (BDS) | At this tender, technical experience in BESS/ Solar/ Wind Power projects during the last 7 years is required. | At this tender, technical experience in BESS/Solar/Wind/Hydro Power projects during the last 7 years may also be considered. Hydro projects involve similar power system, electrical, transmission, and grid integration expertise as utility scale renewable and BESS projects. Hence, such experience may also be considered eligible. Further, since large-scale commissioned BESS projects are currently limited in the market, awarded BESS projects supported by LOA/LOI may also be considered to enable wider participation of qualified bidders. | Provisions of bidding documents shall remain unchanged. |
| 83 | Annexure – A (BDS) | Erected, Tested and Commissioned, as a prime contractor, at least two (2) numbers of AIS/GIS^ Circuit Breaker equipped bays of 33 kV or above voltage level in one Sub-station or Switchyard | Erected, Tested and Commissioned, as a prime contractor/developer, at least two (2) numbers of AIS/GIS circuit breaker equipped bays of 33 kV or above voltage level in one sub-station or switchyard. It is requested to also consider experience executed as a developer along with prime contractor experience for eligibility qualification, as developers are equally responsible for overall project execution, coordination, testing, and commissioning activities. This will enhance wider participation of technically qualified bidders. | Provisions of bidding documents shall remain unchanged. |
| 84 | Annexure – A (BDS) Clause 2.0 | Liquid assets (L.A.) or/and evidence of access to or availability of credit facilities should be not less than Rs. 27.39 Crore | Kindly clarify/amend the clause to include credit facilities/funding support from NBFCs/Banks in addition to Public Sector Banks/Institutions, subject to submission of valid documentary evidence. It is requested to kindly clarify/amend the clause accordingly to facilitate broader financial eligibility for participating bidders. | Provisions of bidding documents shall remain unchanged. |

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| 85 | Pg.2 & Cl. 8, ITB | The completion period for the subject Package shall be 15 (Fifteen) Months | Kindly amend the completion period from 15 months to 18 months | Existing provisions of bidding documents shall prevail. |
| 86 | Pg. 1 & Cl. 1.1(ii), BDS, Annex-A | Supplied, Erected, Tested & Commissioned, as a Prime Contractor, a project(s) of Solar/Wind Power Plant having cumulative capacity of 50MW or more in India with minimum capacity of 10 MW for each Solar/ Wind Power plant. | Kindly amend to Supplied, Erected, Tested & Commissioned, as a Prime Contractor/Developer, a project(s) of Solar/Wind Power Plant having cumulative capacity of 40MW or more in India with minimum capacity of 7.5 MW for each Solar/ Wind Power plant. | Provisions of bidding documents shall remain unchanged. |
| 87 | Pg 21 of 52 Cl.2.9.4, Technical Specification | The Contractor shall Guarantee AC to AC Round trip Efficiency (RtE) of the BESS on monthly basis for BESS. In this regard, the RtE for BESS shall remain at or above 87% from beginning till end of life i.e.; throughout the tenure of the contract. | Kindly Amend RTE 85% | Existing provisions of bidding documents shall prevail. |
| 88 | Pg 18 of 35 Cl:ITB 11.4(d), BDS | The Comprehensive Maintenance Charges (including taxes & duties) (i.e. total of Schedule-4b + corresponding taxes & duties) shall be minimum 10% of the Total Bid Price (including taxes & duties) (i.e. total of Schedule-1 + Schedule-2 + Schedule-3 + Schedule-4a + Schedule-4b + Schedule-5) quoted by the bidder. | O&M charges 10% please reduce to 6% | Existing provisions of bidding documents shall prevail. |
| 89 | | Others | Kindly Provide estimate of project value | Biidders are advised to quote as per the scope and provisions of bidding Documents. |
| 90 | | Others | Please provide site visit contact Person Name and Mobile Number | Bidder may contact following persons: 1. Sh. Yedukondalu Yendrapaty, Engineer, Contact No. 8004112345, email id: yyk@powergrid.in 2. Sh. Brahma Shankar, Sr. DGM, Contact No. 9001894229, email id: brahmashankar@powergrid.in |
| 91 | | Others | Please Provide list of spares details | The bidder shall be responsible for maintaining adequate spares to ensure system availability as specified in the bidding documents. |

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| 92 | 01_Attachment-3(QR) Clause No.2 (2.2 Route 2) (ii) Technical Experience Requirements | Bidder should have technical collaboration agreement/ Manufacturing license with a Battery Manufacturer meeting the requirements stipulated at Clause 1.2 (i) above. In case of technical collaboration /license, bidder shall furnish along with the bid a copy of such license / collaboration agreement done with the battery manufacturer and such agreement/license should be valid as on the originally scheduled last date of bid submission. | Please clarify whether the Technical Collaboration Agreement / Manufacturing License Agreement as per Clause 1.2 may be executed with an international battery manufacturer meeting the qualification requirements of Clause 1.2(i), or whether such collaboration is restricted only to domestic/Indian manufacturers. Further, please confirm that such agreement is required to be executed and submitted along with the bid prior to the bid submission deadline | Provisions of specified QR are amply clear. |
| 93 | IV, 8, 1.1 (cc) | Subcontractor"/"vendor"/"sub-vendor" means firms/ corporations/government entities to whom execution of any part of the Facilities, including preparation of any design or supply of any Plant and Equipment, is sub-contracted directly or indirectly by the Contractor with the consent of the Employer in writing, and includes its legal successors or permitted assigns. | Kindly clarify whether prior written consent of the Employer is required for all subcontractors and sub-vendors, including lower-tier suppliers of standard materials, or only for critical subcontracted scope. Further, please confirm that such consent shall not be unreasonably withheld or delayed so as to avoid impact on project execution timelines.. | The Contractor shall procure the bought-out items from the sub vendors as per the list in "Compendium of Vendors" available on POWERGRID website www.powergrid.in after ensuring compliance to the requirements/conditions mentioned therein. In case of unavailability / non-response, Contractor may propose additional/new sub-vendor for approval of Emplyer as per prevailing norms of Employer. |
| 94 | V, 4, 3.3 | The Contractor shall be responsible for providing all the spares as may be required during currency of the Contract. The spares shall be maintained by the Contractor at no extra cost to the Employer/ Owner. | Please confirm whether the obligation to maintain spares at no additional cost is limited to mandatory/operational spares identified in the Contract Documents and does not extend to replacement arising from normal wear and tear or Employer-induced damage. | The bidder shall be responsible for maintaining adequate spares to ensure system availability as specified in the bidding documents. |
| 95 | IV, 11, 5.6 | The Contractor shall permit the Employer to inspect the Contractor's accounts and records relating to the performance of the Contractor. | The inspection right should be limited to accounts and records directly related to the performance of the Contract, and such inspection should be conducted upon reasonable prior notice during normal business hours. | Provisions of bidding documents are amply clear. |
| 96 | IV, 22, 12.5 | Confidentiality The provisions of this GCC Clause 12 shall survive termination, for whatever reason, of the Contract. | There should be definite timeline for the survival obligations of Confidentiality, two (02) years is recommended. | Provisions of the bidding documents shall remain unchanged. |

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| 97 | IV, 22, 22.8.1 | Confidentiality The provisions of this GCC Clause 12 shall survive termination, for whatever reason, of the Contract. | The Contractor's liability for latent defects warranty shall be limited to period of ten (10) years from the end of Defect Liability Period. For the purpose of this clause, the latent defects shall be the defects inherently lying within the material or arising out of design deficiency, which do not manifest themselves during the Defect Liability Period defined in this GCC Clause 22, but later. latent defect liability period shall be of 5 years as per standard renewable industry practice. | Provisions of the bidding documents shall remain unchanged. |
| 98 | Technical Specification: Section-Project Rev-00, 23/52, 2.9.7 | Liquidated Damages | There is no capping on Liquidated damages during the O&M period. Request to kindly limit it to 15% of the O&M Contract price. | Existing provisions of bidding documents shall prevail. |
| 99 | BESS Container | Platform requirements to access the BESS for O&M. | We understands that no platforms surrounding the BESS groups are required. | The requirement of platforms (walkways/access structures) around the BESS containers shall be as per the Technical Specifications and safety requirements. The same shall be designed and provided by the Contractor as per the approved layout and detailed engineering, wherever required for operation and maintenance, safety, and statutory compliance. Accordingly, the provisions of the Bidding Document shall remain unchanged. |
| 100 | BESS Container | Canopy structure requirement for outdoor structures | We understands that a canopy part is not required for the BESS foundation. Kindly confirm | The requirement of canopy for associated equipment shall be as per the Technical Specifications and design considerations. The same shall be finalized by the contractor during detailed engineering based on equipment requirements, environmental conditions, safety considerations, and statutory guidelines. Accordingly, the provisions of the Bidding Document shall remain unchanged. |
| 101 | BESS Container | Water tank for Fire Fighting system along with piping network for supply | Since no specific guidelines are available in RFP , Water tank for Fire Fighting system has been considered in the scope with 100KL water tank capacity for 90min only. | The Contractor shall design and provide the complete fire protection system for the BESS installation, including water storage, pumping system, and distribution network, in accordance with the Technical Specifications and applicable statutory requirements. The sizing of the fire water storage (including tank capacity and duration) shall be determined by the Contractor during detailed engineering based on fire protection philosophy, applicable standards, and site-specific requirements. Accordingly, the provisions of the Bidding Document shall remain unchanged. |

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| 102 | BESS Container | Contaminated Water Collection Drain Line – BESS Area | Since no specific guidelines are available in RFP, A dedicated contaminated-water collection and drainage system is not considered in the BESS installation area to safely capture and convey any potentially hazardous runoff resulting from fire case. | The Contractor shall design and provide appropriate drainage and containment systems for the BESS installation, including provisions for handling contaminated water, if required, during fire or emergency conditions. The design shall comply with applicable statutory regulations, environmental norms, and safety standards. Detailed provisions in this regard shall be finalized during detailed engineering based on site conditions and applicable guidelines. Accordingly, the provisions of the Bidding Document shall remain unchanged. |
| 103 | Geotechnical | Geotech Report | Kindly provide for estimation in Prebid stage or bidder recommends using a 20 Ton Net SBC for civil design, along with 18 kN uplift and 15kN lateral & 150kN endbearing forces to be considered in the design of free standing pile in absence of details. | The Bidder shall carry out detailed geotechnical investigations at site and design the foundations (including pile foundations, if required) based on actual soil parameters, load conditions, and applicable standards. Any assumptions made by the Bidder for estimation purposes shall be at their own risk, and no additional cost implication shall be considered on this account. In this regard the Bidder shall be deemed to have satisfied itself, through its own independent investigations and site visit, regarding all relevant site conditions that may affect the execution of the Works. Accordingly, the provisions of the Bidding Document shall remain unchanged. |
| 104 | Hydrology | Hydrology Report | In the absence of a Hydrology report, bidder has assumed sheet flow within the project land catchment area, and no contribution from the outer catchment area will be considered. Kindly confirm | The Bidder shall carry out necessary hydrological assessment of the project site, including evaluation of catchment characteristics, and design the drainage system accordingly. Any assumptions made by the Bidder (such as considering only internal catchment) shall be at the Bidder's own risk, and no additional cost implication shall be considered on this account. In this regard the Bidder shall be deemed to have satisfied itself, through its own independent investigations and site visit, regarding all relevant site conditions that may affect the execution of the Works. Accordingly, the provisions of the Bidding Document shall remain unchanged. |

