

**Clarification-III dated 10/06/2026 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
1	Clause 2.9.4-Section Project _BESS 150 MW 300 MWh Kalikiri APTRANSCO	Guaranteed Round Trip Efficiency (RtE) of 87%	The specified AC-AC Round Trip Efficiency (RtE) of 87% is not practically achievable under actual operating conditions and high ambient temperature requirements. Further, similar APTRANSCO BESS tenders specify minimum RtE as 85%. Hence, kindly consider the minimum guaranteed RtE as 85% on AC-AC basis.	Provisions of bidding documents shall remain unchanged.
2	Clause 2.0 / Page 10-Section Project _BESS 150 MW 300 MWh Kalikiri APTRANSCO	Six (6) Nos. of 33 kV line bays shall be provided by APTRANSCO	Kindly clarify the exact bay configuration and allocation philosophy for the six (6) nos. 33 kV bays being provided by APTRANSCO. Further clarify the maximum permissible MW/MWh loading per bay and whether additional bays shall be provided in case of future augmentation requirements.	Refer Clause 2.0, Scope of Work, Section Project Rev-00.
3	Clause 2.9.3-Section Project _BESS 150 MW 300 MWh Kalikiri APTRANSCO	Outage during augmentation counted as accountable outage	Since augmentation/replacement activities are mandatory to maintain guaranteed capacity, kindly request exclusion of planned augmentation outage from accountable BESS outage calculations, subject to prior approval of Employer.	Provisions of bidding documents shall remain unchanged.
4	Clause 2.9.4-Section Project _BESS 150 MW 300 MWh Kalikiri APTRANSCO	Guaranteed AC-AC RtE of 87% throughout contract life	Kindly clarify whether the guaranteed RtE requirement of 87% throughout the entire 12-year contract period	Provisions of bidding documents shall remain unchanged.
5	Clause 7.1.2-Section Project _BESS 150 MW 300 MWh Kalikiri APTRANSCO	Grid Forming Inverter and Black Start capability	Kindly clarify the detailed functional requirements for Black Start operation. Further clarify whether Black Start functionality is required for all PCS units or can be provided as per OEM recommended configuration/design philosophy	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. Accordingly, the provisions of the Bidding Document shall remain unchanged.
6	Clause 2.3-Section Project _BESS 150 MW 300 MWh Kalikiri APTRANSCO	Charging/discharging power during testing under contractor scope	Kindly clarify whether temporary construction/testing power and energy required for commissioning and performance testing shall be provided by Employer/APTRANSCO or arranged entirely by contractor.	Please refer Clause 2.3, Provision of Power during construction & commissioning stage , Section Project Rev-00.
7	Clause 7.1.9 & Clause 7.1.14-Section Project _BESS 150 MW 300 MWh Kalikiri APTRANSCO	UPS / Auxiliary Supply Redundancy	Kindly clarify whether 2x100% redundant UPS/DC auxiliary supply system is mandatory. As per standard industry practice and OEM design philosophy, non-redundant auxiliary supply arrangement is generally adopted for 33 kV switchgear control and auxiliary systems. Hence, kindly allow bidder/OEM standard auxiliary supply configuration.	Provisions of bidding documents shall remain unchanged.
8	Clause 3.1-Technical Specifications For Battery & Battery Management System (BMS)	Auxiliary Consumption considered in RtE- The contractor shall ensure an optimized design with a very high round trip efficiency considering the overall loss of the BESS along with the auxiliary system losses.	Kindly clarify the methodology for Round Trip Efficiency (RtE) calculation. In the "Section Project – BESS 150 MW / 300 MWh Kalikiri APTRANSCO" document, it is mentioned that auxiliary consumption shall not be part of RtE calculation. Hence, kindly confirm that auxiliary consumption shall be excluded from AC-AC RtE calculation.	Bidders have to provide Minimum AC-AC Round Trip Efficiency (RTE) of 87% excluding auxiliary consumption. Accordingly, the provisions of the Bidding document shall remain unchanged.
9	Clause 4.1-Technical Specifications For Battery & Battery Management System (BMS)	Recovery time between duty cycles	Kindly clarify the minimum and maximum recovery/cooling time required between consecutive charge/discharge duty cycles for sizing compliance, or whether the bidder can propose the recovery/cooling time as per OEM recommendation and battery technology.	Provisions of bidding documents shall remain unchanged.
10	Clause 5.12-Technical Specifications For Battery & Battery Management System (BMS)	AC set point 24°C ±2°C	Kindly clarify whether OEM-specific operating temperature range differing from 24°C ±2°C shall be acceptable.	The specified AC set point of 24°C ±2°C is intended for uniform and reliable BESS performance; however, OEM-specific operating temperature ranges may be allowed during detailed engineering, subject to alignment with established industrial practices.

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11	Clause 6.2-Technical Specifications For Battery & Battery Management System (BMS)	FAT on subsystem/module level	Kindly clarify whether complete integrated container FAT is mandatory before dispatch or subsystem FAT shall suffice.	Provisions of bidding documents shall remain unchanged.
12	Clause 1.1.3-Section-33 kV Switch Gear	Bottom cable entry mandatory	Kindly clarify whether side/top cable entry arrangement shall also be acceptable based on OEM switchgear design philosophy and site layout requirements.	Provisions of bidding documents shall remain unchanged.
13	QR [Annexure-A (BDS)]		Based on our understanding of Route 1, Clause 3 as mentioned below, we believe that we qualify under the stated eligibility criteria. Reason for Qualification: We have successfully erected, tested, and commissioned two (2) numbers of 33 kV VCB equipped bays outdoor substation (2 × 1250 kVA) as a Prime Contractor for XXX. For your reference, we have attached the approved drawings and experience certificate pertaining to the project. Considering the above, we request you to kindly confirm whether our understanding of the qualification requirement is correct.	Provisions of specified QR are amply clear.
14	General		Request for Review of Auxiliary Consumption Requirement We are aggressively working towards participating in the subject tender and would like to inform you that we have appointed one of the industry's best consultants for pre-bid engineering to ensure a comprehensive technical evaluation of the project requirements. During our review, we noted that the tender allows a maximum auxiliary consumption limit of 1.8% of the BESS capacity during charging/discharging operations, beyond which Liquidated Damages (LDs) are applicable. In this regard, our team, along with the appointed consultant, has carried out a detailed assessment based on the technical offers received from multiple vendors. Based on this evaluation, it has been observed that the auxiliary consumption of the complete BESS system, including all associated equipment and balance-of-plant loads, is found to be in the range of 4.30%–4.40% of the BESS capacity during charging/discharging operations. For your reference, we have attached the supporting calculations derived from the technical offers received. We would also like to highlight that the corresponding State Utility TBCB bid does not prescribe any LD linked to auxiliary consumption. In the interest of contractor to submit technically compliant bids without deviations, we kindly request you to review and reconsider the specified auxiliary consumption limits.	Provisions of bidding documents shall remain unchanged.

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