

NTPC VIDYUT VYAPAR NIGAM LIMITED

(A Wholly Owned Subsidiary of NTPC Limited, A Maharatna Organization, under

Ministry of Power, Government of India)

5th Floor, Engineering Office Complex,

A-8A, Sector -24, Noida – 201301 (U.P.)

Request for Selection (RfS) Document

For

Procurement under Tariff-Based Global Competitive Bidding Request for Selection (RfS) document for setting up of 250 MW/500 MWh STU connected standalone Battery Energy Storage Systems (BESS) in the state of Kerala for Kerala State Electricity Board (KSEBL)



with Viability Gap Funding (VGF) supported through Power System Development Fund (PSDF)

RFS DOCUMENT NO.: NVVN/C&M/BESS-04/2025-26

DISCLAIMER

1. Though adequate care has been taken while preparing the RfS document, the bidder(s) shall satisfy themselves that the document is complete in all respect. Intimation regarding any discrepancy shall be given by the prospective bidders to the office of NTPC Vidyut Vyapar Nigam Limited (NVVN) immediately. If no intimation is received from any bidder prior to the last date for seeking the clarification, it shall be considered that the document is complete in all respect and has been received/ acknowledged by the bidder(s).
2. NVVN reserves the right to modify, amend or supplement this document.
3. This RfS document has been prepared in good faith, and on best endeavor basis. Neither NVVN nor their employees or advisors make any representation or warranty, express or implied, or accept any responsibility or liability, whatsoever, in respect of any statements or omissions herein, or the accuracy, completeness or reliability of information, and shall incur no liability under any law, statute, rules or regulations as to the accuracy, reliability or completeness of this document, even if any loss or damage is caused by any act or omission on their part.
4. This RfS is not an agreement and is neither an offer nor invitation to the prospective bidders or any other person. The purpose of this RfS is to set the terms for the selection process and to provide Bidders with information that may be useful to them in preparation and submission of their Bids.
5. The bidder shall bear all its costs associated with or relating to the preparation and submission of its bid, including but not limited to preparation, copying, postage, delivery fees or any other costs incurred in connection with or relating to its bid. All such costs and expenses will remain with the bidder and the authority shall not be liable in any manner whatsoever for the same or for any other costs or other expenses incurred by a bidder in preparation of submission of the bid, regardless of the conduct or the outcome of the bidding process.
6. In case of any discrepancy in the Bidding documents uploaded on the websites of NVVN, Bharat ETS e-bidding portal (The link for same is <https://www.bharat-electronictender.com>), the documents uploaded on the <https://www.bharat-electronictender.com> website will prevail.

Place: Noida

Date: 11.10.2025

BID INFORMATION SHEET

The brief details of the RfS are as under:

(A)	NAME OF WORK/ BRIEF SCOPE OF WORK/ JOB	1. Selection of Battery Energy Storage System Developers for Setting up of 500 MWh (250 MW x 2 hrs) Standalone Battery Energy Storage Systems in Kerala for “on Demand” usage under Tariff-based Competitive Bidding 2. The Projects will be set up under “BOO” model.				
(B)	RfS NO. & DATE	NVVN/C&M/BESS-04/2025-26 Dated 11/10/2025				
(C)	TYPE OF BIDDING SYSTEM	Single Stage Bidding with Two Envelopes				
(D)	TYPE OF RfS/ TENDER	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">E-TENDER</td><td style="width: 50%; text-align: center;"><input style="width: 80%;" type="text" value="Yes"/></td></tr> <tr> <td style="text-align: center;">MANUAL</td><td style="text-align: center;"><input style="width: 80%;" type="text"/></td></tr> </table>	E-TENDER	<input style="width: 80%;" type="text" value="Yes"/>	MANUAL	<input style="width: 80%;" type="text"/>
E-TENDER	<input style="width: 80%;" type="text" value="Yes"/>					
MANUAL	<input style="width: 80%;" type="text"/>					
(E)	COMPLETION/ CONTRACT PERIOD	As mentioned in RfS Document				
(F)	DOCUMENT FEE/ COST OF RfS DOCUMENT (NON-REFUNDABLE)	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">APPLICABLE</td><td style="width: 50%; text-align: center;"><input style="width: 80%;" type="text" value="Yes"/></td></tr> <tr> <td style="text-align: center;">NOT APPLICABLE</td><td style="text-align: center;"><input style="width: 80%;" type="text"/></td></tr> </table> <p>Amount: INR 22,500/- (Indian Rupees Twenty-Two Thousand Five Hundred Only) including GST shall be submitted through NEFT/ RTGS transfer in the account of the NVVN.</p>	APPLICABLE	<input style="width: 80%;" type="text" value="Yes"/>	NOT APPLICABLE	<input style="width: 80%;" type="text"/>
APPLICABLE	<input style="width: 80%;" type="text" value="Yes"/>					
NOT APPLICABLE	<input style="width: 80%;" type="text"/>					
(G)	DOCUMENT PROCESSING FEE	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">APPLICABLE</td><td style="width: 50%; text-align: center;"><input style="width: 80%;" type="text" value="Yes"/></td></tr> <tr> <td style="text-align: center;">NOT APPLICABLE</td><td style="text-align: center;"><input style="width: 80%;" type="text"/></td></tr> </table> <p>Rs. 13.50 Lakh + 18% GST for total Project capacity quoted by bidder, shall be submitted through NEFT/RTGS transfer in the account of the NVVN.</p>	APPLICABLE	<input style="width: 80%;" type="text" value="Yes"/>	NOT APPLICABLE	<input style="width: 80%;" type="text"/>
APPLICABLE	<input style="width: 80%;" type="text" value="Yes"/>					
NOT APPLICABLE	<input style="width: 80%;" type="text"/>					

(H)	EARNEST MONEY DEPOSIT (EMD)	APPLICABLE	<input type="text" value="Yes"/>
		NOT APPLICABLE	<input type="text"/>
		Amount: INR 4,80,000/MW (Rupees Four Lakh Eighty Thousand only per MW) per Project shall be submitted in the form of Bank Guarantee.	
(I)	PERFORMANCE BANK GUARANTEE	Bidders selected by NVVN/ KSEBL based on this RfS shall submit Performance Bank Guarantee (PBG) for a value @ INR 12,00,000/MW (Rupees Twelve Lakh only per MW) to KSEBL , prior to signing of BESPA with KSEBL as per terms of RfS.	
(J)	DATE, TIME & VENUE OF PRE-BID MEETING	As per date & time mentioned on ETS portal. Bidders shall submit their queries on or before to NVVN through email.	
(K)	OFFLINE & ONLINE BID-SUBMISSION DEADLINE	Applicable as per NIT on Bharat-ETS portal	
(L)	TECHNO-COMMERCIAL BID OPENING	As per NIT on Bharat-ETS portal	
(M)	e-Reverse Auction (e-RA)	Will be informed to eligible bidders. Date and time of e-RA shall be intimated through email.	
(N)	CONTACT DETAILS OF (insert details of the e-bidding portal)	mailto: Bharat-ETS portal https://www.bharat-electronictender.com	
(O)	Name, Designation, Address and other details (For Submission of Response to RfS)	Kushank Kumar, Sr. Manager(C&M) NTPC VIDYUT VYAPAR NIGAM LIMITED Ph No. 0120-4947239 5th Floor, Engineering Office Complex, A-8A, Sector -24, Noida – 201301 (U.P.)	
(P)	Details of persons to be contacted in case of any assistance required	NTPC VIDYUT VYAPAR NIGAM LIMITED (A Wholly Owned Subsidiary of NTPC Limited) 5th Floor, Engineering Office Complex, A-8A, Sector -24, Noida – 201301 (U.P.)	

1. Bidders are required to quote strictly as per terms and conditions of the RfS documents and not to stipulate any deviations/ exceptions.
2. Any bidder, who meets the Qualifying Requirement and wishes to quote against this

RfS, may download the complete RfS document along with its amendment(s) and clarifications if any, from Bharat ETS e-bidding portal and/or NVVN website (www.nvvn.co.in) and submit their Bid complete in all respect as per terms & conditions of RfS Document on or before the due date of bid submission.

3. Clarification(s)/ Corrigendum(s) if any shall also be available on the above referred websites.

Bidders are requested to remain updated for any notices/ amendments/ clarifications etc. to the RfS document through the websites <https://www.bharat-electronictender.com> and www.nvvn.co.in. No separate notifications will be issued for such notices/ amendments/ clarifications etc. in the print media or individually. Intimation regarding notification on the above shall be updated on www.nvvn.co.in and the details only will be available from <https://www.bharat-electronictender.com>.

SECTION 1. INTRODUCTION & INVITATION FOR BIDS

1 *Background & Introduction*

- 1.1 NTPC VIDYUT VYAPAR NIGAM LIMITED (hereinafter referred to as “NVVN”), a wholly Owned Subsidiary of NTPC Limited (Govt of India Enterprises), has been incorporated with the objective of, inter alia, carrying on the business of trading in electricity by purchasing all forms of electrical power from generating companies, captive generating plants (CGPs), distribution licensees, State Electricity Boards etc., and sell such electrical power thereof to SEBs, distribution companies / licensees and bulk power consumers etc. in India and abroad. Kerala has been allocated 500 MWh of BESS Capacity under by Ministry of Power, GoI under the Viability Gap Funding (VGF) scheme supported through Power System Development Fund (PSDF) for Development of Battery Energy Storage Systems (BESS). NVVN has been appointed by Kerala State Electricity Board (KSEBL) as Authorised Representative for conducting Bid Process on behalf of KSEBL.
- 1.2 With various global developments in technology and manufacturing, Renewable Energy (RE) has become the most affordable and cheapest source for meeting energy requirements. India has been expanding its installed RE capacity with the aim of reaching 500 GW by 2030. RE from sources like solar and wind is variable and not available round the clock like thermal power to meet the demand. Energy Storage Systems (ESS) are necessary to address this challenge by storing excess energy when not needed and supplying it during peak demand periods. As reliance on RE increases, the grid experiences stress during evening and morning peaks when sufficient RE is not available, necessitating additional power dispatch. ESS plays a vital role in successfully integrating RE into the grid and assisting grid operators in managing these fluctuations in demand and RE supply. ESS connected to solar pooling stations also help in maximizing the capacity utilization of RE transmission systems.
- 1.3 The above aspects rightly point out to the next course of direction of India’s energy planning methodology-integrating Energy Storage Systems (ESS) with existing and upcoming RE capacity in order to optimize generation mix while also better utilizing the transmission infrastructure in the country. With respect to increasing the storage component in the energy mix, CEA’s Report on identification of usage of storage as business case and for ancillary services, identifies Pumped Hydro Storage System (PSP) and Battery Energy Storage Systems (BESS) as the commercially deployed solutions for providing requisite storage capacity. CEA’s Report on Optimal generation capacity mix for the year 2029-30 (Version 2.0), released in April, 2023, envisages a total installed Battery Energy Storage capacity of 41,650 MW/208,250 MWh as part of the installed capacity in 2029-30. This will be in addition to 18,986 MW of Pumped Hydro Storage System envisaged to be a component of the installed capacity in 2029-30.
- 1.4 Going forward, the planning process for transition to a greener energy mix in the country would entail integrating the planned Renewable capacity into India’s energy grid while ensuring its safety and reliability. Apart from Pumped Hydro Storage Plants, BESS are envisaged to be significant element of the future grid with increased share of renewable

energy in accordance with the target of 500 GW of non-fossil-based capacity to be installed by 2030. BESS assets can provide the required flexibility in generation apart from ensuring the resource adequacy. Besides, Energy Storage Systems also have the potential to enable better utilization of the country's transmission network and reducing network infrastructure footprint.

1.5 Guidelines for Implementation of the RfS

This RfS document has been prepared based on the Guidelines for “Procurement and Utilization of Battery Energy Storage Systems as part of Generation, Transmission and Distribution assets, along with Ancillary Services”, issued by Ministry of Power vide Gazette Notification dated 10.03.2022 and subsequent amendments and clarifications issued thereto until the bid submission deadline for this RfS and Viability Gap Funding scheme for development of Battery Energy Storage Systems supported through Power System Development Fund (PSDF) dated 09th June 2025 and subsequent clarifications and amendments issued by Ministry of Power . NVVN has issued this RfS in the capacity of “Authorised Representative” (hereinafter referred to as the Authorised Representative, or NVVN) of the Procurer i.e. **Kerala State Electricity Board (KSEBL)** as defined in the aforementioned Guidelines/ amendments/ clarifications.

- 1.6 Kerala State Electricity Board (KSEBL) (hereinafter referred to as the Procurer, or end procurer or Buying Entity or KSEBL) seeks to utilize energy storage systems, on an “On-Demand” basis, suited to the requirements of KSEBL during the peak and off-peak hours. In view of the above, the NVVN hereby invites proposals for setting up of STU-connected Projects of Standalone Battery Energy Storage Systems (BESS), for an aggregate storage capacity of 500 MWh (250 MW x 2 hrs) with single cycle charging/discharging operation, with provision for occasional dual cycle per day with annual limit as 400 Cycles of BESS with project to be located in the State of Kerala connected with State Transmission Utility.

Kerala State Electricity Board (Referred also as “End Procurer or Buying Entity or KSEBL”) shall enter into a Battery Energy Storage Purchase Agreement (BESPA) with the successful Bidders selected based on this RfS, for availing the Energy Storage facility as per the terms, conditions and provisions of the RfS and BESPA. It is clarified that the charging power shall be provided by the Buying Entity/ KSEBL.

Being lowest bidder does not entail the bidders to be eligible for issuance of LOAs. LOAs shall be issued for a cumulative capacity upto 500MWh subject to acceptance of the discovered rates in this RfS by KSEBL. The decision of KSEBL in this regard shall be final and binding on the bidders.

- 1.7 Battery Energy Storage System Developers (hereinafter referred to as BESSDs) selected by NVVN based on this RfS, shall set up the BESS on Build Own Operate (BOO) basis in accordance with the provisions of this RfS document and standard BESPA. BESPA formats shall be available for download from the (<https://www.bharat-electronictender.com>)

- 1.8 Energy Storage facility shall be procured by the KSEBL from the above tender. KSEBL shall be the End Procurer for using the energy storage facility and charging/

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discharging the BESS in line with respective agreements with the BESSD and KSEBL, based on due performance by the concerned parties. For this tranche, 100% of the awarded capacity shall be off taken by KSEBL.

- 1.9 The Bidders will be free to avail fiscal incentives like Accelerated Depreciation, Concessional Customs and Excise Duties, Tax Holidays etc. available if any for such Projects. The same will not have any bearing on comparison of bids for selection. As equal opportunity is being provided to all Bidders at the time of tendering itself, it is up to the Bidders to avail various tax and other benefits. No claim shall arise on NVVN/ KSEBL for any liability if Bidders are not able to avail fiscal incentives and this will not have any bearing on the applicable tariff. NVVN shall not bear responsibility for any availability or non-availability of fiscal incentive and submission of the bid by the Bidder shall be independent of such availability or non-availability as the case may be of the fiscal incentives.
- 1.10 Already commissioned projects cannot be considered under this RfS. Projects under construction or projects which are not yet commissioned will, however, be considered, in case these projects are not already accepted under any other Central or State Schemes. Enhancement and augmentation of already commissioned Projects, irrespective of their capacities will not be considered as eligible Project under this scheme. The battery capacity being installed under this tender cannot be used by the developer as part of the installed Project capacity demonstrated under any other tender concluded by any Central or State Agency as on the last date of bid submission of this RfS.
- 1.11 **Viability Gap Funding**

BESSD selected under this RfS shall be eligible for grant of Central Financial Assistance in the form of Viability Gap Funding (VGF), to be released as per the provisions contained in this RfS. The VGF support has been earmarked for a cumulative BESS capacity of 500 MWh (allocated capacity to Kerala).

2 Invitation for Bids

- 2.1 A Single Stage, Two-Envelope competitive Bidding Procedure will be adopted and will proceed as detailed in this document. The respective rights of the Buying Entity/ KSEBL and the Bidder/BESSD shall be governed by the RfS Documents/Agreements signed between the KSEBL and the BESSD.
- 2.2 Interested bidders have to necessarily register themselves on the <https://www.bharat-electronictender.com> ("ETS portal") through M/s Electronic Tender.com (India) Pvt. Limited to participate in the bidding under this invitation for bids. It shall be the sole responsibility of the interested Bidders to get themselves registered at the aforesaid portal for which they are required to contact Bharat ETS e-bidding portal <https://www.bharat-electronictender.com> to complete the registration formalities.

They may obtain further information regarding this RfS from the registered office of NVVN at the address given on the Bid Information Sheet from 10:00 hours to 17:00 hours on all working days.

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For proper uploading of the bids on the Bharat ETS e-bidding portal, it shall be the sole responsibility of the Bidders to apprise themselves adequately regarding all the relevant procedures and provisions as detailed in the portal as well as by contacting Bharat ETS e-bidding portal directly, as and when required, for which contact details are also mentioned on the Bid Information Sheet. NVVN in no case shall be responsible for any issues related to timely or properly uploading/ submission of the bid in accordance with the relevant provisions of the Bidding Documents.

- 2.3 Bidders should submit their bid proposal complete in all aspect on or before last date and time of Bid Submission as mentioned on the Bharat ETS e-bidding portal, the NVVN website (www.nvvn.co.in) indicated in the Bid Information Sheet.
- 2.4 Bidder shall submit bid proposal along with non-refundable RfS Document Fees and Bid Processing Fees and Earnest Money Deposit (EMD) complete in all respect as per the Bid Information Sheet. Bid proposals received without the stipulated RfS Document Fees, Bid Processing Fees and EMD, will be rejected. In the event of any date indicated being declared a holiday, the next working day shall become operative for the respective purpose mentioned herein.
- 2.5 RfS documents which include Eligibility Criteria, Technical Specifications, various Conditions of Contract, Formats etc. can be downloaded from Bharat ETS e-bidding portal or from NVVN's website. It is mandatory to download official copy of the RfS Document from Bharat ETS e-bidding portal (<https://www.bharat-electronictender.com>) to participate in the Tender. Any amendment(s)/corrigendum(s)/clarification(s) with respect to this RfS shall be uploaded on Bharat ETS e-bidding portal (<https://www.bharat-electronictender.com>). The Bidder should regularly check for any Amendment(s)/Corrigendum(s)/Clarification(s) on the above mentioned (<https://www.bharat-electronictender.com>) website. The same may also be uploaded on the NVVN's website. However, in case of any discrepancy, the information available on <https://www.bharat-electronictender.com> website shall prevail.
- 2.6 NVVN shall conduct e-Reverse Auction (e-RA) as per provisions of RfS documents.
- 2.7 NVVN reserves the right to cancel/ withdraw/ defer this invitation for bids without assigning any reason and shall bear no liability whatsoever consequent upon such a decision.
- 2.8 **Interpretations**
 - a. Words comprising the singular shall include the plural & vice versa.
 - b. An applicable law shall be construed as reference to such applicable law including its amendments or re-enactments from time to time.
 - c. A time of day shall save as otherwise provided in any agreement or document be construed as a reference to Indian Standard Time.
 - d. Different parts of this contract are to be taken as mutually explanatory and supplementary to each other and if there is any differentiation between or among the parts of this contract, they shall be interpreted in a harmonious manner so as to give effect to each part.

- e. The table of contents and any headings or subheadings in the contract has been inserted for case of reference only & shall not affect the interpretation of this document.

SECTION 2. SPECIAL CONDITIONS OF CONTRACT

3 **Scope of Work**

- 3.1 Under this RfS, the BESSD shall be required to set up a Battery Energy Storage System (BESS), with the primary objective of making the energy storage facility available to the Buying Entity i.e., KSEBL for charging/discharging of the BESS, on an “on demand” basis. Detailed criteria for performance are elaborated in Clause 8 of the RfS.
- 3.2 Setting up of the BESS and interconnection of the BESS with the STU network including the construction of Bay will be under the scope of the BESSD. Entire Operation & maintenance including safety of the equipment / personnel will be under the scope of the BESSD. This RfS is technology agnostic on the nature of battery storage system being opted by the BESSD, as long as it meets the definition of BESS under this RfS and the required performance criteria under the RfS and BESP.A.
- 3.3 The BESS shall be charged by drawing power from KSEBL and inject power to KSEBL network in accordance with the dispatch instructions issued by SLDC. KSEBL will provide required power for charging BESS. Scheduling of charging and discharging of BESS shall be under the scope of KSEBL.

4 **Total capacity offered and Project sizing.**

- 4.1 Selection of BESS Projects for a total capacity of 250 MW/ 500 MWh will be carried out through e-bidding followed by e-Reverse Auction process. The minimum bid size shall be 500 MWh i.e. 250 MW x 2 hours and the detail of the project is furnished in Annexure-E. The project size shall be quoted as 250MW X 2hrs (500MWh).

For project size of 250 MW/ 500 MWh, approximately 09-acre of land will be allotted to the BESSD.

Selection of Project Developers will be carried out based on the Tariff (Capacity Charge) offered by the Bidders. In this context, the term “Project” used anywhere in the RfS, and BESP.A, will solely mean the BESS, set up by the BESSD to make available the Contracted Capacity as agreed to in the BESP.A

- 4.2 For the specified Contracted Capacity, any over sizing of the BESS over the minimum rated Energy capacities required under this RfS is left to the discretion of the BESSD. However, it is to be noted that, at the time of commissioning, rated capacity of the BESS (Power and Energy) to be installed as indicated in the BESP.A, will be verified

4.3 **Project Configuration:**

The Projects shall be set up in the vicinity of the BDPP, 220kV Brahmapuram Substation, as below:

S. No.	Name of the Substation	Location	Connectivity voltage	Proposed BESS capacity in MW/ MWh
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1.	220kV SS Brahmapuram	9.996928 76.371255	220 kV	250/ 500
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- 4.4 The Bidder is required to design the Battery Energy Storage System (BESS) under the BESP, ensuring that the BESS can charge and discharge with a C- rate of 0.5. Additionally, the BESS must be capable of being charged or discharged starting from 20 MW/40 MWh and variable smoothly upto the total rated capacity as specified in the Agreement.

With the BESS with a capacity of 250 MW / 500 MWh, the system must be capable of charging or discharging by allowing the system to manage capacity starting from 20 MW and smoothly progressing to 250 MW.

5 **Contracted Capacity Allocation for a Bidder**

Following conditions shall be applicable to the Bidders for submission of bids against this RfS:

- 5.1 The total capacity of 250 MW/500 MWh, shall be set up, as shown in Annexure – E. A Bidder, including its Parent, Affiliate or Ultimate Parent or any Group Company shall submit a single bid offering a Project Capacity of complete 250MW / 500 MWh. The Project Capacity to be quoted shall be in the form of “x” MW/”2x” MWh, i.e. the BESS system shall be rated for 2 hours’ charging and 2 hours discharging in 1 cycle.

Note: In case a common Company/Companies directly or indirectly hold(s) more than 10% but less than 26% shareholding in more than one Bidder participating in the RfS, each of such Bidders will be required to submit the Disclosure as per Format 7.8A. In all other cases, Format 7.8 will be applicable.

- 5.2 The cumulative Project Capacity to be allocated to a Bidder including its Parent, Affiliate or Ultimate Parent or any Group Company shall be limited to 250 MW/500 MWh.
- 5.3 The evaluation of bids shall be carried out as described in Section-4 of RfS. The methodology for Allocation of Projects is elaborated in Section-4 of RfS.
- 5.4 Subject to the exception as per Clause 5.1 above, multiple bids from same company including its Parent/ Ultimate Parent/Affiliates/Group Companies shall make all the bids submitted by the group invalid
- 5.5 Project Developer Eligibility: Both public and private sectors are encouraged to participate in the tender and that there should be at least one bid from a private sector participant, failing which the bid shall be cancelled and tender will be floated afresh.

6 **Project Location**

- 6.1 The total Project capacity of 250 MW /500 MWh shall be located in the vicinity of 220 kV Substation Brahmapuram of the STU network as per information mentioned in Annexure-E, in the state of Kerala. Land allocation for the Projects will be under the

scope of KSEBL owning the identified substation. Land will be provided on right-to use basis to the BESSD at annual lease charge of Rs 1 per project per year through suitable agreement with KSEBL. Project land details are enclosed herewith at Annexure-E. The bidders as discovered after the e-Reverse auction, will be provided land area as mentioned in table below.

Sl	Project	Name of Substation	Proposed BESS Capacity in MWh	Bay Availability	Interconnecting Voltage (kV)	Space Availability (in Acres)
1	250 MW	220 kV SS Brahmapuram	500	Bay to be extended in BESSD Scope	220	9

6.2 The land area will be given to the BESSD by KSEBL for Right of Use (ROU) within 60 days from the signing of the BESPA as per provisions of RfS. In case of any delay in signing of ROU agreement of land to the BESSD, the Financial Closure and Commissioning milestones will be suitably extended.

6.3

- The layout and single line diagram of Brahmapuram sub- station is enclosed as part of Annexure–E, clearly showing the BESS area.
- The area identified for BESS is also identified as per enclosed layout and for approach to BESS, it is required to construct the approach road separately by the BESSD for accessing the Project, without hindering the O&M activities of the sub-station.
- As Battery Energy Storage System is prone to fire hazard, the BESSD shall provide suitable means such as fire barrier between switchyard and BESS to avoid fire to spread from BESS to Yard equipment.
- The bidders are encouraged to visit the proposed project location prior to submission of bids. Any further requests regarding construction of bay or site shall not be entertained after bid submission.
- Contact details of concerned officers from KSEBL for the site visit are as follows:

S. No	Substation Name	Contact Details
1.	220kV SS Brahmapuram	Assistant Executive Engineer, 220kV SS Brahmaouram Ph : 9446008371
2.	BDPP Premises	Assistant Engineer BDPP Ph: 9496009254

- 6.4 After the expiry/termination of the BESPAs, the entire land area allocated to the BESSD shall be returned to KSEBL in the same condition or in mutually agreed condition as it was allocated. The duration of the land Right to Use agreement shall be co-extensive and co-terminus with the duration of the BESPAs. If the BESSD does not vacate the allocated land area and/or does not uninstall the entire Project equipment from the designated land area upon expiry/termination of the BESPAs within 180 days of expiry/ termination of BESPAs, KSEBL shall charge the applicable market price/circle rate for the respective land parcels, as fixed by the concerned Revenue Authorities of the Government, as part of penalty on the BESSD till they hand over the land in same condition as it was allocated.

7 Connectivity with the Grid

- 7.1 Projects should be designed for interconnection with the State Transmission Network (STU) network in accordance with the prevailing CERC/KSERC regulations, Grid Connectivity and Intra-state Open Access Regulations and amendments thereto, in this regard. For interconnection with the grid and metering, the BESSD shall abide by all rules and regulations framed under the Electricity Act, 2003 including the applicable Grid Code, Grid Connectivity Standards, Regulations on Communication System for transmission of electricity and other Regulations/Procedures (as amended from time to time) issued by Appropriate Commissions and Central Electricity Authority (CEA). Under this RfS, the voltage for interconnection at the STU shall be 220 kV. BESSD shall also comply with the applicable requirements mentioned in the First Time Charging (FTC) regulations/rules issued by the Central/State Government, as amended from time to time. The term Grid network/substation wherever indicated in the RfS/BESPAs/ BESSAs shall refer to the “STU network”, wherever applicable.
- 7.2 The project shall be interconnected to the KSEBL sub-station as per Annexure–E in Kerala. Necessary applications for grant of connectivity will be required to be made by the BESSD to KSEBL. All the requisite costs associated with obtaining connectivity such as bay construction and bus extension cost and other related infrastructure cost & requisite fee shall be borne by the BESSD.
- 7.3 The responsibility of getting connectivity with the transmission system of the STU shall entirely be of the BESSD and shall be at the cost of the BESSD, in line with applicable regulations. The transmission of power up to the point of interconnection, where metering is done for energy accounting, shall be the responsibility of the BESSD at its own cost. The maintenance of Transmission system up to the interconnection point on the BESS side shall be responsibility of the BESSD, to be undertaken entirely at its risk and cost.
- 7.4 The entire cost of construction of infrastructure from the Project upto and including at the Interconnection Point, including but not limited to the transmission line, including the construction of the Bay, Bus bar protection relay augmentation with installation of protection and control panel, maintenance & all cost up to the delivery point shall be borne by the BESSD. The maintenance of the Transmission system up to the interconnection point shall be the responsibility of the BESSD, to be undertaken entirely at its cost and expense. The SLDC/Scheduling charges, connectivity and

other charges shall be payable by BESSD.

- 7.5 The BESSD shall be required to follow the Detailed Procedure as issued by CERC/CTU/ STU /SERC as applicable, regarding connectivity of the Project. The Project shall comply with all the technical requirements specified under CEA/CEIG, including subsequent amendments and clarifications issued thereto, as well as other Rules/Regulations issued by SERC/CERC/CEA/CEIG and as amended from time to time. It is further clarified that the Entities (BESSD and Buying Entity) as indicated in the procedure issued under the above Rules/Regulations, will be responsible for their respective obligation as notified in the procedure, irrespective of the provisions of the RfS, and BESP. The Project shall also comply with the SERC/CEIG/CEA (Measures relating to Safety and Electric Supply) Regulations, including subsequent amendments and clarifications issued thereto.

Important Notes:

- (i) Bidders must make note of the information pertaining to the land allocated for the project and space for bay construction at the substation.
- (ii) Tentative coordinates of the Interconnection point shall be provided.

The BESSD shall provide adequate protection system to ensure synchronized operation of the BESS to the grid. All associated equipments and protection system of BESS shall be compatible with the existing Substation system. Provision for communicating both real time data and metering data to SLDC and control room of 220kV SS Brahmapuram shall be ensured and are under the scope of BESSD.

- 7.6 Metering arrangement of the Project shall have to be adhered to in line with relevant clause of the BESP. All relevant parameters of energy injected and drawn by the project shall be measured and continuously recorded by means of a main meter, check meter and standby meter as specified by KSEBL. Power Quality Meter shall also be provided as per extant regulations.

The BESSD shall install Special Energy Meters (SEM) as specified in the Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006 as amended from time to time, for accounting the quantum of energy generated, the quantum of energy injected into the transmission and/or distribution system and the quantum of energy consumed. The Special Energy Meters installed shall be capable of measuring the 15 minutes time-block-wise active energy and reactive energy', in accordance with the Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006 as amended from time to time and the provisions of State Grid Code.

The BESSD shall install power quality meter and share the recorded data thereof with the KSEBL with such periodicity as may be specified by the appropriate Electricity Regulatory Commission. PQ meter to be installed shall be able to measure harmonics as well as other power quality parameters such as voltage sag, swell, flicker, disruptions at POI as per Central Electricity Authority (Technical Standards for Connectivity to the Grid) (Amendment) Regulations, 2019. Also, the power Quality Meter shall conform to IEC 61000 / IEEE Standard 519, Class A and various

parameters to be measured include DC current injection, harmonics, voltage sag, swell, flicker and other disruptions.

- 7.7 The BESSD shall comply with KSERC/ CERC regulations on Forecasting, Scheduling and Deviation Settlement, as applicable from time to time. The scheduling of power to/from the Project as per the applicable regulation shall be provided by the KSEBL. However, any DSM penalties due to violation of the schedule of charging or discharging of the BESS due to reasons attributable to BESS shall be to the account of the BESSD. DSM penalties, if any, shall be levied separately on the respective entities as applicable, at their respective ends for the charging and discharging activities. Any consequential liability on KSEBL in respect of charging/ discharging power purchase/ sale due to Deviation (DSM) at BESS end shall be to the account of BESSD.
- 7.8 In order to remove potential discrepancies and ambiguities, the BESSDs are hereby instructed that, as part of scheduling of power to/from the Project, they will be required to punch-in their respective schedules and subsequent revisions, by themselves, at the interfaces of the SLDC concerned for the corridor of power flow, including the Transmission Utility, as per the provisions in this RfS, regulations in force, under intimation to SLDC. KSEBL may facilitate in identification of any discrepancy and assist the BESSD for its early rectification without any liability on KSEBL. The BESSD shall be solely responsible for discrepancy identification and its rectification to avoid any rejection/loss payment of invoices.
- 7.9 DSM penalties, if any, shall be levied separately on the BESSD as applicable, at their BESSD ends for the charging and discharging activities as per CERC/ KSERC regulations.
- 7.10 Reactive power charges shall be on account of the BESSD as applicable, at the BESSD end during charging and discharging, as per CERC/KSERC regulations. It is to be ensured that Harmonics has to be maintained within the prescribed limit as per the Regulations/Procedures (as amended from time to time) issued by Appropriate Commissions and Central Electricity Authority (CEA).
- 7.11 The BESSD shall be required to follow the applicable Procedure for Grant of connectivity as issued by KSERC as well as other Regulations issued by KSERC/CEA as amended from time to time. The BESSDs will be required to apply for connectivity at the identified substations within 30 days of signing of BESPA and shall furnish copies of the application as well as granted connectivity, to CE (REES&PED) at the earliest. In case the BESSD fails to obtain the connectivity at a Substation identified, the same shall be immediately notified by the BESSD to CE (REES&PED). At least 30 days prior to the proposed commissioning date, the BESSD shall be required to submit the Connectivity Agreement signed with the STU/ KSEBL to CE (REES&PED).
- 7.12 The responsibility of complying with Central Electricity Regulatory Commission (Connectivity and General Network Access to the Inter-State Transmission System) Regulations, 2022 as indicated in the Detailed Procedure issued subsequently under the above Regulation vests with the BESSD. It is further clarified that the Entities

(BESSD and Buying Entity), will be responsible for their respective obligations as notified in the applicable Regulations irrespective of the provisions of the RfS and BESPA.

The Bay extension, Bus Extension / Addition of Bay equipments in the existing bay shall be in conformance to the General Layout of the substation and shall be constructed after obtaining approval of the Deputy Chief Engineer, Transmission Circle Kalamassery of KSEBL. Prior approval of design of Earth mat being laid by the BESSD shall be obtained from Transmission wing of KSEBL. The scheme of Protection shall also be similarly got approved and the status of Interconnecting Circuit Breaker, Isolators shall be made available for integrating to the SCADA of the Sub-Station. The Current, Voltage and Power parameters at BESS Bay shall be provided available for integrating to the SCADA of the Sub-Station.

The BESSD is required to place all the Control & Relay panels and RTU required for Data Transfer at separate control room at BESS Premises. Independent RTU shall be provided by the developer and the SCADA Screen of BESS shall be shared to Substation Control room and SLDC in developers scope. The transfer of data to SLDC and to 220kV Brahmapuram Substation Control room shall be in entire scope of the BESSD including internet connectivity. Cyber Security measures shall be complied with by the BESSD. The BESSD shall comply with cyber security guidelines issued by the competent authority, from time to time, and the technical standards for communication system in Power Sector laid down by the Authority. The adequate firewalls must be in place at BESS plant end where the data of BESS is integrated with the SLDCs.

All provisions of Make in India (MII) orders and orders related to Cyber Security issued by the government must be complied with, in all the activities involved in the project(s) from start to completion.

The specifications of the Interconnecting Transformer shall be pre-approved by Transmission wing of KSEBL. The timeline for approval shall be thirty days from submission of application in this regard.

8 Performance Criteria of the Project

8.1 Project performance parameters

- a. The Contracted Capacity of the Project shall be in terms of “MW”, which shall also be referred to as the Project Capacity. KSEBL’s obligation shall be for off-take of entire Contracted Capacity and energy at Delivery point.
- b. For example, for the Project Capacity of 250 MW/ 500 MWh, Contracted Capacity shall be 250 MW. The BESPA shall entitle KSEBL to schedule discharge upto 500 MWh of energy from the BESS in each cycle, subject to the following:
 - i. Buying entity will schedule charging of the BESS with equal amount of energy plus energy expected to be lost as conversion losses (determined from the Round-Trip Efficiency (RtE) of the system as declared by the BESSD on day ahead basis).

Illustration: For a Contracted Capacity of 250 MW/500 MWh, assuming an RtE of

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85%, KSEBL shall schedule and supply charging power to the tune of 588.24 MWh, to expect a discharge of 500 MWh as per the desired schedule.

- ii. Energy scheduled for discharge in a given cycle during a year shall be more than or equal to the Min. Dispatchable Energy Capacity at the End of Year as specified under Article 4.4.2.(c) of BESP A and as per Clause 8.1.e.iv. below.

For example, during the end of the 3rd Year after COD, the energy scheduled for discharge from 250 MW/ 500 MWh capacity shall be more than or equal to $250 \times 0.925 \times 2 = 462.5$ MWh.

- iii. Contracted capacity shall be the project capacity at delivery point. KSEBL shall provide the charging energy factoring the RtE, as per specified RtE in RfS.
- c. The total Project Capacity shall be for supply to and offtake by KSEBL and there will be no merchant capacity. The BESS shall adhere to the specifications and performance requirements laid out in Annexure-A of the RfS in this regard.
- d. Power rating of the project capacity of 500 MWh (250 MW x 2 hrs) BESS will be 250 MW, i.e., the maximum value of the active output at the Delivery Point. Input energy shall be provided by KSEBL at delivery point for contract capacity as illustrated in 8.1 (b). The Energy rating of 500 MWh of the system will be the dispatchable capacity at COD of the system, as measured at the Metering Point. Terms and definitions of terminologies related to BESS shall be as defined in IEC 62933-2-1.
- e. The BESSD shall make the BESS available for **Single operational cycles per day**, i.e. One complete charge-discharge cycle per day.

Provided that KSEBL, at its discretion, can split the discharge of the stored energy upto three sessions. The discharge may also be performed at below the rated power, stretching upto 8 Hours. For purpose of BESS operation, a day shall be reckoned as from 06:00 hrs on a day to 06:00 hrs on next day. The discharge extended beyond 24:00 hrs shall be reckoned to be performed on the same day. There shall be no mandatory cooling period between two sessions of same operation. (Charging or Discharging). Similarly, the charging may also be performed upto 10 hours and upto three sessions.

The BESS shall be operated for occasional dual cycles in a day subject maximum of 5 (Five) dual cycle days in a month, however subject to the annual limit of 400 cycles.

It is hereby clarified that the BESS should be designed to provide a minimum of 2 Hours of discharging capacity at rated power. However, KSEBL, at its sole discretion, can schedule discharging of the BESS upto three sessions each day, at rated power or stretching upto 8 Hours when discharged below rated power.