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| 105 | Topography | Contour / Topography | Kindly provide for estimation in Prebid stage or bidder using flat land 0 to 3 degree in absence of details. | The Bidder shall carry out necessary topographical survey and site assessment and design the layout, grading, and civil works accordingly. Any assumptions made by the Bidder (such as considering flat land with 0-3 degree slope) shall be at the Bidder's own risk, and no additional cost implication shall be considered on this account. In this regard the Bidder shall be deemed to have satisfied itself, through its own independent investigations and site visit, regarding all relevant site conditions that may affect the execution of the Works. Accordingly, the provisions of the Bidding Document shall remain unchanged. |
| 106 | Civil works | For approach to BESS, if it is required to construct the approach road separately by the contractor for accessing the Project, without hindering the O&M activities of respective sub-stations. | It is understood by bidder that Water Bound Macadam (WBM) roads shall be provided for both the approach 4m and internal road 3m networks as per standard industry practice. Please provide the subgrade CBR value . | The roads (approach and internal) shall be constructed by the Contractor as per the scope of work, Technical Specifications and tender drawing. The subgrade CBR value shall be determined based on site-specific investigations carried out by the Contractor. Any assumptions made by the Bidder for estimation purposes shall be at their own risk, and no additional cost implication shall be considered on this account. Accordingly, the provisions of the Bidding Document shall remain unchanged. |
| 107 | Location/ Coordinate | BESS location | Request you to share the KMZ/DWG of the BESS location, clearly marking the plot boundary. | Please refer Sr. No. 1 of Amendment-III. |
| 108 | Underground utilities | Underground scanning report | Please share the underground scanning report if available to understand the Existing Underground facilities inside the plot boundary (Like: Water pipeline, Electrical cables or other structures etc.). | Underground scanning report for mentioned area is not available with Employer. The Contractor shall carry out necessary site investigations, including underground utility detection, and design/execute the works accordingly. The site is being provided on "as-is-where-is" basis, and any additional requirements arising out of existing underground utilities shall be deemed to be included in the scope of the Contractor. Accordingly, the provisions of the Bidding Document shall remain unchanged. |

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| 109 | Civil works | BESS Container foundation | As the soil investigation report and hydrology details are not available, bidder has assumed that placing the BESS container at FGL/NGL level over rubble soling with an RCC grade slab above will be adequate to safely sustain the approximate dead load of the BESS equipment, which is around 45 Tons. | The foundation system for BESS containers shall be designed by the Contractor based on detailed geotechnical investigation, hydrological assessment, load conditions and approved equipment manufacturer foundation layout plan. The Contractor shall ensure that the foundation design is suitable for all static and dynamic loads, soil conditions, and site-specific requirements. Any assumptions made by the Bidder (such as placement at FGL/NGL level over rubble soling and RCC slab) shall be at the Bidder's own risk, and no additional cost implication shall be considered on this account. Accordingly, the provisions of the Bidding Document shall remain unchanged. |
| 110 | General | VISUAL MONITORING SYSTEM (CCTV Requirement) | As the RFP does not specify the camera type for BESS plant peripheral surveillance, Camera specification is mentioned in the RFP. Bidder has considered Bullet Cameras for perimeter monitoring to achieve complete coverage with zero dead zones. | The Visual Monitoring System shall be designed, supplied, and installed by the Contractor in accordance with the specifications provided in the Bidding Document. Selection of camera type (such as bullet, dome, PTZ, etc.) shall be as per the system design proposed by the Contractor, ensuring complete coverage and compliance with specified performance and functional requirements. Accordingly, the provisions of the Bidding Document shall remain unchanged. |
| 111 | Annexure-II_Technical Specifications for VMS, 12.8. Power Supply (UPS) for NVR , Storage and Client Machines | UPS rating - 5KVA | The power supply for CCTV cameras and related equipment will be taken from the nearest PSC station (UPS) power source. From the PSC station the supply will be distributed to the nearest CCTV locations. | The power supply arrangement for CCTV and associated equipment shall be designed, supplied, and implemented by the Contractor in accordance with the Technical Specifications. The Contractor shall ensure reliable and uninterrupted power supply to the surveillance system, including appropriate backup arrangement (UPS/ dual source, as required). The exact source and distribution scheme (including supply from UPS/PSC or other suitable arrangement) shall be finalized during detailed engineering. Accordingly, the provisions of the Bidding Document shall remain unchanged. |
| 112 | Annexure-II_Technical Specifications for VMS, 12, 9. Storage | NAS (Network Attached Storage) for CCTV | The bidder shall provide CCTV recording storage for a maximum period of 45 days. Kindly provide the locations of cameras to be installed at important and sensitive zones. Our CCTV server is capable of storing data for up to 45 days. Therefore NAS is not required for the CCTV system. | The NAS should record in auto FIFO (first in and first out) mode and should maintain minimum storage requirements of 15 days for cameras placed at non-critical locations and 180 days for cameras placed at "important/sensitive" locations at any given point of time. Accordingly, the provisions of the Bidding Document shall remain unchanged. |

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| 113 | Annexure-II_Technical Specifications for VMS, 14, 10.2. Number of ports: | A. Giga Byte (Gig) copper Ethernet port: For connecting storage NVR server & client in redundant mode on different switches. B. Fast Ethernet (FE) copper port: For connecting NVR server & client in redundant mode on different switches. | The bidder seeks to clarify that Fast Ethernet copper (Cu) ports with 100 Mbps bandwidth are sufficient for connectivity to the Network Video Recorder (NVR). Additionally fibre optic ports shall be provided with Gigabit Ethernet (1 Gbps) capacity to ensure adequate bandwidth for network backbone communication. | Existing provisions of the bidding documents shall remain unchanged. |
| 114 | Section-Energy Management System (EMS) with SCADA, 6, 5. Power Plant Controller | Power Plant Controller 5.1. Power plant controller (PPC) shall be provided with two processors (main processing unit and memories), one for normal operation and one as hot standby. | Bidder considers providing a Master EMS for BESS plant control, including setpoint control, power/energy management, and curtailment functions. The proposed EMS shall perform the functional requirements of the Power Plant Controller (PPC) and shall be configured with redundant architecture comprising one main processor and one hot standby processor for reliable operation. Kindly confirm | The Energy Management System (EMS) along with the Power Plant Controller (PPC) shall meet the functional requirements specified in the Technical Specifications. The PPC functionality may be implemented as a separate system or integrated within the EMS, subject to compliance with all specified functionalities, performance requirements, and redundancy provisions. The system shall be configured with suitable redundancy (including hot standby configuration) to ensure reliable operation. Accordingly, the provisions of the Bidding Document shall remain unchanged. |
| 115 | Technical Specification: Section-Project Rev-00, 17, 2.8.2 | However, if it is found during detailed engineering and/or Reliability & Availability prediction calculation that additional spares are required to meet target values, the same shall be made available by the Contractor without any additional cost to the Employer. | Please note that if availability guarantee is with EPC then EPC will decide the spares otherwise client should give list of spares so that cost can be included at the bidding time. In future additional spares will have cost implications. | The bidder shall be responsible for maintaining adequate spares to ensure system availability as specified in the bidding documents. |
| 116 | Technical Specification: Section-Project Rev-00, 27, 7.1.2 | b) The Battery Energy Storage System (BESS) be equipped with a Grid Forming Inverter (GFM) mode which can provide supply during Black Start Restoration. The inclusion of such capability will significantly enhance system reliability and resilience during contingency conditions. | Please confirm the black start philosophy? We recommend Black start provision with necessary back up aux supply provision for PCS and battery containers from two IDT blocks. | The BESS system shall be capable of black start operation as per the requirements of the Technical Specifications. The detailed black start philosophy, including auxiliary power arrangement, system configuration, and restoration sequence, shall be developed and finalized by the Contractor during detailed engineering in consultation with the Employer. The system shall ensure reliable and safe operation under black start conditions, including provision of necessary auxiliary power backup. Accordingly, the provisions of the Bidding Document shall remain unchanged. |

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| 117 | Technical Specification: Section-Project Rev-00, 38, 7.2.1 | d) Comply with the grid-interfacing requirements as mentioned in following standards:i. IEEE Std. 2800 -2022: IEEE Standard for Interconnection and Interoperability of Inverter -Based Resources (IBRs) Interconnecting with Associated Transmission Electric Power Systems ii. IEC TS 62786-1: Distributed energy resources connection with the grid - Part 1: General requirements iii. IEC TS 62786-3: Distributed energy Resources connection with the grid: Part 3, Additional requirements for stationary battery energy storage systems. | Please note that we will follow CEA/ CERC guidelines for grid interfacing however we cannot guarantee compliance to these standards as it is not applicable to India and project application. | The BESS system shall comply with the grid interfacing requirements specified in the Technical Specifications, including the referenced IEEE and IEC standards. In addition, compliance with applicable CEA/CERC regulations and Grid Code requirements is mandatory. The Contractor shall ensure that the system meets all such requirements to the extent applicable for the project. Accordingly, the provisions of the Bidding Document shall remain unchanged. |
| 118 | Section Power Conditioning System, 6, 5 | Local Display unit for viewing important parameters, configuration and troubleshooting purpose shall be provided. | Please note that all PCS OEMS do not offer local HMI, instead we can offer web based HMI OR Bluetooth and app based HMI; please confirm acceptance. | Please refer Sr. No. 6 of Amendment-III. |
| 119 | Section Power Conditioning System, 6, 6 | String Monitoring facility:- PCS shall be provided with current monitoring transducer at incoming DC cables from each battery array. The current transducers used for this purpose shall have accuracy of 1.0 class or better. | PC unlike PV inverter do not have string monitoring for each DC input, however DC side monitoring shall be ensured as per clause 5.e above. | Please refer Sr. No. 7 of Amendment-III. |
| 120 | Section Power Conditioning System | PCS shall communicate with EMS on IEC 60870-5-104 or IEC 61850 | Please note that most of the vendors supports only MODBUS TCP IP protocol from PCS to EMS; the same will be considered; please confirm. The same is applicable for EMS vendor as well. | The communication between PCS and EMS shall be as per the requirements specified in the Technical Specifications, including IEC 60870-5-104 and/or IEC 61850 protocols. Accordingly, the provisions of the Bidding Document shall remain unchanged. |
| 121 | Section Project _BESS 150 MW 300 MWh Kalikiri APTRANSCO, 2.9.4, 22 | Auxiliary power consumption of BESS shall not be part of RtE calculation. Separate metered connection for the Auxiliary Power load of BESS is detailed in forthcoming section. The Contractor shall declare RtE on Day Ahead Basis. | We understand that auxiliary power of the complete project shall not be a part of the RTE calculation | Auxiliary power consumption of the BESS shall not be considered as part of the Round Trip Efficiency (RtE) calculation. The same shall be measured separately through dedicated metering as specified in the Bidding Document. Accordingly, the provisions of the Bidding Document shall remain unchanged. |

Clarification-II dated 04/06/2026 to the Bidding Document for Package AP-BESS-01 for Design, Supply, Erection, Testing & Commissioning of 150 MW/ 300MWh Battery Energy Storage System at Kalikiri, Andhra Pradesh under "Setting up of 1,000 MW/2,000 MWh Battery Energy Storage System (BESS) in Andhra Pradesh Under Tariff-Based Competitive Bidding with Viability Gap Funding supported through PSDF". Spec. No.: CC/T/W-BESS/DOM/A10/26/07004

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| 122 | Section Project _BESS 150 MW 300 MWh Kalikiri APTRANSCO, 2, 9, Page 10 of 52 | The nameplate/ design ratings shall be achievable during discharge for the full range of environmental conditions at the project site when the battery is fully charged. In any case, the BESS shall be capable of being discharged at reduced power levels from that specified above. However, the energy discharged from the battery shall not require to be greater than the Output Energy Capacity of BESS at the delivery point specified herein. | 1. Please confirm that the 150MW power and 300MWH energy capacity is to be met at the 33kV delivery point. 2. Please confirm that the capacity of 300MWH is including the plant auxiliary consumption or excluding the plant auxiliary consumption. | 1. The rated capacity of 150 MW / 300 MWh for the BESS shall be available at the delivery point (33 kV level) as specified in the Technical Specifications. 2. The specified energy capacity (300 MWh) is exclusive of auxiliary power consumption. Auxiliary consumption shall be metered separately and shall not be considered as part of the BESS output energy capacity. Accordingly, the provisions of the Bidding Document shall remain unchanged. |
| 123 | Section Project _BESS 150 MW 300 MWh Kalikiri APTRANSCO, 2.1, 10 | 100 kVA Diesel generator for critical auxiliary power supply | Kindly confirm which critical load is to be considered in this 100kVA? Does it include any BESS side load as well? | The 100 kVA Diesel Generator is intended for supplying power to critical auxiliary loads of the BESS required for safe operation, monitoring, and control during contingency conditions. The detailed list of critical loads to be supplied through DG (including EMS/SCADA, control systems, protection systems, communication systems, and other essential auxiliaries) shall be finalized by the Contractor during detailed engineering in consultation with the Employer. Accordingly, the provisions of the Bidding Document shall remain unchanged. |
| 124 | Section Project _BESS 150 MW 300 MWh Kalikiri APTRANSCO, 5, 10 | III.Audible Noise Primary equipment noise levels shall be as specified in the relevant equipment specifications. The Contractor shall limit the audible noise in various areas of the BESS buildings and Containers to the following values. • Inside battery containers or building - 90 dBA. | Noise level is guaranteed by the BESS OEMS at around 1 meter from the battery container; we will meet the 90dB level at 1m outside from the battery container; please confirm. | The audible noise levels for the BESS shall comply with the limits specified in the Technical Specifications for respective locations. In particular, the noise level of 90 dBA shall be met inside the battery container or building, as specified. Compliance at other locations (such as outside the container) shall be as per the applicable limits defined in the Technical Specifications. Accordingly, the provisions of the Bidding Document shall remain unchanged. |

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| 125 | Section Project _BESS 150 MW 300 MWh Kalikiri APTRANSCO, 6, 26, Page 27 of 52 | The BMS shall provide multilevel (module/rack/system) monitoring and control, including real time measurement and logging of key parameters such as SoC (State of Charge), SoH (State of Health), voltage, current, temperature, charge/discharge cycles etc. | Please note that the data logging facility shall be consider at EMS/ SCADA level however all the data will be made available by BMS for logging at SCADA. | The Battery Management System (BMS) shall provide comprehensive monitoring and data acquisition of all required parameters as specified in the Technical Specifications. The data shall be made available for logging and analysis at the EMS/SCADA level. The Contractor shall ensure that all required parameters are recorded, stored, and retrievable for operation, analysis, and performance evaluation as per specification requirements. Accordingly, the provisions of the Bidding Document shall remain unchanged. |
| 126 | Section Project _BESS 150 MW 300 MWh Kalikiri APTRANSCO, 6, 31 | 7.1.7 LT Switchgear for BESS Auxiliaries | The Contractor shall provide LT switchgear and associated systems for powering all auxiliary loads of the BESS, including battery cooling system, fire detection and suppression, lighting, control systems, communication systems, and other ancillary loads. The complete auxiliary power supply for the BESS installation shall be sourced through BESS Tie Transformer itself with no dependency on external auxiliary supply. As confirmed by the client during pre-bid meeting auxiliary power supply for the plant shall be provided by Employer at 33kV level and ELC need to arrange all the supporting system like MV feeder, aux traformer, LV cable and DB for distribution of the aux supply at the plant level; please confirm the same. If above is true, then auxiliary power will be external supply and not internal supply case. If above is not true than please provide the proposed aux SLD. | Please refer Sr. No. 8 of Amendment-III. |
| 127 | Section Project _BESS 150 MW 300 MWh Kalikiri APTRANSCO, 7.1.13, 34 | | As Battery Energy Storage System is prone to fire hazards, the contractor shall provide suitable means such as fire barrier between surrounding area and BESS to avoid fire spreading from BESS to surrounding area. The safety of the equipment / personnel related to BESS operations will be in the scope of the Contractor. Employer/Beneficiary will in no way be responsible for any loss/ damage due to any fire accidents. Kindly confirm the exact locations to be considered for these fire barriers. | The requirement for fire barriers and associated fire mitigation measures shall be as per the Technical Specifications and applicable safety standards. The exact locations, type, and extent of such fire barriers shall be finalized by the Contractor during detailed engineering, based on layout, equipment arrangement, fire risk assessment, and applicable statutory guidelines. The Contractor shall ensure that adequate measures are provided to prevent the spread of fire within the BESS installation and to surrounding areas. Accordingly, the provisions of the Bidding Document shall remain unchanged. |

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| Sr. No. | Clause No | Description as per Bid Document | Biidders Query | POWERGRID's Reply |
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| 128 | Section Project _BESS 150 MW 300 MWh Kalikiri APTRANSCO, 7.1.14, 35 | 7.1.14 UPS and / or DC system: • UPS system(s) and / or DC system of suitable rating shall be provided for the entire Battery Energy Storage System (BESS) plant for each location in the auxiliary/control room building. The UPS/DC shall be configured for full redundancy (2×100 %) to ensure that each unit can independently support the entire critical load in the event of failure of the other, enabling uninterrupted control power supply for critical systems of BESS, 33 kV Pooling switchgear, relays, and emergency lighting. UPS sizing including battery runtime, overload capacity etc. shall be finalized during detailed engineering based on actual critical loads, ambient conditions, and project requirements. | Please note that for battery container, UPS will be preinstalled by the OEM and redundant UPS can not be considered for battery container. Please confirm that it is not applicable for the battery and PCS. The UPS requirement as per Clause 7.1.14 will be followed for other packages of the project excluding Battery & PCS; please confirm. | The UPS/DC system requirements shall be as per the Technical Specifications for ensuring reliable and uninterrupted power supply to all critical loads of the BESS system. For battery containers and PCS, OEM-specific design provisions (including inbuilt power supply/UPS arrangements, if provided) may be considered; however, the Contractor shall ensure that the overall system meets the redundancy and reliability requirements specified in the Technical Specifications. Accordingly, the provisions of the Bidding Document shall remain unchanged. |
| 129 | Section Project _BESS 150 MW 300 MWh Kalikiri APTRANSCO, 7.12, 43 | 7.12 Safe Disposal of unit Batteries from the BESS | The Contractor 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 Contractor 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. Please note that we can not take this scope as we do not know about the then prevailing standards for recycling at the end of project life and recycling eco-system availability in Bharat. | Existings provisions of bidding documents shall prevail. |

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| 130 | Section Project _BESS 150 MW 300 MWh Kalikiri APTRANSCO | 7.14.1 Liquidated Damages (LD) Calculation w.r.t. Excess Auxiliary Consumption The actual Auxiliary Consumption of BESS during Charging/Discharging operation and idle state shall be measured during performance guarantee stage (trial run), and if the actual consumption is found to be more than that allowed consumption then the applicable LD amount (one time) shall be calculated with following formula: 1. LD for higher Auxiliary consumption (in ₹) during charging/ discharging = {Actual Loss (in kW) - 1.8% of BESS Power Capacity (in kW)} x INR 2,01,279/- 2. LD for higher Auxiliary consumption (in ₹) during idle state = {Actual Loss (in kW) - 0.2% of BESS Power Capacity (kW)} x INR 3,53,599/- | Please confirm that the auxiliary system loss will be measured over one charge- discharge cycle with idle period considered as one hour rest period between the charge and discharge operation; so total measurement period will be around 5 to 6 hours. | The methodology, duration, and operating conditions for measurement of auxiliary consumption (including charging, discharging, and idle conditions) shall be finalized during detailed engineering and performance testing procedures in consultation with the Employer. Any assumptions regarding fixed duration (such as one charge-discharge cycle with one-hour idle period) are indicative and shall be subject to finalization during performance testing. Accordingly, the provisions of the Bidding Document shall remain unchanged. |
| 131 | Section-Battery & Battery Management System (BMS), 41, 5 | 4.1 Sizing of BESS Systems Sizing of BESSs is related to the identification of one or more suitable duty cycles as specified elsewhere in the specification, which the BESS may typically have to perform at the primary PCC to meet its operational requirements taking into account also the maximum and minimum recovery time available to restore the BESS between the duty cycles. Depth of discharge of batteries, auxiliary power requirements, degradation etc. shall also be considered in BESS sizing so that performance criteria is met. | Please confirm whether BESS plant auxiliary consumption is to be considered in battery capacity sizing? We understand that the 300MWH is to be met at 33kV SWGR; please confirm. | The rated capacity of 150 MW / 300 MWh shall be achieved at the delivery point (33 kV switchgear) as specified in the Technical Specifications. Auxiliary power consumption shall be accounted separately and shall not form part of the specified output energy capacity at the delivery point. Accordingly, the provisions of the Bidding Document shall remain unchanged. |