Illustration (Discharge) :

(1)

Session	Time	Power (MW)	Duration (Minutes)	Energy Discharged (MWh)
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1	17:00 to 17:15	20	15	5
2	18:00 to 18:30	100	30	50
	18:30 to 19:30	250	60	250
	19:30 to 20:00	40	30	20
3	20:30 to 22:15	100	105	175
			195	500

(2)

Session	Time	Power (MW)	Duration (Minutes)	Energy Discharged (MWh)
1	18:00 to 01:00	50	420	350
2	01:30 to 02:00	250	30	125
3	02:30 to 03:00	50	30	25
			480	500

f. Following provisions shall be applicable on the entire Project Capacity guaranteed to be off taken by KSEBL:

- i. The procurement shall be in power (MW) terms. The BESSD shall install, operate and maintain the BESS to offer facility to KSEBL to charge and discharge the BESS on an “on demand” basis. The BESSD shall guarantee a minimum system availability of 95% on annual basis for Charging Cycles. The BESSD shall pay the liquidated damages for shortfall, if any, to KSEBL. Amount of such liquidated damages shall be 1.5 Times the Capacity Charges for the capacity not made available during charging cycles. The BESSD shall declare availability on Day Ahead Basis. The BESSD should provide the DC (Declared Capacity) for each time block for the day before 09:00 hours the previous day. The tentative instructions for scheduling of charging and discharging will be issued by SLDC by 15:00 hours on the previous day.

Schedule revisions will be issued by SLDC upto two clear 15-minute time blocks prior to the schedule period. However, as per Grid requirements, the SLDC shall request real-time schedule revisions, which shall be implemented real time and no later than the end of next time block.

Revisions to the Declared Capacity (DC) by the BESSD shall be submitted at least six clear 15-minute time block in advance. Frequent revision to DC, especially during evening peak hours, shall not be entertained and no more than two such revisions shall be permitted from 18:00 to 22:00 hours in a month. The discharge schedule from SLDC shall not be altered in such cases and will be treated as shortfall in discharge commitment.

Intrastate Deviation Settlement Mechanism (DSM) shall become applicable as and when notified by KSERC / CERC.

The Monthly Average Availability shall be calculated for each month. On the basis of monthly Availability, Annual Average Availability shall be calculated.

The illustration is provided as under:

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ILLUSTRATION:

Month	Monthly Average Availability	Annual Average Availability = $\{\Sigma (\text{Monthly Average Availability})\} / 12$
1	95%	$(95\%+95\%+93\%+97\%+93\%+98\%+95\%+92\%+96\%+95\%+91\%+90\%) / 12$ = 94.16 %
2	95%	
3	93%	
4	97%	
5	93%	
6	98%	
7	95%	
8	92%	
9	96%	
10	95%	
11	91%	
12	90%	

- ii. “Availability” of the Project shall mean the ability of the BESS to execute a function i.e. charging or discharging, when called upon to do so, as per the schedule or signal provided by the off-taker, subject to the minimum system ratings specified herein. In addition, the BESSD shall also demonstrate, **on annual basis, 100% of the minimum dispatchable capacity of the BESS** as required under Clause 8.1.e.iv below.

For a given BESPA, the Annual availability guarantee during Charging period shall commence from the date of fully commissioning of the system and shall be calculated as below:

Monthly System Availability = Mean of the System availabilities of all time-blocks during the month in which the KSEBL has scheduled power for charging the BESS.

Where,

System Availability in a time-block=

$$\frac{\text{Actual Drawl } MU_i(A)}{\text{Scheduled Drawl } MU_i(B)}$$

where

- i refers to the i^{th} time-block in the Month where Scheduled Injection $MU_i \neq 0$.
- Actual Drawl MU_i is the Actual Energy for Charging in the i^{th} time-block, in MUs
- Scheduled Drawl MU_i is the Energy Scheduled for Charging in the i^{th} time-block, in MUs
- A and B shall be as per the DSM/UI Reports published by the SLDC or measurement at the Main ABT Meter at the Point of Interconnection.

System Annual availability shall be calculated as per above. The

liquidated damages for **system availability below 95%** shall be settled on monthly basis and if it is not able to settle in the same/ current month, it will be carried forward for settlement in subsequent month(s).

If the Annual un-availability of 5% is already reached during part of a year, the Monthly Capacity Charges will be paid only after deducting the Penalty for Availability.

- iii. The BESSD shall guarantee a **minimum AC to AC roundtrip efficiency (RtE) of 85%** for the system on monthly basis. The BESSD shall be liable for Liquidated Damages to the off-taker, if any, on account of excess conversion losses, based on the following conditions:
- (a) For $RtE < 70\%$, there shall be a liquidated damage @ APPC tariff of previous financial year of the KSEBL, levied upon the excess conversion losses, considering system $RtE = 85\%$ and tariff payment for the corresponding month shall not be made to the BESSD;
 - (b) For $70\% \leq RtE < 85\%$, there shall be a liquidated damage levied @ APPC tariff of previous financial year of KSEBL, levied upon excess conversion losses considering system $RtE = 85\%$.
 - (c) For $RtE > 85\%$, there shall be incentive @Rs. 0.50 per unit of excess discharge of energy considering system $RtE = 85\%$

System Roundtrip Efficiency =

$$= \frac{\text{Sum Total of Actual Injection/Discharging MUSj in a month (C)}}{\text{Sum Total of Actual Drawal/Charging MUSj in a month (D)}}$$

Where,

j refers to the j^{th} month in a year;

$D \neq 0$;

$D \leq 2 \times E_{\text{bess}} \times (MD_{n-1} - (MD_{n-1} - MD_n) \times j/12) \times \text{No of}$

Days in the jth month/ RtE_g ;

E_{bess} refers to Energy Rating specified in Clause 8.1.b. above;

MD_{n-1} refers to minimum guaranteed dispatchable energy at the end of the previous year (as a % of Capacity at the COD specified in Clause 8.1.e.iv. below);

MD_n refers to minimum guaranteed dispatchable energy at the end of the current year;

RtE_g refers to the guaranteed Round-Trip Efficiency under the BESPA;

C and D shall be as per the DSM/UI Reports published by the Regional RPCs/SLDCs or measurement at the Main ABT Meter at the Point of Interconnection.

For calculation of LD, RtE shall be calculated based on the above formula rounded off to three decimal places.

Note:

- The Scheduled capacity shall be subject to the System Power Rating specified in Clause 8.1.a. above and 8.1.b above.
- The BESSD shall take separate, metered connection for the Auxiliary Power load of BESS
or

The BESSD can draw auxiliary power from Interconnection point. Separate meter shall be provided by Developer to measure Auxiliary consumption and that would be billed by KSEBL @ Industrial Tariff excluding demand charges, subject to approval of Hon'ble KSERC.

All Expenses towards availing the connection, including but not limited to Line Extension / Panel or RMU erection, for Auxiliary Power shall be at expense of the BESSD.

The BESSD shall declare RtE on Day Ahead basis along with Declared Capacity.

- iv. Taking into consideration capacity degradation, the minimum dispatchable energy to be made available by the BESSD at the end of a given year shall be as follows:

Contract Year	Min. Dispatchable Capacity at the end of Year (as a % of Capacity at the Beginning of Life/Final COD)
1	97.5%
2	95.0%
3	92.5%
4	90.0%
5	87.5%
6	85.0%
7	82.5%
8	80.0%
9	77.5%
10	75.0%
11	72.5%
12	70.0%
13	70.0%

14	70.0%
15	70.0%
16	70.0%

- v. The nameplate 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. The energy discharged from the battery shall be greater than that specified above.
- vi. The BESSD is required to meet the Discharge energy commitment subject to Clause (iv) above. The Discharge Energy Commitment shall be 95 % of the Energy scheduled for dispatch on monthly basis. The BESSD shall be liable for Liquidated Damages to KSEBL, if any, on account of short fall in supply of committed energy at the Average Market Clearing Price (MCP) in peak hour (18:30Hrs-20:30Hrs) in Day Ahead Market (DAM) of Power Exchange for corresponding billing month period.
- The BESSD shall be eligible for incentive, from completion of one year after CoD of entire project capacity @ Rs.1.00 per unit for the excess discharge of energy for the quantum discharged by KSEBL in excess of the minimum dispatchable energy taking into consideration YoY capacity degradation as 2 %.
- For example: The minimum dispatchable capacity during the fifth year with the initial capacity as 500 MWh is $(500 - 500 \times 2.5\% \times 5) = 437.5$ MWh. The incentive is applicable if BESS delivers more than 450 MWh $(500 - 500 \times 2\% \times 5)$ in the fifth year. If the BESS is discharged in excess of 450MWh during any day during discharge cycle in the fifth year of operation, the excess discharged units will be eligible for incentive of Rs 1/kWh. This will be settled on monthly basis. The incentive will not be applicable during discharge cycles where the BESS is not scheduled above 450MWh in example above.
- The disbursement of incentives shall be effective along with the monthly bills.
- vii. SLDC shall, in accordance with Applicable Laws and Regulations thereunder, issue instructions to the BESSD on behalf of KSEBL for dispatch of electricity to the Grid during such period and in such volume as it may specify in its instructions. The BESSD shall clearly specify the maximum recovery times required to restore the BESS for functional availability between duty cycles. The maximum allowed cooling time between Charge to Discharge or Discharge to charge would be 1 hr. There shall be no cooling or recovery time between two sessions during charging or discharging operation.
- viii. Operational Window: Operational Window shall mean the expected hours/duration of system (capacity) availability on each day during the term of the Contract, excluding:
- Maximum BESS recovery time as specified in this document
 - Grid Outages (duly certified to this effect by the Grid Operator)
 - Planned Maintenance Outage duly informed by the BESSD to the off-taker

with at least one month's prior notice, subject to total no. of planned outage period being not more than 34 hours in a two-month period.

- d. The Scheduled maintenance must be carried out during monsoon season, subject to prior approval from KSEBL.

BESSD will have to comply with the Charging and Discharging Schedule as intimated by SLDC.

- ix. In addition to above, the BESSD shall also submit Available Energy Test Report for the Project Capacity as per IEC 62933-2-1 on Annual basis.
- x. It shall be the responsibility of the BESSD to make periodic replacements/replenishments of system capacities at its own cost to ensure annual guaranteed system ratings, if and when required, up to the Term of the Contract. Outage time as a result of replacement will also be counted as an "Accountable BESS Outage" for the purpose of computing BESS Availability.
- g. Pursuant to the provisions as above, the BESSD shall plan the dispatch of electricity and convey its availability for scheduling thereof by the SLDC and shall supply electricity in accordance with the provisions of the Grid Code and the Electricity Act, 2003. The BESSD shall adhere to all the technical requirements as brought out in Annexure-A of the RfS. The BESS shall conform to all the applicable standards of CEA/CEIG and regulations of CERC/KSERC for connectivity, metering, communication with the grid operators, etc.

8.2 **Shortfall in meeting Performance Criteria**

Following provisions shall be applicable on the Contracted Capacity guaranteed to be offtaken by KSEBL:

- i. Shortfall in demonstrating minimum Availability: Subsequent to COD of full Project capacity or capacity accepted by KSEBL, in case the annual Availability during Charging Cycles demonstrated by the BESSD is less than the minimum as specified above, such shortfall in performance shall make the BESSD liable to pay the liquidated damages to KSEBL.

Liquidated damages on account of shortfall in meeting the minimum Availability criteria as per Clause 8.1.e.i., will be computed as follows:

Liquidated damages in Rs.= (A – B) x C x D x n x 1.5

where,

A is Guaranteed Annual Availability (in %) as per Clause 8.1.f.i. above;

B is Actual Annual System Availability (in %) , as calculated as per Clause 8.1.f.ii. above;

C is BESS Power Capacity (in MW);

D is Capacity Charges Rs/MW/month as discovered through bidding process;

n is the number of months

In case of the BESS failing to meet minimum 50% of the stipulated availability applicable for a particular Contract Year as per Clause 8.1.f.4 above, for a cumulative period of 2 years or more during the Term of the BESPA, the shortfall

shall be considered as BESSD Event of Default under the BESPAs, and failure to rectify this Event will result in termination of the BESPAs.

In case the BESSD fails to meet the monthly RtE demonstration as per Clause 8.1.f.iii above, additional Liquidated Damages for the unavailability of the required minimum RtE shall be applicable for the entire month.

It is clarified that the calculation of Availability as per Clause 8.1.f.ii of the RfS will not include the planned outage as declared by the BESSD under Clause 8.1.f.vii of the RfS. However, in case the BESSD notifies any outage outside the planned outage hours, while KSEBL may not actually schedule any power injection/drawl during those outage hours, such hours will be covered in calculating the Monthly Availability as per Clause 8.1.f.ii.

For example, in case the BESSD notifies outage for 10 hours outside the total allocated quota of planned outage amounting to (34 x 6) hours, i.e. 204 hours, the denominator of the formula in Clause 8.1.f.ii above will include the time-blocks corresponding to these 10 hours, and exclude the 204 hours of planned outage.

However, this damage shall not be leviable to the extent the availability of system is affected due to Force Majeure event as specified under the agreement. An illustration to this effect is enclosed at Annexure-D.

ii. Shortfall in demonstrating minimum Round-trip-Efficiency: In case the BESSD fails to meet the monthly RtE demonstration as per Clause 8.1.f.iii above, Liquidated Damages for the shortfall in required minimum RtE shall be applicable for the month.

iii. Shortfall in Supply of Committed energy: as per provision of RfS Clause 8.1.f.vi

9 Commissioning of Projects

The Commissioning of the Project shall be carried out by the BESSD in line with the procedure as per the BESPAs.

The BESSD shall commission the Project in line with provisions of the SERC/CERC (Indian Electricity Grid Code) Regulations, 2023, as amended from time to time. In line with this regulation, the BESSD proposing the Project, or its part, for commissioning, shall give to KSEBL, a preliminary notice not later than 60 days prior and advance notice not later than 30 days prior to the proposed commissioning date. KSEBL may authorize any individual or committee or organization to witness and validate the commissioning procedure on site. Commissioning certificates shall be issued by KSEBL after successful commissioning. The BESSD shall obtain necessary safety clearances from the Central Electricity Authority/CEIG/ State Electrical Inspectorate prior to commissioning of the Project.

9.1 Part Commissioning

Part commissioning of the Project, without prejudice to the imposition of any liquidated damages in terms of the BESPAs on the part which is not commissioned, shall be accepted by KSEBL subject to the condition that the minimum part commissioning capacity for the 1st part will be 50% of Project Capacity. The total number of instalments in

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which a Project can be commissioned will not be more than 3, i.e., 1st initial instalment and 2 subsequent instalments.

However, the SCD will not get altered due to part commissioning. Irrespective of dates of part commissioning or full commissioning, the BESPA will remain in force for a period as per Clause 22.5 of the RfS.

9.2 Commissioning Schedule and Liquidated Damages not amounting to Penalty for Delay in Commissioning

- a. The Scheduled Commissioning Date (SCD) for commissioning of the full capacity of the Project shall be the date as on 18 months from the Effective Date of BESPA (for e.g. if Effective Date of the BESPA is 05.12.2025, then SCD shall be 04.06.2027).
- b. The maximum time period allowed for commissioning of the full Project Capacity with applicable liquidated damages, shall be limited to the date as on 6 months from the SCD or the extended SCD (if applicable).
- c. In case of delay in commissioning of the Project beyond the SCD until the date as per Clause 9.2.b. above, as part of liquidated damages, the total PBG amount for the Project shall be encashed on per-day-basis and proportionate to the balance capacity not commissioned. For example, in case of a Project Capacity of 250 MW capacity, if commissioning of 100 MW capacity is delayed by 18 days beyond the SCD, then the liquidated damages shall be calculated as: $\text{PBG amount} \times (100/250) \times (18/180)$. For the purpose of calculations of liquidated damages, 'month' shall be considered consisting of 30 days.
- d. As an alternative to the above encashment of PBG, the BESSD may choose to make a payment of the amount corresponding to the liquidated damages, directly to the KSEBL. The BESSD shall intimate to KSEBL, its chosen alternative out of the two options, within 10 business days of intimation of the liquidated damages to the BESSD, as calculated by the KSEBL. In case no response is received from the BESSD until the lapse of the above deadline, KSEBL shall encash the PBG for the amount as per the liquidated damages.
- e. In case the Developer chooses to make necessary payments in lieu of the liquidated damages, the said payment shall be credited to the KSEBL's account through NEFT payment, no later than 5 business days from the above intimation by the BESSD. In case of non-payment by the developer within the above deadline, the PBG will be encashed by the KSEBL on the next business day.
- f. In case Commissioning of the Project is delayed beyond the date as per Clause 9.2.b above, the BESPA capacity shall stand reduced/amended to the Project Capacity commissioned until the deadline as per Clause 9.2.b. above, the entire PBG will be encashed by the KSEBL, and the BESPA for the Project shall stand terminated for the balance un-commissioned capacity.
- g. It is clarified that for the purpose of commissioning, the Project Capacity shall refer to the rated capacity of the Energy Storage System as declared by the BESSD in the BESPA. Any reduction in the Project Capacity on account of Clause 9.2.e above, will have no bearing on the obligation of the BESSD to provide the Contracted Capacity as per the BESPA.

10 Delay in Commissioning on Account of Delay in readiness of STU evacuation infrastructure/ Start Date of Connectivity

Subsequent to grant of connectivity, in case there is a delay in readiness of the STU substation at the Delivery Point, including readiness of the power evacuation and transmission infrastructure of the STU network until SCD of the Project, or delay in Start Date of Connectivity, and it is established that::

- i. The BESSD has complied with the complete application formalities as per Clause 7 above,
- ii. The BESSD has adhered to the applicable Regulations/Procedures in this regard as notified by the KSERC/STU, and
- iii. The delay in grant of connectivity by the STU and/or delay in readiness of the substation at the Delivery Point, including readiness of the power evacuation and transmission infrastructure of the STU network, is a factor attributable to the STU/transmission licensee and is beyond the control of the BESSD;

The above shall be treated as delays beyond the control of the BESSD and SCD for such Projects shall be revised as the date as on 30 days subsequent to the readiness of the Delivery Point and power evacuation infrastructure and/or Start Date of Connectivity. **The decision on requisite extension on account of the above factor shall be taken by the KSEBL.**

In case of delay in commissioning of Project due to reasons beyond the reasonable control of the BESSD, KSEBL may extend the SCD after examining the issue on a case-to-case basis.

In case of delay in Project commissioning on account of reasons solely attributable to the BESSD, resulting in any liquidated damages/penalty levied on the KSEBL, under the SERC / CERC / GNA Regulations, such damages/penalty shall be passed on to and payable by the BESSD.

11 Early Commissioning

The BESSD shall be permitted for full commissioning as well as part-commissioning of the Project even prior to the SCD. Early commissioning of the Project will be allowed solely at the risk and cost of the BESSD, and KSEBL will schedule the capacity from such early commissioned Project at the BESPA charges (for the Contracted Capacity).

The developer shall give fifteen (15) days' advance notice to the Procurer(s) regarding the advance commissioning of full or part capacity. However, early part / full commissioning of the Project and subsequent capacity procurement from the same shall be subject to the approval of KSEBL. Such intimation regarding consent to procure BESS capacity from early commissioning shall be provided by KSEBL within 15 days of receipt of the request being made by the BESSD, beyond which it would be considered as deemed refusal.

Irrespective of early commissioning, BESSD shall arrange for any augmentation of the Battery capacity, if required, to meet the capacity criteria mentioned at the time of SCD (i.e., dispatchable capacity on SCD date shall be 100% of the contracted capacity) and

to maintain the capacity at the end of every year as indicated in Clause 8.1(e). of the RfS. Subject to the provisions of the BESPA, in case of early commissioning, the BESSD will have to again demonstrate 100% of Contracted Capacity (as per the Commissioning Procedure) to KSEBL from SCD.

12 Viability Gap Funding Mechanism

12.1 In line with the sanction order issued by the Ministry of Power dated 09.06.2025 and subsequent amendments and clarifications issued by Ministry of Power, Government of India, Projects selected under this RfS will be eligible for grant of Viability Gap Funding (VGF) supported through Power System Development Fund (PSDF) by the Government for development of Battery Energy Storage Systems, and the same will be disbursed through the KSEBL.

12.2 Under this RfS, the VGF amount eligible for each Developer shall be limited to the amount calculated as **Rs. 18,00,000/MWh (Rupees Eighteen Lakhs per MWh)**. For example, for a Project Capacity of 250 MW/500 MWh, the VGF amount to be sanctioned for the corresponding Project will be Rs. 90 Crores. BESS Developer shall submit certificate for the capital cost incurred for the Project awarded capacity, duly certified by the Statutory Auditors, within six months from the COD.

12.3 VGF will be sanctioned separately for each Project, based on the Project Capacity as defined in the respective BESPA.

12.4 For each Project, disbursement of VGF will be carried out in 3 tranches, as follows:

Milestone for Disbursement of VGF	% of total VGF disbursed
On Financial Closure as per the BESPA, subject to submission of Bank Guarantee to KSEBL	20
On Commercial Operation Date (COD) of the Project	50
Completion of 1 st year from COD	30
Total	100

12.5 The VGF for each project shall be disbursed to the BESSD, once KSEBL/ CEA certifies the achievement of the disbursement schedule milestone and submission of the required Bank Guarantee by BESSD. KSEBL shall disburse the tranche wise VGF to BESSD only after receipt of the same from the Govt. of India and Submission of BG by BESSD as per Clause 12.6.

12.6 Bank Guarantee: Each tranche of VGF will be disbursed only after submission of Bank Guarantees (BG) for the amount equal to the VGF amount to be disbursed to the BESSD in that tranche. These BGs are in addition to the Performance Bank Guarantee provided by the developer as per clause 19 of this RfS. The BGs for the VGF sanctioned up to COD will be retained by the KSEBL for a period of 1 year starting from the COD and will be returned after the end of 1 year from COD, taking into account recovery of VGF, if any. No BG is required against the disbursement of the last tranche

of VGF post completion of one year of operation.

- 12.7 If the BESSD fails to commission the project in the timeline provided in this BESPA, and project got terminated after disbursement of the quantum of VGF, KSEBL will have full right to recover the total amount of VGF being disbursed till the date of termination of BESPA plus interest @ SBI-MCLR (1 Year) plus five percent, as existing on the date of disbursement, accrued from the date of disbursement on the disbursed amount. In case Project capacity is being reduced as per Clause 9.2 of the RfS, recovery of VGF amount shall be made on pro-rata basis corresponding to the capacity being terminated.
- 12.8 KSEBL will have the right to recover the VGF disbursed amount through encashment of BG, if the BESPA gets terminated within the first 2 years after COD of the Project, on account of reasons solely attributable to the BESSD. Irrespective of the year of termination within the first 2 years after COD, the VGF amount to be recovered will be fixed as the amount disbursed plus interest @SBI-MCLR (1 Year) plus 5 percent, as existing on the date of disbursement, accrued from the date of disbursement on the disbursed amount.
- 12.9 If the Project is transferred or sold to a third party during the above tenure, the BG will be re-issued by the new entity, corresponding to the amount applicable. The sale/transfer of the Project shall be effective only on submission of BG by new entity. However, this will be subject to prior approval of sanctioning authority of Grants-in-Aid {Rule230(9)}, in view of the asset being acquired substantially out of Government Grants.

SECTION 3. STANDARD CONDITIONS OF CONTRACT

13 *Obtaining RfS Documents*

Interested Bidders have to download the official copy of RfS & other documents after logging into the <https://www.bharat-electronictender.com>. The Bidder shall be eligible to submit/ upload the bid document only after logging into the <https://www.bharat-electronictender.com> (and downloading the official copy of RfS).

14 *Cost of Documents & Bid Processing Fees*

Prospective Bidders interested to participate in the bidding process are required to submit their Project proposals in response to this RfS document along with a non-refundable processing fee as mentioned in the Bid Information Sheet. A Bidder will be eligible to participate in the bidding process only on submission of entire financial amounts as per the Bid Information Sheet. Payments against Cost of RfS document and Bid Processing Fee shall be done only through NEFT/RTGS (electronic transfer), and the Bidder shall submit the transaction receipt, as part of the online bid submission.

The bank details of NVVN are:

- i. Bank Name: ICICI Bank Limited
- ii. Branch: CONNAUGHT PLACE BRANCH
- iii. Bank Address: 9A, PHELPS BUILDING, INNER CIRCLE, NEW DELHI-110001
- iv. IFSC Code: ICIC0000007
- v. Account No.: 000705008910

Bids submitted without cost of the RfS document and/or Bid Processing Fee and/or Bank Guarantee/Payment on Order Instrument against Earnest Money Deposit (EMD) (including partial submission of any one of the respective amounts), may be liable for rejection by NVVN.

15 *Project Scope & Technology Selection*

Under this RfS, the BESSD shall set up the Project including the transmission network up to the Interconnection/Delivery Point, at its own cost and in accordance to the provisions of this RfS document. All approvals, permits and clearances required for setting up of the Project and/or transmission network upto the Delivery Point (along with connectivity), including those required from State Government and local bodies, shall be in the scope of the BESSD. The Projects to be selected under this RfS provide for deployment of Battery Energy Storage Technology. However, the selection of Projects would be technology agnostic within the above segment.

16 *Connectivity with the Grid*

Please refer Clause 7 of the RfS.

17 *Clearances Required from the Central/State Government and Other Local Bodies*

The BESSDs are required to obtain all necessary clearances and permits as required for setting up the Projects, including but not limited to the following:

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- a) No Objection (NOC)/Environmental clearance (if applicable) for the Project.
- b) Approval for water from the concerned authority (if applicable) required for the Project.
- c) Any other clearances as may be legally required, in order to establish and operate the Project.
- d) Necessary approval(s) of CEIG/ State Electrical Inspectorate
- e) No Objection (NOC)/ Permit (if applicable) from the Local Body for the Project.
- f) Fire clearance.

The above clearances, as applicable for the Project, will be required to be submitted to KSEBL prior to commissioning of the Project. In case of any of the clearances indicated above being not applicable for the said Project, the BESSD shall submit an undertaking in this regard, and it shall be deemed that the BESSD has obtained/applied for all the necessary clearances for establishing and operating the Project. Any consequences contrary to the above shall be the responsibility of the BESSD. The BESSD shall also comply with all the laws, regulations, orders and procedures issued by the appropriate authority, applicable for setting up and implementing the Project.

The BESSD shall be required to follow the applicable rules regarding project registration with the State Nodal Agency in line with the provisions of the applicable policies/regulations of the State where the Projects are being located. It shall be the responsibility of the BESSD to remain updated about the applicable charges payable to the SNA under the applicable State policies.

Note: The BESSD should apply for all the necessary approvals, permits and clearances not more than 60 days from the Effective Date of the BESP, which shall be complete in all respects, incorporating the clarifications/changes as required by the concerned authorities. The above timeline shall be adhered to, in order to examine cases where the BESSD faces delay in grant of the necessary approvals and permits, for a period substantially greater than the standard period of grant of approval by the respective organizations.

17.1 In line with the O.M. issued by the Department of Expenditure, Ministry of Finance, vide No. 7/10/2021-PPD(1) dated 23.02.2023 and subsequent amendments and clarifications thereto, the Bidder shall meet the following criteria for its bid to be considered for evaluation under the RfS:

- a. Any Bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority (as defined in the OM as referred above).
- b. Any Bidder (including an Indian Bidder) who has a Specified Transfer of Technology (ToT) arrangement with an entity from a country which shares a land border with India will be eligible to participate in this RfS only if the Bidder is registered with the Competent Authority under the referred OM.
- c. "Bidder" in this reference, means any person or firm or company, including any member of a consortium, every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency branch or office

controlled by such person, participating in this tender.

- d. "Bidder from a country which shares a land border with India" for the purpose of this clause, means:
- i. An entity incorporated, established or registered in such a country; or
 - ii. A subsidiary of an entity incorporated, established or registered in such a country; or
 - iii. An entity substantially controlled through entities incorporated, established or registered in such a country; or
 - iv. An entity whose beneficial owner is situated in such a country; or
 - v. An Indian (or other) agent of such an entity; or
 - vi. A natural person who is a citizen of such a country; or
 - vii. A consortium where any member of the consortium falls under any of the above.
- e. "Beneficial owner" for the purposes of Clause 17.1.d.iv. above will be as defined in the referred OM, including subsequent amendments and clarifications thereto.
- f. In support of the above, the Bidder shall be required to submit necessary Undertaking, as per Format 7.8/7.8A of the RfS.
- g. Other provisions of the referred OM dated 23.02.2023, except Sl. 17 of the OM, will also be applicable for this tender. Any interpretation of the above clauses will be made in line with the referred OM, including subsequent amendments and clarifications thereto.

18 Bank Guarantee/ Payment on Order Instrument (POI) against Earnest Money Deposit (EMD)

- 18.1 Earnest Money Deposit (EMD) of INR 4,80,000/MW (Rupees Four Lakh Eighty Thousand only per MW) - per Project in the form of Bank Guarantee according to Format 7.3A and valid for 12 months from the last date of bid submission, shall be submitted by the Bidder along with their bid, failing which the bid shall be summarily rejected. The Bank Guarantees towards EMD have to be issued in the name of the Bidding Company/ Lead Member of Bidding Consortium. In the event of encashment of EMD, the encashed amount shall include all applicable taxes.
- 18.2 The Bidder shall furnish the Bank Guarantees towards EMD from any of the Scheduled Commercial Banks as listed on the website of Reserve Bank of India (RBI) and amended as on the date of issuance of bank guarantee. Bank Guarantee issued by foreign branch of a Scheduled Commercial Bank is to be endorsed by the Indian branch of the same bank or State Bank of India (SBI).

The EMD shall be valid as per the timelines stipulated above. However, shortfall in the EMD validity, if any, up to a period of seven (7) days shall be acceptable. Further, an additional shortfall only in the following cases shall be acceptable: If the bidder has submitted the EMD with validity as per original bid submission date or as per any revised submission date, and if the deadline for submission of bids has been extended further, the Bid Guarantee shall be acceptable provided, the EMD is valid for more than

two months from the actual date of bid submission and the Bidder submits the EMD extension for the requisite period within seven days from the date of actual bid submission, if required.

While issuing the physical BGs, the Bidder's Bank shall also send electronic message through secure SFMS (in case of BGs issued from within India) or SWIFT (in case of BGs issued from outside India) to NVVN's Beneficiary Bank as per the details given in Format 7.14.

- 18.3 NVVN has agreed to accept the EMD in the form of an unconditional and irrevocable Bank Guarantee instead of the cash deposit with the clear position intimated to the bidder that the EMD Bank Guarantee shall be encashable for being appropriated by the NVVN in terms of the guarantee as in the case of appropriation of the cash deposit lying with the NVVN.

18.4 **Forfeiture of EMD:**

The BG towards EMD shall be encashed by the NVVN in following cases:

- a. If the bidder withdraws or varies the bid after due date and time of bid submission and during the validity of bid;
- b. In case, KSEBL offers to execute the BESPA with the Selected Bidder and if the Selected Bidder does not submit the requisite documents as per Clause 22 of the RfS or does not execute the BESPA within the stipulated time period;
- c. If after issuance of LoA, it is found that the documents furnished by the bidders as part of response to RfS are misleading or misrepresented in any way;
- d. If the bidder fails to furnish required PBG/POI in accordance with Clause 19 of the RfS.

- 18.5 **Payment on Order Instrument (POI):** As an alternative to submission of EMD as above, the Bidder also has an option to submit a letter of undertaking issued by either of the following three organizations, viz. (i) Indian Renewable Development agency Limited (IREDA) or (ii) Power Finance Corporation Limited or (iii) REC Limited. This Letter of Undertaking shall be issued as "Payment on Order Instrument" (POI), wherein the POI issuing organization undertakes to pay in all scenarios under which the EMD would be liable to be encashed by the NVVN within the provisions of RfS/BESPA. This instrument would have to be furnished as per Format 7.3 C of the RfS, within the timelines as per Clause 18.1 above, for the amount and validity period as per those Clause 18.1 above.

The term "Bank Guarantee (BG) towards/ against EMD" occurring in the RfS shall be read as "Bank Guarantee (BG)/ Payment on Order Instrument (POI) towards/ against EMD".

18.6 **Insurance Surety Bond for Bid Security**

The Bid Security shall, at the Bidder's option, be in the form of an Insurance Surety Bond from an Insurer as per guidelines issued by Insurance Regulatory and

Development Authority of India (IRDAI). The format of the Insurance Surety Bond shall be in accordance with the form of Insurance Surety Bond towards bid security included in the RfS as per Format 7.3D.

Insurance Surety Bond against Bid Security issued by an Indian Insurance company outside India needs to bear stamp duty of appropriate value applicable to the place where Insurance Surety Bond is to be submitted. The Insurance Surety Bond may be got adjudicated by the NVVN from Collector of Stamps, within 3 months of arrival of Insurance Surety Bond in India. Expenses incurred in this regard shall be borne by NVVN.

19 Performance Bank Guarantee (PBG)/ Payment on Order Instrument (POI)

- 19.1 Bidders selected by the NVVN based on this RfS shall submit -Performance Bank Guarantee (PBG) for a value @ INR 12,00,000/MW (Rupees Twelve Lakh only per MW), to the KSEBL, prior to signing of BESPA. It may be noted that successful Bidders shall submit the PBG according to Format 7.3B with a validity period upto (& including) the date as on 9 months after the Scheduled Commissioning Date of the Project. Upon receipt and successful verification of the total PBG in the acceptable format by KSEBL, along with communication from KSEBL to NVVN confirming acceptance of the PBG submitted by the successful bidder, and upon receipt of the success charge by NVVN from the successful bidder, the BG submitted towards EMD shall be returned by NVVN to the successful bidder.

As an alternative to the above submission of PBG, the BESSD may choose to make a payment of the amount corresponding to the PBG, directly to KSEBL.

- 19.2 All Performance Bank Guarantees (PBGs) shall be submitted separately for each Project.

Note: The PBGs are required to be submitted in the name of the entity signing the BESPA. In case of BESPA being eventually signed with the SPV incorporated/utilized by the successful bidder, the PBG may be submitted in the name of the successful bidder within the above prescribed deadline, if the bidder chooses to do so, and the same shall be replaced by the PBG issued in the name of the SPV, prior to signing of BESPA.

- 19.3 The BESSD shall furnish the PBG from any of the Scheduled Commercial Banks as listed on the website of Reserve Bank of India (RBI) and amended as on the date of issuance of bank guarantee. Bank Guarantee issued by foreign branch of a Scheduled Commercial Bank is to be endorsed by the Indian branch of the same bank or State Bank of India (SBI). In case of the Project being implemented through an SPV incorporated by the successful bidder, the PBG shall be furnished in the name of the SPV, except for the case as indicated in Clause 39.3 of the RfS.
- 19.4 The format of the Bank Guarantees prescribed in the Format 7.3 A (EMD) and 7.3 B (PBG) shall be strictly adhered to and any deviation from the above Formats shall result in rejection of the EMD/ PBG and consequently, the bid. In case of deviations in the formats of the Bank Guarantees, the corresponding BESPA shall not be signed.

- 19.5 KSEBL has agreed to accept the PBG in the form of an unconditional and irrevocable Bank Guarantee instead of the cash deposit with the clear position intimated to the bidder that the PBG shall be encashable for being appropriated by the KSEBL in terms of the guarantee as in the case of appropriation of the cash deposit lying with KSEBL.
- 19.6 The selected Bidder for the Project selected based on this RfS is required to sign BESPA with KSEBL within the timeline as stipulated in Clause 22 of the RfS. In case, KSEBL offers to execute the BESPA with the Selected Bidder and if the Selected Bidder does not submit the requisite documents as per Clause 22 of the RfS, or does not execute the BESPA within the stipulated time period, then the EMD shall be encashed by NVVN on written instructions from KSEBL or Bank Guarantee equivalent to the amount of the EMD shall be encashed by KSEBL (i.e. PBG) as liquidated damages not amounting to penalty, the selected Project shall stand cancelled and the selected Bidder expressly waives off its rights and objections, if any, in that respect. The Liquidated Damages realized shall be passed on to KSEBL.
- 19.7 The Bank Guarantees have to be executed on non-judicial stamp paper of appropriate value as per Stamp Act relevant to the place of execution.
- 19.8 All expenditure towards execution of Bank Guarantees such as stamp duty etc. shall be borne by the Bidders/BESSDs. Any Bank Guarantee or amendment to be submitted as part of the bidding process / contract execution, shall be accepted only when the BG issuance message is transmitted by the issuing bank through SFMS (insert SFMS details of the KSEBL).
- 19.9 In case of Bank Guarantees issued by foreign branch of a Scheduled Commercial Bank, the same is to be endorsed by the Indian branch of the same bank or SBI, and the endorsing bank would be required to provide the SFMS confirmation.
- 19.10 After the bidding process is over, NVVN shall release the Bank Guarantees towards EMD of the unsuccessful Bidders within 15 days after the completion of e-Reverse Auction. The PBG shall be returned to the BESSD within 9 months from the COD of the Project, after taking into account any liquidated damages due to delays in commissioning as per Clause 9 and 10 of the RfS.

20 Consultancy Fee

- 20.1 **Consultancy Fee:** The Selected Bidder shall have to pay INR 1,12,50,000 (Rupees One Crore Twelve Lakh Fifty Thousand only) + 18% GST to NVVN towards administrative overheads, coordination with State Authorities, State Utilities and others expenses. The payment has to be made by the BESSD in the form of DD/ Pay Order/ NEFT/ RTGS within 30 days of issuance of LoA by KSEBL. Any delay in depositing the said amount to the NVVN as mentioned above within the stipulated time shall attract late payment charges @18% per annum+18% GST, levied on per day basis, on the total Consultancy Fee, till (and including) the date of payment of Consultancy Fee, which shall not be later than the date of signing of BESPA. BESPA shall only be signed after deposit of the Consultancy Fee to the NVVN and written confirmation of the same from NVVN to KSEBL. In case of delay in making full payment of above delay charges, the amount paid, if any until the above deadline, along with interest,

shall be first reduced from the total amount due towards the delay charges and interest amount (i.e. rate of interest as stated above). Further, balance amount to be paid shall attract Interest rate @ one-year SBI MCLR rate / annum + 5% (five percent) on pro-rata basis.

20.2 **Not Used**

21 Integrity Pact (IP)

Bidders are required to unconditionally accept all the conditions of the "Integrity Pact (IP)" as per **Attachment titled Integrity Pact** to the Bidding Documents which has been pre-signed by the NVVN.

Bidders shall certify their compliance on "**Integrity Pact** " by accepting the following General Technical Evaluation (GTE) of the Tender at e-Tender Portal:

"Do you certify full compliance to all provisions of Bidding Document?"