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| Sr. No. | Clause No | Description as per Bid Document | Biidders Query | POWERGRID's Reply |
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| 132 | Section-Battery & Battery Management System (BMS) 5.1.2, 6 | Where appropriate, dc wiring shall be braced for available fault currents. Protection shall include a dc breaker, fuse, or other current-limiting device on the battery bus. This protection shall be coordinated with the PCS capabilities and battery string protection. The Contractor shall produce a fault analysis and protection coordination study for the battery dc subsystem during final design. The Employer reserves the right to withhold permission to ship the BESS until the fault analysis has been satisfactorily completed. | Protection at each individual rack/ string level will be ensured by fuses however coordination with PCS DC side fuses will be ensured. | The Contractor shall provide adequate DC protection for the battery system, including protection at rack/string level and at the system/PCS interface, in accordance with the Technical Specifications. The protection scheme may include fuses, DC breakers, or other suitable devices as per OEM design; however, proper coordination between battery, PCS, and overall system protection shall be ensured. The Contractor shall carry out detailed fault analysis and protection coordination studies for the DC subsystem during detailed engineering and submit the same for Employer's review. Accordingly, the provisions of the Bidding Document shall remain unchanged. |
| 133 | Section-Battery & Battery Management System (BMS) 5.4.3.1 and 5.4.3.2 | 5.4.3.1 Structure: All structural members shall be as per relevant IS standard and designing shall be done considering all load and safety requirements. The Contractor shall submit the reinforcement and other details calculations in support of the meeting the load capacity. It shall also comply site specific seismic requirements. The design of all modules and racks shall specifically account for the anticipated vibrations and shocks associated with the transportation of the BESS. 5.4.3.2 Thermal Insulation Between all external and internal surfaces of walls / roof / doors thermal insulation of Mineral wool or Rockwool (IS-8183) shall be provided considering fire safety and thermal insulation requirements. | Please note that most of the containers are imported and compliance to IS-8183 or other IS standard cannot be guaranteed. We would like to further mention that the battery container will be standard design and no OEM shall modify the design. | The battery container and associated structures shall comply with the requirements specified in the Technical Specifications, including applicable standards for structural design, thermal insulation, and safety. In case of standardized OEM designs, internationally accepted equivalent standards (IEC/ISO or equivalent) may be considered, subject to demonstrating compliance with the functional and safety requirements specified in the Technical Specifications. The Contractor shall ensure that the container design meets all requirements related to structural integrity, thermal insulation, fire safety, and site conditions. Accordingly, the provisions of the Bidding Document shall remain unchanged. |

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| 134 | Section-Battery & Battery Management System (BMS), 5.12, 14 | Contractor shall offer air conditioning system comprising of multiple air conditioning units working in conjunction, controlled by the Microprocessor based controller for desired operation. Calculation for designing shall be submitted for the approval of Employer considering heat dissipation requirement of BESS and external environmental conditions. All air-conditioning units shall be physically independent of each other, so that Problem/ fault in one of the units shall not hamper the working of other units. However, during such fault in any of the unit; the alternate unit(s) shall take over and continue to operate till the faulty unit is operational again. All units shall never start at the same time. If the condition is such that all units shall start together then internal time delay of at least 10 sec shall be provided in starting of each unit to avoid surge. | Please note that there is only one air conditioner inside the Battey container and chiller unit (which will also be single unit) will be standard OEM design without redundancy | The air conditioning system for the BESS shall be provided as per the requirements of the Technical Specifications, ensuring reliable and continuous operation under all operating conditions. For battery containers and associated systems, OEM-specific design provisions may be considered; however, the Contractor shall ensure that adequate redundancy or equivalent arrangement is provided to maintain required temperature conditions in the event of failure of any cooling unit. The overall system shall be designed such that failure of any single cooling unit shall not lead to unsafe operating conditions or impact on BESS performance and safety. Accordingly, the provisions of the Bidding Document shall remain unchanged. |
| 135 | Section Project, Table 1, Pg 9-10 | Two complete charge-discharge cycles per day for 12 years. Partial cycles shall also count as full cycle. | Counting partial charge/ discharge operations as full cycles is commercially and technically inconsistent with battery degradation principles and significantly increases lifecycle degradation risk. Kindly clarify degradation accounting methodology. | Please refer Sr. No. 1 of Amendment-III. |
| 136 | Section Project, Cl. 2.9.2, Pg 18 | Guaranteed Monthly System Availability applicable. | Kindly clarify exclusions applicable while like grid outage, force majeure, communication failure from SLDC, and planned shutdowns. | The Guaranteed Monthly System Availability shall be assessed as per the provisions of the Technical Specifications. Exclusions from availability calculation shall be limited to such cases as defined in the Contract, including grid unavailability and force majeure conditions. Accordingly, the provisions of the Bidding Document shall remain unchanged. |

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| 137 | Section-Project, 2.7 (Models/studies); 10.0 | Provide PSSE v36 & PSCAD v5 models; grid compliance studies; submit within 3 months of LoA. | Availability of OEM EMT models and SLDC study windows may exceed 3 months. Also, required technical data of high voltage system to be provided by client, as it is not part of bidder's scope. | The Contractor shall submit PSSE and PSCAD models along with grid compliance studies within the stipulated timeframe as specified in the Technical Specifications. The Contractor shall coordinate with OEMs and relevant authorities to obtain necessary models and data in a timely manner. Relevant grid data required for carrying out studies shall be made available by the Employer/concerned utility to the extent available. In case of any constraints related to availability of OEM models or study windows with SLDC, the same shall be appropriately coordinated and finalized during project execution without impacting overall project timelines. Accordingly, the provisions of the Bidding Document shall remain unchanged. |
| 138 | Section Project, Cl. 2.2, Pg 13 | Control room building shall be provided for the BESS installation, which shall accommodate Battery Management Systems (BMS), Energy Management System (EMS), SCADA, communication equipment, UPS and other common auxiliary systems required for operation and monitoring. The control room shall also include Operator Workstations (OWS) and Engineering Workstations (EWS) for local monitoring, control, diagnostics, and facilities/ gateways required for integration with the plant's existing control architecture. | Please provide location of control room building for checking required cable length. | The control room building shall be located within the project site as per the overall layout to be finalized during detailed engineering. The exact location, routing, and lengths of cables shall be considered by the Contractor based on site conditions, equipment layout, and their proposed design. The Contractor may make suitable assumptions for estimation purposes. No additional cost shall be considered on account of variation in cable lengths. Accordingly, the provisions of the Bidding Document shall remain unchanged. |
| 139 | Section Project, Cl. 2.1, Pg 11 | The Contractor shall be responsible for implementing comprehensive fire protection and safety measures for the BESS installation/operation, in accordance with the provisions of the applicable State/Central statutory rules/ regulations. Fire Hydrant System, including water supply and storage arrangements, shall be supplied & installed by the contractor for the BESS area, and necessary approval shall be obtained from the appropriate authority of Andhra Pradesh. | Kindly confirm, For BESS container sprinkler system, any dedicated water collection pit to be provided to store the contaminated water. Or it can be directly connected with the natural drain provided inside the BESS area. | The fire protection system, including drainage and disposal of firefighting water, shall be designed and implemented by the Contractor in accordance with applicable statutory regulations, environmental norms, and best engineering practices. The Contractor shall ensure that any contaminated firefighting water is handled, treated, or disposed of appropriately in compliance with applicable environmental regulations. Direct discharge of contaminated water into natural drains shall not be permitted unless specifically allowed by statutory authorities. The requirement of collection pits, containment arrangements, or treatment systems shall be finalized by the Contractor during detailed engineering based on regulatory requirements and site conditions. Accordingly, the provisions of the Bidding Document shall remain unchanged. |

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| 140 | (PCS Specification, Clause 2(v)(a), Pg. 5 of 11) | BESS shall support black start operation. | Kindly clarify minimum black start duration, critical load support requirement, synchronization sequence, and islanding philosophy. | <p>The BESS shall be capable of black start operation as per the requirements specified in the Technical Specifications.</p> <p>The detailed black start philosophy, including minimum duration, critical load support, synchronization sequence, and islanding operation, shall be finalized by the Contractor during detailed engineering based on system design, operational requirements, and applicable grid regulations, in consultation with the Employer.</p> <p>The Contractor shall ensure safe and reliable black start capability, including provision of adequate auxiliary power supply, control systems, and synchronization arrangements.</p> <p>Accordingly, the provisions of the Bidding Document shall remain unchanged.</p> |
| 141 | 01_Attachment-3(QR) Clause No.2 (2.2 Route 2) (ii) Technical Experience Requirements | <p>Bidder should have technical collaboration agreement/ Manufacturing license with a Battery Manufacturer meeting the requirements stipulated at Clause 1.2 (i) above.</p> <p>In case of technical collaboration /license, bidder shall furnish along with the bid a copy of such license / collaboration agreement done with the battery manufacturer and such agreement/license should be valid as on the originally scheduled last date of bid submission.</p> | <p>Clause 1.2 related to Battery Manufacturing / Technical Collaboration requirements:</p> <p>1.Please clarify whether the Technical Collaboration Agreement / Manufacturing License Agreement as per Clause 1.2 may be executed with an international battery manufacturer meeting the qualification requirements of Clause 1.2(i), or whether such collaboration is restricted only to domestic/Indian manufacturers.</p> <p>Further, please confirm whether such Technical Collaboration Agreement / Manufacturing License Agreement is required to be executed and submitted along with the bid prior to the bid submission deadline.</p> <p>2.In case bidder enters into a valid Technical Collaboration / Manufacturing License Agreement with a qualified battery manufacturer, please clarify whether bidder's own financial credentials and financial statements may be considered for meeting the bidder's financial qualification requirements.</p> <p>3.Please clarify whether any minimum equity participation, shareholding pattern, joint venture structure, or ownership stake is mandatory between the bidder and the battery manufacturer under the Technical Collaboration / Manufacturing License arrangement.</p> <p>4.Please confirm whether the bidder is permitted to enter into collaboration with Indian battery manufacturing companies under Clause 1.2.As per Clause 1.2(i), the bidder must have manufactured and supplied at least 50 MWh of batteries (of the same technology offered in the bid) cumulatively during the last seven (7) years, out of which at least 10</p> | <p>1. The Technical Collaboration Agreement / Manufacturing License Agreement as per Clause 1.2 may be executed with any battery manufacturer meeting the qualification requirements specified in Clause 1.2(i), irrespective of whether the manufacturer is domestic or international, subject to compliance with applicable statutory and bidding document provisions. The same shall be valid and submitted along with the bid as per the requirements of the Bidding Document.</p> <p>Accordingly, the provisions of the Bidding Document shall remain unchanged.</p> <p>2. Financial qualification requirements shall be met independently by the Bidder in accordance with the provisions of the Bidding Document. The Technical Collaboration / Manufacturing License Agreement with a battery manufacturer shall not be considered for meeting the Bidder's financial qualification requirements.</p> <p>Accordingly, the provisions of the Bidding Document shall remain unchanged.</p> <p>3. The Technical Collaboration / Manufacturing License arrangement shall ensure compliance to provisions of bidding documents.</p> <p>4. The Bidder is permitted to enter into technical collaboration with Indian or international battery manufacturers meeting the qualification requirements specified in Clause 1.2(i).</p> <p>The qualification requirements are intended to ensure that the offered battery technology has demonstrated performance and operational track record, and shall remain as specified in the Bidding Documents.</p> <p>5. The basic intent of entering into Technical Collaboration / Manufacturing</p> |