On Bidder's acceptance to the above GTE condition, Bidder confirms to have read, understood and unconditionally accept & commit to all the contents, terms, conditions and undertakings mentioned in the Integrity Pact which has been pre-signed by the NVVN and enclosed with the Bidding Documents. Where the Joint Venture(s) / Consortium are permitted to participate in the bid pursuant to ITB Clause 8.1.2(a), acceptance of above GTE by bidder shall mean that all the JV Partner(s)/ Consortium members have read, understood and unconditionally accept & commit to all the contents, terms, conditions and undertakings mentioned in the Integrity Pact which has been pre-signed by the NVVN and enclosed with the Bidding Documents.

On Acceptance of the above GTE, Integrity Pact shall be considered signed by the Bidder / JV Partner(s)/ Consortium members and the same shall come into force from the date of submission of bid.

It may also be noted that subsequent to NVVN's evaluation of Bids, resulting into award of Contract to a particular Bidder, the Integrity Pact so submitted shall form an integral part of the Contract.

21 (A) ***Independent External Monitors (IEM)s***

In respect of this package, the Independent External Monitors (IEMs) would be monitoring the bidding process and execution of Contract to oversee implementation and effectiveness of the Integrity Pact Program.

This panel is authorized to examine / consider all references made to it under this tender. The bidder(s), in case of any dispute(s) / complaint(s) pertaining to this package may raise the issue either with the designated 'Nodal Officer' in NVVN or directly with the IEMs address available at NVVN website www.nvvn.co.in.

The Independent External Monitors (IEMs) has the right to access without restriction to all Project documentations of the KSEBL including that provided

by the Contractor. The Contractor will also grant the IEMs, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his Project Documentations. The same is applicable to Subcontractors. The IEMs are under contractual obligation to treat the information and documents of the Bidder/ Contractor/ Sub-Contractors/ JV partners/ Consortium member with confidentiality.

The Nodal Officer for necessary coordination with Independent External Monitors shall be as under:

(i))	Concerned Group Head in C&M	:	if the issue pertains to awarding of Contract by C&M
(ii)	Concerned Head of Department	:	if the issue pertains to other departments
(iii)	Concerned Head of of: Department	:	if the issue pertains to post- award execution of Contract

22 Battery Energy Storage Purchase Agreement (BESPA)

- 22.1 KSEBL shall enter into Battery Energy Storage Purchase Agreement (BESPA) with Bidders selected based on this RfS. A copy of standard BESPA to be executed between KSEBL and the BESSD is available on <https://www.bharat-electronictender.com> (and also in the NVVN's website. The BESPA will be signed within 30 days of issuance of LoAs, if not extended by KSEBL. BESPA will be executed between KSEBL and selected bidder or its SPV for the Project.
- 22.2 The BESSD shall submit a detailed completion Schedule for the Project within 30 days from BESPA effective date. Broad details to be captured in the Schedule are the land procurement, grid connectivity order, supply and erection status of various Project components; financial arrangement/ tie up etc. The BESSD shall also submit the progress report to KSEBL in a format acceptable to KSEBL and shall contain percentage completion achieved compared with the planned percentage completion for each activity on monthly basis, and any such other information as and when required by KSEBL. In addition to the above, subsequent to signing of BESPA, the BESSD shall be required to submit the monthly Project status on 5th day of every calendar month as per Annexure-D of the RfS or any format as provided subsequent to signing of BESPA.
- 22.3 Note: BESPA will be executed between KSEBL and the BESSD for the total Project Capacity awarded to the Bidder. Delays in meeting the project execution timeline on account of changes in the project parameters from the data as submitted in the Covering Letter (Format 7.1), shall be at the risk and cost of the Successful Bidder.
- 22.4 In case any change in project location by the BESSD during the project construction period results in any modification in the connectivity/power evacuation to be taken by Buying Entity/ NVVN for charging power, any additional charges/ penalties payable by

Buying Entity/ NVVN in this regard shall be borne by the BESSD, unless the change is on account of a Force Majeure event.

- 22.5 The BESPA shall be valid for a period of 16 years from the SCD or date of full commissioning of the Project, whichever is later. Any extension of the BESPA period beyond the term of the BESPA shall be through mutual agreement between the BESSD and KSEBL. BESPA shall be extended for a period upto 5 years at tariff not more than 60% of the BESPA tariff and mutually agreed between KSEBL and BESSD, provided the Minimum Dispatchable Energy after 15 years and through the extended period is more than 70% of the Contracted Capacity as on COD and RtE remaining more than 85%, subject to approval of KSERC.

The extension of BESPA beyond the initial 16 years would be for the part of Contracted Capacity as demonstrated after the 16-year period. e.g: If the Minimum Dispatchable Capacity demonstrated after the 16-year period is 400 MWh at 250MW, then the extension of BESPA will be for 80% of the initial Contracted Capacity. A maintenance period upto 90 days will be allowed for Battery replacement / other maintenance activities, after the 16-year period.

- 22.6 The Performance Bank Guarantee to KSEBL as per Clause 19 above and Consultancy Fee to NVVN as per Clause 20 above, shall be submitted by the BESSD prior to signing of BESPA. Before signing of BESPA between KSEBL and the BESSDs, the KSEBL will verify the shareholding of the Project Company along with a copy of complete documentary evidence or certificate from statutory auditor. If at this stage it is found that the documents furnished by the BESSDs are false / misleading or misrepresented in any way, then the provisions contained in this RfS will be applicable.
- 22.7 Successful bidders will have to submit the required documents to KSEBL within 15 days from the issuance of LoA. In case of delay in submission of documents beyond the 15 days as mentioned above, KSEBL shall not be liable for delay in verification of documents and subsequent delay in signing of BESPA. Effective Date of the BESPA shall be the date as on 30 days from the date of issue of LoA, or the date of signing of BESPA, whichever is later (for example, if the date of LoA is 07.02.2026, the Effective Date will be 06.03.2026 or date of signing of BESPA, whichever is later). Subsequent to expiry of the 30 -day period after the issuance of LoA, in case the KSEBL intimates to the Successful Bidder, a particular date as the date for signing of BESPA, the specified date shall become the Effective Date of the BESPA, irrespective of the date of signing of BESPA.
- 22.8 Not Used
- 22.9 The BESSD will be free to replenish the battery capacity from time to time during the Term of the BESPA at its cost and expense to meet the performance criteria. However, KSEBL will be obligated to off-take capacity only within the performance range as specified in the BESPA and at the charges applicable as per the existing agreements. Any excess supply will be dealt as per provisions of the BESPA.

23 Financial Closure or Project Financing Arrangements

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- 23.1 The Projects shall achieve Financial Closure within the date as on 06 months after the Effective Date of the BESPA (for e.g. if Effective Date is 06.03.2026, the above deadline will be 05.09.2026).
- 23.2 At the stage of financial closure, the BESSDs shall report 100% tie-up of Financing Arrangements for the Projects. In this regard, the BESSD shall submit a certificate/ necessary documents from all financing agencies regarding the tie-up of 100% of the funds indicated for the Project, including arrangements of funds in the form of Equity.
- 23.3 Checklist of documents to be submitted at this stage is provided at Annexure-B of the RfS.
- 23.4 In case of default in achieving above condition as may be applicable within the stipulated time, KSEBL shall be entitled to encash PBG and shall remove the Project from the list of the selected Projects, unless the delay is on account of factors not owing to any action or inaction on the part of the BESSD, or caused due to a Force Majeure as per BESPA. An extension can however be considered, on the sole request of BESSD, on advance payment of extension charges of INR 1,000/- per day per MW. This extension will not have an impact on the obligation of BESSD to achieve commissioning by the SCD of the Project. Subsequent to the completion of deadline for achieving financial closure, KSEBL shall issue notices to the BESSD not meeting the requirements of Financial Closure as per the RfS deadlines. The notice shall provide a period of 7 business days to the respective BESSDs to either furnish the necessary documents or make the above-mentioned payment of Rs. 1,000/MW/day. In case of non-submission of either-the requisite documents or the necessary amount upon expiry of the above-mentioned notice period of 7 days-the KSEBL shall encash the PBG of the BESSD and terminate the BESPA for the Project. The amount of Rs. 1,000/MW/day shall be paid by the BESSDs in advance prior to the commencement of the said delay period and shall be calculated based on the period of delay as estimated by the BESSD. In case of the BESSD meeting the requirements of Financial Closure before the last date of such proposed delay period, the remaining amount deposited by the BESSD shall be returned by the KSEBL. Interest on account of delay in deposition of the above-mentioned charges or on any subsequent extension sought, shall be levied @ one-year SBI MCLR rate /annum + 5% (five percent) on pro-rata basis. Any extension charges paid so, shall be returned to the BESSD without any interest on achievement of successful commissioning within the SCD, on pro-rata basis, based on the project capacity commissioned as on SCD.
- 23.5 The BESSD will have to submit the required documents to the KSEBL at least 14 days prior to the scheduled Financial Closure date. In case of delay in submission of documents mentioned above, KSEBL shall not be liable for delay in verification of documents and subsequent delay in Financial Closure.

24 Land Arrangements for the Project

- 24.1 Land identification and possession shall be in line with Clause 6 of the RfS.
- 24.2 The above land area will be given to the BESSD for Right of Use (ROU) within 60 days from Effective Date of the BESPA. In case of any delay in signing of ROU agreement of land to the BESSD, the Financial Closure and Commissioning milestones will be

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suitably extended, provided that the delay is not due to any action/ inaction on part of the BESSD.

- 24.3 The BESSD shall submit documents/Lease Agreements to establish possession/right to use for at least 90% of the required land area at the time of financial closure in the name of the BESSD for a period not less than the complete term of the BESPA.
- 24.4 The With respect to signing of ROU agreement for the required land to set up BESS by the BESSD, commissioning of the Project will not be allowed until submission of land agreement by the BESSD in terms of the Clauses 6 & 7 of the RfS except when the delay in signing of ROU is on account of KSEBL. The above land area will be given to the BESSD for Right of Use (ROU) within 60 days from Effective Date of the BESPA. In case of any delay in signing of ROU agreement of land to the BESSD, the Financial Closure and Commissioning milestones will be suitably extended provided that the delay is not due to any action/ inaction on part of the BESSD. The RoU agreement shall be co-terminus and co-extensible with the BESPA period.
- 24.5 However, in case of delays in signing of ROU by the BESSD on account of Government / KSEBL delay (including but not limited to delay in land use pattern change, and/or relaxation under respective State land ceiling Act, and/or land lease permission from State Government/Authorities) or delay caused due to a Force Majeure as per BESPA, SCD shall be suitably extended.
- 24.6 The BESSD is free to setup the project in self-identified land owned by the BESSD or through suitable Right of Use agreement. The RoU agreement shall have clear RoU period for not less than 20 years from the effective date of BESPA and shall be extended prior to extension of BESPA period for 5 years. The performance parameters shall be as specified in this RfS at the interconnecting point at Brahmapuram 220 kV SubStation.

25 Commercial Operation Date (COD)

In case of part commissioning, Commercial Operation Date (COD) will be declared only for that part of Project Capacity. COD shall be the next day after the date of commissioning of the Project, as indicated on the Commissioning Certificate, upon successful commissioning of the full capacity of the Project or the last part capacity of the Project as the case may be, as declared in line with the commissioning procedure as provided in the BESPA. Similarly, for each part commissioning, COD will be the next day after actual date of commissioning of the respective part capacity.

The BESSD shall obtain necessary charging and safety clearances from the concerned authorities (STU/ SLDC/ CEIG/ CEA/ State Electrical Inspectorate etc.) prior to commissioning of the Project. The 16-year tenure of BESPA shall be as per the provisions of BESPA. Any capacity being offered to the grid before COD shall not be at the cost of KSEBL under this RfS, KSEBL may agree to buy this capacity.

Declaration of COD will be governed by applicable Grid Code provisions, and in case of discrepancy between the procedure given in the RfS and that stipulated in the Grid Code, the provisions of Grid Code will prevail.

26 Modifications in Controlling Shareholding

- 26.1 The BESSD shall indicate its shareholding in the company indicating the controlling

shareholding before signing of BESPA with KSEBL.

- 26.2 No change in controlling shareholding of the Bidding Company or Bidding Consortium shall be permitted from the date of submission of response to RfS till the execution of the BESPA.

Following shall not be considered as change in shareholding as mentioned above:

- a. Infusion of Fresh equity capital amongst the existing shareholders/promoters at the time of Bid Submission to meet equity requirements.
 - b. Conversion of CCDs, CCPs etc. already issued to existing shareholders.
 - c. Death, marriage, Divorce, minor attaining major (any legal heir who was minor at the time of signing of BESPA), insolvent, insane of existing shareholders.
 - d. Transfer of shares within the members of Immediate Promoter Group only.
 - e. Transfer of shares to IEPF.
 - f. Issue of Bonus Shares.
- 26.3 In case of Project being executed through SPV, the Successful Bidder, if being a single company, shall ensure that its shareholding in the SPV/ Project Company executing the BESPA, shall not fall below 51% at any time prior to COD of the Project. In the event the successful Bidder is a consortium, then the combined shareholding of the consortium members in the SPV/ Project Company executing the BESPA, shall not fall below 51% at any time prior to COD. However, in case the Project is being set up by a listed Company, this condition will not be applicable.
- 26.4 In case of the selected Bidder itself executing the BESPA, it shall ensure that controlling shareholding of the Bidding Company remains unchanged until the COD. However, in case the Project is being set up by a listed Company, this condition will not be applicable.
- 26.5 In case of companies having multiple promoters (but none of the shareholders having more than 50% of voting rights and paid up share capital), it shall be considered as a company under joint control. In such cases, the shareholding pattern in the company as submitted at the time of bidding, shall be maintained upto the COD.
- 26.6 Any change in the shareholding after COD can be undertaken under intimation to the KSEBL.
- 26.7 In the event of Change in Shareholding/ Substitution of Promoters triggered by the Financial Institutions leading to signing of fresh BESPA with a new entity, an amount of INR 10 Lakh per Project +18% GST per Transaction as Facilitation Fee (non-refundable) shall be deposited by the BESSD to KSEBL.

27 Instructions to Bidders for Structuring of Bid Proposals in Response to RfS

The bidder including its Parent, Affiliate or Ultimate Parent or any Group Company shall submit single response to RfS. Detailed Instructions to be followed by the bidders for online submission of response to RfS are stated at Annexure – C. Submission of bid proposals by Bidders in response to RfS shall be in the manner described below:

- a. Covering Letter as per **Format 7.1**.

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- b. In case of a Bidding Consortium, a Power of Attorney in favour of the Lead Member issued by the other Members of the Consortium shall be provided in original as per format attached hereto as **Format 7.2**.

In the event any Member of the Bidding Consortium (other than Lead Member) is a foreign entity, it may submit Board Resolutions in place of Power of Attorney for the purpose of fulfilling the requirements under this clause. Provided that such Board Resolutions shall be supported by an unqualified opinion issued by the legal counsel of such foreign entity stating that the Board Resolutions are in compliance with the applicable laws of the respective jurisdictions of the issuing Company and the authorizations granted therein are true and valid.

- c. Bank Guarantee/ Payment on Order Instrument (POI) against Earnest Money Deposit (EMD) as per **Format 7.3 A/7.3 C**.
- d. Board Resolutions, as per prescribed formats enclosed as per **Format 7.4** duly certified by the Company Secretary or the Director of the relevant Bidder, as applicable to the Bidder and mentioned hereunder:
- Board Resolution from the Bidding Company or the Lead Member of the Consortium, as the case may be, in favour of the person signing the response to RfS and in the event of selection of the Projects and to sign the BESPA with the KSEBL. Board Resolution from each of the Consortium Members in favour of the person signing Consortium Agreement.
 - Board Resolution from the Bidding Company committing 100% (One Hundred Percent) of the equity requirement for the Project/ Board Resolutions from each of the Consortium Members together in aggregate committing to 100% (One Hundred Percent) of equity requirement for the Project (in case of Bidding Consortium); and
 - Board Resolutions from each of the Consortium Members and Lead member contributing such additional amount over and above the percentage limit (specified for the Lead Member and other member in the Consortium Agreement) to the extent becoming necessary towards the total equity share in the Project Company, obligatory on the part of the Consortium pursuant to the terms and conditions in the Consortium Agreement.
- e. In case of a Consortium, the Consortium Agreement between the Members in the Consortium as per **Format 7.5** along with Board resolution from each Member of the Consortium for participating in Consortium.
- f. Format for Financial Requirements as per **Format 7.6** along with the certificate from Statutory Auditors showing details of computation of the financial credentials of the Bidder.
- g. Undertaking as per **Format 7.7**.
- h. A disclosure statement as per **Format 7.8/7.8A** regarding participation of any related companies in the bidding process.
- i. Format for Technical Criteria as per **Format 7.9** (to be filled out separately for each Project).
- j. Declaration by the Bidding Company / Lead Member of Bidding Consortium for the Proposed Technology Tie Up as per **Format 7.10** (to be filled out separately for each Project).

k. Integrity Pact between the NVVN and the Bidding Company as per **Format 7.11**.

l. Attachments

- i. Memorandum of Association, Article of Association needs to be attached along with the bid. The bidder should also highlight the relevant provision which highlights the objects relating to Power/ Energy/ Renewable Energy/ Standalone Battery Energy Storage System development.
 - In case, there is no mention of the above provisions in the MoA/ AoA of the bidding company, the same has to be amended and submitted prior to signing of BESPA, if the bidder is selected as Successful bidder.
 - If the selected bidder wishes to execute the project through a Special Purpose Vehicle (SPV), the MoA/ AoA of the SPV highlighting the relevant provision which highlights the objects relating to Power/ Energy/ Renewable Energy/ Solar Power plant development has to be submitted prior to signing of BESPA.
- ii. Certificate of Incorporation of Bidding Company/ all member companies of Bidding Consortium. In case of AIF, registration certificate issued by SEBI would be required.
- iii. A certificate of shareholding of the bidding company, its Parent and Ultimate Parent (if any) duly certified by a practicing Chartered Accountant/ Company Secretary as on a date within 30 days prior to the last date of bid submission. NVVN reserves the right to seek additional information relating to shareholding in promoter companies, their parents/ ultimate parents and other group companies to satisfy themselves that RfS conditions have been complied with and the bidder will ensure submission of the same within the required time lines.
- iv. Certified copies of annual audited accounts for the last financial year, i.e. FY 2024-25/2023-24, or provisional audited accounts duly certified by a practicing Chartered Accountant (as applicable), along with certified copies of Balance Sheet, Profit & Loss Account, Schedules and Cash Flow Statement supported with bank statements as on the date at least 7 days prior to the due date of bid submission (if applicable), shall be required to be submitted.
- v. Details of all types of securities/instruments which are pending conversion into equity whether optionally or mandatorily.

m. Covering letter of the Financial bid as per **Format - 7.12**.

n. Break-up of the Preliminary Estimate of Cost of Project as per **Format 7.13** (separately for each Project).

28 Important Notes and Instructions to Bidders

- 28.1 Wherever information has been sought in specified formats, the Bidders shall fill in the details as per the prescribed formats and shall refrain from any deviations and referring to any other document for providing any information required in the prescribed format.
- 28.2 The Bidders shall be shortlisted based on the declarations made by them in relevant schedules of RfS. The documents submitted online will be verified before signing of BESPA in terms of Clause 22 of the RfS.

- 28.3 If the Bidder/Member in a Bidding Consortium conceals any material information or makes a wrong statement or misrepresents facts or makes a misleading statement in its response to RfS, in any manner whatsoever, NVVN reserves the right to reject such response to RfS and/or cancel the Letter of Award, if issued, and the Bank Guarantee/POI provided up to that stage shall be encashed. Bidder shall be solely responsible for disqualification based on their declaration in the submission of response to RfS.
- 28.4 If the event specified at 28.3 is discovered after the Effective Date of BESPA, consequences specified in BESPA shall apply.
- 28.5 Response submitted by the Bidder shall become the property of the NVVN and NVVN shall have no obligation to return the same to the Bidder. However, the EMDs submitted by unsuccessful Bidders shall be returned as specified in Clause 19 of the RfS.
- 28.6 All documents of the response to RfS (including RfS and subsequent Amendments/ Clarifications/ Addenda and BESPA) submitted online must be digitally signed by the person authorized by the Board as per Format 7.4.
- 28.7 The response to RfS shall be submitted as mentioned in Clause 27 of the RfS. No change or supplemental information to a response to RfS will be accepted after the scheduled date and time of submission of response to RfS. However, NVVN reserves the right to seek additional information from the Bidders, if found necessary, during the course of evaluation of the response to RfS.
- 28.8 *Bidder to familiarize themselves with Bharat ETS portal.*
- 28.9 All the information should be submitted in English language only. In case of foreign bidders having documents in other than English language, then the documents shall be translated in English language by certified translator and submitted.
- 28.10 Bidders shall mention the name of the contact person and complete address and contact details of the Bidder in the covering letter.
- 28.11 Response to RfS that are incomplete, which do not substantially meet the requirements prescribed in this RfS, will be liable for rejection by NVVN.
- 28.12 Response to RfS not submitted in the specified formats will be liable for rejection by the NVVN.
- 28.13 Bidders delaying in submission of additional information or clarifications sought will be liable for rejection.
- 28.14 Non-submission and/ or submission of incomplete data/ information required under the provisions of RfS shall not be construed as waiver on the part of the NVVN of the obligation of the Bidder to furnish the said data/ information unless the waiver is in writing.
- 28.15 The Kerala State Electricity Regulatory Commission shall be the appropriate commission to exercise the regulatory and adjudicatory jurisdiction in regard to matters between BESSD and KSEBL. Subject to the above, only Kerala High Court, Ernakulam shall have exclusive jurisdiction in all matters pertaining to this RfS and

KSEBL.

- 28.16 All the financial transactions to be made with the NVVN or KSEBL including consultancy fee (with NVVN), delay charges (with KSEBL except charges for delay in Financial Closure), and any additional charges (if required), shall attract 18% GST on each transaction, irrespective of the same being mentioned in the RfS/BESPA.

29 Non-Responsive Bid

The electronic response to RfS submitted by the bidder along with the documents submitted **online** to the NVVN shall be scrutinized to establish “Responsiveness of the bid”. Each bidder’s response to RfS shall be checked for compliance with the submission requirements set forth in this RfS.

Any of the following conditions shall cause the Bid to be “Non-responsive”:

- (a) Non-submission of the requisite Cost of RfS and/ or Processing Fee as mentioned in the Bid Information Sheet.
- (b) Response to RfS not received by the due date and time of bid submission.
- (c) Non-submission of correct, valid and operative Pass-Phrases for both Technical and Financial Bid (Price Bid) Parts after the deadline of Bid Submission, and before the commencement of the Online Tender Opening Event (TOE) of Technical Bid.
- (d) Any indication of tariff in any part of response to the RfS, other than in the financial bid.
- (e) Data filled in the Electronic Form of Financial Bid (Second Envelope), not in line with the instructions mentioned in the same electronic form.
- (f) Except for the scenario as per Clause 5.1 above, in case it is found that the Bidding Company including Ultimate Parent Company/ Parent Company/ Affiliate/ Group Companies have submitted more than one response to this RfS, then all these bids submitted shall be treated as non-responsive and rejected.
- (g) Non-submission or partial submission of EMD in acceptable form along with response to RfS.

In any of the above cases, the bid shall not be considered for bid opening and evaluation process.

30 Method of Submission of Response to RfS by the Bidder

- 30.1 The bidder has to submit original of following documents **offline**:

- a. Bank Guarantee/ Payment on Order Instrument towards EMD as mentioned in the Bid Information Sheet (as per Format 7.3A/ 7.3C). One EMD may be submitted for the cumulative capacity quoted by the bidder, or individual EMDs may be submitted for each Project.
- b. (Any documentation required as part of submission of bid on the bidding portal decided by the NVVN).

No documents will be accepted in person, on or before the date of bid submission.

Bank Guarantee/POI against EMD needs to be submitted in both online and offline

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modes. The bidders will be required to submit the bank guarantee, either in person or through post, at the office of NVVN until the date as on 2 working days after the closing date of bid submission. The 2-day duration will be counted from the date of bid submission.

For e.g., if the bid submission deadline is 18:00 hrs on 22.10.2025, the above deadline will expire at 18:00 hrs on 24.10.2025. In case of the above deadline being a holiday, the next working day in NVVN will be the deadline for submission of Bank Guarantees.

Note: In all cases, the Bank Guarantee/POI against EMD (if applicable), shall be issued on or before the bid submission deadline. These instruments issued after the expiry of the deadline will be summarily rejected.

The bidding envelope shall contain the following sticker:

RfS for Procurement of ____ MW/ ____ MWh Standalone Battery Energy Storage Systems in Kerala with VGF under Tariff-based Global Competitive Bidding Procurement under tariff-based global competitive bidding Request for Selection (RfS) document for setting up of 250 MW/500 MWh STU connected standalone Battery Energy Storage Systems (BESS) in the state of Kerala with Viability Gap Funding (VGF) Support	
<i>Cumulative Capacity of the projects applied for</i>	_____MW/_____MWh
<i>No. of Projects Bid for</i>	
<i>RfS Reference No.</i>	_____dated: _____
<i>Submitted by</i>	<i>(Enter Full name and address of the Bidder)</i>
<i>Authorized Signatory</i>	<i>(Signature of the Authorized Signatory)</i> <i>(Name of the Authorized Signatory)</i> <i>(Stamp of the Bidder)</i>
<i>Bid Submitted to</i>	NVVN Limited, 5 th Floor EOC Building, NTPC Limited, A-8A, Sector 24, Noida 201301

30.2 **Documents to be Submitted Online**

Detailed instructions to be followed by the Bidders for online submission of response to RfS as stated as Annexure-C. The bidders shall strictly follow the instructions mentioned in the electronic form in respective technical bid and financial bid while filling the form.

If the Bidder has submitted bid online and fails to submit the Bank Guarantee for requisite amount offline within 2 working days from last date of bid submission, then the same shall be treated as incomplete bid and Cost of RfS, Processing fee submitted at this stage will be encashed, the EMD(s) shall be returned and the submitted bid will stand cancelled and the respective bidder will be debarred from participating in any of the tenders issued by NVVN, for a period of 6 (six) months,

starting from the last date of bid submission of this RfS

All documents of the response to RfS submitted online must be digitally signed and uploaded on the website, <https://www.bharat-electronictender.com>. Response to RfS shall contain the following:

I. Technical Bid (First Envelope)

The Bidder shall upload single technical bid containing **scanned copies** of the following documents duly signed and stamped on each page by the authorized signatory as mentioned below.

- (a) Formats - 7.1, 7.2 (if applicable), 7.3 A, 7.4, 7.5 (if applicable), 7.6, 7.7, 7.8/7.8A, 7.9, 7.10 and 7.11 as elaborated in Clause 27 of the RfS.
- (b) All attachments elaborated in Clause 27 of the RfS, under the sub-clause k: Attachments, with proper file names.
- (c) All supporting documents regarding meeting the eligibility criteria.
- (d) Scanned Copies of NEFT/RTGS details towards Cost of RfS Document and Bid Processing Fee as mentioned in Bid Information Sheet.
- (e) Scanned Copies of requisite amount of Bank Guarantee/Payment on Order Instrument towards EMD as mentioned in the Bid Information Sheet.

The Bidder will have to fill the Electronic Form provided at the Bharat ETS portal as part of Technical Bid.

II. Financial Bid (Second Envelope)

Bidders shall submit the single Financial Bid containing the scanned copy of following document(s):

- (a) Covering letter as per Format - 7.12 of the RfS
- (b) Preliminary Estimate of Cost of the Project as per Format 7.13 of the RfS

Only a single capacity charge (INR/MW/MONTH) for all the Projects applied for, shall have to be filled online in the Electronic Form provided at the ISN- ETS portal. The instructions mentioned in the Financial Bid Electronic Form have to be strictly followed without any deviation, else the bid shall be considered as non- responsive.

Important Note:

- (a) The Bidders shall not deviate from the naming and the numbering formats of envelopes mentioned above, in any manner.
- (b) In each of the envelopes (as part of online bid submission), all the documents enclosed shall be indexed and flagged appropriately, with the index list indicating the name of the document against each flag.
- (c) All the envelopes shall be properly sealed with the signature of the Authorized Signatory running across the sealing of the envelopes.
- (d) In case the Bidder submits the online documents on <https://www.bharat-electronictender.com> within the bid submission deadlines and fails to submit the

offline documents in the office of NVVN within the bid submission deadlines, the online bid of the Bidder shall not be opened and shall be 'archived (to be replaced with a suitable word based on the bidding portal)' on the <https://www.bharat-electronictender.com>.

Similarly, bids submitted offline but without any online submission on <https://www.bharat-electronictender.com> shall not be opened and the EMD shall be returned to the respective Bidder.

- (e) **In case of submission of Bank Guarantee against EMD online on or before the bid submission deadline, and non-submission of the hard copy of the Bank Guarantee to NVVN within the date as on 2 working days subsequent to bid submission deadline, then the same shall be treated as incomplete bid and Cost of RfS, Processing fee submitted at this stage will be encashed, the EMD(s) shall be returned and the submitted bid will stand cancelled and the respective bidder will be debarred from participating in any of the tenders issued by NVVN, for a period of 6 (six) months, starting from the last date of bid submission of this RfS.**
- (f) The tariff to be quoted in the Financial Bid shall be exclusive of GST (for providing the storage service). GST levied on the storage service being provided by the Project, if any, shall be passed through to the NVVN.

31 **Notice Board for Display**

The BESSD will have to put a notice board (at least 180 cm x 120 cm) at its project site main entrance prominently displaying the following message before declaration of COD.



250_MW/ 500 MWh STU-Connected Battery Energy Storage System

Project Installed and operated by

----- (insert name of the BESSD)

[Under RfS for Procurement of 250 MW /500 MWh Battery Energy Storage Systems under Tariff-based Global Competitive Bidding in Kerala under PSDF

**Component of VFG scheme by
Kerala State Electricity Board Limited**

Date of Commencement of Work:

Proposed date for Completion:

32 **Validity of the Response to RfS**

The Bidder shall submit the response to RfS which shall remain valid up to the date as on 12 months from the last date of submission of response to RfS ("Bid Validity").

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NVVN reserves the right to reject any response to RfS which does not meet the aforementioned validity requirement.

33 Bid Preparation Cost

The Bidder shall be responsible for all the costs associated with the preparation of the response to RfS and participation in discussions and attending pre-bid meeting(s) etc. NVVN shall not be responsible in any way for such costs, regardless of the conduct or outcome of the bid process.

34 Clarifications/ Pre-Bid Meeting/ Enquiries/ Amendments

- 34.1 Clarifications/ Doubts, if any, on RfS document may be emailed and/ or through <https://www.bharat-electronictender.com>. The format for submission of clarifications is available on the portal.
- 34.2 NVVN will make effort to respond to the same in the Pre-Bid Meeting to be held as mentioned in the Bid Information Sheet. A compiled list of such questionnaire and the NVVN's response will be uploaded in the <https://www.bharat-electronictender.com>. If necessary, amendments, clarifications, elaborations shall be issued by the NVVN which will be notified on the NVVN/ <https://www.bharat-electronictender.com>. No separate reply/ intimation will be given for the above, elsewhere. In the event of the issuance of any revision or amendment of the RfS documents, the Bidders shall be provided a period of at least 7 days therefrom, for submission of bids. No clarifications will be issued subsequent to bid submission deadline. Post issuance of any amendments, Bidders shall be allowed a period of three (03) working days for seeking clarifications, after which no query or clarification shall be entertained.
- 34.3 A Pre-Bid Meeting shall be held as mentioned in the Bid Information Sheet (Venue to be notified later on the NVVN's website).
- 34.4 Enquiries/ Clarifications may be sought by the Bidder by contacting the NVVN's officials as per the details contained in the Bid Information Sheet.

35 Right of the NVVN to Reject a Bid

NVVN reserves the right to reject any or all of the responses to RfS or cancel the RfS or annul the bidding process for any project at any stage without assigning any reasons whatsoever and without thereby any liability. In the event of the tender being cancelled at any stage, the processing fee (excluding GST, if amount credited to the NVVN's account), without any interests, shall be returned to the respective Bidders.

36 Post Award Compliances

- 36.1 Timely completion of all the milestones i.e. signing of BESPA, meeting Financial Closure Requirements/Conditions Subsequent (BESPA), Commissioning etc. will be the sole responsibility of BESSD. KSEBL shall not be liable for issuing any intimations/ reminders to BESSDs for timely completion of milestones and/ or submission of compliance documents.
- 36.2 Any checklist shared with BESSD by NVVN for compliance of above mentioned

milestones to be considered for the purpose of facilitation only. Any additional documents required as per the conditions of Guidelines, RfS and BESPAs must be timely submitted by the BESSD.

- 36.3 Tentative timelines of various activities to be carried out under this RfS are summarized as follows:

Activity	Duration
Date of issuance of RfS	Zero Date (A)
Date of pre-bid meeting	A+12 days
Bid submission deadline	A+31 days (=B)
Issuance of LoAs	B+45 days (=C)
Effective Date of BESPAs	C+ 30 days (=D)
Application for connectivity by the BESSD	D+30 days
Financial Closure	D+06 months
Release of 1 st tranche of VGF on financial closure subject to submission of BG and proof of possession of 90% of the total land.	D+06 months (upon fulfilment of FC)
Project commissioning	D+18 months (=E)
Release of 2 nd tranche of VGF	D+18 months (upon achieving COD)
Release of 3 rd tranche of VGF	E+1 year

- 36.4 Project monitoring activities under the RfS shall include periodic Project site visits by Appropriate Central Government Organizations/Authority/Committee(s) authorized from time to time.
- 36.5 Under this RfS, it is proposed to promote only commercially established and operational technologies to minimize the technology risk and to achieve timely commissioning of the Projects. **Further, the BESSD shall ensure that the BESS installed is of requisite quality as per best industry practices and refurbished battery cells are not used in the project. BESS shall also ensure that the application software of the Energy Management System (EMS) of the BESS shall be developed indigenously within India.** The Bidder may indicate regarding the selection of technology and its details at the time of submission of bids in the prescribed Format 7.10 of the RfS. The technology proposed at the time of submission of response to RfS can be changed at the time of Financial Closure.
- 36.6 The Bidder is required to undertake to furnish evidence of meeting the above criteria in line with provisions of Clause 23 of the RfS. The undertaking shall be submitted as per enclosed Format 7.9 of the RfS.
- 36.7 The Projects shall also comply with the performance criteria as detailed in Clause 8 of the RfS.

QUALIFICATION REQUIREMENTS FOR BIDDERS

Bidders participating in the RfS should meet the qualifying requirements stipulated under clause 37.1 (i) or 37.1(ii) or 37.1 (iii) or 37.1(iv) and 37.2, 37.3 & 37.4 as applicable. In addition, the Bidder should also meet the requirements stipulated under clause 39.0 together with the requirements stipulated in RFS.

37 General Eligibility Criteria

37.1 The Bidder must fall under either of the following categories:

- i. A Company under the Companies Act, 2013.
- ii. A Foreign Company under the respective nation's laws.
- iii. Alternative Investment Funds (AIF) as registered under SEBI. "AIF" shall be as defined by SEBI.
- iv. A Consortium comprising the above entities.

The above would be subject to the relevant Acts, Rules, Guidelines, Orders and Policy documents of the Government of India as amended from time to time.

37.2 In case a foreign company i.e. the bidder under clause 37.1 (ii), is participating on standalone basis and it is selected as successful Bidder, it has to form a "Special Purpose Vehicle" (SPV), i.e. an Indian Company registered under the Companies Act, 2013 as its subsidiary Company, with at least 51% shareholding in the SPV, before signing of BESPA and it shall comply with all the laws and provisions related to Foreign Direct Investment in India.

In case the foreign company is participating as a member of consortium, Clause 37.4 of the QR shall also be applicable.

37.3 A Consortium i.e. bidder participating under clause 37.1 (iv), shall participate with one of the consortium partners as the Lead Member. The consortium shortlisted and selected against this RfS has to necessarily form a Project Company and get it registered under the Companies Act, 2013 prior to signing of Battery Energy Storage Purchase Agreement ("BESPA"), keeping the original shareholding of the Bidding Consortium unchanged. In case applications for multiple Projects have been made by a Consortium, separate Project Companies can be formed for each Project. For the avoidance of doubt, it is hereby clarified that the shareholding pattern of the Project Company shall be identical to the shareholding pattern of the Consortium.

37.4 A consortium i.e. bidder participating under clause 37.1 (iv), selected as Successful Bidder for the purpose of implementing the Project, shall incorporate a Project company before signing of BESPA with the Buying Entity (KSEBL) with equity participation by the Members in line with consortium agreement submitted with the bid i.e. the Project Company incorporated shall have the same shareholding pattern as that indicated in the Consortium Agreement given at the time of submission of response to RfS. This shall not change till the signing of BESPA and the Controlling Shareholding (Lead Member holding not less than 51% of the voting rights and paid-up share capital) shall not change from submission deadline of response to RfS up to Commercial Operation Date (COD) of the Project. Transfer of controlling shareholding within the same group of companies will however be allowed prior to COD with the permission of KSEBL, subject to the condition that, the management control remains within the same group of companies.

Note for Clause 37.0

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- a) Limited Liability Partnership (LLPs) are not eligible for participation.
- b) A Bidder which has been selected as Successful Bidder based on this RfS can also execute the Project through a Special Purpose Vehicle (SPV) i.e. a Project Company especially incorporated/acquired as a subsidiary Company of the successful bidder for setting up of the Project, with at least 51% shareholding in the SPV which has to be registered under the Indian Companies Act, 2013, before signing of BESPA. Multiple SPVs may also be utilized for executing more than one Project.
- c) The Bidder or any of its Affiliates should not be a willful defaulter to any lender. Further, the Bidder & any of its Affiliate including any Consortium Member & any of its Affiliate, their directors, should not have been barred or included in the blacklist by any government agency or authority in India, the government of the jurisdiction of the Bidder or Members where they are incorporated or the jurisdiction of their principal place of business, any international financial institution such as the World Bank Group, Asian Development Bank, African Development Bank, Inter-American Development Bank, Asian Infrastructure Investment Bank etc. or the United Nations or any of its agencies. The Bidder shall submit an undertaking to this effect.