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| | | | <p>MWh capacity must be in satisfactory operation as on the originally scheduled last date of bid submission. However, presently only a limited number of companies satisfy the above qualification criteria, and many such qualified suppliers have significantly higher commercial pricing, which may substantially increase the overall bid cost. In this regard, we request clarification on the intent and flexibility of the qualification requirement.</p> <p>5. Additionally, kindly clarify whether execution of the Technical Collaboration Agreement mandatorily requires procurement of batteries exclusively from the collaborating manufacturer, or whether the agreement is intended only for qualification purposes.</p> <p>6. Further, considering the bid submission deadline of 04 June 2026 and the additional time required for preparation of bids, collection of supporting documents, and completion of internal approvals, we request you to kindly consider extension of the bid submission timeline to enable wider participation and competitive bidding.</p> | <p>License Agreement is to manufacture and supply the Batteries based on the credentials of the collaborator/licensor. Accordingly, the bidder shall be required to source batteries from such manufacturing facilities owned by the bidder.</p> <p>6. Bidders may refer to any corrigendum/addendum issued by the Employer regarding extension of bid submission timelines.</p> <p>At present, the provisions of the Bidding Document shall remain unchanged.</p> |
| 142 | 01_Attachment-3(QR), Clause No.2 (2.2 Route 2) (ii), Technical Experience Requirements | Whether a legally enforceable undertaking jointly with the Collaborator(s) / Licensor as per the prescribed format provided at Section-VI in Volume-I of the bidding documents, jointly executed by the license provider/ technology collaborator has been attached with the bid. | The bid requires submission of a legally enforceable undertaking jointly executed with the Collaborator(s) / Licensor, as per the prescribed format referred to under Section-VI of Volume-I of the bidding documents. However, the referred prescribed format for such undertaking does not appear to be enclosed/available in the tender documents published by PGCIL. In view of the above, we request PGCIL to kindly provide the prescribed format or clarify whether bidders may submit the undertaking in their own mutually agreed format covering the requisite scope and commitments as envisaged under the tender conditions. | Please refer Amendment-I |
| 143 | Technical Specifications, RTE : Clause 2.9.4 2.9.4 Guaranteed Roundtrip Efficiency, | The Contractor shall Guarantee AC to AC Round trip Efficiency (RtE) of the BESS on monthly basis for BESS. In this regard, the RtE for BESS shall remain at or above 87% from beginning till end of life i.e.; throughout the tenure of the contract. | The tender calls for 87% RTE (AC to AC, at 33KV interconnection point) throughout the project life. Whereas Battery RTE changes as it degrades. Can PGCIL consider variation in RTE across project life? Say 86% at COD and 85% in year 12? Please clarify. | The Contractor shall guarantee AC-to-AC Round Trip Efficiency (RtE) of the BESS as specified in the Technical Specifications, and the RtE shall remain at or above the stipulated value throughout the contract period. Accordingly, variation in guaranteed RtE over the project life is not permitted, and the provisions of the Bidding Document shall remain unchanged. |

Clarification-II dated 04/06/2026 to the Bidding Document for Package AP-BESS-01 for Design, Supply, Erection, Testing & Commissioning of 150 MW/ 300MWh Battery Energy Storage System at Kalikiri, Andhra Pradesh under "Setting up of 1,000 MW/2,000 MWh Battery Energy Storage System (BESS) in Andhra Pradesh Under Tariff-Based Competitive Bidding with Viability Gap Funding supported through PSDF". Spec. No.: CC/T/W-BESS/DOM/A10/26/07004

| Sr. No. | Clause No | Description as per Bid Document | Biidders Query | POWERGRID's Reply |
|---------|---|--|--|--|
| 144 | Technical Specifications, Clause 7.14.1 Liquidated Damages (LD) Calculation w.r.t. Excess Auxiliary Consumption | The actual Auxiliary Consumption of BESS during Charging/Discharging operation and idle state shall be measured during performance guarantee stage (trial run), and if the actual consumption is found to be more than that allowed consumption then the applicable LD amount (one time) shall be calculated with following formula: 1. LD for higher Auxiliary consumption (in ₹) during charging/ discharging = {Actual Loss (in kW) - 1.8% of BESS Power Capacity (in kW)} x INR 2,01,279/- 2. LD for higher Auxiliary consumption (in ₹) during idle state = {Actual Loss (in kW) - 0.2% of BESS Power Capacity (kW)} x INR 3,53,599/- | Tender states 1.8% during Charge / discharge and 0.2% during idle state. Typically Aux power is calculated as energy in KWh as % of energy throughput, either on per cycle or per day or per month or per year basis. In this formula, it is mentioned in KW and not KWh Question 1: How will battery degradation across various years be accounted Question 2: How will the seasonal variation (changes in ambient temperature and hence its impact on aux power) be accounted across seasons Question 3: If the BESS takes some time to settle down, the Aux test at any given instant (and multiplying by the energy difference across lifetime) could be misleading. Can we average the BESS Aux power across any defined period, and consider deviation from pre-set values, for aux related penalty | The auxiliary power consumption for BESS shall be measured during the Performance Guarantee (trial run) stage as specified in the Technical Specifications. The limits for auxiliary consumption (in % of BESS power capacity) are defined in terms of BESS Power (kW) Capacity for the purpose of standardization and comparison across bidders. The Contractor shall design the system considering degradation effects, ambient conditions, and operational variations to ensure compliance with the specified auxiliary consumption limits. Seasonal variations, system stabilization, and operational conditions shall be inherently accounted for by the Contractor in the system design. Averaging or normalization of auxiliary consumption over extended periods beyond the defined performance testing conditions shall not be considered. Accordingly, the provisions of the Bidding Document shall remain unchanged. |
| 145 | General | | Distance for 33KV Cable : They verbally mentioned some 600 to 700m running length for cable routing - Can this be clarified? | Two (2) Nos. of land parcels measuring 4.23 Acre & 3.07 Acre would be offered for the BESS project is at indicative distance of about 700-850 metres from the 33 kV yard of APTRANSCO within the 400/220 kV susbtation. The stated distance is tentative and may vary during finalization of cable routing and detailed engineering. |
| 146 | General | | Fault level on 33KV Bus at their interconnecting substation - This value is not available in the SLD - we need this for earthing and cable ampacity design Please clarify. | Please refer Sr. No. 1 of Amendment-III |
| 147 | | Rationalization of Comprehensive Maintenance Charges | As per industry practices observed in transmission, solar, and EPC infrastructure projects, the Comprehensive Maintenance (CM) component generally ranges between 3.5% to 5% of the project value for 10 years depending upon project scope and risk allocation. However, in long-duration BESS projects, higher Comprehensive Maintenance requirements result in substantial working capital blockage for contractors due to long-term bank guarantee commitments, spare inventory provisioning, manpower retention, insurance obligations, and financing costs over the maintenance period. | Existing provisions of bidding documents shall remain unchanged |

Clarification-II dated 04/06/2026 to the Bidding Document for Package AP-BESS-01 for Design, Supply, Erection, Testing & Commissioning of 150 MW/ 300MWh Battery Energy Storage System at Kalikiri, Andhra Pradesh under "Setting up of 1,000 MW/2,000 MWh Battery Energy Storage System (BESS) in Andhra Pradesh Under Tariff-Based Competitive Bidding with Viability Gap Funding supported through PSDF". Spec. No.: CC/T/W-BESS/DOM/A10/26/07004

| Sr. No. | Clause No | Description as per Bid Document | Bidders Query | POWERGRID's Reply |
|---------|-----------------------------------|--|---|---|
| 148 | Volume-I / Annexure-A to BDS | 1.0 Technical Experience 1.1 Route: 1 ii. Supplied, Erected, Tested & Commissioned, as a Prime Contractor, a project(s) of Solar/ Wind Power Plant having cumulative capacity of 50MW or more in India with minimum capacity of 10 MW for each Solar/ Wind Power plant. | Bidder, as the Prime Contractor, has commissioned the Balance of System (BoS) package for a Solar Power Plant wherein the Solar Modules were supplied free of cost by the Customer. In this regard, please clarify whether such experience of the bidder shall be considered as meeting the QR condition under Route-1 (ii). | Provisions of specified QR are amply clear. |
| 149 | GCC | 10.11 For the purpose of the Contract, it is agreed that the Contract Price specified in Article 2(Contract Price and Terms of Payment) of the Contract Agreement is based on the taxes, duties, levies and charges prevailing at the date seven (07) days prior to the last date of bid submission (hereinafter called "Tax" in this GCC Sub-clause 10.7). If any rates of Tax are increased or decreased, a new Tax is introduced, an existing Tax is abolished, or any change in interpretation except for classification related purpose, or application of any Tax occurs in the course of the performance of the Contract, duties & levies applicable locally. | Kindly consider 30 days prior to Bid submission date instead of 7 days | Provisions of bidding documents shall remain unchanged. |
| 150 | Section 1 TECHNICAL SPECIFICATION | 8.0 QUALIFYING REQUIREMENT OF SUB-CONTRACTOR OR SUPPLIER a. Battery Manufacturer for BESS Battery System (Qualifying Requirement for bidder qualifying through Route 1) The battery manufacturer must have manufactured and supplied at least 50 MWh of batteries (of the technology which has been offered in the bid) cumulatively during last three (3) years in stationary grid applications as on issuance of NoA. | OEMs with cumulative 50 MWh of Battery Manufacturer relevant to BESS domain is hardly available. In order to avoid monopoly and in relevance to the prevailing guidelines for local content , we request the Employer to consider lesser capacity (25 MWhr) | Existing provisions of bidding documents shall remain unchanged |

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| Sr. No. | Clause No | Description as per Bid Document | Biidders Query | POWERGRID's Reply |
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| 151 | Section 1 TECHNICAL SPECIFICATION | The scope of works of this specification covers setting up of BESS at selected substation of APTRANSCO in Andhra Pradesh. The BESS also termed as "Project" shall include Battery System, Power Conversion System (PCS), PCS Transformers (as per Contractor's design) and Interconnection with 33 kV MV bus developed by APTRANSCO | Bidder understands that the 33kV MV bus by APTRANSCO will be made ready atleast 60 days prior to the BESS plant readiness timelines. If any delay in 33kV MV bus availability due to reasons not attributable to the contractor. | The bidder, in the event of contract, shall ensure completion of works as per agreed schedule in line with the provisions of contract documents. |
| 152 | Section 1 TECHNICAL SPECIFICATION | Output/Input Power Rating of BESS at the delivery point (Power Capacity of Project)# 150 MW Initial Design Output Energy Capacity of BESS at the delivery point* - 300 MWhr | Output / Input Power rating of BESS at the delivery point is mentioned. Bidder understands that the 150MW and 300MWhr against Power availability specified here indicates power available at the Commissioning and subject to degradation during the O&M period, as specified in the tender. Pl confirm Bidder understanding. | The specified Output/Input Power Rating (150 MW) and Energy Capacity (300 MWh) correspond to the rated/design capacity at the Delivery Point at the time of Commissioning (COD). The battery degradation over the O&M period is inherent, the Contractor is required to meet the Guaranteed Dispatchable Capacity as specified in the Technical Specifications throughout the Contract Period. Any degradation shall be within the stipulated limits, and the Contractor shall ensure compliance with the minimum capacity requirements (year-wise) through appropriate system design, augmentation, or replacement at their own cost. |
| 153 | Section 1 TECHNICAL SPECIFICATION | General | Bidder request to clarify on the list of approvals in Employer and Bidder scope | Existing provisions of bidding documents shall remain unchanged |
| 154 | Section 1 TECHNICAL SPECIFICATION | q) Contractor shall also comply with the requirements of relevant authority regarding charging and synchronization. | The Employer shall take all the relevant approvals and compliances in relevance to inclusion & interconnectivity of BESS in the existing SS. While all approvals relevant for BESS plant commissioning such CEIG approval, Safety clearance will be obtained by the Bidder | Existing provisions of bidding documents shall remain unchanged |
| 155 | Section 1 TECHNICAL SPECIFICATION | w) All preventive and annual maintenance activities, up to and including the 33 kV pooling switchgear, shall be in the Contractor's scope for the entire contract period. | 33kV Pooling Switchgear where the BESS will be interconnected will be provided by APTRANSCO as per the scope of work and delivery point. Hence, request the Employer to remove the scope of maintenance during O&M period for 33kV switchgear | Please refer Sr. No. 2 of Amendment-III. |
| 156 | Section 1 TECHNICAL SPECIFICATION | 2.2 Civil works b) The scope of civil work shall include but shall not be limited to the following based on design and drawings developed by the contractor: a) Dismantling of existing structure (if any) on plot area | We request the Employer to take necessary approvals or arrange necessary permissions relevant to removal of existing structures if any as its an existing SS of APTRANSCO. (Or) Hinderance free area to be provided by the Employer to the Bidder to commence the works. | Land shall be handed over on an "as-is-where-is" basis, and the Bidder shall be deemed to have satisfied itself, through its own independent investigations and site visit, regarding all relevant site conditions that may affect the execution of the Works. Accordingly, the provisions of the Bidding Document shall remain unchanged. |