38 Not Used

39 Financial Eligibility Criteria

39.1 Net-Worth/ Asset Under Management (AUM) or Investible Funds

- a) The Net Worth of the Bidder should be equal to or greater than INR 48,00,000 /MW of the quoted capacity in MW (i.e. INR 24,00,000 / MWH of the MWH capacity), as on the last day of the preceding financial year on the date of Techno-commercial bid opening. For e.g., for a 500 MWh (250 MW x 2 hrs) Project Capacity, the minimum Net Worth requirement to be demonstrated shall be Rs. 48 lakh x 250 MW = Rs. 1,20,00,00,000. In case of the Bidder being a SEBI registered AIF, the cumulative value of Assets Under Management (AUM) with minimum requirement as per above shall be demonstrated. In this context, AUM shall mean the amount as certified by the Statutory Auditor of the AIF.
- b) The net-worth/value of AUM to be considered for the above purpose will be the cumulative net-worth of the Bidder/AIF or consortium members. Except in the case of AIFs, the Bidder may seek qualification on the basis of financial capability of its Affiliate(s) for the purpose of meeting the Net Worth criteria as per the RfS. In case of the Bidder being a Bidding Consortium, any Member may meet the above criteria on the basis of financial capability of its Affiliate(s). In both cases, such Affiliates shall undertake to contribute the required equity funding and performance bank guarantees in case the bidder(s) fail to do so in accordance with the RfS.
- c) Net Worth to be considered for this clause shall be the total Net Worth as calculated in accordance with the Companies Act, 2013. AUM or investible funds to be considered under this clause will be calculated in accordance with applicable SEBI (AIF) Regulations.

39.2 Liquidity

In order to ascertain that the Bidder has sufficient means to manage the fund

requirements for the Project, the Bidder shall be required to demonstrate the following parameter:

- a) A minimum annual turnover of INR 1,60,00,000 / MW of the quoted capacity in MW (i.e. INR 80,00,000 / MWH of the MWH capacity), in the preceding financial year as on the date of techno-commercial bid opening. It is hereby clarified that "Other Income" as indicated in the annual accounts of the Bidder shall not be considered for arriving at the annual turnover.

39.3 Except for AIFs, the Bidder may seek qualification on the basis of financial capability of its Affiliate(s) for the purpose of meeting the qualification requirements as per Clauses 39.1 and 39.2 above. In case of the Bidder being a Bidding Consortium, any Member (except an AIF) may seek qualification on the basis of financial capability of its Affiliate(s). In such cases, the Bidder shall be required to submit Board Resolutions from the respective Affiliate(s), undertaking to contribute the required equity funding and Performance Bank Guarantees/POI in case the Bidder(s) fail to do so in accordance with the RfS. In case of non-availability of the Board Resolution as required above, a letter from the CEO/ Managing Director of the respective Affiliate(s), undertaking the above, shall be required to be submitted and the requisite Board Resolution from the Affiliate(s) shall be required to be submitted prior to signing of BESPA.

"Note: In case bidder is seeking qualification on the basis of financial capability of its Affiliate(s) for the purpose of meeting the qualification requirements, only standalone Financial Statement of Affiliate(s) would be considered."

39.4 For the purposes of meeting financial requirements, only latest unconsolidated audited annual accounts shall be used. However, audited consolidated annual accounts of the Bidder may be used for the purpose of financial requirements, provided the Bidder has at least twenty six percent (26%) equity in each Company whose accounts are merged in the audited consolidated account.

39.5 A Company/Consortium would be required to submit annual audited accounts for the last financial year as on last date of bid submission, along with net worth, annual turnover and PBDIT certificate (as applicable) from a practicing Chartered Accountant/ Statutory Auditor to demonstrate fulfillment of the criteria. In case of foreign companies, the Bidders shall be required to submit the annual audited accounts for the last three respective financial year as per the general norm in the country where the Bidder or its Affiliate(s) is/ are located, or provisional accounts in the preceding three (3) financial years as on the date of techno-commercial bid opening.

Note: In case of foreign Bidders, in the event the Bidder is unable to furnish the audited annual accounts for the previous financial year as per the prevalent norm in the respective country, the Bidder shall submit the annual audited accounts of the last financial year for which the audited accounts are available. This, however, would be acceptable, subject to the condition that the last date of response to this RfS falls on or within the deadline for completion of audit of annual accounts of companies, as stipulated by the laws/rules of the respective country, and the Bidder shall submit the corresponding documentary evidence against the same. In case the annual accounts or provisional accounts as on the date of techno-commercial bid opening, are submitted in a language other than English, a certified English translation from an approved translator shall be required to be submitted by the

Bidder.

- 39.6 For meeting the above financial eligibility criteria, if the data is provided by the Bidder in a foreign currency, equivalent Indian Rupees of Net Worth and other financial parameters will be calculated by the Bidder using Reserve Bank of India's reference rates prevailing on the date of closing of the accounts for the respective financial year.
- 39.7 In case of any currency for which RBI reference rate is not available, Bidders shall convert such currency into USD as per the exchange rates certified by their banker prevailing on the relevant date and used for such conversion. After such conversion, the Bidder shall follow the procedure/ submit document as elaborated in Clause 39.6 above.
- 39.8 In case the bidder has participated under Clause 39.1 (iv) i.e. Consortium, then the financial requirement (both the Net-Worth and Liquidity requirements) to be met by each Member of the Consortium shall be computed in proportion to the equity commitment made by each of them in the Project Company. For example, if two companies A and B form a Consortium with equity participation in 70:30 ratio and submit their bid for a capacity of 500 MWh (250 MW x 2 hrs), then, total Net-Worth to be met by the Consortium is Rs. 48.00 Lakh x 250 MW = Rs. 120.00 Crores. The minimum requirement of Net-Worth to be met by Lead Member A would be minimum Rs. 84.00 Crores and to be met by Consortium Member B would be Rs. 36.00 Crores. Similar methodology shall be followed for computation of liquidity requirement.
- 39.9 For the purpose of meeting the technical and financial eligibility criteria, the Bidder may also use credentials of those companies having equal to or less than 50% shareholding in the bidding company, subject to the following:
- a) The qualification criteria parameters will be met proportionately to the equity contribution of the entity whose credentials are being used to meet the requirement. For example, in case of Net Worth requirement being Rs 120 Crore and the strength of a company is used which owns 30% of the total shareholding in the bidder, the said company should be able to meet up to Rs 36 Crore of the Net Worth.
 - b) In case the strength of the company is being used for meeting the eligibility criteria, the shareholding pattern of the respective company will be locked-in up to COD of the Project.

General Notes:

In case where audited results for the last financial year as on the date of Techno Commercial Bid Opening are not available, the financial results certified by a practicing Chartered Accountant/ Statutory Auditor along with net worth, annual turnover and PBDIT certificate (as applicable) from a practicing Chartered Accountant/ Statutory Auditor shall be considered acceptable. In case the Bidder/ Affiliate(s) is not able to submit the financial results certified by practicing Chartered Accountant/ Statutory Auditor, the audited result of the financial year preceding the last financial year as on the date of techno-commercial bid opening along with net worth, annual turnover and PBDIT certificate (as applicable) for that year from a practicing Chartered Accountant/ Statutory Auditor shall be considered for evaluating financial parameters.

Further, a certificate would be required from the CEO/CFO as per the format enclosed in the bidding documents stating that the financial results of the company for the last financial year as on date of Techno Commercial Bid Opening are under audit and the Certificate from a practicing Chartered Accountant certifying the financial parameters is not available.

In case, the Bidder is seeking qualification on the basis of financial capability of Affiliate(s) as per Clause 39.3, a certificate would be required from the CEO/CFO of the such Affiliate(s) as per the format enclosed in the bidding documents stating that the financial results of the company for the last financial year as on date of Techno Commercial Bid Opening are under audit and the Certificate from a practicing Chartered Accountant certifying the financial parameters is not available.

SECTION 4. BID EVALUATION AND SELECTION OF PROJECTS

40 *Bid Evaluation*

Bid evaluation will be carried out considering the information furnished by Bidders as per provisions of this RfS. The detailed evaluation procedure and selection of bidders are described in subsequent clauses in this Section.

41 *Techno-Commercial Evaluation of Bidders (Step 1)*

- 41.1 The first envelope (Technical Bid submitted online) of only those bidders will be opened by NVVN whose required documents as mentioned at Clause 30 of the RfS are received by the NVVN. Bid opening (online) will be done only after the deadline for submission of Bank Guarantee (if applicable) and/or DDs/Pay order against Cost of RfS document and Bid Processing Fee.

For e.g., if the bid submission deadline is 18:00 hrs on 05.11.2025, the online bid opening will be conducted on 06.11.2025. In case of the above deadline being a holiday, the bids will be opened on the next working day.

- 41.2 Subject to Clause 29 of the RfS, NVVN will examine all the documents submitted by the Bidders and ascertain meeting of eligibility conditions prescribed in the RfS. During the examination of the bids, NVVN may seek clarifications/additional documents to the documents submitted etc. from the Bidders if required to satisfy themselves for meeting the eligibility conditions by the Bidders. Bidders shall be required to respond to any clarifications/additional documents sought by the NVVN within 07 (seven) days from the date of such intimation from the NVVN. All correspondence in this regard shall be made through email / (<https://www.bharat-electronictender.com>) only. It shall be the responsibility of the Bidder to ensure that the email id of the authorized signatory of the Bidder is functional. The Bidder may provide an additional email id of the authorized signatory in the covering letter. No reminders in this case shall be sent. It shall be the sole responsibility of the Bidders to remove all the discrepancies and furnish additional documents as requested. NVVN shall not be responsible for rejection of any bid on account of the above.

- 41.3 The response to RfS submitted by the Bidder shall be scrutinized to establish Techno-Commercial eligibility as per the RfS.

42 *Financial Bid Evaluation (Step 2)*

- 42.1 In this step evaluations of Techno-Commercially Qualified Bids shall be done based on the capacity charges, or the "First Round Tariff", quoted by the Bidder in the Financial Bid. After this step, the shortlisted bidders shall be invited for the Reverse Auction. **The "tariff" in this section, will refer to the capacity charges quoted by the bidders.**

- 42.2 Second Envelope (containing First Round Tariff) of only those bidders shall be opened whose technical bids are found to be qualified as per the RfS.

- 42.3 The Bidder including its Parent, Affiliate or Ultimate Parent or any Group Company will have to submit a single bid (single application) quoting a single tariff (capacity charges) in Indian Rupee per MW for all the Projects applied for. **The tariff has to be quoted in Indian Rupee per MW per month in whole numbers only (no decimal places allowed).** If it is quoted with any decimal places, the digits in the decimal places shall be ignored. (For e.g. if the quoted tariff is INR 2,25,000.34/MW/month, then it shall be considered as INR 2,25,000/MW/month).

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- 42.4 In this step, evaluation will be carried out based on tariff quoted by the Bidders.
- 42.5 On completion of Techno-Commercial bid evaluation, if it is found that only one or two Bidder(s) is/are eligible for the next stage, opening of the financial bid of the Bidder(s) will be at the discretion of NVVN. Thereafter, NVVN will take appropriate action as deemed fit.
- 42.6 If the first-round tariff quoted is same for two or more Bidders, then all the Bidders with same tariff shall be considered of equal rank/ standing in the order.
- 42.7 All Bidders with same tariff shall be eligible for reverse auction round (provided their rank is equal to or less than n^{th} Bidder as mentioned in Clause 43.2 of the RfS).
- 42.8 Ranking of bidders after Financial Bid Evaluation: Following illustrates an example of ranking of bidders after financial bid opening and evaluation

Bidder	Submitted Financial Bid	Ranking
B1	₹ 1,90,000 (Tariff in ₹/ MW/month)	L1
B2	₹ 1,92,000 (Tariff in ₹/ MW/month)	L2
B3	₹ 1, 93,000 (Tariff in ₹/ MW/month)	L3
B4	₹ 1,93,000 (Tariff in ₹/ MW/month)	L3
B5	₹ 1,95,000 (Tariff in ₹/ MW/month)	L4
B6	₹ 2,11,000 (Tariff in ₹/ MW/month)	L5
B7	₹ 2,15,000 (Tariff in ₹/ MW/month)	L6
B8	₹ 2,16,000 (Tariff in ₹/ MW/month)	L7
B9	₹ 2,20,000 (Tariff in ₹/ MW/month)	L8

43 Reverse Auction (Step 3)

- 43.1 The reverse auction for the total tendered capacity shall be conducted on the portal <https://www.bharat-electronictender.com>, on the day as intimated by NVVN to the eligible Bidders.
- 43.2 Subsequent to opening of financial bid, Bidder quoting Highest rate ("H1" Bidder) shall be eliminated. However, if total number of bidders whose financial bid has been opened is less than or equal to 4, no bidder shall be eliminated at this stage.

Note:

- (a) In case more than one bidder is ranked as "H1" bidder, i.e. such bidders are at the same tariff, all such bidders will be eliminated at this stage, provided that the remaining number of bidders considered for RA after elimination shall be at least 4.

At least one day prior to reverse auction, an advance intimation regarding the date and time of the reverse auction will be sent by e-mail to all the bidders whose technical bids have been opened and are found to be qualified. However, from this advance intimation it shall not be construed by the bidders that they have been shortlisted for Reverse Auction. Further, at least two hours before the scheduled start time of Reverse Auction, a system generated email for invitation for Reverse Auction will be sent to all those bidders only who have been shortlisted based on the criteria mentioned at Clause 43.2 above.

- 43.3 Shortlisted bidders for Reverse Auction will be able to login into the <https://www.bharat-electronictender.com> of reverse auction 15 minutes before the start time of reverse auction.
- a. During the 15 minutes prior to start of reverse auction process, the respective tariff of the bidder shall be displayed on its window.
 - b. The minimum decrement value for tariff shall be INR 1000 per MW/month. The Bidder can mention its revised discounted tariff which has to be at least Rs. 1000/MW/month less than its current tariff.
 - c. Bidders can only quote any value lower than their previous quoted tariff taking into consideration the minimum decrement value mentioned in the previous clause. However, at any stage, increase in tariff will not be permissible. Bidders can improve their ranking by quoting the tariff lower than their last quoted tariff.
 - d. During reverse auction, the Bidder shall not have the option of changing the total project capacity while quoting tariff during reverse auction.
 - e. In the bidder's bidding window, the following information can be viewed by the bidder:
 - i. Its tariff as the initial start price and there after last quoted tariff along with the project capacity for which the Bidder is qualified.
 - ii. The list of all the Bidders with their following details: Pseudo Identity, last quoted tariff and project capacity
 - f. The initial auction period will be of 30 (thirty) minutes with a provision of auto extension by 8 (eight) minutes from the scheduled/ extended closing time. If any Bidder beats the L1 price in last eight minutes of auction period or extended auction period. If no such valid bid which is less than the instant L1 bid is received during last eight minutes of auction period or extended auction period, then the reverse auction process will get closed.

44 Selection of Successful Bidders

- 44.1 Subsequent to conclusion of the e-RA process, the lowest quoting Bidder after reverse auction for the Project will be selected as Successful Bidder.
- 44.2 Time stamping- In case of a tie among two or more Bidders (i.e. their last quoted tariff being the same), they will be considered in the chronological order of their last quoted tariff during the e-RA with preference to be given to that Bidder who has quoted his last tariff during the e-RA, earlier than others.
- i. In the above case, if the time of quote also becomes exactly same among the Bidders at a tie, then the ranking among these Bidders shall be done as follows:
 - Step 1: Highest rank (i.e. L1) will be given to the Bidder who has quoted the lowest in

Financial Bid (Electronic Form) and so on. If there is also a tie among any of these bidders, then the following step (Step 2) will be followed.

- Step 2: Ranking will be done based on draw of lots.

45 Issuance of LoAs

- a) At the end of the selection process, a Letter of Award (LoA) will be issued to the successful Bidder for the Project. In case of a Consortium being selected as the successful Bidder, the LoA shall be issued to the Lead Member of the Consortium.
- b) In case KSEBL is not satisfied with the rates/ tariffs as discovered after the bidding process, KSEBL reserve the right to annul the bid process without any financial implications to any of the parties concerned.
- c) In all cases, KSEBL's/ NVVN's decision regarding selection of Bidder through Reverse Auction or other- wise based on tariff or annulment of tender process shall be final and binding on all participating bidders.
- d) The BESPA signing date shall be within one month from the date of issuance of LoA or any other extended date as mutually agreed between KSEBL and the successful bidder. In case of delay in signing of BESPA beyond 6 months from the date of issuance of LoAs, or any other extended date as mutually agreed between KSEBL and the successful bidder, the successful bidder may choose to exit from this tender. Accordingly, the LoA issued to the respective Bidder shall stand cancelled.
- e) Adoption of tariff identified through this tender is subjected to approval of Hon'ble KSERC. In case of non-approval from KSERC, no parties shall be liable in any manner.

46 GOVERNING LAW AND DISPUTE RESOLUTION

46.1 Governing Law

This Agreement shall be governed by and construed in accordance with the Laws of India. Any legal proceedings in respect of any matters, claims or disputes under this Agreement shall be under the jurisdiction of appropriate courts in Delhi.

46.2 Amicable Settlement and Dispute Resolution

46.2.1 Amicable Settlement

- i. Either Party is entitled to raise any claim, dispute or difference of whatever nature arising under, out of or in connection with this Agreement ("Dispute") by giving a written notice (Dispute Notice) to the other Party, which shall contain:
 - (a) a description of the Dispute;
 - (b) the grounds for such Dispute; and
 - (c) all written material in support of its claim.
- ii. The other Party shall, within thirty (30) days of issue of Dispute Notice issued under Article 16.2.1(i), furnish:
 - (a) counter-claim and defences, if any, regarding the Dispute; and

- (b) all written material in support of its defences and counter-claim.
- iii. Within thirty (30) days of issue of Dispute Notice by any Party pursuant to Article 16
 - (i) if the other Party does not furnish any counter claim or defence under Article 16
 - (ii) or thirty (30) days from the date of furnishing counter claims or defence by the other Party, both the Parties to the Dispute shall meet to settle such Dispute amicably. If the Parties fail to resolve the Dispute amicably within thirty (30) days from the later of the dates mentioned in this Article 16.2.1.
 - (iii) the Dispute shall be referred for dispute resolution in accordance with Article 16.3.

46.2.2 Dispute Resolution

Dispute Resolution by the Appropriate Commission

- i) Where any Dispute or differences arises in relation to this agreement of any nature whatsoever including the construction, interpretation or implementation of the provisions of this agreement as well as claim made by any Party for any change in or determination of the Tariff or any matter related to Tariff or claims made by any Party which partly or wholly relate to any change in the Tariff or determination of any of such claims could result in change in the Tariff, and relates to any matter agreed to be referred to the Appropriate Commission, shall be submitted to adjudication by the Appropriate Commission. Appeal against the decisions of the Appropriate Commission shall be made only as per the provisions of the Electricity Act, 2003, as amended from time to time.

SECTION 5. DEFINITIONS OF TERMS

47 *Following terms used in the documents will carry the meaning and interpretations as described below:*

- 47.1 **"ACT" or "ELECTRICITY ACT, 2003"** shall mean the Electricity Act, 2003 and include any modifications, amendments and substitution from time to time.
- 47.2 **"AFFILIATE"** shall mean a company that, directly or indirectly,
- i. controls, or
 - ii. is controlled by, or
 - iii. is under common control with, a company developing a Project or a Member in a Consortium developing the Project and control means ownership, directly or indirectly, of more than 50% (fifty percent) of the voting shares of such company or right to appoint majority Directors.
- 47.3 **"APPROPRIATE COMMISSION"** shall mean the Kerala State Electricity Regulatory Commission and as defined in the BESPAs.
- 47.4 **"AVAILABILITY"** shall mean as defined in Clause 8 of the RfS.
- 47.5 **"APPC" or "Average Power Purchase Cost"** during a year means the weighted average cost of the power purchased by KSEB Ltd including the cost of self-generation by KSEB Ltd.
- 47.6 **"Authorised Representative"** of the Procurer: shall mean 'NTPC Vidyut Vyapar Nigam Limited' or 'NVVN' the agency carrying out the tendering / bidding process shall be deemed to be the Authorized Representative of the 'Procurer' or 'Buying Entity' or 'KSEBL' and will on behalf of the Procurer be responsible for fulfilling all the obligations imposed on the 'Procurer' during the bidding phase, in accordance with these Guidelines.
- 47.7 **"BATTERY ENERGY STORAGE SYSTEMS" or "BESS"** shall mean the system(s)/projects utilizing methods and technologies such as electrochemical batteries (Lead Acid, Li-ion, solid state batteries, flow batteries, etc.), providing a facility that can store chemical energy and deliver the stored energy in the form of electricity, including but not limited to ancillary facilities (grid support, for example). Such systems may be co-located with RE Generating Stations, or may be operated on stand-alone basis.
- 47.8 **"BATTERY ENERGY STORAGE SYSTEM DEVELOPER" or "BESSD" or "DEVELOPER" or "PROJECT DEVELOPER" or "DEVELOPER"** shall mean the entity owning/operating the BESS facility for supply of power under the BESPAs, and shall refer to the Bidding Company or a Bidding Consortium participating in the bid and having been selected and allocated a Project capacity by KSEBL (through a competitive bidding process), including the SPV formed by the selected bidder/consortium for the purpose of setting up of the Project and signing of BESPAs with KSEBL.
- 47.9 **"BATTERY ENERGY STORAGE PURCHASE AGREEMENT" or "BESPA"** shall mean the agreement signed between the Selected Bidder/BESSD and KSEBL according for procurement of capacity from the BESS, as per the terms and conditions of the standard BESPAs enclosed with this RfS.
- 47.10 **"BID" or "PROPOSAL"** shall mean the documents submitted by the Bidder towards meeting the techno-commercial and financial qualifying requirements, along with the price bid submitted by the Bidder as part of its response to the RfS issued by NVVN as Authorized Representative of KSEBL.

- 47.11 **“BIDDER”** shall mean Bidding Company (including a foreign company) or a Bidding Consortium submitting the Bid. Any reference to the Bidder includes Bidding Company/ Bidding Consortium, Member of a Bidding Consortium including its successors, executors and permitted assigns and Lead Member of the Bidding Consortium jointly and severally, as the context may require; foreign companies participating in the bidding process shall be registered as companies as per the rules of their country of origin.
- 47.12 **“BIDDING CONSORTIUM”** or **“CONSORTIUM”** shall refer to a group of Companies that collectively submit the response in accordance with the provisions of this RfS under a Consortium Agreement.
- 47.13 **“BID CAPACITY”** shall mean aggregate project capacity of the Battery Energy Storage System(s) as proposed by the Bidder.
- 47.14 **“BUYING ENTITY”** or “Buying Utility” or “Discom” or **“END PROCURER”** shall mean Kerala State Electricity Board Ltd. (KSEBL).
- 47.15 **“CHARTERED ACCOUNTANT”** shall mean a person practicing in India or a firm whereof all the partners practicing in India as a Chartered Accountant(s) within the meaning of the Chartered Accountants Act, 1949.
- For bidders incorporated in countries other than India, “Chartered Accountant” shall mean a person or a firm practicing in the respective country and designated/ registered under the corresponding Statutes/ laws of the respective country.
- 47.16 **“COMPANY”** shall mean a body corporate incorporated in India under the Companies Act, 2013 or any law in India prior thereto relating to Companies, as applicable.
- 47.17 **“COMMERCIAL OPERATION DATE (COD)”** shall mean the date as defined in Clause 24 of the RfS.
- 47.18 **“CONTRACTED CAPACITY”** or the **“PROJECT CAPACITY”** shall mean the capacity in MW/MWh (“X” MW x 4 hrs) contracted with KSEBL for providing Energy storage facility to the Procurer for charging and discharging the system on “on-demand” basis, based on which the BESPA is executed with KSEBL.
- 47.19 **“CONTRACT YEAR”** shall mean the period beginning from the Effective Date of the BESPA and ending on the immediately succeeding 31st March and thereafter each period of 12 months beginning on 1st April and ending on 31st March provided that:
- in the financial year in which the Scheduled Commissioning Date would occur, the Contract Year shall end on the date immediately before the Scheduled Commissioning Date and a new Contract Year shall commence once again from the Scheduled Commissioning Date and end on the immediately succeeding 31st March, and thereafter each period of 12 (Twelve) Months commencing on 1st April and ending on 31st March, and
 - provided further that the last Contract Year of this Agreement shall end on the last day of the Term of this Agreement.
- 47.20 **“CONTROL”** shall mean the ownership, directly or indirectly, of more than 50% (fifty percent) of the voting shares of such Company or right to appoint majority Directors.
- 47.21 **“CONTROLLING SHAREHOLDING”** shall mean more than 50% of the voting rights and paid up

share capital in the Company/ Consortium.

- 47.22 **“CENTRAL TRANSMISSION UTILITY (CTU)”** shall mean the Central Transmission Utility as defined in sub-section (10) of section 2 of the Electricity Act 2003.
- 47.23 **“DAY”** shall mean calendar day.
- 47.24 **“Declared Capacity”** – shall mean the amount of electricity (in MW) that the BESS is capable of delivering, as declared by the BESSD for each 15 minute Time Block on Day ahead basis
- 47.25 **“EFFECTIVE DATE”** shall mean the date as on 30 days from the date of issue of LoA, or the date of signing of BESPA, whichever is later (for example, if the date of LoA is 07.04.2025, the Effective Date will be 06.05.2025 or date of signing of BESPA, whichever is later). Subsequent to expiry of the 30 -day period after the issuance of LoA, in case KSEBL intimates to the Successful Bidder, a particular date as the date for signing of BESPA, the specified date shall become the Effective Date of the BESPA, irrespective of the date of signing of BESPA.
- 47.26 **“EQUITY”** shall mean Net Worth as defined in Companies Act, 2013.
- 47.27 **“FINANCIAL CLOSURE”** or **“PROJECT FINANCING ARRANGEMENTS”** means arrangement of necessary funds by the BESSD towards 100% Project Cost either by way of commitment of funds by the Company from its internal resources and/or tie up of funds through a bank/ financial institution by way of sanction of a loan or letter agreeing to finance;
- 47.28 **“GUIDELINES”** shall mean “Guidelines for Procurement and Utilization of Battery Energy Storage Systems as part of Generation, Transmission and Distribution assets, along with Ancillary Services” issued by Ministry of Power vide Gazette Resolution dated 10.03.2022, including subsequent amendments and clarification thereof, if any, issued until the last date of bid submission of this RfS.
- 47.29 **“GROUP COMPANY”** of a Company means
- a Company which, directly or indirectly, holds 10% (Ten Percent) or more of the share capital of the Company or;
 - a Company in which the Company, directly or indirectly, holds 10% (Ten Percent) or more of the share capital of such Company or;
 - a Company in which the Company, directly or indirectly, has the power to direct or cause to be directed the management and policies of such Company whether through the ownership of securities or agreement or any other arrangement or otherwise or;
 - a Company which, directly or indirectly, has the power to direct or cause to be directed the management and policies of the Company whether through the ownership of securities or agreement or any other arrangement or otherwise or;
 - a Company which is under common control with the Company, and control means ownership by one Company of at least 10% (Ten Percent) of the share capital of the other Company or power to direct or cause to be directed the management and policies of such Company whether through the ownership of securities or agreement or any other arrangement or otherwise;

Provided that entities which have Government shareholding, financial institution, scheduled bank, foreign institutional investor, Non-Banking Financial Company, and any mutual fund, pension

funds and sovereign funds shall not be deemed to be Group Company, and its shareholding and the power to direct or cause to be directed the management and policies of a Company shall not be considered for the purposes of this definition unless it is the Project Company or a Member of the Consortium developing the Project.

47.30 **“ISTS”** shall mean Inter-State Transmission System.

47.31 **“InSTS”** shall mean Intra-State Transmission System

47.32 **“INTER-CONNECTION POINT/ DELIVERY/ METERING POINT”** shall mean a single point at the 220 kV Brahmapuram substation of Kerala State Electricity Board Limited, at the voltage level of 220 kV, where the power from the Project(s) is injected into the grid (including the dedicated transmission line connecting the Projects with the substation system) as specified in the RfS document. Metering shall be done at this interconnection point where the power is injected into or drawn from. For interconnection with grid and metering, the BESSDs shall abide by the relevant CERC/ KSERC Regulations, Grid Code and Central Electricity Authority (Installation and Operation of Meters) Regulations, 2014 or equivalent KSERC Grid Connectivity and Intra-state Open Access Regulations, 2013 as amended and revised from time to time.

47.33 **“JOINT CONTROL”** shall mean a situation where a company has multiple promoters (but none of the shareholders has more than 50% of voting rights and paid up share capital).

47.34 **“LEAD MEMBER OF THE BIDDING CONSORTIUM”** or **“LEAD MEMBER”**: There shall be only one Lead Member, having the shareholding of not less 51% in the Bidding Consortium.

Note: The shareholding of the Lead member in the Project Company (Special Purpose Vehicle) cannot be changed till 01 (one) year after the Commercial Operation Date (COD) of the Project.

47.35 **“LETTER OF AWARD”** or **“LoA”** shall mean the letter issued by KSEBL to the selected Bidder for award of the Project.

47.36 **“LIMITED LIABILITY PARTNERSHIP”** or **“LLP”** shall mean a Company governed by Limited Liability Partnership Act 2008 or as amended.

47.37 **“LLC”** shall mean Limited Liability Company.

47.38 **“MEMBER IN A BIDDING CONSORTIUM”** or **“MEMBER”** shall mean each Company in a Bidding Consortium. In case of a Technology Partner being a member in the Consortium, it has to be a Company.

47.39 **“MONTH”** shall mean calendar month.

47.40 **“NET-WORTH”** shall mean the Net-Worth as defined section 2 of the Companies Act, 2013.

47.41 **“PAID-UP SHARE CAPITAL”** shall mean the paid-up share capital as defined in Section 2 of the Companies Act, 2013.

47.42 **“PARENT”** shall mean a Company, which holds more than 50% voting rights and paid up share capital, either directly or indirectly in the Project Company or a Member in a Consortium developing the Project.

47.43 **“PROJECT”** shall mean the Battery Energy Storage System set up by the BESSD for supply of Power on an “on Demand” basis, having single point of injection/drawl into/from the grid at Interconnection/ Delivery/ Metering Point, or in case of sharing of transmission lines, by separate

injection at Pooling Point and having separate control systems and metering. The Project shall also comprise auxiliaries and associated facilities, bay(s) for transmission system in the their switchyard, dedicated transmission line up to the injection point and all the other assets, buildings/structures, equipment, plant and machinery (pertaining to the BESS), facilities and related assets required for the efficient and economic operation of the power supply facility, whether completed or at any stage of development and construction or intended to be developed and constructed for the purpose of supply of power to KSEBL.

- 47.44 **“PROJECT CAPACITY”** shall mean the maximum AC capacity at the Delivery Point that can be scheduled on which the BESPA shall be signed;
- 47.45 **“PROJECT COMMISSIONING”**: The Project will be considered as commissioned in line with the Commissioning procedure defined in the RfS/BESPA and upon certification thereof by KSEBL.
- 47.46 **“PROJECT LOCATION”** shall mean the area identified by the BESSD, comprising village(s), Tehsil(s)/Taluk(s) and District(s) within Kerala, where the Project is being implemented.
- 47.47 **“POWER ON DEMAND”** shall mean the requirement of the Buying Entity to charge and discharge the BESS based on its requirements during the time of day, subject to provisions of the RfS and BESPA.
- 47.48 **“RENEWABLE ENERGY (RE) POWER”** shall mean power from a RE Power generation facility.
- 47.49 **“RfS”** or **“RfS DOCUMENT”** or **“BIDDING DOCUMENT(S)”** or **“TENDER DOOCUMENTS”** shall mean the “Request for Selection” document issued by NVVN, acting as Authorised Representative of KSEBL, including standard Battery Energy Storage Purchase Agreement, along with subsequent clarifications and amendments thereof, vide RfS No. _dated ____.
- 47.50 **“SCHEDULED COMMISSIONING DATE”** or **“SCD”** shall be the date as indicated in Clause 9 of the RfS.
- 47.51 **“SELECTED BIDDER”** or **“SUCCESSFUL BIDDER”** shall mean the Bidder selected pursuant to this RfS to set up the Project and supply electrical output as per the terms of BESPA.
- 47.52 **“STATE TRANSMISSION UTILITY”** or **“STU”** shall mean Kerala State Electricity Board Ltd.
- 47.53 **“STATUOTORY AUDITOR”** shall mean the auditor appointed under the provisions of the Companies Act, 1956 / Companies Act, 2013 (as the case may be) or under the provisions of any other applicable governing law
- 47.54 **“TOE”** shall mean Tender Opening Event.
- 47.55 **“TIME BLOCK”** – shall refer to a 15-minute interval for which electrical parameters and quantities are recorded by special energy meters in Indian Power Grid.
- 47.56 **“ULTIMATE PARENT”** shall mean a Company, which owns more than 50% (Fifty Percent) voting rights and paid up share capital, either directly or indirectly in the Parent and Affiliates;
- 47.57 **“WEEK”** shall mean calendar week;

SECTION 6.
SAMPLE FORMS & FORMATS FOR BID SUBMISSION

The following formats are required to be submitted as part of the RfS. These formats are designed to demonstrate the Bidder's compliance with the Qualification Requirements set forth in Section 4 and other submission requirements specified in the RfS.

Format 7.1

COVERING LETTER

(The Covering Letter should be submitted on the Letter Head of the Bidding Company/ Lead Member of Consortium)

Ref.No. _____ Date: _____
From: _____ (Insert name and address of Bidding Company/ Lead Member of Consortium)

Tel.#:
Fax#:
E-mail address#

To

NVVN Limited

Sub: Response to RfS No. dated for..... (Insert title of the RfS)

Dear Sir/ Madam,

We, the undersigned..... [insert name of the 'Bidder'] having read, examined and understood in detail the RfS including Qualification Requirements in particular, terms and conditions of the standard BESPA for availability of Contracted Capacity for the Term of the BESPA to the Intermediary Procurer, hereby submit our response to RfS.

We confirm that in response to the aforesaid RfS, neither we nor any of our Ultimate Parent Company/ Parent Company/ Affiliate/ Group Company has submitted response to RfS other than this response to RfS, directly or indirectly, in response to the aforesaid RfS (as mentioned in Format 7.8 under Disclosure) **OR** We confirm that in the response to the aforesaid RfS, we have a Group Company who owns more than 10% but less than 26% in the bidding company as well as other companies who may participate in this RfS, and accordingly, we have submitted requisite undertaking as per Format 7.8A in this regard [*strike out whichever not applicable*].

We also confirm that we including our Ultimate Parent Company/ Parent Company/ Affiliate/ Group Companies directly or indirectly have not submitted response to RfS for more than cumulative capacity of ____MW/ ____MWh (to be specified as ½ of the tendered capacity) , including this response to RfS. We are submitting response to RfS for the development of following Project(s) [*strike out one of the projects if not applicable*]: -

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S. No.	Name of the Substation	Location	Connectivity voltage	Proposed BESS capacity in MW/ MWh
1.	220kV SS Brahmapuram	9.996928 76.371255	220 kV	250/ 500

**The preferences of the Projects shall be considered only for the last successful bidder whose total quoted capacity is more than the balance capacity. In this case, allocation will be done as described in Clause 44.4 of the RfS.*

1. We give our unconditional acceptance to the RfS, dated [Insert date in dd/mm/yyyy], standard BESPA documents attached thereto, issued by NVVN on behalf of KSEBL. In token of our acceptance to the RfS, BESPA and BESSA documents along with the amendments and clarifications issued by NVVN, the same have been digitally signed by us and enclosed with the response to RfS. We shall ensure that the BESPA is executed as per the provisions of the RfS and provisions of BESPA and shall be binding on us. Further, we confirm that the Project shall be commissioned within the deadline as per Clause 9 of the RfS. We further undertake that we shall demonstrate possession of 100% area of the identified land, within the timelines as per the RfS.
2. Earnest Money Deposit (EMD):- (Please read Clause 17 carefully before filling)
We have enclosed EMD of INR (Insert Amount), in the form of Bank Guarantee no..... [Insert bank guarantee number] dated [Insert date of bank guarantee] as per Format 7.3A from [Insert name of bank providing bank guarantee] and valid up to.....in terms of Clause No. 18 of this RfS. The total capacity of the BESS Project offered by us is MW/ MWh. [Insert cumulative capacity proposed]. (strike off whichever is not applicable).
3. We hereby declare that in the event our Project(s) get selected and we are not able to submit Bank Guarantee/POI of the requisite value(s) towards PBG, Consultancy Fee for the selected Projects, within due time as mentioned in Clauses 19 & 20 of this RfS on issue of LoA by KSEBL for the selected Projects and/or we are not able to sign BESPA with Procurer within the timeline as stipulated in the RfS for the selected Projects, KSEBL shall have the right to take action as per provisions of Format-7.3A of the RfS.
4. We have submitted our response to RfS strictly as per Section 7 (Sample Forms and Formats) of this RfS, without any deviations, conditions and without mentioning any assumptions or notes in the said Formats.
5. Acceptance: -
We hereby unconditionally and irrevocably agree and accept that the decision made by NVVN/ KSEBL in respect of any matter regarding or arising out of the RfS shall be binding on us. We hereby expressly waive and withdraw any deviations from the provisions of the RfS and also waive and withdraw all claims in respect of this process.

We also unconditionally and irrevocably agree and accept that the decision made by KSEBL in respect of award of Projects according to our preference order as above and in line with the

provisions of the RfS, shall be binding on us.

6. Familiarity with Relevant Indian Laws, Regulations and Orders:-
We confirm that we have studied the provisions of the relevant Indian Laws, Regulations and Order issued by judicial bodies as required to enable us to submit this response to RfS and execute the BESPA, in the event of our selection as Successful Bidder.
7. In case of our selection as the Successful bidder under the scheme and the project being executed by a Special Purpose Vehicle (SPV) incorporated by us which shall be our subsidiary, we shall infuse necessary equity to the requirements of RfS. Further we will submit a Board Resolution prior to signing of BESPA with the Intermediary Procurer, committing total equity infusion in the SPV as per the provisions of RfS.
8. We are submitting our response to the RfS with formats duly signed as desired by you in the RfS online for your consideration.
9. It is confirmed that our response to the RfS is consistent with all the requirements of submission as stated in the RfS, including all clarifications and amendments and subsequent communications from NVVN.
10. The information submitted in our response to the RfS is correct to the best of our knowledge and understanding. We would be solely responsible for any errors or omissions in our response to the RfS.
11. We confirm that all the terms and conditions of our Bid are valid up to _____(*Insert date in dd/mm/yyyy*) for acceptance [i.e. a period of 12 months from the last date of submission of response to RfS].
12. Contact Person

Details of the representative to be contacted by NVVN/ KSEBL are furnished as under:

Name :
Designation :
Company :
Address :
Phone Nos. :
Mobile Nos. :
Fax Nos. :
E-mail address :

13. We have neither made any statement nor provided any information in this Bid, which to the best of our knowledge is materially inaccurate or misleading. Further, all the confirmations, declarations and representations made in our Bid are true and accurate. In case this is found to be incorrect after our selection as Successful Bidder, we agree that the same would be treated as a seller's event of default under BESPA and consequent provisions of BESPA shall apply.