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| Sr. No. | Clause No | Description as per Bid Document | Biidders Query | POWERGRID's Reply |
|---------|---|---|--|--|
| 157 | Section 1 TECHNICAL SPECIFICATION | e) Site Preparation: Site grading including slope protection, ground preparation/filling/levelling (if required), Ground improvement (if required) of the identified area. | We request the Employer to share the existing SS and outdoor switchgear ground preparation details and slope protection activities performed. Also, we request the Employer to mandate and include relevant drawings as a part of tender to have a level palying field among the bidders | The Bidder shall carry out detailed geotechnical investigations and site contouring to establish the requirements for ground improvement, site grading, and slope protection based on the investigation reports. Bidder shall be deemed to have satisfied itself, through its own independent investigations and site visit, regarding all relevant site conditions that may affect the execution of the Works. Accordingly, the provisions of the Bidding Document shall remain unchanged. |
| 158 | Section 1 TECHNICAL SPECIFICATION | f) FGL (Finished Ground Level) shall be at least 300 mm higher than the highest flood level (HFL) of the site. If HFL is not available, then nearby road level shall be assumed as HFL. Contractor shall submit the FGL level for Employer's approval based on the approved contour level drawing, site HFL data, topography of land and natural drainage. HFL data is required to be arranged by contractor | Bidder request to share relevant Hydrology report and flood study report for the past 25 years of that region. | As per the Technical Specifications, determination of Highest Flood Level (HFL) and corresponding Finished Ground Level (FGL) forms part of the Contractor's scope of work. The bidder shall carry out necessary site assessments, surveys, hydrological studies, and investigations, including collection of relevant historical data from appropriate sources, to establish HFL and design FGL accordingly. |
| 159 | Section 1 TECHNICAL SPECIFICATION | 9. Bore well and pumps for water supply are in the scope of Contractor meeting the day-to-day requirement of the water supply. | We request the Employer to consider limiting the Capex cost as there is an existing SS and Borwells may be existing. The same can be used as water source by extending the water supply and pumping requirements as an extended set up for O&M purpose. Also, please confirm if we can use the Existing Fire Hydrant system for PTx and extend the same for BESS plant provided the pumping requirements and pressure is technically feasible for extension | As per the provisions of the bidding document, provision of water supply system, including source development (such as borewell), pumps, storage, and associated infrastructure to meet construction and O&M requirements, shall be entirely in the scope of the Contractor. The Contractor shall carry out necessary assessment, design, and execution to ensure adequate and reliable water supply under all operating conditions for the project. Accordingly, the provisions of the bidding document shall remain unchanged. |
| 160 | Section 1 TECHNICAL SPECIFICATION | 2.8 Spares 2.8.1 General The spare parts and maintenance accessories shall be classified into the following: a) Availability Spares | We request the Employer to quantify the same in the Annexure similar to Mandatory Spares. As per clause 2.8.2 Availability Spares and Optional Spares intends a similar scope. Pl clarify and differentiate both. | The bidder shall be responsible for maintaining adequate spares to ensure system availability as specified in the bidding documents. |
| 161 | Section 1 TECHNICAL SPECIFICATION | 2.9.4 Guaranteed Roundtrip Efficiency The Contractor shall Guarantee AC to AC Round trip Efficiency (RtE) of the BESS on monthly basis for BESS. In this regard, the RtE for BESS shall remain at or above 87% from beginning till end of life i.e.; throughout the tenure of the contract. | We request the Employer to consider RTE % as 83% minimum as per standard industrial practice | Existing provisions of bidding documents shall remain unchanged |

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| Sr. No. | Clause No | Description as per Bid Document | Biidders Query | POWERGRID's Reply |
|---------|-------------------------------------|--|---|---|
| 162 | Section 1 - Technical specification | 2.9.3 Guaranteed Dispatchable Capacity Taking into consideration capacity degradation, Contractor shall warrant and guarantee that BESS, once fully charged, shall be capable of delivering Energy Capacity at or above the "Guaranteed Dispatchable Capacity" for the full range of environmental conditions at the project site as per Table below at the Delivery point throughout the Contract Period individually for BESS | As per standard industrial practice we request you to consider the YoY degradation as 3% instead of 2.5% | Existing provisions of bidding documents shall remain unchanged |
| 163 | Section 1 - Technical specification | 2.9.6 Claim Procedure If the Liquidated Damage payment is not received from Contractor within One months from date of invoicing, then Employer is entitled to deduct the pending amount from the CPG available with the Employer | Liquidated Damages shall be discussed and there should be a mechanism involved rather than deduction in case of any conflicts between the Employer and Contractor for the LD. There should be a cure period of 3 months defined before deduction of LD. | Provisions of bidding documents shall remain unchanged. |
| 164 | Section 1 - Technical specification | 2.9.7.1 LD Calculation w.r.t. Guaranteed Monthly System Availability LD for shortfall in monthly System Availability (in ₹) = (A - B) x 0.022 E | We request the Employer to consider the System Availability to be measured on an annual basis. During O&M, if there are any rectification or defects or any maintenance to be carried out it may take some weeks to resolve. In such scenario that particular month's Guaranteed Availability may not be achieved as required. Hence, we request the Employer to consider Annual Guaranteed Availability while evaluating the LD. Further the LD levied are calculated generally on the basis of scheduled injection of MUs from the BESS system. Hence, we request you to calculate the LD on the revenue lost in actuals due to non-availability | Existing provisions of bidding documents shall remain unchanged |

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| Sr. No. | Clause No | Description as per Bid Document | Bidders Query | POWERGRID's Reply |
|---------|-------------------------------------|---|---|--|
| 165 | Section 1 - Technical specification | 2.9.7.2 Liquidated Damages Calculation w.r.t. Guaranteed Roundtrip Efficiency: Liquidated damages on account of shortfall in meeting the Monthly Guaranteed RtE mentioned in 2.9.4 shall be as follows: a) For RtE < 72%, there shall be a liquidated damage @ Average Power Purchase Cost (APPC) tariff (including transmission charges) at Andhra Pradesh state level of all DISCOMs, of previous financial year of the Discoms of excess conversion losses considering system RtE = 87% and Comprehensive Maintenance charges for the corresponding month shall not be made to the Contractor. | In relevance to the standard industry practice and in lieu of fair approach to the LD levied, we request you to consider that the LD will be based on the APPC tariff and Part 2 - Not paying the Comprehensive maintenance charges for the corresponding month to be removed. Also, we request please specify the average APPC tariff rates for the last 10 years for understanding the impact and estimate. | Existing provisions of bidding documents shall remain unchanged |
| 166 | Section 1 - Technical specification | 2.9.7.2 Liquidated Damages Calculation w.r.t. Guaranteed Roundtrip Efficiency: Liquidated damages on account of shortfall in meeting the Monthly Guaranteed RtE mentioned in 2.9.4 shall be as follows: b) For $72\% \leq \text{RtE} < 87\%$, there shall be a liquidated damage levied @ APPC tariff (including transmission charges) at Andhra Pradesh state level of all DISCOMs, of previous financial year of the Discoms of excess conversion losses considering system RtE = 87% | We request please specify the average APPC tariff rates for the last 10 years for understanding the impact and estimate. | The Average Power Purchase Cost (APPC) tariff is determined annually by the Andhra Pradesh Electricity Regulatory Commission (APEREC) based on the actual procurement cost of DISCOMs for the respective financial year. Bidders are advised to refer to the relevant APERC Tariff Orders / regulatory publications for indicative APPC values and undertake their own assessment for estimating financial impact. Accordingly, the provisions of the bidding document shall remain unchanged. |
| 167 | Section 1 - Technical specification | 2.9.7 Liquidated Damages Calculation 2.9.7.1 LD Calculation w.r.t. Guaranteed Monthly System Availability 2.9.7.2 Liquidated Damages Calculation w.r.t. Guaranteed Roundtrip Efficiency | Overall Cap for Liquidated Damages for the Guaranteed Generation is not defined. We request the Employer to consider the Overall Cap for BESS Performance shall be Cumulative 15% of the Total BESS CV. | Existing provisions of bidding documents shall remain unchanged |

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| Sr. No. | Clause No | Description as per Bid Document | Biidders Query | POWERGRID's Reply |
|---------|-------------------------------------|---|--|--|
| 168 | Section 1 - Technical specification | <p>7.14.1 Liquidated Damages (LD) Calculation w.r.t. Excess Auxiliary Consumption: The actual Auxiliary Consumption of BESS during Charging/Discharging operation and idle state shall be measured during performance guarantee stage (trial run), and if the actual consumption is found to be more than that allowed consumption then the applicable LD amount (one time) shall be calculated with following formula:</p> <p>1. LD for higher Auxiliary consumption (in ₹) during charging/discharging = {Actual Loss (in kW) - 1.8% of BESS Power Capacity (in kW)} x INR 2,01,279/-</p> <p>2. LD for higher Auxiliary consumption (in ₹) during idle state = {Actual Loss (in kW) - 0.2% of BESS Power Capacity (kW)} x INR 3,53,599/-</p> | <p>LD for Auxiliary consumption is mentioned as one time during Trial run. However, once the LD for auxiliary consumption is paid at the beginning of the O&M period during trial run, we request you to eliminate this impact on the RTE while evaluating the RTE% achieved. Since, Separate LD on account of excess auxiliary consumption shall not be applicable as it would get reflect in shortfall in RTE (with auxiliary consumption).</p> | <p>Existing provisions of bidding documents shall remain unchanged</p> |
| 169 | Section 1 - Technical specification | <p>General</p> | <p>Please share the following details for assesment and for appropriate design of civil works:</p> <ol style="list-style-type: none"> 1. Geo Tech report of the proposed area and or SS 2. Topography survey of the overall layout 3. Vicinity map where the BESS area will be provided to the contractor with coordinates 4. Access roads indicated in the vicinity map 5. Hydrology Report 6. Ground improvement performed in the existng substation. Pl confirm if any rock breaking activities are required. 7. Existing Cable Trenches / Cable Crossings and Road crossings in the proposed area. 8. Along with the SLD share the overall indicative layout of the SS with area marked for SS | <p>As per the provisions of the bidding document, the Contractor shall be responsible for carrying out detailed site investigations, surveys, and studies, including but not limited to geotechnical investigation, topographic survey, hydrological assessment, and identification of existing underground/overground utilities, required for proper design and execution of the project.</p> <p>Bidders are advised to visit the site and satisfy themselves regarding site conditions, topography, soil characteristics, access, and existing infrastructure before submission of bids.</p> |
| 170 | Section 1 - Technical specification | <p>General</p> | <p>Kindly share the short circuit current rating in the SLD</p> | <p>Please refer Sr. No. 1 of Amendment-III.</p> |

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| Sr. No. | Clause No | Description as per Bid Document | Biidders Query | POWERGRID's Reply |
|---------|---|--|---|--|
| 171 | Addendum SPECIFIC REQUIREMENT'S (Section- Project) C/ENGG/SPEC/SEC-PROJECT/SPECIFIC REQUIREMENT REV NO 10 | <p>Clause 2.1 (a) "All equipment/materials/items, as per Annexure-K (Rev 01), as applicable under present scope of works, shall be procured and supplied from domestic manufacturers only with Minimum Local Content for individual items as listed in the above annexure.</p> <p>Any imported equipment/material/item/parts/component (comprising of embedded systems) to be supplied under the contract shall be tested in the certified laboratories to check for any kind of embedded malware/trojans/cyber threats and for adherence to Indian Standards as per the directions issued by Ministry of Power/Govt. of India from time to time. In case of such import from specified "prior reference" countries, the requirement of prior permission from the Govt. of India including protocol for testing in certified and designated laboratories by Ministry of Power/Govt. of India shall also be complied with by the contractor.</p> <p>The bidder/contractor shall list out the products and components producing Toxic e-waste under the contract and shall furnish to the Employer the procedure of safe disposal at the time of closing of the contract."</p> | <p>In reference to this clause - "all equipments shall be manufactured domestically and minimum local content requirement for Class I and Class II local supplier" and "Qualifying requirements for Battery manufacturer under technical specification", the Qualifying requirements for Battery manufacturer are so stringent, for such capacity of cumulative 50 MWhr with domestic content will not be available as the cells are not predominantly available in India. Hence the Qualifying requirement to be reduced to 25 MWhr instead of 50 MWhr.</p> <p>Also, Annexure K as per this clause is not shared. Please share the same.</p> | Existing provisions of bidding documents shall remain unchanged |
| 172 | | <p>2.8 Spares</p> <p>2.8.1 General</p> <p>b)</p> <p>Mandatory Spares (if specified in BPS), Testing & Maintenance equipment (if specified in BPS) in addition to (a) above</p> | There is no Mandatory Spare List available in the schedule. Please share the same. | The bidder shall be responsible for maintaining adequate spares to ensure system availability as specified in the bidding documents. |

Clarification-II dated 04/06/2026 to the Bidding Document for Package AP-BESS-01 for Design, Supply, Erection, Testing & Commissioning of 150 MW/ 300MWh Battery Energy Storage System at Kalikiri, Andhra Pradesh under "Setting up of 1,000 MW/2,000 MWh Battery Energy Storage System (BESS) in Andhra Pradesh Under Tariff-Based Competitive Bidding with Viability Gap Funding supported through PSDF". Spec. No.: CC/T/W-BESS/DOM/A10/26/07004

| Sr. No. | Clause No | Description as per Bid Document | Bidders Query | POWERGRID's Reply |
|---------|-----------|---|--|---|
| 173 | | General | Please share the Site investigation report and observations | As per the provisions of the bidding document, the Contractor shall be responsible for carrying out detailed site investigations, surveys, and studies, including but not limited to geotechnical investigation, topographic survey, hydrological assessment, and identification of existing underground/overground utilities, required for proper design and execution of the project. Bidders are advised to visit the site and satisfy themselves regarding site conditions, topography, soil characteristics, access, and existing infrastructure before submission of bids. |
| 174 | | General | Please confirm if the 33kV swithyard is outdoor or indoor where the BESS has to be included | Existing provisions of bidding documents shall remain unchanged |
| 175 | | Clause 7.14.1 of the Technical Specifications | <p>Clause 7.14.1 of the Technical Specifications stipulates an allowable auxiliary consumption limit of 1.8% of BESS Power Capacity during charging/ discharging operation, beyond which liquidated damages are applicable.</p> <p>We respectfully submit that for utility-scale BESS projects, auxiliary consumption is influenced by multiple factors including ambient temperature, thermal management requirements, HVAC operation, EMS/SCADA systems, fire protection systems, communication equipment, battery chemistry, operating profile, and OEM- specific design considerations. The climatic conditions at the project site may further increase auxiliary power requirements, particularly during high-temperature periods.</p> <p>Further, it is observed that in recent NTPC standalone BESS tenders, a significantly higher allowance has been considered while evaluating auxiliary consumption and system losses. In certain utility-scale BESS procurements, the permissible margin available for auxiliary consumption and associated operational losses is effectively in the range of approximately 5%, recognizing the practical operating requirements of large-scale BESS installations and variations across technology platforms. Considering prevailing industry practices, OEM operating characteristics, and the need to ensure wider participation from globally qualified BESS suppliers, the presently stipulated limit of 1.8% appears to be highly restrictive and may unnecessarily constrain technology selection and project optimization.</p> <p>Accordingly, we request POWERGRID to kindly revise the allowable</p> | Existing provisions of bidding documents shall remain unchanged |

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| | | | <p>auxiliary consumption limit during charging/ discharging operation from 1.8% to 2.8% of BESS Power Capacity. The proposed value remains significantly more stringent than the allowances considered in comparable utility-scale BESS tenders while providing a reasonable operating margin for efficient and reliable system operation under varying site conditions.</p> <p>This modification would encourage broader competition, facilitate adoption of proven utility-scale BESS technologies, and ensure successful project implementation without materially affecting the overall performance objectives of the project.</p> | |
| 176 | | Rationalization of Performance Guarantee LD Rates | <p>We note that the applicable liquidated damages associated with auxiliary consumption performance guarantees are extremely high and may result in disproportionate commercial exposure compared to the actual impact on project performance.</p> <p>Considering the evolving nature of utility-scale BESS technology, dependence of auxiliary consumption on environmental and operating conditions, and the fact that the project already incorporates multiple performance guarantees, availability guarantees, dispatchable capacity guarantees and efficiency requirements, the current LD rates appear excessive relative to the associated commercial risk.</p> <p>Accordingly, we request POWERGRID to kindly review and rationalize the applicable performance guarantee LD rates. We specifically request that the LD rates associated with auxiliary consumption performance guarantees be reduced substantially and capped at one-tenth (1/10th) of the presently specified values, or alternatively be revised to levels commensurate with the actual economic impact of such losses.</p> <p>Such a revision would establish a more balanced risk allocation framework, encourage wider participation from leading BESS technology providers, and ultimately result in more competitive pricing for the project while preserving the intended performance objectives.</p> | Existing provisions of bidding documents shall remain unchanged |

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| 177 | | Allocation of Land Parcel | <p>We understand that approximately 4.71 acres of land is proposed to be made available for development of the BESS facility. To facilitate optimal project layout, equipment placement, statutory fire safety clearances, future augmentation requirements, construction logistics, and long-term operation and maintenance activities, we request POWERGRID to kindly ensure that the 4.71-acre land parcel located on the left-hand side while entering the substation premises is allocated for the BESS project, instead of the parcel adjacent to the proposed 33 kV bay extension area.</p> <p>During our site assessment, it was observed that the parcel adjacent to the 33 kV bay extension area is comparatively low-lying and contains a significant number of rocks and boulders. Development of the BESS facility in this area would require substantial site preparation activities, including extensive excavation, rock breaking, disposal, filling, and ground improvement works. This may adversely impact project timelines, increase construction complexity, and lead to avoidable additional costs.</p> <p>In contrast, the land parcel located on the left-hand side while entering the substation appears more suitable from a constructability, accessibility, drainage, and operational standpoint. Allocation of this parcel would facilitate efficient project execution, reduce site development requirements, improve equipment accessibility during operation and maintenance, and support future augmentation activities.</p> <p>Accordingly, we request POWERGRID to kindly allocate the aforesaid 4.71-acre parcel on the left-hand side of the substation entrance for development of the BESS facility.</p> | Existing provisions of bidding documents shall remain unchanged |
| 178 | Section - Battery & BMS | Requirement for operation in varying environments | <p>Environmental parameters like humidity, dust level, seismic zone and pollution level are not comprehensively specified in the visible sections. Request detailed site environmental data including maximum humidity, seismic classification, pollution class and wind loading conditions.</p> | Please refer 5.0 Physical and Other Parameters, Technical Specification: Section-Project Rev-00, & applicable IS code. |
| 179 | Section - Battery & BMS | Software licenses valid for service life of battery | <p>Lifetime software licensing for all systems may be commercially difficult especially for third-party software platforms. Request definition of minimum required software support duration and <u>treatment of OEM software version upgrades.</u></p> | Existing provisions of the bidding documents shall remain unchanged. |
| 180 | Section - EMS with SCADA | Real-time interaction with IEX | <p>Real-time IEX integration requirements and cybersecurity interface responsibilities are not clearly defined. Request detailed communication architecture, API responsibility, cybersecurity scope and integration responsibility matrix.</p> | It shall be finalised during detailed engineering. Accordingly, the provisions of the Bidding document shall remain unchanged. |