Dated the _____ day of _____, 20....

Thanking you,
We remain,
Yours faithfully,

Name, Designation, Seal and Signature of Authorized Person in whose name Power of Attorney/ Board Resolution/ Declaration.

FORMAT FOR POWER OF ATTORNEY

(Applicable Only in case of Consortiums)

*(To be provided by each of the other members of the Consortium in favor of the Lead Member)
(To be stamped in accordance with Stamp Act, the Non-Judicial Stamp Paper of Appropriate Value)*

KNOW ALL MEN BY THESE PRESENTS THAT M/s.....having its registered office at,, and M/s having its registered office at, (Insert names and registered offices of all Members of the Consortium) the Members of Consortium have formed a Bidding Consortium named (insert name of the Consortium if finalized) (hereinafter called the 'Consortium') vide Consortium Agreement dated..... and having agreed to appoint M/s.....as the Lead Member of the said Consortium do hereby constitute, nominate and appoint M/s a company incorporated under the laws ofand having its Registered/ Head Office atas our duly constituted lawful Attorney (hereinafter called as Lead Member) to exercise all or any of the powers for and on behalf of the Consortium in regard to submission of the response to RfS No.....

We also authorize the said Lead Member to undertake the following acts:

- i) To submit on behalf of Consortium Members response to RfS.
- ii) To do any other act or submit any information and document related to the above response to RfS Bid.

It is expressly understood that in the event of the Consortium being selected as Successful Bidder, this Power of Attorney shall remain valid, binding and irrevocable until the Bidding Consortium achieves execution of BESPA.

We as the Member of the Consortium agree and undertake to ratify and confirm all whatsoever the said Attorney/ Lead Member has done on behalf of the Consortium Members pursuant to this Power of Attorney and the same shall bind us and deemed to have been done by us.

IN WITNESS WHEREOF M/s, as the Member of the Consortium have executed these presents on this..... day ofunder the Common Seal of our company.

For and on behalf of Consortium Member

M/s.....

- ----- (Signature of person authorized by the board)

(Name
Designation
Place:
Date:)
Accepted

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(Signature, Name, Designation and Address

of the person authorized by the board of the Lead Member)

Attested

(Signature of the executant)

(Signature & stamp of Notary of the place of execution)

Place: -----

Date: -----

Lead Member in the Consortium shall have the controlling shareholding in the Company as defined in Section-6, Definition of Terms of the RfS.

FORMAT FOR BANK GUARANTEE TOWARDS EARNEST MONEY DEPOSIT
(EMD)

(To be stamped in accordance with Stamp Act, the Non-Judicial Stamp Paper of Appropriate Value)

Reference:

Bank Guarantee No.:

Date:

In consideration of the _____ *[Insert name of the Bidder]*
(hereinafter referred to as 'Bidder') submitting the response to RfS inter alia for _____ *[Insert title of the RfS]*
of the cumulative capacity of _____
_____ MW/MWh *[Insert cumulative Project capacity proposed]* for offering Battery Energy Storage System on long term basis, in response to the RfS No. _____ dated _____ issued by NTPC Vidyut Vyapar Nigam Limited (hereinafter referred to as the NVVN) and the NVVN considering such response to the RfS of *[Insert the name of the Bidder]* as per the terms of the RfS, the

_____ *[Insert name & address of bank]* hereby agrees unequivocally, irrevocably and unconditionally to pay to the NVVN at *[Insert Name of the Place from the address of the NVVN]* forthwith without demur on demand in writing from NVVN or any Officer authorized by it in this behalf, any amount upto and not exceeding Rupees _____ *[Insert amount not less than that derived on the basis of Rs. 8.80 Lakhs per MW of cumulative capacity proposed, only, on behalf of M/s*
_____ *[Insert name of the Bidder]*.

This guarantee shall be valid and binding on this Bank up to and including _____ *[insert date of validity in accordance with Clause No. 18 of this RfS]* and shall not be terminable by notice or any change in the constitution of the Bank or the term of contract or by any other reasons whatsoever and our liability hereunder shall not be impaired or discharged by any extension of time or variations or alternations made, given, or agreed with or without our knowledge or consent, by or between parties to the respective agreement.

Our liability under this Guarantee is restricted to INR.....(Indian Rupees _____ only). Our Guarantee shall remain in force until _____ *[insert date of validity in accordance with Clause No. 18 of this RfS]*. NVVN shall be entitled to invoke this Guarantee till _____ *[insert date of validity in accordance with Clause No. 18 of this RfS]*.

The Guarantor Bank hereby agrees and acknowledges that NVVN shall have a right to invoke this BANK GUARANTEE in part or in full, as it may deem fit.

The Guarantor Bank hereby expressly agrees that it shall not require any proof in addition to the written demand by NVVN, made in any format, raised at the above mentioned address of the Guarantor Bank, in order to make the said payment to NVVN.

The Guarantor Bank shall make payment hereunder on first demand without restriction or conditions and notwithstanding any objection by _____ *[Insert name of the Bidder]* and/ or any other person. The Guarantor Bank shall not require NVVN to justify the invocation of this BANK GUARANTEE, nor shall the Guarantor Bank have any recourse

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against NVVN in respect of any payment made hereunder.

This BANK GUARANTEE shall be interpreted in accordance with the laws of India and the courts at New Delhi shall have exclusive jurisdiction.

The Guarantor Bank represents that this BANK GUARANTEE has been established in such form and with such content that it is fully enforceable in accordance with its terms as against the Guarantor Bank in the manner provided herein.

This BANK GUARANTEE shall not be affected in any manner by reason of merger, amalgamation, restructuring or any other change in the constitution of the Guarantor Bank.

This BANK GUARANTEE shall be a primary obligation of the Guarantor Bank and accordingly NVVN shall not be obliged before enforcing this BANK GUARANTEE to take any action in any court or arbitral proceedings against the Bidder, to make any claim against or any demand on the Bidder or to give any notice to the Bidder or to enforce any security held by NVVN or to exercise, levy or enforce any distress, diligence or other process against the Bidder.

This BANK GUARANTEE shall be effective only when the Bank Guarantee issuance message is transmitted by the issuing Bank through SFMS to ___First Bank and a confirmation in this regard is received by NVVN.

Notwithstanding anything contained hereinabove, our liability under this Guarantee is restricted to INR _____ (Indian Rupees _____ Only) and it shall remain in force until _____ [*Date to be inserted on the basis of Clause No. 18 of this RfS*].

We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only if NVVN serves upon us a written claim or demand.

Signature: _____

Name: _____

Power of Attorney No.: _____

For

_____*[Insert Name and Address of the Bank]* ____

Contact Details of the Bank:

E-mail ID of the Bank:

Banker's Stamp and Full Address.

Dated this ____ day of ____, 20__

FORMAT FOR PERFORMANCE BANK GUARANTEE (PBG)

(To be submitted Separately for each Project)

(To be stamped in accordance with Stamp Act, the Non-Judicial Stamp Paper of Appropriate Value)

Reference:

Bank Guarantee No.:

Date:

In consideration of the _____ [*Insert name of the Bidder*] (hereinafter referred to as 'selected Battery Energy Storage System Developer') submitting the response to RfS inter alia for [*insert title of the RfS*] of the capacity of MWh, at [*Insert name of the place*], in response to the RfS dated issued by NTPC Vidyut Vyapar Nigam Limited as Authorized Representative of Kerala State Electricity Board (hereinafter referred to as the Procurer) and Procurer considering such response to the RfS of [*Insert name of the Bidder*] (which expression shall unless repugnant to the context or meaning thereof include its executors, administrators, successors and assignees) and selecting the Project of the Battery Energy Storage System Developer (BESSD) and issuing Letter of Award No. _____ to _____ (*Insert Name of selected Battery Energy Storage System Developer*) as per terms of RfS and the same having been accepted by the selected BESSD resulting in a Battery Energy Storage Purchase Agreement (BESPA) to be entered into, for procurement of capacity [from selected Battery Energy Storage System Developer or a Project Company, M/s _____ {a Special Purpose Vehicle (SPV) formed for this purpose}, if applicable].

As per the terms of the RfS, the _____ [*Insert name & address of Bank*] hereby agrees unequivocally, irrevocably and unconditionally to pay to the _____ [*Insert name of the Procurer*], (hereinafter referred to as Procurer, or Buying Entity at [*Insert Name of the Place from the address of the Procurer*] forthwith on demand in writing from the Procurer or any Officer authorised by it in this behalf, any amount up to and not exceeding Indian Rupees _____ [Total Value] only, on behalf of M/s _____ [*Insert name of the selected Battery Energy Storage System Developer/ Project Company*]

This guarantee shall be valid and binding on this Bank up to and including and shall not be terminable by notice or any change in the constitution of the Bank or the term of contract or by any other reasons whatsoever and our liability hereunder shall not be impaired or discharged by any extension of time or variations or alternations made, given, or agreed with or without our knowledge or consent, by or between parties to the respective agreement.

Our liability under this Guarantee is restricted to INR _____ (Indian Rupees _____ Only).

Our Guarantee shall remain in force until The Procurer shall be entitled to invoke this Guarantee till

The Guarantor Bank hereby agrees and acknowledges that the Procurer shall have a right to invoke this BANK GUARANTEE in part or in full, as it may deem fit.

The Guarantor Bank hereby expressly agrees that it shall not require any proof in addition to the written

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demand by the Procurer, made in any format, raised at the above mentioned address of the Guarantor Bank, in order to make the said payment to the Procurer.

The Guarantor Bank shall make payment hereunder on first demand without restriction or conditions and notwithstanding any objection by _____ *[Insert name of the selected Battery Energy Storage System Developer/ Project Company as applicable]* and/ or any other person. The Guarantor Bank shall not require the Procurer to justify the invocation of this BANK GUARANTEE, nor shall the Guarantor Bank have any recourse against Procurer in respect of any payment made hereunder

This BANK GUARANTEE shall be interpreted in accordance with the laws of India and the courts at New Delhi shall have exclusive jurisdiction.

The Guarantor Bank represents that this BANK GUARANTEE has been established in such form and with such content that it is fully enforceable in accordance with its terms as against the Guarantor Bank in the manner provided herein.

This BANK GUARANTEE shall not be affected in any manner by reason of merger, amalgamation, restructuring or any other change in the constitution of the Guarantor Bank.

This BANK GUARANTEE shall be a primary obligation of the Guarantor Bank and accordingly the Procurer shall not be obliged before enforcing this BANK GUARANTEE to take any action in any court or arbitral proceedings against the selected Battery Energy Storage System Developer/ Project Company, to make any claim against or any demand on the selected Battery Energy Storage System Developer/ Project Company or to give any notice to the selected Battery Energy Storage System Developer/ Project Company or to enforce any security held by the Procurer or to exercise, levy or enforce any distress, diligence or other process against the selected Battery Energy Storage System Developer / Project Company.

This BANK GUARANTEE shall be effective only when the Bank Guarantee issuance message is transmitted by the issuing Bank through SFMS to _____ First Bank and a confirmation in this regard is received by the Procurer.

The Guarantor Bank acknowledges that this BANK GUARANTEE is not personal to the Procurer and may be assigned, in whole or in part, (whether absolutely or by way of security) by the Procurer to any entity to whom the Procurer is entitled to assign its rights and obligations under the BESPA.

Notwithstanding anything contained hereinabove, our liability under this Guarantee is restricted to INR _____ (Indian Rupees _____ Only) and it shall remain in force until We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only if the Procurer serves upon us a written claim or demand.

Signature: _____
Name: _____
Power of Attorney No.: _____
For _____
_____ *[Insert Name and Address of the Bank]* _____

Contact Details of the Bank:

E-mail ID of the Bank:

Banker's Stamp and Full Address.

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Dated this ____ day of ____, 20__

Witness:

1.

Signature

Name and Address

2.

Signature

Name and Address

Notes:

1. The Stamp Paper should be in the name of the Executing Bank and of appropriate value.
2. The Performance Bank Guarantee shall be executed by any of the Scheduled Commercial Banks as listed on the website of Reserve Bank of India (RBI) and amended as on the date of issuance of Bank Guarantee. Bank Guarantee issued by foreign branch of a Scheduled Commercial Bank is to be endorsed by the Indian branch of the same bank or State Bank of India (SBI).

FORMAT OF PAYMENT ON ORDER INSTRUMENT (POI) TO BE ISSUED BY IREDA/REC/PFC (IN LIEU OF EMD)

No.

Date

The NVVN,

Registered

Reg: M/s _____(insert name of the Bidder) – Issuance of Payment on Order Instrument for an amount of Rs. _____

Dear Sir,

1. It is to be noted that M/s. _____(insert name of the POI issuing Agency) ('IREDA/REC/PFC') has sanctioned a non-fund based limit loan of Rs. _____ (Rupees _____ only) to M/s _____ under the Loan Agreement executed on _____ to execute Renewable Energy Projects/Energy Storage Projects.
2. At the request of M/s _____, on behalf of _____ (insert name of the Bidder), this Payment on Order Instrument (POI) for an amount of Rs. _____ (Rupees _____ (in words)). This Payment on Order Instrument comes into force immediately.
3. In consideration of the _____ [Insert name of the Bidder] (hereinafter referred to as 'Bidder') submitting the response to RfS inter alia for _____ [Insert title of the RfS] of the cumulative capacity of MW [Insert cumulative Project capacity proposed] for supply of power there from on long term basis, in response to the RfS No. _____ dated _____ issued by NTPC Vidyut Vyapar Nigam Limited (hereinafter referred to as the NVVN or Authorised Representative) and the NVVN considering such response to the RfS of [Insert the name of the Bidder] as per the terms of the RfS, the _____ [Insert name & address of IREDA/PFC/REC] hereby agrees unequivocally, irrevocably and unconditionally to pay to the NVVN at [Insert Name of the Place from the address of the NVVN] forthwith without demur on demand in writing from the NVVN or any Officer authorized by it in this behalf, any amount upto and not exceeding Rupees ____ [Insert amount not less than that derived on the basis of Rs. 6.82 Lakhs per MW of cumulative capacity proposed], only, on behalf of M/s _____ [Insert name of the Bidder].
4. In consideration of the above facts, IREDA/REC/PFC, having its registered office at _____, agrees to make payment for the sum of Rs. _____ lakhs (in words.....) to the NVVN on the following conditions:-
 - (i) IREDA/REC/PFC agrees to make payment of the above said amount unconditionally, without demur and without protest within a period of ____ days of receipt of request from the NVVN within the validity period of this letter as specified herein;
 - (j) The commitment of IREDA/REC/PFC, under this Payment of Order Instrument will have the same effect as that of the commitment under the Bank Guarantee issued by any Public Sector Bank and shall be enforceable in the same manner as in the case of a Bank Guarantee issued by a Bank and the same shall be irrevocable and shall be honored irrespective of any agreement or its breach between IREDA/REC/PFC or its constituents notwithstanding any

dispute that may be raised by the against the NVVN;

- (k) The liability of IREDA/REC/PFC continues to be valid and binding on IREDA/REC/PFC and shall not be terminated, impaired and discharged, by virtue of change in its constitution and specific liability under letter of undertaking shall be binding on its successors or assignors;
 - (l) The liability of IREDA/REC/PFC shall continue to be valid and binding on IREDA/REC/PFC and shall not be terminated/ impaired/ discharged by any extension of time or variation and alternation made given or agreed with or without knowledge or consent of the parties (the NVVN and Bidding Party), subject to the however to the maximum extent of amount stated herein and IREDA/REC/PFC is not liable to any interest or costs etc;
 - (m) This Payment of Order Instrument can be invoked either partially or fully, till the date of validity;
 - (n) IREDA/REC/PFC agrees that it shall not require any proof in addition to the written demand by the NVVN made in any format within the validity period. IREDA/REC/PFC shall not require the NVVN to justify the invocation of the POI against the Bidding Party, to make any claim against or any demand against the Bidding Party or to give any notice to the Bidding Party;
 - (o) The POI shall be the primary obligation of IREDA/REC/PFC and the NVVN shall not be obliged before enforcing the POI to take any action in any court or arbitral proceedings against the Bidding Party;
 - (p) Neither the NVVN is required to justify the invocation of this POI nor shall IREDA/REC/PFC have any recourse against the NVVN in respect of the payment made under letter of undertaking;
5. Notwithstanding anything contrary contained anywhere in this POI or in any other documents, this POI is and shall remain valid upto _____ and IREDA/REC/PFC shall make payment thereunder only if a written demand or request is raised within the said date and to the maximum extent of Rs and IREDA/REC/PFC shall in no case, be liable for any interest, costs, charges and expenses and IREDA's/REC's/PFC's liability in no case will exceed more than the above amount stipulated.
6. In pursuance of the above, IREDA/REC/PFC and the NVVN have signed an Umbrella Agreement dated _____ setting out the terms and conditions for issue of letter of undertaking by IREDA/REC/PFC to the NVVN and the said terms and conditions shall be read as a part of this letter of undertaking issued for the project of the project of PP mentioned above.

Thanking you,

Yours faithfully

For and on behalf of

M/s. _____

(Name of the POI issuing agency).

()

General Manager (TS)

Copy to:-

M/s. __PP_____

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As per their request

()
General Manager (TS)

Format 7.3 D

**Bid Security Form Insurance Surety Bond (To be stamped in accordance with Stamp Act, if any,
of the Country of the issuing Bank)**

Insurance Surety Bond No.....

Date.....

To

NTPC VIDYUT VYAPAR NIGAM LIMITED,

5th Floor, Engineering Office Complex, A-8A, Sector -24, Noida -201301 (U.P.)

Dear Sirs,

In accordance with Invitation for Bids under your Bid Document No. _____, M/s.....[Bidder's Name] having its Registered/Head Office at..... (hereinafter called the 'Bidder') wish to participate in the said bid for [Name of Package]

As an irrevocable Insurance Surety Bond against Bid Security for an amount of (*)..... valid for days from(**) required to be submitted by the Bidder as a condition precedent for participation in the said bid which amount is liable to be forfeited on the happening of any contingencies as mentioned under the Bidding Documents.

We, the ____[Name & address of the Insurer]having our Head Office at (#)_____guarantee and undertake to pay immediately on demand by NTPC VIDYUT VYAPAR NIGAM LIMITED (hereinafter called the 'NVVN') the amount of

.....(*) without any reservation, protest, demand and recourse. Any such demand made by the 'NVVN' shall be conclusive and binding on us irrespective of any dispute or difference raised by the Bidder and/or any right/remedy available to the bidder in terms thereof.

This Insurance Surety Bond shall be unconditional as well as irrevocable and shall remain valid upto(@) If any further extension of this Insurance Surety Bond is required, the same shall be extended to such required period (not exceeding one year) on receiving instructions from M/s[Bidder's Name] on whose behalf this Insurance Surety Bond is issued.

In witness where of the Insurer, through its authorized officer, has set its hand and stamp on this.....day of.....20.....at.....

WITNESS:

.....
(Signature) (Signature)

.....
(Name) (Name)

.....

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(Official Address)

(Designation with
Bank Stamp)

Authorized Vide

Power of Attorney No.....

Date.....

NOTE: 1. (*) The amount shall be as specified in the Bid Data Sheets. (**) This shall be the date of opening of Techno-Commercial bids.

(#) Complete mailing address of the Head Office of the Insurer to be given.

(@) This date shall be forty-five (45) days after the last date for which the bid is valid.

2. The Insurance Surety Bond shall be from an Insurer as per guidelines issued by Insurance Regulatory and Development Authority of India (IRDAI) as amended from time to time.

3. The NVVN shall be the Creditor, the Bidder shall be the Principal debtor and the Insurance company/Insurer shall be the Surety in respect of the Insurance Surety Bond to be issued by the Insurer.

4. The Insurance Surety Bond should be on Non-Judicial stamp paper/e-stamp paper of appropriate value as per Stamp Act prevailing in the state(s) where the Insurance Surety Bond is submitted or is to be acted upon or the rate prevailing in State where the Insurance Surety Bond is executed, whichever is higher. The Stamp Paper/e-stamp paper shall be purchased in the name of Bidder/Insurer issuing the Insurance Surety Bond.

5. While getting the Insurance Surety Bond issued, Bidders are required to ensure compliance to the points mentioned in Form of Bank Guarantee/Insurance Surety Bond Verification Check List enclosed in this Section of Bidding Documents. Further, Bidders are required to fill up this Form and enclose the same with the Insurance Surety Bond.

FORMAT FOR BOARD RESOLUTIONS

The Board, after discussion, at the duly convened Meeting on.....[*Insert date*], with the consent of all the Directors present and in compliance of the provisions of the Companies Act, 1956 or Companies Act 2013, as applicable, passed the following Resolution:

1. RESOLVED THAT Mr/ Ms....., be and is hereby authorized to do on our behalf, all such acts, deeds and things necessary in connection with or incidental to our response to RfS vide RfS No. _____for _____(insert title of the RfS), including signing and submission of all documents and providing information/ response to RfS to (Insert name of NVVN) the Authorised Representative of KSEBL, representing us in all matters before the Authorised Representative of KSEBL, and generally dealing with the Authorised Representative of KSEBL in all matters in connection with our bid for the said Project. (***To be provided by the Bidding Company or the Lead Member of the Consortium***)

2. FURTHER RESOLVED THAT pursuant to the provisions of the Companies Act, 1956 or Companies Act, 2013, as applicable and compliance thereof and as permitted under the Memorandum and Articles of Association of the Company, approval of the Board be and is hereby accorded to invest total equity in the Project. (***To be provided by the Bidding Company***)

[Note: In the event the Bidder is a Bidding Consortium, in place of the above resolution at Sl. No. 2, the following resolutions are to be provided]

FURTHER RESOLVED THAT pursuant to the provisions of the Companies Act, 1956 or Companies Act, 2013, as applicable and compliance thereof and as permitted under the Memorandum and Articles of Association of the Company, approval of the Board be and is hereby accorded to invest (%) equity [*Insert the % equity commitment as specified in Consortium Agreement*] in the Project. (***To be provided by each Member of the Bidding Consortium including Lead Member such that total equity is 100%***)

FURTHER RESOLVED THAT approval of the Board be and is hereby accorded to participate in consortium with M/s ----- [*Insert the name of other Members in the Consortium*] and Mr/ Ms....., be and is hereby authorized to execute the Consortium Agreement. (***To be provided by each Member of the Bidding Consortium including Lead Member***)

And

FURTHER RESOLVED THAT approval of the Board be and is hereby accorded to contribute such additional amount over and above the percentage limit (specified for the Lead Member in the Consortium Agreement) to the extent becoming necessary towards the total equity share in the Project Company, obligatory on the part of the Consortium pursuant to the terms and conditions contained in the Consortium Agreement dated.....executed by the Consortium as per the provisions of the RfS. (***To be passed by the Lead Member of the Bidding Consortium***)

3. NOT USED

In case of a Consortium the respective Boards of all Consortium Members should pass the aforesaid Resolution before execution of Consortium Agreement.

Certified True Copy

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(Signature, Name and Stamp of Company Secretary)

Notes:

- 1) This certified true copy should be submitted on the letterhead of the Company, signed by the Company Secretary/ Director.
- 2) The contents of the format may be suitably re-worded indicating the identity of the entity passing the resolution.
- 3) This format may be modified only to the limited extent required to comply with the local regulations and laws applicable to a foreign entity submitting this resolution. For example, reference to Companies Act, 1956 or Companies Act, 2013 as applicable may be suitably modified to refer to the law applicable to the entity submitting the resolution. However, in such case, the foreign entity shall submit an unqualified opinion issued by the legal counsel of such foreign entity, stating that the Board resolutions are in compliance with the applicable laws of the respective jurisdictions of the issuing Company and the authorizations granted therein are true and valid.

FORMAT FOR CONSORTIUM AGREEMENT

(To be stamped in accordance with Stamp Act, the Non-Judicial Stamp Paper of Appropriate Value)

THIS Consortium Agreement ("Agreement") executed on this ____ Day of _____ Two Thousand ____ between M/s _____ [Insert name of Lead Member] a Company incorporated under the laws of _____ and having its Registered Office at _____ (hereinafter called the "**Member-1**", which expression shall include its successors, executors and permitted assigns) and M/s _____ a Company incorporated under the laws of _____ and having its Registered Office at _____ (hereinafter called the "**Member-2**", which expression shall include its successors, executors and permitted assigns), M/s _____ a Company incorporated under the laws of _____ and having its Registered Office at _____ (hereinafter called the "**Member-n**", which expression shall include its successors, executors and permitted assigns), [The Bidding Consortium should list the details of all the Consortium Members] for the purpose of submitting response to RfS and execution of Battery Energy Storage Purchase Agreement (in case of award), against RfS No. _____ dated _____ issued by NTPC Vidyut Vyapar Nigam Limited (the Authorised Representative) a Company incorporated under the Companies Act, 2013, and having its Registered Office at _____.

WHEREAS, each Member individually shall be referred to as the "Member" and all of the Members shall be collectively referred to as the "Members" in this Agreement.

WHEREAS the _____ (insert name of the Procurer) desires to purchase Power under RfS for _____ (insert title of the RfS);

WHEREAS, the Authorised Representative had invited response to RfS vide its Request for Selection (RfS) dated _____

WHEREAS the RfS stipulates that in case response to RfS is being submitted by a Bidding Consortium, the Members of the Consortium will have to submit a legally enforceable Consortium Agreement in a format specified by the Authorised Representative wherein the Consortium Members have to commit equity investment of a specific percentage for the Project.

NOW THEREFORE, THIS AGREEMENT WITNESSTH AS UNDER:

In consideration of the above premises and agreements all the Members in this Bidding Consortium do hereby mutually agree as follows:

1. We, the Members of the Consortium and Members to the Agreement do hereby unequivocally agree that Member-1 (M/s _____), shall act as the Lead Member as defined in the RfS for self and agent for and on behalf of Member-2, _____, Member-n and to submit the response to the RfS.
2. The Lead Member is hereby authorized by the Members of the Consortium and Members to the Agreement to bind the Consortium and receive instructions for and on their behalf.

3. Notwithstanding anything contrary contained in this Agreement, the Lead Member shall always be liable for the equity investment obligations of all the Consortium Members i.e. for both its own liability as well as the liability of other Members.
4. The Lead Member shall be liable and responsible for ensuring the individual and collective commitment of each of the Members of the Consortium in discharging all of their respective equity obligations. Each Member further undertakes to be individually liable for the performance of its part of the obligations without in any way limiting the scope of collective liability envisaged in this Agreement.
5. Subject to the terms of this Agreement, the share of each Member of the Consortium in the issued equity share capital of the Project Company is/shall be in the following proportion:

Name	Percentage
Member 1	---
Member 2	---
Member n	---
Total	100%

We acknowledge that after the execution of BESPA, the controlling shareholding (having not less than 51% of the voting rights and paid up share capital) in the Project Company developing the Project shall be maintained upto COD of the Project.

6. The Lead Member, on behalf of the Consortium, shall inter alia undertake full responsibility for liaising with Lenders or through internal accruals and mobilizing debt resources for the Project, and ensuring that the Seller achieves Financial Closure in terms of the BESPA.
7. In case of any breach of any equity investment commitment by any of the Consortium Members, the Lead Member shall be liable for the consequences thereof.
8. Except as specified in the Agreement, it is agreed that sharing of responsibilities as aforesaid and equity investment obligations thereto shall not in any way be a limitation of responsibility of the Lead Member under these presents.
9. It is further specifically agreed that the financial liability for equity contribution of the Lead Member shall not be limited in any way so as to restrict or limit its liabilities. The Lead Member shall be liable irrespective of its scope of work or financial commitments.
10. This Agreement shall be construed and interpreted in accordance with the Laws of India and courts at New Delhi alone shall have the exclusive jurisdiction in all matters relating thereto and arising thereunder.
11. It is hereby further agreed that in case of being selected as the Successful Bidder, the Members do hereby agree that they shall furnish the Performance Guarantee in favour of the Procurer in terms of the RfS.
12. It is further expressly agreed that the Agreement shall be irrevocable and shall form an integral part of the Battery Energy Storage Purchase Agreement (BESPA) and shall remain valid until the expiration or early termination of the BESPA in terms thereof, unless expressly agreed to the

contrary by the Procurer.

13. The Lead Member is authorized and shall be fully responsible for the accuracy and veracity of the representations and information submitted by the Members respectively from time to time in the response to RfS.
14. It is hereby expressly understood between the Members that no Member at any given point of time, may assign or delegate its rights, duties or obligations under the BESPA except with prior written consent of the Procurer.
15. This Agreement
 - a) has been duly executed and delivered on behalf of each Member hereto and constitutes the legal, valid, binding and enforceable obligation of each such Member;
 - b) sets forth the entire understanding of the Members hereto with respect to the subject matter hereof; and
 - c) may not be amended or modified except in writing signed by each of the Members and with prior written consent of the Procurer.
16. All the terms used in capitals in this Agreement but not defined herein shall have the meaning as per the RfS and BESPA.

IN WITNESS WHEREOF, the Members have, through their authorized representatives, executed these present on the Day, Month and Year first mentioned above.

For M/s----- [Member 1]

(Signature, Name & Designation of the person authorized vide Board Resolution Dated _____)

Witnesses:

1) Signature-----

Name:

Address:

2) Signature -----

Name:

Address:

For M/s-----[Member 2]

(Signature, Name & Designation of the person authorized vide Board Resolution Dated _____)

Witnesses:

1) Signature -----

Name:

2) Signature -----

Name:

Address:

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Address:

For M/s-----[Member n]

(Signature, Name & Designation of the person authorized vide Board Resolution Dated _____)

Witnesses:

1) Signature -----

Name:

Address:

(2) Signature -----

Name:

Address:

Signature and stamp of Notary of the place of execution

FORMAT FOR FINANCIAL REQUIREMENT*(This should be submitted on the Letter Head of the Bidding Company/ Lead Member of Consortium)*

Ref. No. _____

Date: _____

From: _____ *(Insert name and address of Bidding Company/ Lead Member of Consortium)*

Tel.#:

Fax#:

E-mail address#

To**(Enter address of the NVVN)**

Sub: Response to RfS No. _____ dated _____ for _____.

Dear Sir/ Madam,

We certify that the Bidding Company/Member in a Bidding Consortium is meeting the financial eligibility requirements as per the provisions of the RfS. Accordingly, the Bidder, with the support of its Affiliates, (strike out if not applicable) is fulfilling the minimum Net Worth/AUM criteria, by demonstrating a Net Worth/AUM of Rs..... Cr. (..... in words) as on the last date of Financial Year 2023-24/2022-23 or as on the date at least 7 days prior to the bid submission deadline (Strike out wherever not applicable).

This Net Worth/AUM has been calculated in accordance with instructions provided in Clause 39.1 of the RfS.

Exhibit (i): Applicable in case of Bidding Company

For the above calculations, we have considered the Net Worth/AUM by Bidding Company and/ or its Affiliate(s) as per following details:

Name of Bidding Company	Name of Affiliate(s) whose net worth is to be considered	Relationship with Bidding Company*	Net Worth/AUM (in Rs. Crore)
Company 1			
Total			

**The column for "Relationship with Bidding Company" is to be filled only in case the financial capability of Affiliate has been used for meeting Qualification Requirements. Further, documentary evidence to establish the relationship, duly certified by a practicing company secretary/ chartered accountant is required to be attached with the format.*

Exhibit (ii): Applicable in case of Bidding Consortium

(To be filled by each Member in a Bidding Consortium separately)

Name of Member: *[Insert name of the Member]*

Net Worth/AUM Requirement to be met by Member in Proportion to the Equity Commitment: INR -----
 ---- Crore (Equity Commitment (%) * Rs. [] Crore)

For the above calculations, we have considered Net Worth/AUM by Member in Bidding Consortium and/or its Affiliate(s) per following details:

Name of Consortium Member Company	Name of Affiliate(s) whose net worth/AUM is to be considered	Relationship with Bidding Company* (If any)	Net Worth/AUM (in Rs. Crore)	Equity Commitment (in %age) in Bidding Consortium	Committed Net Worth/AUM (in Rs. Crore)
Company 1					

Total					

* The column for "Relationship with Bidding Company" is to be filled only in case the financial capability of Affiliate has been used for meeting Qualification Requirements. Further, documentary evidence to establish the relationship, duly certified by a practicing company secretary/chartered accountant is required to be attached with the format

Further, we certify that the Bidding Company/ Member in the Bidding Consortium, with the support of its Affiliates, (strike out if not applicable) is fulfilling the minimum Annual Turnover Criteria, by demonstrating an Annual Turnover of INR _____ (_____ in words) as on the end of Financial Year 2023-24/2022-23 or as on the day at least 7 days prior to the bid submission deadline (choose one). (Strike out if not applicable)

Exhibit (i): Applicable in case of Bidding Company

For the above calculations, we have considered the Annual Turnover by Bidding Company and/or its Affiliate(s) as per following details:

Name of Bidding Company	Name of Affiliate(s) whose Annual Turnover is to be considered	Relationship with Bidding Company*	Annual Turnover (In Rs. Crore)
Company 1			
Total			

*The column for "Relationship with Bidding Company" is to be filled only in case the financial capability of Affiliate has been used for meeting Qualification Requirements. Further, documentary evidence to establish the relationship, duly certified by a practicing company secretary/chartered accountant is

required to be attached with the format.

Exhibit (ii): Applicable in case of Bidding Consortium
(To be filled by each Member in a Bidding Consortium separately)
Name of Member: [Insert name of the Member]

Annual Turnover Requirement to be met by Member in Proportion to the Equity Commitment: INR -----
 - ---Crore (Equity Commitment (%) * Rs. [] Crore)

For the above calculations, we have considered Annual Turnover by Member in Bidding Consortium and/or its Affiliate(s) as per following details:

Name of Consortium Member Company	Name of Affiliate(s) whose Annual Turnover is to be considered	Relationship with Bidding Company* (If Any)	Annual Turnover (in Rs. Crore)	Equity Commitment (in %age) in Bidding Consortium	Proportionate Annual Turnover (in Rs. Crore)
Company 1					

Total					

** The column for "Relationship with Bidding Company" is to be filled only in case the financial capability of Affiliate has been used for meeting Qualification Requirements. Further, documentary evidence to establish the relationship, duly certified by a practicing company secretary/chartered accountant is required to be attached with the format*

(Signature & Name of the Authorized Signatory)

(Signature and Stamp of CA)

Membership No.

Regn. No. of the CA's Firm:

Date:

- Note: (i) Along with the above format, in a separate sheet on the letterhead of the Chartered Accountant's Firm, provide details of computation of Net Worth and Annual Turnover duly certified by the Chartered Accountant.
- (ii) Certified copies of Balance sheet, Profit & Loss Account, Schedules and Cash Flow Statements are to be enclosed in complete form along with all the Notes to Accounts.

UNDERTAKING

(To be submitted on the letterhead of the Bidder)

We, hereby provide this undertaking to NTPC Vidyut Vyapar Nigam Limited, in respect to our response to RfS vide RfS No. _____ dated _____, that M/s _____ (insert name of the Bidder), or any of its Affiliates is not a willful defaulter to any lender.

Further, we also undertake that as on the bid submission deadline, the Bidder & any of its Affiliate, including any Consortium Member & any of its Affiliate, their directors have not been barred or included in the blacklist by any government agency or authority in India, the government of the jurisdiction of the Bidder or Members where they are incorporated or the jurisdiction of their principal place of business, any international financial institution such as the World Bank Group, Asian Development Bank, African Development Bank, Inter-American Development Bank, Asian Infrastructure Investment Bank etc. or the United Nations or any of its agencies.

(Name and Signature of the Authorized Signatory)

FORMAT FOR DISCLOSURE

(To be submitted on the Letter Head of the Bidding Company/ Each Member of Consortium)

DISCLOSURE

Ref.No. _____

Date: _____

From: _____ *(Insert name and address of Bidding Company/ Lead Member of Consortium)*

Tel. #:

Fax #:

E-mail address#

To

(Enter address of the NVVN)

Sub: Response to RfS No. _____ dated _____ for _____.

Dear Sir/ Madam,

We hereby declare and confirm that only we are participating in the RfS Selection process for the RfS No. _____ and that our Parent, Affiliate or Ultimate Parent or any Group Company with which we have direct or indirect relationship are not separately participating in this selection process.

We further declare that the above statement is true & correct. We undertake that if at any stage it is found to be incorrect, in addition to actions applicable under the RfS/BESPA including but not limited to cancellation of our response to this RfS and LoA/BESPA as applicable, we, i.e. M/s _____ (enter name of the bidding company/member in a consortium), including our Parent, Ultimate Parent, and our Affiliates shall be suspended/debarred from participating in any of the upcoming tenders issued by the NVVN for a period of 2 years from the date of default as notified by the NVVN.

We also understand that the above is in addition to the penal consequences that may follow from the relevant laws for the time being in force.

We further declare that we have read the provisions of Clause 37.4 of the RfS, and are complying with the requirements as per the referred OM dated 23.02.2023 except Sl. 17 of the OM, including subsequent amendments and clarifications thereto. Accordingly, we are also enclosing necessary certificates (Annexure to this format) in support of the above compliance under the RfS. We understand that in case of us being selected under this RfS, any of the above certificates is found false, NVVN/ KSEBL shall take appropriate action as deemed necessary.

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Dated the _____ day of _____, 20....

Thanking you,

We remain,

Yours faithfully,

Name, Designation, Seal and Signature of Authorized Person in whose name Power of Attorney/ Board Resolution/ Declaration.

FORMAT FOR DISCLOSURE

(To be submitted on the Letter Head of the Bidding Company/ Each Member of Consortium)

(To be submitted by all such bidders in which a common Company/companies directly/indirectly own(s) more than 10% but less than 26% shareholding)

DISCLOSURE

Ref.No. _____

Date: _____

From: _____ *(Insert name and address of Bidding Company/ Lead Member of Consortium)*

Tel. #:

Fax#:

E-mail address#

To

(Enter address of NVVN)

Sub: Response to RfS No. _____ dated _____ for _____.

Dear Sir/ Madam,

We hereby declare and confirm that in terms of the definitions of the RfS, M/s _____ (enter name of the common shareholder) is our Group Company, and has a direct/indirect shareholding of less than 26% in the bidding company. M/s _____ (enter name of the common shareholder) also holds directly/indirectly less than 26% shareholding in other Companies which may participate in this RfS, i.e. RfS No. _____.

We undertake that M/s _____ (enter name of the above common shareholder) is not a party to the decision-making process for submission of response to this RfS by M/s _____ (enter name of the bidding company/member in the consortium). We further undertake that while undertaking any action as part of our response to RfS, we are not complicit with other such bidders participating in this RfS, in which M/s _____ (enter name of the common shareholder) has less than 26% direct/indirect shareholding, if any.

We further declare that the above statement is true & correct. We undertake that if at any stage it is found to be incorrect, in addition to actions applicable under the RfS/BESPA including but not limited to cancellation of our response to this RfS and LoA/BESPA as applicable, we, i.e. M/s _____ (enter name of the bidding company/member in a consortium), including our Parent, Ultimate Parent, and our Affiliates shall be suspended/debarred from participating in any of the upcoming tenders issued by the NVVN for a period of 2 years from the date of default as notified by the NVVN.

We also understand that the above is in addition to the penal consequences that may follow from the relevant laws for the time being in force.

We further declare that we have read the provisions of Clause 37.4 of the RfS, and are complying with the requirements as per the referred OM dated 23.02.2023 except Sl. 17 of the OM, including subsequent

RfS for Procurement of 250 MW/500 MWh BESS in Kerala with VGF under Tariff-based Global Competitive Bidding	RfS No. NVVN/C&M/BESS-04/2025-26	Page 98 of 138
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amendments and clarifications thereto. Accordingly, we are also enclosing necessary certificates

(Annexure to this format) in support of the above compliance under the RfS. We understand that in case of us being selected under this RfS, any of the above certificates is found false, NVVN/ KSEBL shall take appropriate action as deemed necessary.

Dated the _____ day of _____, 20____.

Thanking you,

We remain,

Yours faithfully,

Name, Designation, Seal and Signature of Authorized Person in whose name Power of Attorney/ Board Resolution/ Declaration.

DECLARATION

**RESTRICTION ON PROCUREMENT FROM CERTAIN COUNTRIES:
MoF OM F.7/10/2021-PPD(1) dated 23.02.2023**

(To be submitted on the Letter Head of the Bidding Company/ Each Member of Consortium)

Ref. No. _____

Date: _____

From: _____ *(Insert name and address of Bidding Company/Member of Consortium)*

Tel.#: Fax#:

E-mail address#

To

(Enter address of NVVN)

Sub: Response to the RfS No dated for the tender for
.....

Dear Sir/ Madam,

This is with reference to attached order vide OM No. F.7/10/2021-PPD(1) dated 23.02.2023 issued by Department of Expenditure, MoF, Govt of India.

We are hereby submitting the following declaration in this regard:

"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority. I hereby certify that this bidder fulfils all requirements in this regard and is eligible to be considered. Where applicable, evidence of valid registration by the Competent Authority shall be attached]."

We further declare that the above statement is true & correct. We are aware that if at any stage it is found to be incorrect, our response to the tender will be rejected.

Dated the _____ day of _____, 20....

Thanking you,

We remain,

Yours faithfully,

Encl: OM dated 23.02.2023, as referred above

Name, Designation, Seal and Signature of Authorized Person in whose name Power of Attorney/ Board Resolution/ Declaration.

FORMAT FOR TECHNICAL CRITERIA

(This should be submitted on the Letter Head of the Bidding Company/ Lead Member of Consortium)

(To be Submitted Separately for each Project)

Ref. No. _____

Date: _____

From: _____ *(Insert name and address of Bidding Company/ Lead Member of Consortium)*

Tel.#:

Fax#:

E-mail address#

To
(Enter address of NVVN)

Sub: Response to RfS No. _____ dated _____ for _____.

Dear Sir/ Madam,

We hereby undertake to certify in line with **Clause 23** under the title “Financial Closure” that the following details shall be furnished within **06 (six) months** from Effective Date of the BESPA.

- 1.0 Evidence of achieving complete-tie-up of the Project Cost through internal accruals or through a Financing Agency.
- 2.0 DPR of the Project, detailing out project configuration and proposed commissioning schedule of the Project.
- 3.0 Bank Guarantee for an amount equal to of the total VGF amount sanctioned for the Project. Failure or delay on our part in achieving the above conditions shall constitute sufficient grounds for actions as per the provisions of the RfS.

Dated the _____ day of _____, 20....

Thanking you,

We remain,

Yours faithfully,

Name, Designation, Seal and Signature of Authorized Person in whose name Power of Attorney/ Board Resolution/ Declaration.

DECLARATION BY THE BIDDER FOR THE PROPOSED TECHNOLOGY TIE-UP

(To be Submitted Separately for each Project)

1	Name of Bidding Company/ Lead Member of Bidding Consortium	
3	Contracted Capacity proposedMW/.....MWh
4	Technology Proposed to be adopted for the Project	(Brief about the technology proposed)

Dated the _____ day of _____, 20....

Thanking you,
We remain,
Yours faithfully,

Name, Designation, Seal and Signature of Authorized Person in whose name Power of Attorney/ Board Resolution/ Declaration.

INTEGRITY PACT

Between

NTPC Vidyut Vyapar Nigam Ltd (NVVN) (hereinafter referred to as

"The Authorised Representative") and

.....(hereinafter referred

to as "The

Bidder/Contractor ")

and

..... (hereinafter referred to as

"JV Partner/ Consortium Members" (if applicable)

Preamble

The Authorised Representative invites the bids from all eligible bidders and intends to enter into Contract for with the successful bidder(s), as per organizational systems and procedures. The Authorised Representative values full compliance with all relevant laws and regulations, and the principles of economical use of resources, and of fairness and transparency in its relations with its Bidder(s) and/or Contractor(s).

In order to achieve these goals, the Authorised Representative will appoint Independent External Monitor(s) (IEM), who will monitor the bidding process and the execution of the Contract for compliance with the principles mentioned above.

Section 1 Commitments of the Authorised Representative

1. The Authorised Representative Commits itself to take all measures necessary to prevent corruption and to observe the following principles in this regard:-
 - a) No employee of the Authorised Representative, either in person or through family members including relatives, will in connection with the bidding for or the execution of a Contract, demand or accept a promise for or accept for him/herself or for a third person, any material or immaterial benefit to which he/she is not legally entitled to.
 - b) The Authorised Representative shall, during the bidding process treat all Bidders with equity and reason. The Authorised Representative will, in particular, before and during the bidding process, provide to all Bidders the same information and will not provide to any Bidder

confidential/additional information through which the Bidder(s) could obtain an advantage in relation to the bidding process or the Contract execution.

- c) The Authorised Representative will exclude from the process all known prejudiced persons.
- 2. If the Authorised Representative obtains information on the conduct of any of its employees which is a criminal offence under the IPC/PC Act or if there be a substantive suspicion in this regard, the Authorised Representative will inform the Chief Vigilance Officer and in addition can initiate disciplinary actions.

Section 2 Commitments and Undertakings by the Bidder/Contractor

- 1. The Bidder/Contractor commits and undertakes to take all measures necessary to prevent malpractices & corruption. He commits himself to observe the following principles during his participation in the bidding process and during the execution of the contract:
 - a) The Bidder/ Contractor undertakes not to, directly or through any other person or firm offer, promise or give or influence to any employee of the Authorised Representative associated with the bidding process or the execution of the contract or to any third person on their behalf any material or immaterial benefit which he/she is not legally entitled, in order to obtain in exchange any advantage of any kind whatsoever during the bidding process or during the execution of the contract.
 - b) The Bidder/ Contractor undertake not to enter into any undisclosed agreement or understanding, whether formal or informal with other Bidders. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other action to restrict competitiveness or to introduce cartelization in the bidding process.
 - c) The Bidder/Contractor undertakes not to commit any offence under the relevant Anti-corruption Laws of India; further the Bidder/Contractor will not use improperly, any information or document provided by the Authorised Representative as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically for purposes of competition or personal gain and will not pass the information so acquired on to others.
 - d) The Bidder/ Contractor, when presenting his bid, undertakes to disclose any and all payments made, or is committed to or intends to make to agents, brokers or any other intermediaries in connection with the bidding process and / or award of the contract.
 - e) The Foreign Bidder/ Contractor, when presenting his bid, undertakes to disclose the name and address of agents and representative in India. Further, Indian Bidder/ Contractor when presenting his bid, undertakes to disclose the name and address of its foreign principals or associates.

2. The Bidder/ Contractor will not instigate and allure third persons/parties to commit offences outlined above or be an accessory to such offences.

Section 3 Disqualification from Bidding Process and Exclusion from Future Contracts

1. If the Bidder(s)/ Contractor(s), before award or during execution has committed a transgression through a violation of any provisions of Section 2 so as to put his reliability or credibility as Bidder into question, the Authorised Representative shall be entitled to disqualify the Bidder(s)/ Contractor(s) from the bidding process or to terminate the contract, if signed on that ground.
2. If the Bidder/ Contractor has committed a transgression through a violation of Section 2 such as to put his reliability or credibility into question, the Authorised Representative shall be entitled to exclude including blacklist and put on holiday the Bidder/ Contractor for any future tenders/contract award process. The imposition and duration of the exclusion will be determined by the severity of the transgression. The severity will be determined by the Authorised Representative taking into consideration the full facts and circumstances of each case particularly taking into account the number of transgressions, the position of the transgressors within the company hierarchy of the Bidder and the amount of the damage. The exclusion will be imposed for a period not exceeding two (02) years.
3. A transgression is considered to have occurred if the Authorised Representative after due consideration of the available evidence concludes that no reasonable doubt is possible.
4. The Bidder with its free consent and without any influence agrees and undertakes to respect and uphold the Authorised Representative's absolute rights to resort to and impose such exclusion and further accepts and undertakes not to challenge or question such exclusion on any ground, including the lack of any hearing before the decision to resort to such exclusion is taken. This undertaking is given freely and after obtaining independent legal advice.
5. Subject to full satisfaction of the Authorised Representative, the exclusion of Bidder/ Contractor could be revoked by the Authorised Representative if the Bidder/ Contractor can prove that he has restored/ recouped the damage caused by him and has installed a suitable corruption prevention system in his organization.

Section 4 Compensation for Damages including Forfeiture of Earnest Money Deposit/ Security Deposit/ Performance & Advance Bank Guarantees

1. If the Authorised Representative has disqualified the Bidder/ Contractor from the bidding process or has terminated the contract pursuant to Section 3, the Authorised Representative shall forfeit the Earnest Money Deposit/Bid

Security, encash Contract Performance Bank Guarantees in addition to excluding the bidder from the future award process and terminating the contract.

2. In addition to 1 above, the Authorised Representative shall be entitled to take recourse to the relevant provisions of the contract related to Termination of Contract due to Contractor's Default.

Section 5 Previous Transgressions

1. The Bidder swears on oath that no previous transgression impinging on anti-corruption principles / any malpractice as mentioned in Section-2 has occurred in the last three years immediately before signing of this Integrity Pact, with any other company / any Public Sector Enterprise/ Undertaking in India / any Government Department in India.
2. If the Bidder makes incorrect statement on previous transgression as mentioned above in para 1, Bidder can be disqualified from the bidding process or the contract, if already awarded, can be terminated on this ground

Section 6 Company Code of Conduct

Bidders are also advised to have a company code of conduct (clearly rejecting the use of bribes and other unethical behaviour) and a compliance program for the implementation of the code of conduct throughout the company.

Section 7 Independent External Monitors (IEM)

1. The Authorised Representative will appoint competent and credible Independent External Monitor for this Pact. The task of the IEMs is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.
2. The IEMs are not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He shall report to CEO of the Authorised Representative or a person authorized by him.
3. The Bidder/Contractor accepts that the IEMs have the right to access without restriction to all Project documentations of the Authorised Representative including that provided by the Contractor. The Contractor will also grant the IEMs, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his Project Documentations. The same is applicable to Subcontractors. The IEMs are under contractual obligation to treat the information and documents of the Bidder / Contractor / Sub-Contractors/ JV partners/Consortium member with confidentiality.
4. The Authorised Representative will provide to the IEMs sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the Authorised Representative and the Contractor. The parties offer to the IEMs the option to participate in such meetings.

5. As soon as the IEMs notices, or believes to notice, a violation of this agreement, he will so inform the Management of the Authorised Representative (CEO of the Authorised Representative or a person authorized by him) and request to discontinue or to take corrective action, or to take other relevant action. The IEMs can in this regard submit non-binding recommendations. Beyond this, the IEMs has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action. However, Independent External Monitor shall give an opportunity to the bidder/contractor to present its case before making its recommendations to the Authorised Representative .
6. The IEMs will submit a written report to CEO of the Authorised Representative or a person authorized by him within 30 days from the date of reference or intimation to him by the Authorised Representative and, should the occasion arise, submit proposals for correcting problematic situations.
7. The Bidder / Contractor accepts that they shall not approach courts while the matter / complaint / dispute has been referred to the IEM in terms of this pact and they shall await IEM's decision before approaching any Court.
8. If the IEMs have reported to CEO of the Authorised Representative or a person authorized by him a substantiated suspicion of an offence under relevant IPC/ PC Act, and he has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Chief Vigilance Officer, the IEMs may also transmit this information directly to the Central Vigilance Commissioner, Government of India.
9. The word " IEM" will include Singular or Plural.

Section 8 Pact Duration

This Pact comes into force from the date of signing by all the parties. It shall expire for the Contractor 12 months after the last payment under the respective Contract, and for all other unsuccessful bidders 6 months after the Contract has been awarded.

Section 9 Miscellaneous Provisions

1. This Pact is subject to Indian Law. The place of performance and jurisdiction shall be New Delhi.
2. Should one or several provisions of this Pact turn out to be invalid; the remainder of this Pact remains valid. In this case, the parties will strive to come to an agreement to their original intentions.
3. The actions stipulated in this Integrity Pact are without prejudice to any other legal action that may follow in accordance with the provisions of the extant law in force relating to any civil or criminal proceedings.
4. If the Contractor is a JV partnership / Consortium, this agreement must be signed by all the partners of JV / Consortium Partners as the case may be.

The Parties hereby sign this Integrity Pact at on this day of..... 20

Authorised
Representative

Bidder/ Contractor

Joint Venture Partner(s)/

Consortium
member(s) (As
Applicable)

Witness

Witness

Witness

1. _____

1.

1.

2. _____

2.

2.

FORMAT FOR SUBMISSION OF FINANCIAL BID

(The Covering Letter should be submitted on the Letter Head of the Bidding Company/ Lead Member of Consortium)

Ref. No. _____

Date: _____

From: _____ *(Insert name and address of Bidding Company/ Lead Member of Consortium)*

Tel. #:

Fax #:

E-mail address#

To

(Enter Address of NVVN)

Sub: Response to RfS No. _____ dated _____ for _____.

Dear Sir/ Madam,

I/ We, _____ *(Insert Name of the Bidder)* enclose herewith the Financial Proposal for selection of my/ firm for _____ number of Project(s) for a cumulative capacity of ____ MW/ ____ MWh in India as Bidder for the above.

I/We agree that this offer shall remain valid for a period of 12 months from the due date of submission of the response to RfS such further period as may be mutually agreed upon.

Dated the _____ day of _____, 20....

Thanking you,

We remain,

Yours faithfully,

Name, Designation, Seal and Signature of Authorized Person in whose name Power of Attorney/ Board Resolution/ Declaration.

Notes:

1. There can be only one tariff for all the projects applied for. If the Bidder quotes two

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tariffs or combination thereof for the projects, then the bid shall be considered as non-responsive.

- 2. If the Bidder submits the financial bid not in line with the instructions mentioned therein, then the bid shall be considered as non-responsive.*
- 3. Tariff requirement shall be quoted as a fixed amount in Indian Rupees only. Conditional proposal shall be summarily rejected.*
- 4. In the event of any discrepancy between the values entered in figures and in words, the values entered in words shall be considered.*
- 5. Tariff should be in Indian Rupee in whole numbers only (no decimal places allowed).*

PRELIMINARY ESTIMATE OF COST OF THE PROJECT

Project Capacity:MW/....MWh

Location:

Bidder may use any format to provide the break-up.

Dated the _____ day of _____, 20....

Thanking you,

We remain,

Yours faithfully,

Name, Designation, Seal and Signature of Authorized Person in whose name Power of Attorney/ Board Resolution/ Declaration.

CONFIRMATION OF BGs THROUGH STRUCTURED FINANCIAL MESSAGING SYSTEM (SFMS)/ SWIFT

While issuing the physical BGs, the Bidder's Bank shall also send electronic message through secure SFMS (in case of BGs issued from within India) or SWIFT (in case of BGs issued from outside India) to NVVN's Beneficiary Bank whose details are provided herein below:

- a. Bank Name: ICICI Bank Limited
- b. Branch: CONNAUGHT PLACE BRANCH
- c. Bank Address: 9A, PHELPS BUILDING, INNER CIRCLE, NEW DELHI-110001
- d. IFSC Code: ICIC0000007

BG issuing/amending bank must send the BG advice in the form of message format via SFMS (Structured Financial Messaging System) as provided by RBI. The format of the message for confirmation of the BG shall be as below:

BG advising message: IFN 760COV/ IFN 767COV via SFMS

Field Number: Particulars (to be mentioned in Row 1)

7037: NVVNBG8910 (unique identifier)

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

1. Codes and Standards

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

Standard/ Code (or equivalent Indian Standards)	Description	Certification Requirements
IEC 62485-2	Safety requirements for secondary batteries and battery installations - to meet requirements on safety aspects associated with the erection, use, inspection, maintenance and disposal: Applicable for Lead Acid and NiCd / NiMH batteries	Applicable only for Lead Acid and NiCd/NiMH batteries
UL 1642 or UL 1973, Appendix E (cell) or IEC 62619 (cell) + IEC 63056 (cell)	Secondary cells and batteries containing alkaline or other non-acid electrolytes - Safety requirements for secondary lithium cells and batteries, for use in industrial applications	Required for Cell
UL 1973 (battery) or (IEC 62619 (battery) + IEC 63056 (battery))	Batteries for Use in Stationary, Vehicle Auxiliary Power and Light Electric Rail (LER) Applications / Secondary cells and batteries containing alkaline or other non-acid electrolytes - Safety requirements for secondary lithium cells and batteries, for use in industrial applications	Either UL 1642 or UL1973 or (IEC 62619 + IEC 63056) for the Battery level
IEC 62281 / UN 38.3	Safety of primary and secondary lithium cells and batteries during transport: Applicable for storage systems using Lithium Ion chemistries	Required for both Battery and Cell.
IEC 61850/ DNP3	Communications networks and management systems. (BESS control system communication)	
UL 9540 or (IEC TS 62933-5-1 + IEC 62933-5-2)	Electrical energy storage (EES) systems - Part 5-1: Safety considerations for grid-integrated EES systems – General specification / Standard for Energy Storage Systems and Equipment	Either UL9540 or (IEC 62933-5-1 + IEC 62933-5-2) is required for BESS system level
IEC 62933-2-1	Electrical energy storage (EES) systems - Part 2-1: Unit Parameters and testing methods - General Specification	Tests for Class B applications: 1. Duty Cycle Round Trip Efficiency Test 2. Equipment and Basic Function Test 3. Available energy Test 4. Insulation test

Power Conditioning Unit Standards for BESS	
IEC 62477-1	Safety requirements for power electronic converter systems and equipment - Part 1: General
IEC 62477-2	Safety requirements for power electronic converter systems and equipment - Part 2: Power electronic converters from 1 000 V AC or 1 500 V DC up to 36 kV AC or 54 kV DC
IEC 61000-6-2 Ed. 2	Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity standard for industrial environments
IEC 61000-6-4 Ed. 2.1	Electromagnetic compatibility (EMC) - Part 6-4: Generic standards - Emission standard for industrial environments
IEC 62116 Ed. 2	Utility-interconnected photovoltaic inverters - Test procedure of islanding prevention measures
IEC 60068-2-1:2007	Environmental testing - Part 2-1: Tests - Test A: Cold
IEC 60068-2-2:2007	Environmental testing - Part 2-2: Tests - Test B: Dry heat
IEC 60068-2-14:2009	Environmental testing - Part 2-14: Tests - Test N: Change of temperature
IEC 60068-2-30:2005	Environmental testing - Part 2-30: Tests - Test Db: Damp heat, cyclic (12 h + 12 h cycle)

The Battery Energy Storage System:

a) shall follow the relevant CEA/CEIG / State Electrical Inspectorate Standards and CERC/SERC Regulations

b) shall be responsible for complying with the “First Time Energization” procedure available at Grid India website as per the IEGC Regulations 2023 (If applicable).

c) 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

Further, CEA Technical Standards for Connectivity to the Grid, Regulations 2007, Part-1 (General), Standards and Codes for Practice, mentions the following:

“

(2) The equipment including overhead lines and cables shall comply with the relevant Indian Standards, British Standard (BS), or International Electrotechnical Commission

(IEC) Standard, or American National Standards Institute (ANSI) or any other equivalent International Standard:

Provided that whenever an International Standard or International Electro technical Commission Standard is followed, necessary corrections or modifications shall be made for nominal system frequency, nominal system voltage, ambient temperature, humidity and other conditions prevailing in India before actual adoption of the said Standard.

(3) The effects of wind, storms, floods, lightening, elevation, **temperature extremes**, icing, contamination, pollution and earthquakes must be considered in the design and

operation of the connected facilities.”

The BESS, therefore, shall be designed keeping in view the ambient temperature and weather conditions prevailing at site i.e. The BESS shall be able to deliver rated performance at the extreme temperature and weather conditions at site where it is deployed.

In this regard, the procedure notified by CEA on 8th April 2024 for assessment of the “Design Temperature for RE Plants in compliance to CEA (Technical Standards for Connectivity to the Grid) Regulations” shall be followed. Same is available at: <https://cea.nic.in/whats-new/?lang=en>

2. System Testing and Commissioning

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

3. Identification and Traceability

Cells/Racks/Packs Assembly shall meet seismic requirement for the plant location of the BESS. Labelling of cells/batteries shall include manufacturer’s name, cell type, name-plate

rating, date of manufacture and date of expiry of parts and labour warranty.

4. Other Sub-systems/Components

Other subsystems/components used in the BESS must also conform to the relevant international/national Standards for Electrical Safety for ensuring Expected Service Life and Weather Resistance.

5. Fire Protection

The BESSD shall design and install a fire protection system that conforms to national and local codes. The fire protection system design and associated alarms shall take into account that the BESS will be unattended at most times. For high energy density technologies, the BESSD shall also obtain thermal runaway characterization of the battery storage systems. As Battery Energy Storage System is prone to fire hazard, the BESSD shall provide suitable means such as fire barrier between switchyard and BESS to avoid fire to spread from BESS to Yard equipment. The safety of the equipment / personnel related to BESS operations will be in the scope of the BESSD. KSEBL will in no way be responsible for any loss / damage due to any fire accidents. Fire Hydrant system with approval from Fire Force Department, Kerala shall be installed in the BESS area. The BESS container area shall be fitted with High mast Thermal & Surveillance Camera and streaming of the same shall be provided at Control Room of 220kV Brahmapuram Sub Station in BESSD's scope.

6. Authorized Test Centres

Batteries/ Power Conditioning Units deployed in the power plants must have valid test certificates for their qualification as per above specified IEC/ BIS Standards by one of the ILAC member signatory accredited laboratories. In case of module types/ BESS/equipment for which such Test facilities may not exist in India at present, test certificates from reputed ILAC Member body accredited Labs abroad will be acceptable.

7. Warranty

BESSD shall procure performance guarantees from the OEM to ensure minimum performance levels for predefined application(s) as per the terms of the RfS. The Warranty shall clearly indicate life expectancy given discharge profiles provided for the application.

8. Performance Monitoring

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

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

9. Other necessary criteria

Central Electricity Authority, Technical Standards for Connectivity to the Grid, (Amendment) Regulations, 2013 and 2019 mention connectivity standards applicable to the wind generating stations, generating stations using inverters, wind - solar photo voltaic hybrid systems and energy storage systems. BESS, being an inverter based power system element, shall also comply to the requirements specified for other generating stations using inverters.

Some of the requirements are indicated below and following shall be added separately in the “Technical and Regulatory Requirements to be followed by Battery Energy Storage System”:

- a) BESS shall be capacity of operating in the frequency range of 47.5 Hz to 52 Hz and be able to deliver rated output in the frequency range of 49.5 Hz to 50.5 Hz.
- b) **Low / High Voltage Ride Through (LVRT/ HVRT):** BESS shall be capacity of operating when voltage at the inter connection point on any or all phases dips/rises to the high or low levels. The levels applicable for wind/solar inverter-based generation may be referred as available in Central Electricity Authority (Technical Standards for Connectivity to the Grid) Regulations.
- c) **Dynamic Reactive Power Support / Voltage Control** - BESS shall have the feature to detect and regulate the voltage of interconnection point as per the specified capability. i.e. The BESS shall be capable of supplying dynamically varying reactive power support at least up to the limits specified for wind/solar generation sources (inverter-based) in the Central Electricity Authority (Technical Standards for Connectivity to the Grid) Regulations. The response time of the BESS shall not exceed the value specified in relevant standards or grid codes.
- d) **Primary Frequency Control** – The BESS shall have provisions for Primary Frequency Control with a droop which can be set as per system requirement between the range specified for wind/solar generation sources (inverter-based) in the Central Electricity Authority (Technical Standards for Connectivity to the Grid) Regulations. BESS to be implemented shall have provisions for Primary frequency control with a droop which can be set as per system requirement between 1-3 percent. The BESS performs regulations in one or several pre-defined ways (e.g. regulating its own output power according to the orders given by SCADA system) to achieve an active power balance between generation and demand to maintain the power system frequency within a reasonable range.
- e) BESS shall be capable to receive active power/reactive power set point from load dispatch centers i.e. SLDC/RLDC.
- f) The BESS shall have the capability for synthetic inertia, black start and intentional island control capability to extend start-up of a blackout system or to operate independently after formation of an island.
- g) BESS shall operate in a manner to promote the power system reliability and improve the power quality. When power quality problems, such as voltage dip, flicker, unsatisfactory power factor,

etc., occur in power system, the BESS could eliminate these problems by flexible active and reactive power output in this function.

- h) The BESS shall provide reliable protection and not be limited to as an over voltage/under-voltage protection, over current protection, low-temperature/over-temperature protection of battery, DC insulation monitoring, etc.

BESS is required to have the following basic functions :

- i) Monitoring: Monitor operational parameters, equipment status and communication status, alarm and faults of main equipment and BESS system, etc.
 - ii) Information exchange: Receive and process information with SLDC /RLDC/NLDC including operation parameters, switching information, various alarms and alerts, protective action signals, control information, etc.
 - iii) Control: Including control mode and parameter setting with SLDC/RLDC/NLDC.
- i) BESS shall have capability to operate in AGC. The details regarding AGC signals required by not limited to, are given (the conventional power plant signal link) at the link, <https://posoco.in/download/detailed-signal-list-for-connecting-generators-under-agc/?wpdml=29546>.
- j) BESS shall be able to operate in AGC and be able to comply with the requirements desired by system operators. Some of the BESS signal list for implementation of AGC can be like below (list is indicative only):
- I. Maximum MW permissible (dynamic or user entry)
 - II. Minimum MW permissible (dynamic or user entry)
 - III. Ramp rate up permissible (dynamic or user entry)
 - IV. Ramp rate down permissible (dynamic or user entry)
 - V. Actual MW
 - VI. Actual MVAR
 - VII. Auxiliary Consumption MW
 - VIII. Scheduled MW (dynamic or user entry)
 - IX. BESS Temperature (for monitoring and correlation)
 - X. Ambient Temperature (for monitoring and correlation)
 - XI. Cycle limits (0-100%) per day (user entry)
 - XII. Circuit breaker status
 - XIII. Local/Remote status
 - XIV. AGC Set Point MW from NLDC to BESS
 - XV. Voltage (kV) at grid level
 - XVI. Voltage (V) at BESS LV side
- k) The static information like detailed write-up on present operation methodology of BESS, forbidden zones, number of cycle limits, Auxiliary consumption details,

capability curve, simulation models (RMS/PSCAD) along with description or any specific information about BESS shall also be furnished as and when required by SLDC/RLDC/NLDC.

- l) In addition to the above, the Project Capacity shall also respond to secondary and Tertiary control signals from the Nodal Agency for providing SRAS-UP, TRAS-UP and SRAS-Down, TRAS-UP services as defined under the Central Electricity Regulatory Commission (Ancillary Services) Regulations, 2021. The performance monitoring and incentives, if any for the SRAS/TRAS shall be in accordance with the extant Regulations for Ancillary Services.
- m) BESS will ensure the compliance of requirements mentioned in procedure of First Time Charging (FTC) as applicable for other power system elements. The consolidated FTC procedure including the requirements for BESS is available in public domain at https://posoco.in/wp-content/uploads/2021/04/Procedure_for_Integration_of_Power_System_Elements.pdf

10. Safe Disposal of unit Batteries from the BESS

The Developer will comply with the requirements under Hazardous & other Waste (Management and Trans boundary Movement) Rules, 2016, as amended from time to time, and Battery Waste Management Rules, 2022 on 24th August, 2022, as amended from time to time, as applicable. The BESSD shall ensure that all Unit Battery modules from the plant after their 'end of life' (when they become defective/ non-operational/ non-repairable) are disposed in accordance with the "e-waste (Management and Handling) Rules, 2016 and Battery Waste Management Rules, 2022" 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.

CHECK LIST FOR FINANCIAL CLOSURE*(To be signed by the Authorized signatory of the BESSD)***(RfS No. _____ dated _____)****Last Date for submission of documents related to Financial Closure – _____
(9 months from Effective Date of BESPA)**

Project Company Name _____

Project ID:- _____

LOA No. - _____ Dtd. - _____

Effective Date of BESPA - _____

Scheduled Commissioning Date: - _____

1.0 Financial Closure - (Clause 23 of the RfS, including subsequent amendments & clarifications)

Details	Presently given in BESPA
Location	
Technology	
Certificate from all financial institutions	<p><u>In case of tie up through Bank / Financial Institutions: -</u></p> <p>Document from Bank / Financial Institutions certifying arrangement of necessary funds by way of sanction of Loan (to be enclosed as <u>Annexure-I</u>).</p> <p><u>In case of Internal Resources: -</u></p> <p>Copy of Board Resolution, Audited/Certified Balance sheet, Profit & Loss Account Statement, Bank Statement and Cash Flow Statement in support of availability of Internal resources of the Project Company and of the Company other than Project Company (in case the required funding will be raised from Company other than Project Company) (to be enclosed as <u>Annexure-I</u>).</p> <p><i>Performa for the cases where funding will be from Company other than Project Company is at 'A-1'.</i></p>

Note:-

- (i) Copy of Final Detailed Project Report (DPR) is to be enclosed as **Annexure – II A**.
- (ii) Undertaking by the Project Company that all Consents, clearances and permits required for implementing the Project as per the terms of BESPA have been obtained is to be enclosed as

Annexure – II B

2.0 Copy of Agreement/ MOU entered into / Purchase Order with acceptance, for the supply of Plants and Equipment (to be enclosed as **Annexure-III**)

3.0 Technical Parameters of the Project (Clause 39 of the RfS)

3.0.1 Certificate from Project Company that Technical specifications and directives given in Annexure-A of the RfS will be adhered to (to be enclosed as **Annexure-IV A**)

3.0.2 Proposed Project configuration as part of DPR of the Project (to be enclosed as **Annexure-IV B**)

4.0 Ownership of the BESSD: Latest Shareholding Pattern of the Project Company (including Compulsorily Convertible Debentures (CCDs), Compulsorily Convertible Preferential Shares (CCPS) of the Project Company certified by Chartered Accountant (to be enclosed as **Annexure V A**)

Shareholding pattern is not required to be submitted by a Listed Company.

Note: Shareholding pattern is to be submitted by the Project Company, as and when requisitioned by the Procurer.

5.0 The above checklist is to facilitate financial closure of projects. For any interpretation the respective provision of RfS / BESPA shall prevail.

**SPECIAL INSTRUCTIONS TO BIDDERS FOR
e-TENDERING AND REVERSE AUCTION****General**

The Special Instructions (for e-Tendering) supplement 'Instruction to Bidders', as given in these Tender Documents. Submission of Online Bids is mandatory for this Tender.

E-Tendering is a new methodology for conducting Public Procurement in a transparent and secured manner. Now, the Government of India has made e-tendering mandatory. Suppliers/ Vendors will be the biggest beneficiaries of this new system of procurement. For conducting electronic tendering, NVVN has decided to use the portal <https://www.bharat-electronictender.com> through ISN ElectronicTender Services Private Limited (referred as ISN- ETS). This portal is based on the world's most 'secure' and 'user friendly' software from ElectronicTender®. A portal built using ElectronicTender's software is also referred to as ElectronicTender System® (ETS).

Benefits to Suppliers are outlined on the Homepage of the portal.

Instructions**Note on ETS BD-CR:**

In order to participate in this Tender, each Bidder would have to deposit towards 'Application Charges for Bidders' an amount equal to Rs 400/MW (Excluding GST) with the Service Provider of Bharat-Electronic Tender Portal [ETS], ie ISN Electronic Tender Services Pvt Ltd (ISN-ETS), as per instructions given on ETS. In ETS, this amount is referred to as 'ETS Bidding-Deposit Conditionally Refundable (ETS BD-CR)' and is calculated @ Rs. 400/- per MW plus GST for the Capacity for which the bidder is submitting the quote.

The amount can be paid online through the following methods:

1. SBI Payment Gateway facility available on ETS portal
2. NEFT/RTGS to the following account:

Beneficiary Name: ISN Electronic Tender Services Pvt. Ltd.

A/C No.: 661405601452

Branch: ICICI Bank, Central Arcade, DLF City, Phase-II, Gurgaon - 122002

IFSC Code: ICIC0006614

Account Type: Current Account

On the 'Date of Bid Finalization', ie the date on which written communication is received by the Service/ Portal Provider of ETS from the Buyer Organization/ Auctioneer (ie NVVN LTD.) about the successful/ unsuccessful Bidders, ETS BD-CR amount corresponding to the quantity allocated/ awarded to that successful Bidder will be retained by the Service/ Portal provider of ETS and treated as 'ETS Bidding-Fee' (including GST), and the balance amount (without any interest) will be refunded by Service/ Portal Provider.

Similarly, for unsuccessful Bidders, the full ETS BD-CR (without any interest) will be refunded within Seven (7) working days from the date of receipt of written communication by the Service/ Portal Provider of ETS from the Buyer Organization/ Auctioneer (ie NVVN LTD.).

Invoicing & TDS deduction after the final outcome of the bidding process/ e-Auction:

Case-1 (Unsuccessful Bidder): In case the bidder does not win any capacity, the full BD-CR amount shall be refunded and therefore no invoice will be given and will not be subject to TDS.

Case-2 (Successful Bidder): In case the bidder wins a particular capacity, an invoice shall be generated @ 400/MW plus GST. The applicable TDS will be calculated on the invoice amount and ETS portal Service Provider shall then deposit this TDS amount on behalf of the bidder and share a copy of the deposit challan. Subsequently, the remaining BD-CR balance shall be refunded, if any.

Note: The bidder must email a copy of the transaction summary and TAN Number

to support@isn-ets.com with the "Subject: 'Bidders Name' - Payment for NVVN Ltd Tender ETS- BDCR"

Tender Bidding Methodology: Sealed Bid System

- Single Stage Two Envelope

Auction

The sealed bid system would be followed by an 'e-ReverseAuction'

Broad Outline of Activities from Bidder's Perspective:

1. Procure a Class-III Digital Signing Certificate (DSC)
2. Register on ElectronicTender System® (ETS)
3. Create Marketing Authorities (MAs), Users and assign roles on ETS. It is mandatory to create at least one MA.
4. View Notice Inviting Tender (NIT) on ETS
5. For this tender -- Assign Tender Search Code (TSC) to an MA
6. Download Official Copy of Tender Documents from ETS. Note: Official copy of Tender Documents is distinct from downloading 'Free Copy of Tender Documents'. To participate in a tender, it is mandatory to procure official copy of Tender Documents for that tender.
7. Clarification to Tender Documents on ETS
 - Query to NVVN Limited (optional)
 - View response to queries posted by NVVN Limited
8. Bid-Submission on ETS
9. Post-TOE Clarification on ETS (Optional)

– Respond to NVVN Post-TOE queries

10. Participate in e-Reverse Auction on ETS

For participating in this tender online, the following instructions are to be read carefully. These instructions are supplemented with more detailed guidelines on the relevant screens of the ETS.

Digital Certificates

For integrity of data and authenticity/ non-repudiation of electronic records, and to be compliant with IT Act 2000, it is necessary for each user to have a Digital Certificate (DC), also referred to as Digital Signature Certificate (DSC), of Class-III, issued by a Certifying Authority (CA) licensed by Controller of Certifying Authorities (CCA) [refer <http://www.cca.gov.in>].

Registration

To use the ElectronicTender® portal <https://www.bharat-electronictender.com>, vendors need to register on the portal. Registration of each organization is to be done by one of its senior persons who will be the main person coordinating for the e-tendering activities. In ETS terminology, this person will be referred to as the Super User (SU) of that organization. For further details, please visit the website/portal, and click on the 'Supplier Organization' link under 'Registration' (on the Home Page), and follow further instructions as given on the site, and special instruction given in the RFP in this regard. Pay Annual Registration Fee as applicable.

After successful submission of Registration details and Annual Registration Fee, please contact ISN-ETS/ ETS Helpdesk (as given below), to get your registration accepted/activated

Important Note: To minimize teething problems during the use of ETS (including the Registration process), it is recommended that the user should peruse the instructions given under 'ETS User- Guidance Center' located on ETS Home Page, including instructions for timely registration on ETS. The instructions relating to 'Essential Computer Security Settings for Use of ETS' and 'Important Functionality Checks' should be especially taken into cognizance.

Please note that even after acceptance of your registration by the Service Provider, to respond to a tender you will also require time to complete activities related to your organization, such as creation of users, assigning roles to them, etc.

ISN-ETS/ ETS Helpdesk

Telephone/ Mobile Customer Support: +91-124 - 4229071, 4229072

[Between 9:00 am to 6:00 pm IST on all working days]

E-mail ID support@isn-ets.com

[Please mark CC: support@electronictender.com]

Some Bidding related Information for this Tender (Sealed Bid)

The entire bid-submission would be online on ETS (unless specified for Offline Submissions). Broad outline of submissions are as follows:

- ☐ Online Payment of Applicable ETS Bidding-Fee (if applicable)

Note: Failure to pay this amount will result in rejection of the bid.