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| 181 | Section - EMS with SCADA | Internet connection during O&M period under Contractor scope | Internet/ data service obligations for entire O&M period may create commercial ambiguity due to changing telecom/ data costs. Request that internet connectivity beyond warranty/ O&M base scope be considered under owner scope or reimbursable basis. | Existing provisions of the bidding documents shall remain unchanged. |
| 182 | Section - EMS with SCADA | Dual processor hot standby EMS architecture mandatory | Requirement resembles transmission utility SCADA architecture and may unnecessarily increase project cost for BESS applications. Request that equivalent redundant industrial-grade architecture be accepted if system availability requirements are met. | Existing provisions of the bidding documents shall remain unchanged. |
| 183 | Section - EMS with SCADA | Extensive monitoring parameters at cell level | Large-scale real-time cell level data logging for utility scale systems may create communication bandwidth and storage challenges. Request clarification on required historical storage duration, polling interval and reporting granularity. | Please refer Sr. No. 10 of Amendment-III. |
| 184 | Section - EMS with SCADA | Inertia support to grid as virtual synchronous machine | Requirement may imply grid-forming capability which is not clearly specified elsewhere. Request confirmation whether grid-forming PCS is mandatory and <u>specify required grid-forming operational scenarios.</u> | Grid forming is mandatory. The operational scenarios shall be finalized during detailed engineering |
| 185 | Section - EMS with SCADA | Remote monitoring through web browser | Cybersecurity standards and data hosting requirements are not defined. Request detailed cybersecurity compliance requirements including data hosting location, firewall standards and remote access policies. | Existing provisions of the bidding documents shall remain unchanged. |
| 186 | Section - PCS | PCS to deliver rated active and reactive power continuously at 50°C ambient | Continuous full active and reactive operation simultaneously at 50°C ambient may lead to excessive derating and oversizing of PCS. Request clarification whether reactive power requirement is applicable simultaneously with full active power at all operating conditions. | The PCS shall be designed to meet the specified active and reactive power requirements at 50°C ambient temperature as per system performance requirements. However, reactive power capability is not required to be delivered simultaneously with full rated active power under all operating conditions |
| 187 | Section - PCS | Black start functionality mandatory | Black start capability generally requires additional auxiliary systems and grid-forming functionality which may not be required for all operational scenarios. Request detailed functional philosophy and grid operational requirement for black start including responsibility boundary and demonstration criteria. | The BESS system shall be capable of black start operation as per the requirements of the Technical Specifications. The detailed black start philosophy, including auxiliary power arrangement, system configuration, and restoration sequence, shall be developed and finalized by the Contractor during detailed engineering in consultation with the Employer. The system shall ensure reliable and safe operation under black start conditions, including provision of necessary auxiliary power backup. Accordingly, the provisions of the Bidding Document shall remain unchanged |
| 188 | Section - PCS | Temperature endurance test report of complete assembly | Availability of complete assembly temperature endurance reports may be difficult for some globally accepted OEM configurations. Request acceptance of component-level/type-test evidence from internationally accredited laboratories. | Existing provisions of the bidding documents shall remain unchanged. |

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| 189 | Section - PCS | Synthetic inertia response mandatory | Functional performance criteria for synthetic inertia are not defined. Request detailed response time, inertia constant simulation and testing methodology requirements. | Synthetic inertia requirements shall be met through PCS control capabilities in line with grid/operator requirements, with response characteristics and validation demonstrated through simulation and site testing during commissioning. |
| 190 | Section - PCS / IDT Transformer | 110% continuous thermal overloading capability | Continuous 110% overload capability for inverter duty transformer under harmonic loading and 50°C ambient significantly increases transformer sizing and cost. Request reconsideration of mandatory 110% continuous overload requirement or allow it subject to defined ambient and loading duty conditions. | Existing provisions of the bidding documents shall remain unchanged. |
| 191 | Section - PCS / IDT Transformer | Transformer withstand 140% overfluxing for 5 seconds | Requirement appears more stringent than standard utility inverter transformer practice and may limit transformer vendor participation. Request POWERGRID to confirm acceptable standard/utility reference basis for this requirement and allow OEM standard design compliance. | Existing provisions of the bidding documents shall remain unchanged. |
| 192 | Section - PCS / IDT Transformer | Mandatory shield winding with separate bushings and grounding arrangement | Requirement increases transformer complexity, size and cost. Request confirmation whether OEM standard electrostatic shield arrangement complying with harmonic mitigation requirements shall be acceptable. | Existing provisions of the bidding documents shall remain unchanged. |
| 193 | Section - Power Conditioning System | "Contractor shall provide only central PCS" | The clause restricts adoption of modern string PCS architecture which offers better modularity, redundancy, maintainability, reduced auxiliary consumption and improved availability. Several globally accepted utility-scale BESS projects are now using string PCS architecture successfully. Request POWERGRID to allow both Central PCS and String PCS architectures, provided all technical performance parameters, grid compliance and protection coordination requirements are met. | Existing provisions of the bidding documents shall remain unchanged. |
| 194 | Section - Project BESS 150 MW 300 MWh | 2 cycles/day for 12 years | Requirement translates to ~8,700 full cycles over project life which is extremely aggressive and may significantly reduce available qualified battery technologies/OEMs. Request clarification whether augmentation shall be permitted during project life to maintain guaranteed capacity and whether partial cycles will be prorated instead of treated as full cycles. | Capacity augmentation during the project life may be permitted, subject to compliance with all specified technical requirements, performance guarantees, and contractual provisions. Partial charge-discharge cycles shall be accounted on a pro-rata basis, wherein cumulative fractional cycles shall be aggregated to determine equivalent full cycles, in accordance with standard industry practice. Bidders shall duly consider the above provisions while finalizing system design, technology selection, and lifecycle performance commitments. |
| 195 | Section - Project BESS 150 MW 300 MWh | Partial cycles shall also be considered as Full Cycle | Counting partial cycles as full cycles may lead to excessive degradation exposure for BESS supplier and is not aligned with standard battery degradation accounting methodologies. Request that equivalent full cycle (EFC) methodology be adopted instead of considering every partial cycle as one complete cycle. | Please refer Sr. No. 1 of Amendment-III. |

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| 196 | Section - Project BESS 150 MW 300 MWh | AC-AC Roundtrip Efficiency minimum 87% | Requirement may become difficult considering auxiliary consumption, HVAC operation at 50°C ambient, transformer losses and partial load operation conditions. Request clarification whether auxiliary consumption at site HVAC and lighting shall be excluded from AC-AC roundtrip efficiency calculations or whether efficiency evaluation shall be done as per IEC 62933 standard reference conditions. | Bidders have to provide Minimum AC-AC Round Trip Efficiency (RTE) of 87% excluding auxiliary consumption. |
| 197 | Section - Project BESS 150 MW 300 MWh | Independent operation of 50 MW / 100 MWh and 75 MW / 150 MWh blocks | Requirement may significantly affect architecture, transformer sizing and EMS segmentation. Request confirmation whether independent operation is required continuously under all grid conditions or only during dispatch instruction by SLDC. | Existing provisions of the bidding documents shall remain unchanged. |
| 198 | Section - Project BESS 150 MW 300 MWh | Recovery time between charge/discharge cycles maximum 1 hour | Cooling recovery requirement under Indian high ambient conditions may be difficult during peak summer conditions. Request clarification whether recovery time excludes thermal stabilization period caused by extreme ambient conditions. | Existing provisions of the bidding documents shall remain unchanged. |
| 199 | Section - Project BESS 150 MW 300 MWh | APFC panel requirement to maintain 0.99 PF for auxiliary system | Requirement may be redundant since PCS itself is capable of reactive power compensation. Request clarification whether auxiliary APFC panel is mandatory if PCS reactive compensation capability is available. | Existing provisions of the bidding documents shall remain unchanged. |
| 200 | Section - Project BESS 150 MW 300 MWh | Guaranteed availability and dispatch obligations with LD | Availability and dispatch obligations may be impacted by grid outage, SLDC instructions, auxiliary outages and force majeure conditions. Request detailed exclusion list and methodology for calculation of availability and LD under external grid disturbances and curtailment conditions. | Existing provisions of the bidding documents shall remain unchanged. |
| 201 | Section - Project BESS 150 MW 300 MWh | Guaranteed Roundtrip Efficiency linked LD | RTE may degrade over project life and under varying ambient conditions. Request clarification whether guaranteed efficiency values are beginning-of-life (BOL) or average lifecycle values. | Existing provisions of the bidding documents shall remain unchanged. |
| 202 | Section - Project BESS 150 MW 300 MWh | Six Nos. 33 kV line bays provided by APTRANSCO | Interface responsibility between contractor and APTRANSCO for cable termination, testing and shutdown coordination requires clarification. Request detailed interface matrix and shutdown responsibility schedule for integration activities. | Existing provisions of the bidding documents shall remain unchanged. |
| 203 | Section - Project BESS 150 MW 300 MWh | Single point turnkey responsibility including statutory approvals | Some statutory approvals may depend on local utility or government timelines outside contractor control. Request list of approvals under owner scope and extension entitlement in case of approval delays beyond contractor control. | Existing provisions of the bidding documents shall remain unchanged. |
| 204 | Section - Project BESS 150 MW 300 MWh | Qualification criteria for supplier/integrator | Qualification thresholds and acceptable consortium structures require clarity. Request clarification on consortium/JV participation rules, lead member responsibility and qualification sharing methodology. | Existing provisions of the bidding documents shall remain unchanged. |

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| 205 | Section - Project BESS 150 MW 300 MWh | Warranty and augmentation obligations | <p>Battery degradation reserve and augmentation philosophy not clearly defined in visible sections.</p> <p>Request confirmation whether augmentation is permitted during contract period and whether replacement cells/modules from equivalent upgraded models shall be acceptable.</p> | <p>Augmentation of battery capacity to meet performance and degradation obligations during the contract period shall be permitted. Replacement or augmentation using cells/modules of equivalent or higher upgraded models shall be acceptable, subject to compliance with specified technical requirements, interoperability, and ensuring seamless integration, performance, and safety of the overall system. Please refer Clause 2.9.3 Guaranteed Dispatchable Capacity, Technical Specification: Section-Project Rev-00 .</p> |
| 206 | Fire Detection & Protection System for BESS | | <p>In this regard, we would like to submit that since the specified NOVEC / AEROSOL fire protection system is intended for critical Li-Ion Battery fire hazards, the system compatibility, reliability and performance certification become extremely important for ensuring effective fire protection. As the said systems are generally designed and evaluated in accordance with UL 9540A for thermal runaway and fire propagation characteristics, it is highly recommended that the tender specification should also specifically call for UL Listed components forming part of the complete fire detection and suppression system. This will ensure that all components used in the system are tested, compatible and certified for integrated operation under BESS fire conditions, thereby enhancing operational safety and compliance with international standards.</p> <p>Further, the clause also includes portable fire extinguishers as a part of the overall Fire Detection & Protection System for BESS. In view of the specialized nature of Lithium-Ion Battery fire risks, it is strongly recommended that the extinguishers provided for the BESS application should contain firefighting agents specifically suitable and proven for Li-Ion battery fire protection.</p> <p>Accordingly, it is requested that the specification may kindly be made more precise by specifically mentioning K-900 / F-500 based extinguishing agents as the charge for portable fire extinguishers intended for BESS applications. This will clearly define the scope of firefighting products required for effective mitigation of Lithium-Ion battery fire hazards and avoid ambiguity during execution and compliance evaluation.</p> <p>We request you to kindly consider the above recommendation and amend the specification accordingly in the interest of enhanced safety, standardization and effective fire protection of the BESS installation.</p> | Existing provisions of bidding documents shall remain unchanged |
| 207 | | Kindly clarify whether the submitted Manufacturer Authorization Form (MAF) shall be treated as legally binding at the time of award | In view of the above, we request you to kindly allow submission of a General MAF instead of a manufacturer-specific MAF | Provisions of bidding documents shall remain unchanged. |