- ☐ Submission of Bid-Parts/ Envelopes
- ☐ Prequalification Application
- ☐ Technical-Part
- ☐ Financial-Part
- ☐ Submission of information pertaining Bid Security/ Earnest Money Deposit (EMD)
- ☐ Submission of digitally signed copy of RfS, PPA & Addendums

Offline Submissions:

The bidder is requested to submit the following documents offline to the under mentioned address before the start of Public Online Tender Opening Event in a Sealed Envelope.

The envelope shall bear (the project name), the tender number and the words 'DO NOT OPEN BEFORE' (due date & time).

1. Original copy of the Bid Security in the form of a Bank Guarantee.
2. DD/ Bankers cheque of Rs drawn in favour of , NVVN Limited, payable at New Delhi against payment of Bid Processing Fee.

Note: The Bidder should also upload the scanned copies of all the above-mentioned original documents as Bid-Annexures during Online Bid-Submission.

Special Note on Security and Transparency of Bids

Security related functionality has been rigorously implemented in ETS in a multi-dimensional manner. Starting with 'Acceptance of Registration by the Service Provider', provision for security has been made at various stages in ElectronicTender's software. Specifically, for Bid Submission some security related aspects are outlined below:

As part of the ElectronicEncrypter® functionality, the contents of both the 'ElectronicForms®' and the 'Main-Bid' are securely encrypted using a Pass-Phrase created by the Bidder himself. Unlike a 'password', a Pass-Phrase can be a multi-word sentence with spaces between words (eg I love this World). A Pass-Phrase is easier to remember, and more difficult to break. It is mandatory that a separate Pass-Phrase be created for each Bid-Part. This method of bid-encryption does not have the security and data-integrity related vulnerabilities which are inherent in e-tendering systems which use Public-Key of the specified officer of a Buyer organization for bid-encryption. Bid-encryption in ETS is such that the Bids cannot be decrypted before the Public Online Tender Opening Event (TOE), even if there is connivance between the concerned tender-opening officers of the Buyer organization and the personnel of e-tendering service provider. This is an

additional reason why a Bidder using ETS need not take the risk of trying to submit his bid near the 'Last Date and Time of Receipt of Bids', and can comfortably do so well in advance.

CAUTION: All bidders must fill ElectronicForms® for each bid-part sincerely and carefully, and avoid any discrepancy between information given in the ElectronicForms® and the corresponding Main-Bid. For transparency, the information submitted by a bidder in the ElectronicForms® is made available to other bidders during the Online Public TOE. If it is found during the Online Public TOE that a bidder has not filled in the complete information in the ElectronicForms®, the TOE officer may make available for downloading the corresponding Main- Bid of that bidder at the risk of the bidder. If variation is noted between the information contained in the ElectronicForms® and the 'Main-Bid', the contents of the ElectronicForms® shall prevail.

Typically, 'Pass-Phrase' of the Bid-Part to be opened during a particular Public Online Tender Opening Event (TOE) is furnished online by each bidder during the TOE itself, when demanded by the concerned Tender Opening Officer.

(Optional Text depending upon the decision of the NVVN Limited):

Additionally, the bidder shall make sure that the Pass-Phrase to decrypt the relevant Bid-Part is submitted to NVVN Limited Name in a sealed envelope before the start date and time of the Tender Opening Event (TOE).

There is an additional protection with SSL Encryption during transit from the client-end computer of a Supplier organization to the e-tendering server/ portal.

Some Bidding related Information for this Tender (e-ReverseAuction)

e-ReverseAuction would be conducted after the opening of the Prequalification/ Financial-Part. The following would be parameters for e-ReverseAuction:

SNo	Parameter	Value
-----	-----------	-------

1	Date and Time of Reverse-Auction Bidding	
---	--	--

Event Will be intimated to the responsive bidders later.

2	Duration of Reverse-Auction Bidding Event	120 Minutes
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3	Automatic extension of the 'Reverse-	
---	--------------------------------------	--

Auction Closing Time', if last bid received is

within a 'Pre-defined Time-Duration'

before the 'Reverse-Auction Closing Time' Yes

3.1	Pre-defined Time-Duration	10 Minutes
-----	---------------------------	------------

3.2	Automatic extension Time-Duration	10 Minutes
-----	-----------------------------------	------------

4	Criteria of Bid-Acceptance	Bidder can go on decreasing his own bid value without taking into cognizance the
---	----------------------------	--

starting point or Rank 1 bid.

5 Entity – Start-Price VCNG quoted by the bidders in financial bid (Second Envelope)

6 Minimum Bid-Decrement 0.01 Rupees

Any special instructions to be inserted by the Buyer Organization Name for that particular Auction:

(Example-1): Only 'n-1' lowest bidders from the Financial-Bid opening round will be invited for e- Reverse Auction ...; Reserve Price for the auction will be the lowest price obtained in the financial-bid round, ...any 'Special Processes incorporated in this e-ReverseAuction'.

(Example-2): Similarly, Buyer organization to outline here 'specific rules and criteria' relevant to this particular e-ReverseAuction. If the e-ReverseAuction involves special processes (such as Categorization of bidders, Loading related to Price Preference, VGF, etc), it is recommended that the Buyer organization gives in Tender Documents here an example of the use of rules and criteria. etc.

Other Instructions

For further instructions, the vendor should visit the homepage of the portal <https://www.bharat-electronictender.com>, and go to the User-Guidance Center

The help information provided through 'ETS User-Guidance Center' is available in three categories – Users intending to Register / First-Time Users, Logged-in users of Buyer organizations, and Logged-in users of Supplier organizations. Various links (including links for User Manuals) are provided under each of the three categories.

Important Note: It is strongly recommended that all authorized users of Supplier organizations should thoroughly peruse the information provided under the relevant links, and take appropriate action. This will prevent hiccups, and minimize teething problems during the use of ETS.

SEVEN CRITICAL DO'S AND DON'TS FOR BIDDERS

Specifically, for Supplier organizations, the following 'SEVEN KEY INSTRUCTIONS for BIDDERS' must be assiduously adhered to:

1. Obtain individual Digital Signing Certificate (DSC or DC) of Class-III, well in advance of your first tender submission deadline on ETS
2. Register your organization on ETS well in advance of the important deadlines for your first tender on ETS viz 'Date and Time of Closure of Procurement of Tender Documents' and 'Last Date and Time of Receipt of Bids'. Please note that even after acceptance of your registration by the Service Provider, to respond to a tender you will also require time to complete activities related to your organization, such as creation of -- Marketing Authority (MA) [ie a department within the Supplier/ Bidder Organization responsible for responding to tenders], users for one or more such MAs, assigning roles to them, etc. It is mandatory to create at least one MA. This unique feature of creating an MA enhances security and accountability within the Supplier/ Bidder Organization.

3. Get your organization's concerned executives trained on ETS well in advance of your first tender submission deadline on ETS

4. For responding to any particular tender, the tender (ie its Tender Search Code or TSC) has to be assigned to an MA. Further, an 'Official Copy of Tender Documents' should be procured/ downloaded before the expiry of Date and Time of Closure of Procurement of Tender

Documents. Note: Official copy of Tender Documents is distinct from downloading 'Free Copy of Tender Documents'. Official copy of Tender Documents is the equivalent of procuring physical copy of Tender Documents with official receipt in the paper-based manual tendering system.

5. Submit your bids well in advance of tender submission deadline on ETS (There could be last minute problems due to internet timeout, breakdown, et al)

Note: Bid-submission in ETS can consist of submission of multiple bid-components, which vary depending upon the situation and requirements of the Buyer. Successful receipt of a bid in an e-tendering scenario takes place if all the required bid-components are successfully 'received and validated' in the system (ETS) within the scheduled date and time of closure of

bidding (On some ETS screens, this is also referred to as 'Last Date and Time of Receipt of Bids'). ETS/ Service Provider is not responsible for what happens at an end-user's end, or while a submission made by an end-user is in transit, until the submission is successfully 'received and validated' in ETS. When a bid-component receipt and validation is successful, it is recorded in the ETS Audit Trail Report, which is generated by ETS. In case of any uncertainty, the application audit trail generated by ETS (ETS Audit Trail Report) shall be the final record/evidence for reference regarding the 'successful bid receipt'.

6. It is the responsibility of each bidder to remember and securely store the Pass-Phrase for each Bid-Part submitted by that bidder. In the event of a bidder forgetting the Pass-Phrase before the expiry of deadline for Bid-Submission, facility is provided to the bidder to 'Annul Previous Submission' from the Bid-Submission Overview page and start afresh with new Pass- Phrase(s)

7. ETS will make your bid available for opening during the Online Public Tender Opening Event (TOE) 'ONLY IF' your 'Status pertaining Overall Bid-Submission' is 'Complete'. For your record, you can generate and save a copy of 'Final Submission Receipt'. This receipt can be generated from 'Bid-Submission Overview Page' only if the 'Status pertaining overall Bid-Submission' is 'Complete'.

NOTE:

While the first three instructions mentioned above are especially relevant to first-time users of ETS, the fourth, fifth, sixth and seventh instructions are relevant at all times.

Additional DO'S AND DON'TS FOR BIDDERS Participating in e-ReverseAuction

1. Get your organization's concerned executives trained for e-ReverseAuction related processes on ETS well in advance of the start of e-ReverseAuction.

2. For responding to any particular e-ReverseAuction, the e-ReverseAuction (ie its Reverse Auction Search Code or RASC) has to be assigned to an MA.

3. It is important for each bidder to thoroughly read the 'rules and related criterion' for the e- ReverseAuction as defined by the Buyer organization.

Note: To participate in e-ReverseAuction, the ETS Bidding-Fee for e-ReverseAuction should be paid before the 'Date and Time of Start of Reverse-Auction'. In case ETS Bidding-Fee for e- ReverseAuction is sent offline to the Auctioneer or ETS Service Provider, it is important for the bidder to ensure that the Auctioneer/ ETS Service Provider has received the ETS Bidding-Fee for e-ReverseAuction and also entered the related details in ETS. When the Auctioneer/ ETS Service Provider enters the details, the bidder should receive an e-mail acknowledgement. If ETS Bidding-Fee for e-ReverseAuction status of the bidder is not updated as outlined above, the bidder would not be able to participate in the Auction.

4. During an e-auction, it is recommended that a bidder submits a bid well before the scheduled time of 'Date and Time of Closure of Reverse-Auction'. Submission of a bid near the closing time of an auction may result in failure due to any of the various factors at that instant, such as – slow internet speed at the bidder's end, slow running of computer at bidder's end, nervousness of the bidder in the last few seconds, etc. This could lead to a delay in submission of data from the bidder's computer to the server. Even if the delay is of a fraction of second after the scheduled closing time, it will result in failure of bid submission. Further, please note that a bid can be submitted even if the bidding page has not been refreshed manually, or otherwise depending on the conditions of the e-auction.

Note: Successful receipt of Bid in an e-auction scenario takes place if the bid is successfully 'received and validated' in the system (ETS) within the scheduled date and time of closure of bidding (On some ETS screens, this is also referred to as 'Date and Time of Closure of Reverse-Auction', or Forward-Auction, as the case may be). End Users shall be solely responsible for ensuring timely submission of their respective bids such that the bids are successfully received in ETS as stated above. ETS/ Service Provider is not responsible for what happens at an end-user's end, or while a submission made by an end-user is in transit, until the submission is successfully 'received and validated' in ETS. When a bid is successfully 'received and validated', it is recorded in the ETS Audit Trail Report, which is generated by ETS. In case of any uncertainty, the application audit trail generated by ETS (ETS Audit Trail Report) shall be the final record/evidence for reference regarding the 'successful bid receipt'.

5. It is important to digitally-sign your 'Final bid' after the end of e-Reverse Auction bidding event.

Minimum Requirements at Bidder's End

Computer System having configuration with minimum Windows 7 or above, and Broadband connectivity Microsoft Internet Explorer 7.0 or above, or Edge with Internet Explorer mode Digital Certificate(s)

ILLUSTRATIONS
(Please refer Clause 8 of the RfS)

a. System Availability

Under a BSSPA between an off-taker 'X' and BESSD 'Y' for a capacity 'C', the Schedule and Actual Injection into/Drawl from the Grid from the Project, as per the DSM/ UI Reports published by the SLDC for a Sample day is shown below:

date	block	Drawl (from Grid) MW (Charging) (X)	Injection (into Grid) MW (Discharging) (Y)	Scheduled Mus (Z)	Time-block Availability, (TA) =(Xi/Zi) or (Yi/Zi)
01-May-28	1	250	0	250	1
01-May-28	2	250	0	250	1
01-May-28	3	240	0	250	0.96
01-May-28	4	240	0	250	0.96
01-May-28	5	235	0	250	0.94
01-May-28	6	235	0	250	0.94
01-May-28	7	240	0	250	0.96
01-May-28	8	240	0	250	0.96
01-May-28	9	0	0	12.5	0
01-May-28	10	12.5	0	0	0
01-May-28	11	0	0	0	NA
01-May-28	12	0	0	0	NA
01-May-28	13	0	0	0	NA
01-May-28	14	0	0	0	NA
01-May-28	15	0	0	0	NA
01-May-28	16	0	0	0	NA
01-May-28	17	0	0	0	NA
01-May-28	18	0	0	0	NA
01-May-28	19	0	0	0	NA
01-May-28	20	0	0	0	NA
01-May-28	21	0	0	0	NA
01-May-28	22	0	0	0	NA
01-May-28	23	0	0	0	NA
01-May-28	24	0	190	250	0.76
01-May-28	25	0	190	250	0.76
01-May-28	26	0	200	250	0.8
01-May-28	27	0	200	250	0.8
01-May-28	28	0	200	250	0.8
01-May-28	29	0	200	250	0.8

01-May-28	30	0	200	250	0.8
01-May-28	31	0	200	250	0.8
01-May-28	32	0	0	0	NA
01-May-28	33	0	0	0	NA
01-May-28	34	0	0	0	NA
01-May-28	35	0	0	0	NA
01-May-28	36	0	0	0	NA
01-May-28	37	0	0	0	NA
01-May-28	38	0	0	0	NA
01-May-28	39	0	0	0	NA
01-May-28	40	0	0	0	NA
01-May-28	41	0	0	0	NA
01-May-28	42	0	0	0	NA
01-May-28	43	12.5	0	12.5	1
01-May-28	44	245	0	250	0.98
01-May-28	45	240	0	250	0.96
01-May-28	46	240	0	250	0.96
01-May-28	47	235	0	250	0.94
01-May-28	48	240	0	250	0.96
01-May-28	49	250	0	250	1
01-May-28	50	250	0	250	1
01-May-28	51	250	0	250	1
01-May-28	52	0	0	0	NA
01-May-28	53	0	0	0	NA
01-May-28	54	0	0	0	NA
01-May-28	55	0	0	0	NA
01-May-28	56	0	0	0	NA
01-May-28	57	0	0	0	NA
01-May-28	58	0	0	0	NA
01-May-28	59	0	0	0	NA
01-May-28	60	0	0	0	NA
01-May-28	61	0	0	0	NA
01-May-28	62	0	0	0	NA
01-May-28	63	0	0	0	NA
01-May-28	64	0	0	0	NA
01-May-28	65	0	0	0	NA
01-May-28	66	0	0	0	NA
01-May-28	67	0	0	0	NA
01-May-28	68	0	0	0	NA
01-May-28	69	0	0	0	NA
01-May-28	70	0	0	0	NA

01-May-28	71	0	0	0	NA
01-May-28	72	0	0	0	NA
01-May-28	73	0	0	0	NA
01-May-28	74	0	0	0	NA
01-May-28	75	0	0	0	NA
01-May-28	76	0	0	0	NA
01-May-28	77	250	0	250	1
01-May-28	78	0	0	0	NA
01-May-28	79	0	0	0	NA
01-May-28	80	0	0	0	NA
01-May-28	81	0	230	250	0.92
01-May-28	82	0	235	250	0.94
01-May-28	83	0	235	250	0.94
01-May-28	84	0	230	250	0.92
01-May-28	85	0	200	250	0.8
01-May-28	86	0	190	250	0.76
01-May-28	87	0	185	250	0.74
01-May-28	88	0	230	250	0.92
01-May-28	89	0	0	0	NA
01-May-28	90	0	0	0	NA
01-May-28	91	0	0	0	NA
01-May-28	92	0	0	0	NA
01-May-28	93	0	0	0	NA
01-May-28	94	0	0	0	NA
01-May-28	95	0	0	0	NA
01-May-28	96	0	0	0	NA
Total		3905	3295	8025	29.7
		No of Block with Active Charging			20
		SYSTEM AVAIL ABILITY during Charging period			0.87

Note: For calculating the System Availability for day/month, schedule provided by Procure/SLDC to be considered. Shortfall in System Availability will be calculated as per below methodology. DSM / UI charges shall be treated separately as per applicable regulations and paid by BESSD.

If KSEBL has scheduled for charging of BESS & discharge of BESS and BESSD has not charge & discharge the BESS according to schedule then TA will be calculated as $TA = (X/Z) + (Y/Z)$ for that time block.

If KSEBL has not scheduled for charging of BESS & discharge of BESS and if BESS performs charging or discharging then TA will be 0 (zero) for that time block.

Any discharge/ injection to the grid without scheduling by KSEBL is not allowed and will not be considered as discharge/ injection from BESS.

i is the i^{th} Time block in the day.

The System Availability for the day is calculated as the mean of **Column TA**, for all time- blocks where **Column Z is not zero**.

Further any drawl/ injection without scheduling will be treated as zero availability.

From the above table, Day's System Availability for charging period= 0.87

Similarly, the System availability shall be calculated for Monthly, 2880 time-blocks (96*30) in a Month (31 Days in a month considered in above), excluding time-blocks where Grid is unavailable or in case of Force Majeure.

Assuming the following parameters:

- a. Total Contract Capacity=250 MW, **C**
- b. Quoted monthly Capacity charges=2 lakhs /MW/month, **D**
- c. Annual system availability (as per procedure above)is calculated to be 0.87, **B**
- d. $n = 12$

Liquidated Damages on account of shortage in annual system Availability, as calculated from formula provided in Clause 9.2:

$$\begin{aligned}\text{Liquidated damages} &= (A - B) \times C \times D \times n \times 1.5 \\ &= (0.95 - 0.87) \times 250 \times 2 \times 12 \times 1.5 \\ &= 720 \text{ lakhs}\end{aligned}$$

a. **System Efficiency**

The present illustration is for calculating the Daily System Efficiency as demonstration only. The same methodology shall be used for calculation of monthly system efficiency as per Clause 9.1.d.3.

$$\text{System Efficiency} = \frac{\text{Total of Column(Y)}}{\text{Total of Column(X)}} = \frac{3295}{3905} = 0.8437 \sim 0.84 \text{ (rounded off to 2 decimal places)}$$

Assuming:

- a. Monthly System Efficiency = 0.84,
- b. Total Monthly Drawl form Grid(Charging Power) = 41.1MUs

Liquidated Damages is calculated @ APPC tariff for excess loss of energy considering expected System Efficiency to be 85%

RfS for Procurement of 250 MW/500 MWh BESS in Kerala with VGF under Tariff-based Global Competitive Bidding	RfS No. NVVN/C&M/BESS-04/2025-26	Page 135 of 138
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Excess conversion losses = $(0.85-0.84) \times \text{Total Drawl from the grid in the month}$
(i.e., Charging Energy)

Liquidated Damages for the month = $\text{Rs.} 0.01 \times 41.1 \times \text{APPC tariff or e.g. Rs. 3.15}$
= Rs 1.295 Millions
= Rs 12.95 lakhs

c. **Discharge Energy Commitment:**

Scheduled Energy for Discharge = $(500 \times 1000) \times 32 = 16 \text{ MU}$

Minimum Guaranteed Availability = 95 %

Discharge Energy Commitment = 15.2 MU

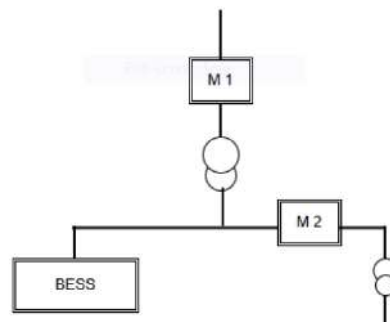
Say if, Short fall during the month = 0.02 MU

Liquidated Damages for

Short fall in Supply of Committed Energy = $0.02 \times (\text{AMCP Peak DAM eg. } 10/-)$
= $0.02 \times 10/-$
= 0.2 Million ie Rs. 2 Lakh

d. Indicative Methodology for calculation of RtE, when Auxiliary Consumption is drawn through the Interconnecting Transformer:

In cases where the Auxiliary Power is drawn through the Interconnecting Transformer, the scheme below can be adopted:



M1 – Main Meter at 220 kV

M 2 – Meter for measuring Auxiliary Consumption.

$$RtE = \frac{M1E}{(M1I - M2)}$$

Where: M1E – Energy exported to Grid from BESS

M1 I – Energy imported to BESS from Grid

PROJECT LOCATION DETAILS**(Bidders are requested to contact the Transmission licensee for further details, if required)**

Sr. Nos.	NAME OF SUB-STATION	EVACUATION CAPACITY IN MWH	Voltage level in KV	Contact details	AREA (Acre)
1	220KV SS BRAHMAPURAM	250	220	Assistant Executive Engineer, 220kV SS Brahmaouram Ph : 944 600 8371	9

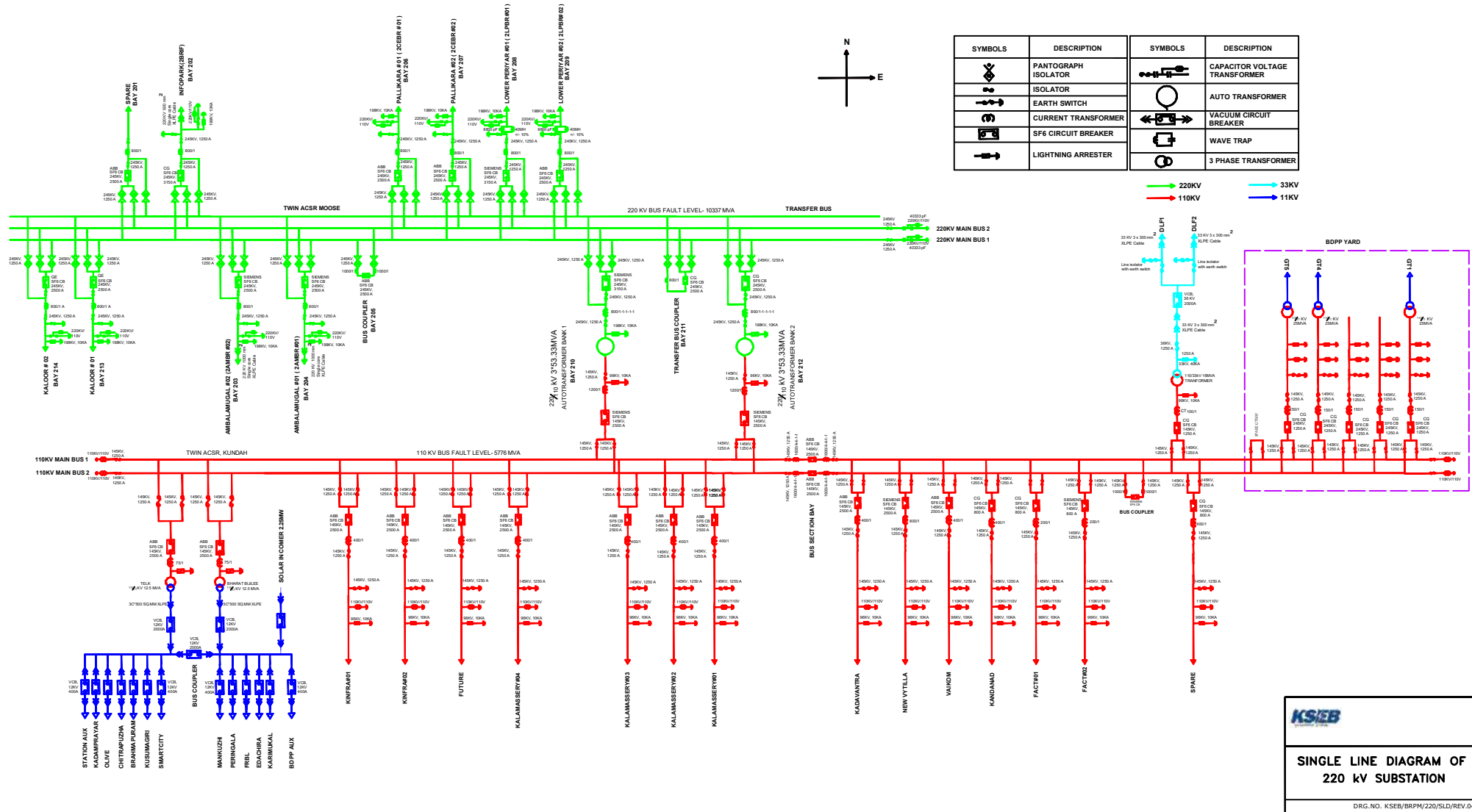
NOTES:












1. Prospective Bidders can contact and visit site during 10AM to 5PM on or before Pre-bid on their own.
2. The purpose of site visit is only for assessment of physical site conditions by the prospective Bidders. Prospective Bidders shall rely only on written clarifications/information/data issued by KSEBL corporate office. KSEBL will not be bound to any clarifications/information/data considered by prospective Bidders for tendering purpose which are not issued by KSEBL corporate office.
3. Representatives of prospective Bidders shall obey the safety guidelines during the site visit. For not obeying safety guidelines, it is the sole responsibility of the visitor for any consequences/eventuality happened at site.

FORMAT FOR COMMISSIONING OF BESS & OTHER DETAILS

1. Commissioning procedure of BESS to be followed by BESSD
2. Commissioning checklist
3. Synchronization declaration to be submitted by BESSD
4. Declaration of System Particulars by BESSD
5. Sample for part/full commissioning certification
6. Communication parameters required by SLDC
7. Fire safety wall for protection (As requested by BESSD-for reference)

SINGLE LINE DIAGRAM OF 220 KV SUBSTATION, BRAHMAPURAM

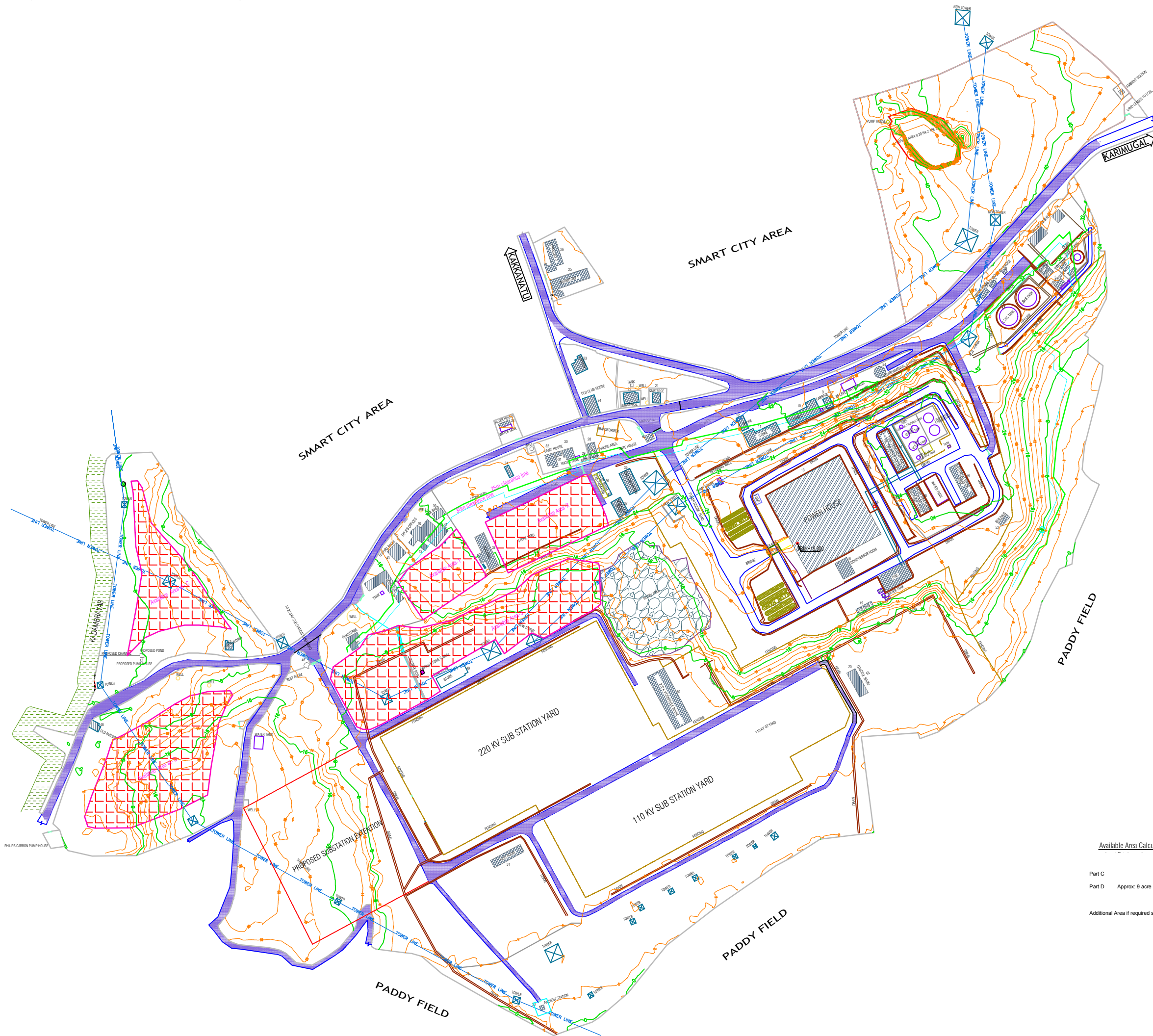
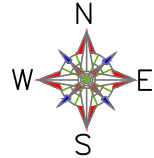


SYMBOLS	DESCRIPTION	SYMBOLS	DESCRIPTION
	PANTOGRAPH ISOLATOR		CAPACITOR VOLTAGE TRANSFORMER
	ISOLATOR		AUTO TRANSFORMER
	EARTH SWITCH		VACUUM CIRCUIT BREAKER
	CURRENT TRANSFORMER		WAVE TRAP
	SF6 CIRCUIT BREAKER		3 PHASE TRANSFORMER
	LIGHTNING ARRESTER		

 220KV
 33KV
 110KV
 11KV

SINGLE LINE DIAGRAM OF 220 kV SUBSTATION	DRAWN	APPRENTICE 2016-17
	RE - DRAW	SUB ENGINEER MAINTENANCE
	CHECKED / APPROVED	AE/SSD/BRPM
		APR 24
DRG.NO. KSEB/BRPM/220/SLD/REV.04		SCALE N T S

Lay out Sketch Showing Available land to be utilized for proposed BESS at Brahmapuram Diesel Power Plant



Available Area Calculation

Part C
Part D Approx: 9 acre

Additional Area if required shall be allotted from Part A1 & A2

Soil Exploration Report

Client : Soil investigation report for 500mw BESS
Project at BDPP, Brahmapuram, Kochi, Kerala .

ARC :

Job : MF/932/2025 - (Bore : II)

Project : K.S.E.B, 6.m x 2.5/m containers wt.60/Ton

Ref No. : Part - C (A)

Site : BRAHMAPURAM, KAKKANAD

Date : Sep / 2025

Soil investigation report for 500mw BESS
Project at BDPP, Brahmapuram, Kochi, Kerala .

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MF/932/2025 - (Bore : I I)

K.S.E.B, 6.m x 2.5/m containers wt.60/Ton

Part - C (A)

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BRAHMAPURAM, KAKKANAD

Sep / 2025

REPORT ON SUB SOIL EXPLORATION FOR PROPOSED BUILDING AT BRAHMAPURAM, KAKKANAD

/ Sep / 2025 (Bore : I I)
Ref : Part - C (A)

I *INTRODUCTION.*

There is a proposed to construction for storage container unit 6.m x 2.5/m container s wt. 60/Ton for KSEB soil investigation brahmapuram site at Kochi, kakkanad . It is decided to carry out a detailed sub soil find our investigation to safe bearing capacity and section of appropriate foundations for proposed building.

This report summarizes the subsoil investigations and furnishes the recommendations on the type of the foundations to be provided.

I.1 SCOPE OF WORK

The scope of work at this site, entrusted with us comprised of

- 1.1 Mobilization of boring rigs with all necessary equipments and skilled/ unskilled personals for the field work.
- 1.2 Boring one bore hole of diameter 150 mm, with drilling equipments in latrate, silt, clay and gravel to a maximum depth of 12 mts or till the spoon rebound at the selected location fixed by the client.
- 1.3 Conduction of Standard Penetration tests in bore hole at every 1.50 m depth or change of strata and prepare bore log showing details.
- 1.4 Collection of disturbed samples in air tight polythene bags with proper labeling and transportation to laboratory.
- 1.5 Conducting the laboratory tests on the disturbed samples as per Indian standards and furnishing the results.
- 1.6 Preparation and submission of the detailed report with field and laboratory results.

II.1 *PROGRAM OF INVESTIGATION*

FIELD INVESTIGATION

- 1.1 One boring units with all necessary equipments along with a team of technical personal with skilled labours were mobilized at the work site.
- 1.2 One bore hole of 150mm was bored to a depth suggested by client, below the existing ground level. Bore hole was made as per IS. 1892-1979, using rotary drilling.
- 1.3 Representative samples were collected at every 1.00mts intervals depth change of strata, whichever is earlier.
- 1.4 The samples collected were carefully sealed and transported to laboratory for tests.
- 1.5 Standard Penetration Tests were conducted at every 1.50 mts intervals intervals after that, as per IS :2131 - 1981. Before testing borehole was Cleaned properly and Split Spoon Sampler is placed centrally in bore hole. A Standard hammer of 63.50 kg. is dropped from a height of 75.cm and number of blows for penetration of sampler for 0-15 cm, 15-30cm and 30-45 cm were noted. Number of blows required form 15-45 cm penetration is reported as N value.
- 1.6 Bore hole was terminated after the investigation.
- 1.7 **LABORATORY INVESTIGATION.**

II. 2.1 The following laboratory tests were conducted on the selected samples as relevant IS Codes.

- a.) Particle size analysis (IS. 2720-Part 4-1985)
- b.) Water contents (IS. 2720-Part 2-1973)
- c.) Bulk density (IS.2720-Part 9-1992)
- d.) Specific Gravity (IS.2720-Part 13-1986)
- e.) Direct shear Test (IS.2720-Part 13-1986)
- f.) Liquid Limit & Plastic Limit (IS.2720-Part 5-1985)
- g.) Triaxial Test (IS.2720-Part 11-1971)

Site: Brahmapuram (Part C-A)

Project: Proposed Solar Container Storage

Client: Kerala State Electricity Board Limited

Bore Hole details: BH-II dated on 20-08-2025.

Ground Water table: Water table was met at 1.50m depth below ground level for BH-II.

Recommendations are based on the assumption that the soil profile found in the bore hole tested is indicative of the entire plot area. Any deviation in soil profile other than that observed in the bore hole tested should immediately be referred to the consultant and proper modification should be implemented by a qualified engineer.

1. Soil Profile

As per the provided soil investigation report, one borehole was taken at the site. In BH-II, top 2.0m depth comprises of Lateritic Clay with Sand (Yellowish Brown) with S.P.T value 13. It is followed by Lateritic Clayey Sand with Gravel (White, Yellowish Pink) up to depth 3.0m with S.P.T value >50. Below this it is Lateritic Clay with Sand with Gravel (White, Yellow) up to depth 6.0m with S.P.T value between 26 and 27. After this it is Rock (White) up to depth 7.0m. Beneath this it is Silty Sand (Greyish Yellow) up to depth 8.0m with S.P.T value >50. Beyond this it is Hard Rock up to depth 10.0m. Borehole was terminated at a depth of 10.0m. Water table was met at a depth of 1.50m below ground level.

2. RECOMMENDATION

1. An isolated footing with a Safe bearing capacity 25T/m^2 may be adopted at 2.0m depth below ground level. Adequate precaution for dewatering and circular precast rings may be used to protect soil sliding. Ensure same stratum is available throughout the site.
2. Foundation shall be constructed using various relevant Indian Standard Codes.

CLIENT:		KERALA STATE ELECTRICITY BOARD LIMITED														
PROJECT:		PROPOSED SOLAR CONTAINER STORAGE														
SITE:		BRAHMAPURAM														
BORE HOLE NO. : BH-II								Date of start: 20/08/2025								
								Date of completion: 20/08/2025								
TYPE OF BORING: Rotary Drilling					Ground water table: 1.5m below GL											
Description of soil	Thickness of layer m	Depth in m below GL	Bore log	Standard Penetration Test					Graph of 'N' value						Remarks	
				depth (m)	15 cm	30 cm	45 cm	N Value	10	20	30	40	50	>50		
Lateritic Clay with Sand (Yellowish Brown)	2.00	2.00		1.00	3	6	7	13								
Lateritic Clayey sand with Gravel (White, Yellowish Pink)	1.00	3.00		2.00	15	35	-	>50								17cm Balance
Lateritic Clay with Sand with Gravel (White, Yellow)	3.00	6.00		3.00	6	13	14	27								
				4.50	5	10	16	26								
Rock (White)	1.00	7.00		6.00												Recovery=35%, RQD=16%
Silty Sand (Greyish Yellow)	1.00	8.00		7.50	25	25	-	>50								21cm balance
Hard Rock	1.00	9.00		8.00												Recovery=15% RQD-15%
Hard Rock	1.00	10.00		9.00												Recovery=75% RQD-28%
Bore hole terminated at 10.00m depth																

Bore hole No.	Depth (m)	Description of soil	Natural water content (%)	Bulk density (g/cc)	LL (%)	PL (%)	Grain size distribution (%)					Type of Sample	Type of test	Specific gravity	Cohesion c (kg/cm ²)	Angle of internal friction (°)					
							Silt & Clay	Fine	Medium	Coarse	Gravel										
II	1.0	Sandy Clay (CH-SP)	30.16	1.38	59.4	28.4	71	10	13	4	2	ds	Insufficient sample for strength test	Direct Shear	2.65	0.18	31				
II	2.0	Clayey Sandy Gravel (GC-SC)	26.94	1.83	-	-	27	4	17	15	37	ds									
II	3.0	Gravelly Sandy Clay (CH-SP)	31.68	1.59	87.9	33.4	65	7	7	5	16	ds						Triaxial	-	0.13	21
II	4.5	Sandy Clay (CH-SP)	28.87	1.63	81.1	31.7	69	7	15	2	7	ds									
II	7.5	Silty Sand (SM)	15.13	1.82	-	-	40	47	12	1	0	ds	Direct Shear	-	0.17	32					
II	8.0-9.0	Very Poor Moderately Strong Hard Rock		2.46								uds	Uniaxial compressive strength = 14.12 N/mm ²								
II	9.0-10.0	Poor Moderately Strong Hard Rock		2.60								uds	Uniaxial compressive strength = 25.90 N/mm ²								

(All the tests are done on remoulded sample collected from SPT spoon)

Soil Exploration Report

Client : Soil investigation report for 500mw BESS
Project at BDPP, Brahmapuram, Kochi, Kerala .
[REDACTED] :

Job : MF/931/2025 - (Bore : I & III)

Project : K.S.E.B, 6.m x 2.5/m containers wt.60/Ton

Ref No. : Part - D (A & B)
[REDACTED] :

Site : BRAHMAPURAM, KAKKANAD

Date : Sep / 2025

[REDACTED]

Soil investigation report for 500mw BESS
Project at BDPP, Brahmapuram, Kochi, Kerala .

MF/931/2025 - (Bore : I & III)

K.S.E.B, 6.m x 2.5/m containers wt.60/Ton

Part - D (A & B)

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BRAHMAPURAM, KAKKANAD

Sep / 2025

REPORT ON SUB SOIL EXPLORATION FOR PROPOSED BUILDING AT BRAHMAPURAM, KAKKANAD

Sep / 2025 (Bore : I & III)
Ref : Part - D (A & B)

I INTRODUCTION.

There is a proposed to construction for storage container unit 6.m x 2.5/m container s wt. 60/Ton for KSEB soil investigation brahmapuram site at Kochi, kakkanad . It is decided to carry out a detailed sub soil find our investigation to safe bearing capacity and section of appropriate foundations for proposed building.

This report summarizes the subsoil investigations and furnishes the recommendations on the type of the foundations to be provided.

I.1 SCOPE OF WORK

The scope of work at this site, entrusted with us comprised of

- 1.1 Mobilization of boring rigs with all necessary equipments and skilled/ unskilled personals for the field work.
- 1.2 Boring one bore hole of diameter 150 mm, with drilling equipments in latrate, silt, clay and gravel to a maximum depth of 12 mts or till the spoon rebound at the selected location fixed by the client.
- 1.3 Conduction of Standard Penetration tests in bore hole at every 1.50 m depth or change of strata and prepare bore log showing details.
- 1.4 Collection of disturbed samples in air tight polythene bags with proper labeling and transportation to laboratory.
- 1.5 Conducting the laboratory tests on the disturbed samples as per Indian standards and furnishing the results.
- 1.6 Preparation and submission of the detailed report with field and laboratory results.

II.1 *PROGRAM OF INVESTIGATION*

FIELD INVESTIGATION

- 1.1 Two boring units with all necessary equipments along with a team of technical personal with skilled labours were mobilized at the work site.
- 1.2 Two bore hole of 150mm was bored to a depth suggested by client, below the existing ground level. Bore hole was made as per IS. 1892-1979, using rotary drilling.
- 1.3 Representative samples were collected at every 1.00mts intervals depth change of strata, whichever is earlier.
- 1.4 The samples collected were carefully sealed and transported to laboratory for tests.
- 1.5 Standard Penetration Tests were conducted at every 1.50 mts intervals intervals after that, as per IS :2131 - 1981. Before testing borehole was Cleaned properly and Split Spoon Sampler is placed centrally in bore hole. A Standard hammer of 63.50 kg. is dropped from a height of 75.cm and number of blows for penetration of sampler for 0-15 cm, 15-30cm and 30-45 cm were noted. Number of blows required form 15-45 cm penetration is reported as N value.
- 1.6 Bore hole was terminated after the investigation.
- 1.7 LABORATORY INVESTIGATION.

II. 2.1 The following laboratory tests were conducted on the selected samples as relevant IS Codes.

- a.) Particle size analysis (IS. 2720-Part 4-1985)
- b.) Water contents (IS. 2720-Part 2-1973)
- c.) Bulk density (IS.2720-Part 9-1992)
- d.) Specific Gravity (IS.2720-Part 13-1986)
- e.) Direct shear Test (IS.2720-Part 13-1986)
- f.) Liquid Limit & Plastic Limit (IS.2720-Part 5-1985)
- g.) Triaxial Test (IS.2720-Part 11-1971)

Site: Brahmapuram (Part D-A&B)

Project: Proposed Solar Container Storage

Client: Kerala State Electricity Board Limited

Bore Hole details: BH-I & BH-III dated 2025

Ground Water table: Water table was met at 2.0m depth below ground level for BH-I & BH-III.

Recommendations are based on the assumption that the soil profile found in the bore hole tested is indicative of the entire plot area. Any deviation in soil profile other than that observed in the bore hole tested should immediately be referred to the consultant and proper modification should be implemented by a qualified engineer.

1. Soil Profile

As per the provided soil investigation report, two boreholes were taken at the site.

In BH-I, top 2.0m depth comprises of Lateritic Clay with Sand & Gravel (Yellowish Red) with S.P.T value 9. It is followed by Silty Sand with Pebbles (Brownish Yellow, Grey) up to depth 3.0m with S.P.T value >50. Below this it is Clayey Silty Sand with Pebbles (Yellowish Brown) up to depth 4.50m with S.P.T value >50. After this it is Weathered Rock (Grey) up to depth 6.0m with S.P.T value >50. Beneath this it is Hard Rock up to depth 6.50m. Borehole was terminated at a depth of 6.50m. Water table was met at a depth of 2.0m below ground level.

In BH-III, the top 2.0m depth comprises of Lateritic Clayey Sand with Gravel (Yellowish Pink, White) with S.P.T value 15. It is followed by Lateritic Clay with Sand & Gravel Brown, Grey, Yellow up to depth 3.0m with S.P.T value 12. Below this it is Silty Sand (Grey, Yellow) up to depth 4.50m with S.P.T value >50. After this it is Weathered Rock (Grey, Yellow) up to depth 6.0m with S.P.T value >50. Beyond this it is Rock up to depth 6.50m with S.P.T value >50. Borehole was terminated at a depth of 6.50m. Water table was met at a depth of 2.0m below ground level.

2. RECOMMENDATION

1. An isolated footing with a Safe bearing capacity 11T/m^2 may be adopted at 2.0m depth below ground level. Adequate precaution for dewatering and circular precast rings may be used to protect soil sliding. Ensure same stratum is available throughout the site.
2. An isolated footing with a Safe bearing capacity 25T/m^2 may be adopted at 3.0m depth below ground level. Adequate precaution for dewatering and circular precast rings may be used to protect soil sliding. Ensure same stratum is available throughout the site.
3. Foundation shall be constructed using various relevant Indian Standard Codes.

CLIENT:		KERALA STATE ELECTRICITY BOARD LIMITED														
PROJECT:		PROPOSED SOLAR CONTAINER STORAGE														
SITE:		BRAHMAPURAM														
BORE HOLE NO. : BH-I								Date of start: 2025								
								Date of completion: 2025								
TYPE OF BORING: Rotary Drilling					Ground water table: 2.0m below GL											
Description of soil	Thickness of layer m	Depth in m below GL	Bore log	Standard Penetration Test					Graph of 'N' value						Remarks	
				depth (m)	15 cm	30 cm	45 cm	N Value	10	20	30	40	50	>50		
Lateritic Clay with Sand & Gravel (Yellowish Red)	2.00	2.00		1.00	2	4	5	9								
Silty Sand with Pebbles (Brownish Yellow,Grey)	1.00	3.00		2.00	41	9	-	>50								28cm Balance
Clayey Silty Sand with Pebbles (Yellowish Brown)	1.50	4.50		3.00	44	6	-	>50								29cm Balance
Weathered Rock (Grey)	1.50	6.00		4.50	50	-	-	>50								43cm Balance
Hard Rock	0.50	6.50		6.00												Recovery 92% RQD-38%
Bore hole terminated at 6.50m depth																

CLIENT:		KERALA STATE ELECTRICITY BOARD LIMITED														
PROJECT:		PROPOSED SOLAR CONTAINER STORAGE														
SITE:		BRAHMAPURAM														
BORE HOLE NO. : BH-III									Date of start: 2025							
									Date of completion: 2025							
TYPE OF BORING: Rotary Drilling					Ground water table: 2.0m below GL											
Description of soil	Thickness of layer m	Depth in m below GL	Bore log	Standard Penetration Test					Graph of 'N' value						Remarks	
				depth (m)	15 cm	30 cm	45 cm	N Value	10	20	30	40	50	>50		
Lateritic Clayey Sand with Gravel (Yellowish Pink, White)	2.00	2.00		1.00	5	6	9	15								
Lateritic Clay with Sand & Gravel Brown, Grey, Yellow)	1.00	3.00		2.00	4	5	7	12								
Silty Sand (Grey, Yellow)	1.50	4.50		3.00	26	24	-	>50								20cm Balance
Weathered Rock (Grey, Yellow)	1.50	6.00		4.50	47	3	-	>50								29cm Balance
Rock	0.50	6.50		6.00	50	-	-	>50								Recovery- Nil
Bore hole terminated at 6.50m depth																

LAB TEST REPORT																
Client:		Kerala State Electricity Board Limited (C/o. Maria Foundation)										Report No: L/356/25				
Project:		Proposed Solar Container Storage										Test Date: 12/09/2025				
Site:		Brahmapuram														
Bore hole No.	Depth (m)	Description of soil	Natural water content (%)	Bulk density (g/cc)	LL (%)	PL (%)	Grain size distribution (%)				Type of Sample	Type of test	Specific gravity	Cohesion c (kg/cm ²)	Angle of internal friction (ø °)	
							Silt & Clay	Fine	Medium	Coarse						Gravel
I	1.0	Gravelly Sandy Clay (CH-SP)	34.79	1.65	72.0	31.8	51	6	12	11	20	ds	Triaxial	2.58	0.17	10
I	2.0	Silty Gravelly Sand (SM-GM)	17.07	1.82	-	-	19	26	29	10	16	ds	Direct Shear	-	0.09	31
I	3.0	Clayey Silty Gravelly Sand (SM-GM)	44.99	1.84	-	-	34	15	13	7	31	ds	Insufficient sample for strength test			
I	4.5	Sandy Gravel (GP-SP)	5.24	1.83	-	-	4	18	15	13	50	ds	Insufficient sample for strength test			
I	6.0-6.5	Poor Moderately Strong Hard Rock		2.57								uds	Uniaxial compressive strength = 25.90 N/mm ²			

(All the tests are done on remoulded sample collected from SPT spoon)

Bore hole No.	Depth (m)	Description of soil	Natural water content (%)	Bulk density (g/cc)	LL (%)	PL (%)	Grain size distribution (%)					Type of Sample	Type of test	Specific gravity	Cohesion c (kg/cm ²)	Angle of internal friction (°)
III	1.0	Silty Gravelly Sand (SC-GC)	43.23	1.78	62.8	32.7	Silt & Clay	Fine	Medium	Coarse	Gravel	sp	Direct Shear	2.64	0.17	28
	2.0	Gravelly Sandy Clay (CH-SP)	38.30	1.48	76.7	33.5	51	14	14	6	15	ds	Triaxial	-	0.25	7
	3.0	Silty Sand (SM)	30.28	1.82	-	-	26	32	31	5	6	ds	Direct Shear	2.65	0.08	33
	4.5	Silty Sand (SM)	24.78	1.83	-	-	15	34	38	4	9	ds	Direct Shear	-	0.09	32

(All the tests are done on remoulded sample collected from SPT spoon)

Soil Exploration Report

Client : Soil investigation report for 500mw BESS
Project at BDPP, Brahmapuram, Kochi, Kerala .
ARC : .
Job : MF/934/2025 - (Bore : VI & VII)
Project : K.S.E.B, 6.m x 2.5/m containers wt.60/Ton
Ref No. : Part – A.1 (A & B)

Site : BRAHMAPURAM, KAKKANAD
Date : Sep / 2025

Soil investigation report for 500mw BESS
Project at BDPP, Brahmapuram, Kochi, Kerala .

MF/934/2025 - (Bore : VI & VII)

K.S.E.B, 6.m x 2.5/m containers wt.60/Ton

Part – A.1 (A & B)

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BRAHMAPURAM, KAKKANAD

Sep / 2025

REPORT ON SUB SOIL EXPLORATION FOR PROPOSED BUILDING AT BRAHMAPURAM, KAKKANAD

/ Sep / 2025 (Bore : VI & VII)
Ref : Part – .A.1 (A & B)

I INTRODUCTION.

There is a proposed to construction for storage container unit 6.m x 2.5/m container s wt. 60/Ton for KSEB soil investigation brahmapuram site at Kochi, kakkanad . It is decided to carry out a detailed sub soil find our investigation to safe bearing capacity and section of appropriate foundations for proposed building.

This report summarizes the subsoil investigations and furnishes the recommendations on the type of the foundations to be provided.

I.1 SCOPE OF WORK

The scope of work at this site, entrusted with us comprised of

- 1.1 Mobilization of boring rigs with all necessary equipments and skilled/ unskilled personals for the field work.
- 1.2 Boring one bore hole of diameter 150 mm, with drilling equipments in latrate, silt, clay and gravel to a maximum depth of 12 mts or till the spoon rebound at the selected location fixed by the client.
- 1.3 Conduction of Standard Penetration tests in bore hole at every 1.50 m depth or change of strata and prepare bore log showing details.
- 1.4 Collection of disturbed samples in air tight polythene bags with proper labeling and transportation to laboratory.
- 1.5 Conducting the laboratory tests on the disturbed samples as per Indian standards and furnishing the results.
- 1.6 Preparation and submission of the detailed report with field and laboratory results.

II.1 *PROGRAM OF INVESTIGATION*

FIELD INVESTIGATION

- 1.1 Two boring units with all necessary equipments along with a team of technical personal with skilled labours were mobilized at the work site.
- 1.2 Two bore hole of 150mm was bored to a depth suggested by client, below the existing ground level. Bore hole was made as per IS. 1892-1979, using rotary drilling.
- 1.3 Representative samples were collected at every 1.00mts intervals depth change of strata, whichever is earlier.
- 1.4 The samples collected were carefully sealed and transported to laboratory for tests.
- 1.5 Standard Penetration Tests were conducted at every 1.50 mts intervals intervals after that, as per IS :2131 - 1981. Before testing borehole was Cleaned properly and Split Spoon Sampler is placed centrally in bore hole. A Standard hammer of 63.50 kg. is dropped from a height of 75.cm and number of blows for penetration of sampler for 0-15 cm, 15-30cm and 30-45 cm were noted. Number of blows required form 15-45 cm penetration is reported as N value.
- 1.6 Bore hole was terminated after the investigation.
- 1.7 LABORATORY INVESTIGATION.

II. 2.1 The following laboratory tests were conducted on the selected samples as relevant IS Codes.

- a.) Particle size analysis (IS. 2720-Part 4-1985)
- b.) Water contents (IS. 2720-Part 2-1973)
- c.) Bulk density (IS.2720-Part 9-1992)
- d.) Specific Gravity (IS.2720-Part 13-1986)
- e.) Direct shear Test (IS.2720-Part 13-1986)
- f.) Liquid Limit & Plastic Limit (IS.2720-Part 5-1985)
- g.) Triaxial Test (IS.2720-Part 11-1971)

Site: Brahmapuram (Part A1-A&B)

Project: Proposed Solar Container Storage

Client: Kerala State Electricity Board Limited

Bore Hole details: BH-VI & BH-VII dated 2025

Ground Water table: Water table was met at 2.0m depth below ground level for BH-VI & BH-VII.

Recommendations are based on the assumption that the soil profile found in the bore hole tested is indicative of the entire plot area. Any deviation in soil profile other than that observed in the bore hole tested should immediately be referred to the consultant and proper modification should be implemented by a qualified engineer.

1. Soil Profile

As per the provided soil investigation report, two boreholes were taken at the site.

In BH-VI, top 3.0m depth comprises of Lateritic Clayey Sand with Gravel (Light Brown) with S.P.T value between 11 and 14. It is followed by Lateritic Clayey Sand with Gravel (Brown) up to depth 4.50m with S.P.T value >50. Below this it is Lateritic Clay with Sand & Gravel (Brown, White) up to depth 6.0m with S.P.T value >50. After this it is Lateritic Clay with Sand & Gravel (Brownish Pink, White) up to depth 7.50m with S.P.T value >50. Beneath this it is Lateritic Clay with Sand & Gravel (Brown, White) up to depth 9.0m with S.P.T value >50. It is followed by Silty Lateritic Clay with Sand (Pinkish Brown, Yellow) up to depth 12.0m with S.P.T value >50. Below this Silty Lateritic Clay with Sand (Red, Yellow) up to depth 14.0m with S.P.T value 32. After this it is Silty Lateritic Clay with Sand (Yellowish Red, Pink) up to depth 16.0m with S.P.T value 42. Beyond this it is Rock up to depth 17.0m. Borehole was terminated at a depth of 17.0m. Water table was met at a depth of 2.0m below ground level.

In BH-VII, the top 2.0m depth comprises of Clayey Sand with Pebbles (Coffee Brown) with S.P.T value >50. It is followed by Lateritic Clayey Sand with Gravel (Brown, White) up to depth 5.50m with S.P.T value >50. Below this it is Clayey Silty Sand (Brownish Grey) up to depth 7.0m with S.P.T value 23.

After this it is Silty Lateritic Clay with Sand (Yellow, White, Grey) up to depth 10.50m with S.P.T value between 12 and 14. Beneath this it is Lateritic Clay with Sand (Pink, White) up to depth 12.0m with S.P.T value 17. It is followed by Silty Lateritic Clay with Sand (Pink, White) up to depth 15.0m with S.P.T value 15. Below this it is Silty Lateritic Clay with Sand (White) up to depth 18.0m with S.P.T value 42. After this it is Silty Lateritic Clay with Sand (Light Whitish Yellow) up to depth 21.0m with S.P.T value 46. Beyond this it is Medium Hard Rock up to depth 22.0m. Borehole was terminated at a depth of 22.0m. Water table was met at a depth of 2.0m below ground level.

2. RECOMMENDATION

1. An isolated footing with a Safe bearing capacity 10T/m^2 may be adopted at 1.20m depth below ground level. Ensure same stratum is available throughout the site.
2. An isolated footing with a Safe bearing capacity 25T/m^2 may be adopted at 3.0m depth below ground level. Adequate precaution for dewatering and circular precast rings may be used to protect soil sliding. Ensure same stratum is available throughout the site.
3. Foundation shall be constructed using various relevant Indian Standard Codes.

CLIENT:		KERALA STATE ELECTRICITY BOARD LIMITED													
PROJECT:		PROPOSED SOLAR CONTAINER STORAGE													
SITE:		BRAHMAPURAM													
BORE HOLE NO. : BH-VI								Date of start: 2025							
								Date of completion:2025							
TYPE OF BORING: Rotary Drilling					Ground water table: 2.00m below GL										
Description of soil	Thickness of layer m	Depth in m below GL	Bore log	Standard Penetration Test					Graph of 'N' value						Remarks
				depth (m)	15 cm	30 cm	45 cm	N Value	10	20	30	40	50	>50	
Lateritic Clayey Sand with Gravel (Light Brown)	3.00	3.00		1.00	3	5	6	11							
				2.00	3	4	10	14							Slipped
Lateritic Clayey Sand with Gravel (Brown)	1.50	4.50		3.00	10	40	-	>50							19cm Balance
Lateritic Clay with Sand & Gravel (Brown,White)	1.50	6.00		4.50	50	-	-	>50							33cm Balance
Lateritic Clay with Sand & Gravel (Brownish Pink,White)	1.50	7.50		6.00	50	-	-	>50							30cm Balance
Lateritic Clay with Sand & Gravel (Brown,White)	1.50	9.00		7.50	16	30	4	>50							9cm Balance
Silty Lateritic Clay with Sand (Pinkish Brown, Yellow)	3.00	12.00		9.00	15	30	5	>50							13cm Balance
				10.50	15	35	-	>50							15cm Balance
Silty Lateritic Clay with Sand (Red,Yellow)	2.00	14.00		12.00	10	15	17	32							
Silty Lateritic Clay with Sand (Yellowish Red,Pink)	2.00	16.00		15.00	8	17	25	42							
Rock	1.00	17.00		16.00											Recovery-14% RQD-Nil
Bore hole terminated at 17.00m depth															

CLIENT:		KERALA STATE ELECTRICITY BOARD LIMITED														
PROJECT:		PROPOSED SOLAR CONTAINER STORAGE														
SITE:		BRAHMAPURAM														
BORE HOLE NO. : BH-VII								Date of start: 2025								
								Date of completion: 2025								
TYPE OF BORING: Rotary Drilling					Ground water table: 2.00m below GL											
Description of soil	Thickness of layer m	Depth in m below GL	Bore log	Standard Penetration Test					Graph of 'N' value						Remarks	
				depth (m)	15 cm	30 cm	45 cm	N Value	10	20	30	40	50	>50		
Clayey Sand with Pebbles (Coffee Brown)	2.00	2.00		1.00	50	-	-	>50								39cm Balance
Lateritic Clayey Sand with Gravel (Brown,White)	3.50	5.50		2.00	50	-	-	>50								37cm Balance
				3.00	50	-	-	>50							34cm Balance	
				4.50	50	-	-	>50							33cm Balance	
Clayey Silty Sand (Brownish Grey)	1.50	7.00		6.00	6	8	15	23								
Silty Lateritic Clay with Sand (Yellow, White,Grey)	3.50	10.50		7.50	5	7	7	14								
				9.00	7	4	8	12								
Lateritic Clay with Sand (Pink,White)	1.50	12.00		10.50	5	7	10	17								
Silty Lateritic Clay with Sand (Pink,White)	3.00	15.00		12.00	4	6	9	15								
Silty Lateritic Clay with Sand (White)	3.00	18.00		15.00	7	15	27	42								
Silty Lateritic Clay with Sand (Light Whitish Yellow)	3.00	21.00		18.00	6	17	29	46								
Medium Hard Rock	1.00	22.00		21.00												Recovery-28% RQD-15%
Bore hole terminated at 22.00m depth																

Bore hole No.	Depth (m)	Description of soil	Natural water content (%)	Bulk density (g/cc)	LL (%)	PL (%)	Grain size distribution (%)					Type of Sample	Type of test	Specific gravity	Cohesion c (kg/cm ²)	Angle of internal Friction (ø°)
							Silt & Clay	Sand			Gravel					
VI	1.0	Clayey Sandy Gravel (GC-SC)	14.29	1.80	-	-	11	8	8	20	53	ds	Direct Shear	2.64	0.16	30
VI	3.0	Gravelly Clayey Sand (SC-GC)	19.98	1.79	-	-	35	15	14	14	22	ds	Direct Shear	-	0.21	29
VI	6.0	Gravelly Sandy Clay (CH-SP)	33.13	1.82	78.1	34.3	54	12	10	10	14	ds	Insufficient sample for strength test			
VI	9.0	Sandy Clayey Silt (MH-CH)	39.16	1.80	72.3	39.3	73	16	11	0	0	ds	Triaxial	2.65	0.25	14
VI	12.0	Clayey Sandy Silt (MH-SP)	42.48	1.78	64.0	41.8	69	23	8	0	0	ds	Triaxial	-	0.20	16
VI	15.0	Clayey Sandy Silt (MH-SP)	39.61	1.81	57.9	39.1	54	16	24	5	1	ds	Triaxial	2.64	0.19	18

(All the tests are done on remoulded sample collected from SPT spoon)

Bore hole No.	Depth (m)	Description of soil	Natural water content (%)	Bulk density (g/cc)	LL (%)	PL (%)	Grain size distribution (%)					Type of Sample	Type of test	Specific gravity	Cohesion c (kg/cm ²)	Angle of internal friction (ø °)	
							Silt & Clay	Sand			Gravel						
								Fine	Medium	Coarse							
VII	1.0	Clayey Gravelly Sand (SC-GC)	19.02	1.82	-	-	16	13	13	29	29	ds	Direct Shear	2.65	0.14	27	
VII	3.0	Clayey Gravelly Sand (SC-GC)	17.32	1.86	-	-	40	12	14	10	24	ds	Insufficient sample for strength test				
VII	6.0	Clayey Sandy Silt (MH-SP)	44.51	1.55	68.2	43.3	68	14	16	2	0	ds		Triaxial	2.64	0.27	16
VII	7.5	Sandy Clayey Silt (MH-CH)	41.09	1.50	73.3	43.7	91	5	4	0	0	ds		Triaxial	-	0.30	18
VII	10.5	Sandy Clayey Silt (MH-CH)	52.51	1.42	101.4	50.7	91	9	0	0	0	ds		Triaxial	2.64	0.35	18
VII	15.0	Sandy Clayey Silt (MH-CH)	44.37	1.52	71.3	37.0	78	9	11	2	0	ds					
VII	18.0	Sandy Clayey Silt (MH-CH)	46.31	1.50	79.6	48.4	88	11	1	0	0	ds					
VII	21.0-22.0	Very Poor Moderately Strong Medium Hard Rock		2.55								uds					

Soil Exploration Report

Client : Soil investigation report for 500mw BESS
ARC : Project at BDPP, Brahmapuram, Kochi, Kerala .

Project : K.S.E.B, 6.m x 2.5/m containers wt.60/Ton
Ref No. : Part – A.2 (A & B)
Builder :
Site : BRAHMAPURAM, KAKKANAD
Date : Sep / 2025

Soil investigation report for 500mw BESS
Project at BDPP, Brahmapuram, Kochi, Kerala .

MF/933/2025 - (Bore : IV & V)

K.S.E.B, 6.m x 2.5/m containers wt.60/Ton

Part – A.2 (A & B)

BRAHMAPURAM, KAKKANAD

Sep / 2025

REPORT ON SUB SOIL EXPLORATION FOR PROPOSED BUILDING AT BRAHMAPURAM, KAKKANAD

, Sep / 2025 (Bore : IV & V)
Ref : Part – A.2 (A & B)

I INTRODUCTION.

There is a proposed to construction for storage container unit 6.m x 2.5/m container s wt. 60/Ton for KSEB soil investigation brahmapuram site at Kochi, kakkanad . It is decided to carry out a detailed sub soil find our investigation to safe bearing capacity and section of appropriate foundations for proposed building.

This report summarizes the subsoil investigations and furnishes the recommendations on the type of the foundations to be provided.

I.1 SCOPE OF WORK

The scope of work at this site, entrusted with us comprised of

- 1.1 Mobilization of boring rigs with all necessary equipments and skilled/ unskilled personals for the field work.
- 1.2 Boring one bore hole of diameter 150 mm, with drilling equipments in latrate, silt, clay and gravel to a maximum depth of 12 mts or till the spoon rebound at the selected location fixed by the client.
- 1.3 Conduction of Standard Penetration tests in bore hole at every 1.50 m depth or change of strata and prepare bore log showing details.
- 1.4 Collection of disturbed samples in air tight polythene bags with proper labeling and transportation to laboratory.
- 1.5 Conducting the laboratory tests on the disturbed samples as per Indian standards and furnishing the results.
- 1.6 Preparation and submission of the detailed report with field and laboratory results.

II.1 *PROGRAM OF INVESTIGATION*

FIELD INVESTIGATION

- 1.1 Two boring units with all necessary equipments along with a team of technical personal with skilled labours were mobilized at the work site.
- 1.2 Two bore hole of 150mm was bored to a depth suggested by client, below the existing ground level. Bore hole was made as per IS. 1892-1979, using rotary drilling.
- 1.3 Representative samples were collected at every 1.00mts intervals depth change of strata, whichever is earlier.
- 1.4 The samples collected were carefully sealed and transported to laboratory for tests.
- 1.5 Standard Penetration Tests were conducted at every 1.50 mts intervals intervals after that, as per IS :2131 - 1981. Before testing borehole was Cleaned properly and Split Spoon Sampler is placed centrally in bore hole. A Standard hammer of 63.50 kg. is dropped from a height of 75.cm and number of blows for penetration of sampler for 0-15 cm, 15-30cm and 30-45 cm were noted. Number of blows required form 15-45 cm penetration is reported as N value.
- 1.6 Bore hole was terminated after the investigation.
- 1.7 LABORATORY INVESTIGATION.

II. 2.1 The following laboratory tests were conducted on the selected samples as relevant IS Codes.

- a.) Particle size analysis (IS. 2720-Part 4-1985)
- b.) Water contents (IS. 2720-Part 2-1973)
- c.) Bulk density (IS.2720-Part 9-1992)
- d.) Specific Gravity (IS.2720-Part 13-1986)
- e.) Direct shear Test (IS.2720-Part 13-1986)
- f.) Liquid Limit & Plastic Limit (IS.2720-Part 5-1985)
- g.) Triaxial Test (IS.2720-Part 11-1971)

Site: Brahmapuram (Part A2-A&B)
Project: Proposed Solar Container Storage
Client: Kerala State Electricity Board Limited

Bore Hole details: BH-IV & BH-V dated 21-08-2025

Ground Water table: Water table was met at 1.50m depth below ground level for BH-IV & BH-V.

Recommendations are based on the assumption that the soil profile found in the bore hole tested is indicative of the entire plot area. Any deviation in soil profile other than that observed in the bore hole tested should immediately be referred to the consultant and proper modification should be implemented by a qualified engineer.

1. Soil Profile

As per the provided soil investigation report, two boreholes were taken at the site.

In BH-IV, top 1.50m depth comprises of Sand with Pebbles (Brown) with S.P.T value >50. It is followed by Lateritic Clayey Sand with Gravel (Yellowish Red) up to depth 3.0m with S.P.T value >50. Below this it is Lateritic Clayey Sand with Gravel (Red) up to depth 4.50m with S.P.T value >50. After this it is Lateritic Clayey Sand with Gravel (Yellowish Red) up to depth 6.0m with S.P.T value >50. Beneath this it is Lateritic Clayey Sand with Gravel (Brown, Yellow, White) up to depth 7.0m with S.P.T value >50. It is followed by Clayey Sand with Gravel (Whitish Yellow) up to depth 9.0m with S.P.T value >50. Below this it is Weathered Rock (Grey) up to depth 10.0m with S.P.T value >50. Beyond this it is Hard Strata with S.P.T Rebound. Borehole was terminated at a depth of 10.0m. Water table was met at a depth 1.50m below ground level.

In BH-V, the top 2.0m depth of Lateritic Clay with Sand (White, Pink) with S.P.T value 9. It is followed by Silty Lateritic Clay with Sand (Light Whitish Yellow) up to depth 4.50m with S.P.T value between 8 and 15. Below this it is Silty Lateritic Clay with Sand & Gravel (Yellow) up to depth 6.0m with S.P.T value 16.

After this it is Silty Lateritic Clay with Sand (Brownish Pink, White) up to depth 7.50m with S.P.T value 19. Beneath this it is Clayey Silty Sand (Yellow) up to depth 8.50m with S.P.T value 23. It is followed by Silty Sand (Yellowish Brown) up to depth 9.50m with S.P.T value >50. Beyond this it is Hard Strata at 9.50m with S.P.T Rebound. Borehole was terminated at a depth of 9.50m. Water table was met at a depth of 1.50m below ground level.

2. RECOMMENDATION

1. An isolated footing with a Safe bearing capacity 10T/m^2 may be adopted at 1.20m depth below ground level. Ensure same stratum is available throughout the site.
2. Foundation shall be constructed using various relevant Indian Standard Codes.

CLIENT:		KERALA STATE ELECTRICITY BOARD LIMITED															
PROJECT:		PROPOSED SOLAR CONTAINER STORAGE															
SITE:		BRAHMAPURAM															
BORE HOLE NO. : BH-IV									Date of start: 21/08/2025								
									Date of completion: 21/08/2025								
TYPE OF BORING: Rotary Drilling					Ground water table: 1.5m below GL												
Description of soil	Thickness of layer m	Depth in m below GL	Bore log	Standard Penetration Test					Graph of 'N' value						Remarks		
				depth (m)	15 cm	30 cm	45 cm	N Value	10	20	30	40	50	>50			
Sand with Pebbles (Brown)	1.50	1.50		1.00	50	-	-	>50								42cm Balance	
Lateritic Clayey Sand with Gravel (Yellowish Red)	1.50	3.00		2.00	18	32	-	>50								17cm Balance	
Lateritic Clayey Sand with Gravel (Red)	1.50	4.50		3.00	50	-	-	>50								35cm Balance	
Lateritic Clayey Sand with Gravel (Yellowish Red)	1.50	6.00		4.50	50	-	-	>50								31cm Balance	
Lateritic Clayey Sand with Gravel (Brown, Yellow, White)	1.00	7.00		6.00	46	4	-	>50								29cm Balance	
Clayey Sand with Gravel (Whitish Yellow)	2.00	9.00		7.50	33	17	-	>50								18cm Balance	
Weathered Rock (Grey)	1.00	10.00		9.00	23	27	-	>50								24cm Balance	
Hard Strata				10.00												SPT Rebound	
Bore hole terminated at 10.00m depth																	

CLIENT:		KERALA STATE ELECTRICITY BOARD LIMITED													
PROJECT:		PROPOSED SOLAR CONTAINER STORAGE													
SITE:		BRAHMAPURAM													
BORE HOLE NO. : BH-V								Date of start: 2025							
								Date of completion: 2025							
TYPE OF BORING: Rotary Drilling				Ground water table: 1.50m below GL											
Description of soil	Thickness of layer m	Depth in m below GL	Bore log	Standard Penetration Test					Graph of 'N' value						Remarks
				depth (m)	15 cm	30 cm	45 cm	N Value	10	20	30	40	50	>50	
Lateritic Clay with Sand (White,Pink)	2.00	2.00		1.00	3	3	6	9							
Silty Lateritic Clay with Sand (Light Whitish Yellow)	2.50	4.50		2.00	2	5	10	15							
				3.00	1	3	5	8							
Silty Lateritic Clay with Sand & Gravel (Yellow)	1.50	6.00		4.50	3	5	11	16							
Silty Lateritic Clay with Sand (Brownish Pink,White)	1.50	7.50		6.00	3	6	13	19							
Clayey Silty Sand (Yellow)	1.00	8.50		7.50	4	8	15	23							
Silty Sand (Yellowish Brown)	1.00	9.50		9.00	49	1	-	>50							29cm Balance
Hard Strata				9.50											SPT Rebound
Bore hole terminated at 9.50m depth															

Bore hole No.	Depth (m)	Description of soil	Natural water content (%)	Bulk density (g/cc)	LL (%)	PL (%)	Grain size distribution (%)					Type of Sample	Type of test	Specific gravity	Cohesion c (kg/cm ²)	Angle of internal friction (°)
							Sand			Gravel						
							Silt & Clay	Fine	Medium	Coarse	Gravel					
IV	1.0	Gravelly Sand (SP-GP)	8.80	1.82	-	-	1	0	7	53	39	ds	Insufficient sample for strength test			
	2.0	Clayey Gravelly Sand (SC-GC)	20.68	1.83	44.6	25.1	37	17	21	11	14	ds		Direct Shear	2.65	0.11
	4.5	Clayey Gravelly Sand (SC-GC)	26.72	1.82	52.6	24.1	26	13	18	8	35	ds	Direct Shear	-	0.09	34
	7.5	Sandy Clayey Gravel (GC-SC)	23.27	1.83	-	-	42	5	9	4	40	ds	Insufficient sample for strength test			
	9.0	Silty Sand (SM)	32.58	1.84	-	-	23	57	20	0	0	ds		Direct Shear	2.65	0.10

(All the tests are done on remoulded sample collected from SPT spoon)

Bore hole No.	Depth (m)	Description of soil	Natural water content (%)	Bulk density (g/cc)	LL (%)	PL (%)	Grain size distribution (%)					Type of Sample	Type of test	Specific gravity	Cohesion c (kg/cm ²)	Angle of internal friction (ø °)
							Silt & Clay	Sand			Gravel					
								Fine	Medium	Coarse						
V	1.0	Clayey Sandy Silt (MH-SP)	37.38	1.56	65.6	39.1	63	21	15	1	0	ds	Triaxial	2.64	0.28	13
V	3.0	Sandy Clayey Silt (MH-CH)	43.17	1.58	53.7	34.5	72	19	9	0	0	sp	Triaxial	-	0.30	16
V	4.5	Clayey Sandy Silt (MI-SP)	26.59	1.72	38.8	30.6	51	13	17	11	8	ds	Triaxial	2.64	0.27	21
V	7.5	Clayey Silty Sand (SM-SC)	28.89	1.75	-	-	32	29	30	6	3	ds	Insufficient sample for strength test			
V	9.0	Silty Sand (SM)	24.13	1.83	-	-	22	42	34	2	0	ds	Direct Shear	2.65	0.14	22

(All the tests are done on remoulded sample collected from SPT spoon)

BATTERY ENERGY STORAGE PURCHASE AGREEMENT

FOR

PROCUREMENT OF 250 MW/ 500 MWH

ON LONG TERM BASIS

Between

.....[Insert Name of BESSD]

And

Kerala State Electricity Board Limited (KSEBL)

...[Insert month and year]

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SCHEDULE B: PERFORMANCE CRITERIA & CALCULATION UNDER BESPA

This Battery Energy Storage Purchase Agreement is made on the[Insert date] day of[Insert month] of [Insert year] at.....[Insert place]

Between

...[Insert name of the BESSD], a Company incorporated under the Companies Act 1956 or Companies Act 2013, having its registered office at [Insert address of the registered office of BESSD] (hereinafter referred to as “**Battery Energy Storage System Developer**” or “**Storage Project Developer**” or “**BESSD**”, which expression shall, unless repugnant to the context or meaning thereof, be deemed to include its successors and permitted assigns) as a Party of the **First Part**;

And

.....[Insert name of Buying Entity], a company incorporated under the **Companies Act, 1956**, having its registered office at [Insert address of the registered office of Buying Entity] (hereinafter referred to as “**KSEBL**” or “**Buying Entity**” or “**Procurer**” or “**Buyer**”), which expression shall, unless repugnant to the context or meaning thereof, be deemed to include its successors and assignees) as a Party of the **Second Part**;

The BESSD and KSEBL are individually referred to as ‘Party’ and collectively referred to as ‘Parties’.

WHEREAS:

- A. The Ministry of Power, Government of India has issued the “*Guidelines for Procurement and Utilization of Battery Energy Storage Systems as part of Generation, Transmission and Distribution assets, along with Ancillary Services*” vide Resolution dated 10th March 2022, including subsequent amendments and clarifications thereof, if any, issued until _____ [Enter the last date of bid submission of the RfS] and Guidelines for Viability Gap Funding Scheme for development of Battery Energy Storage System (BESS) supported through Power System Development Fund (PSDF) on 09th June 2025 including subsequent amendments and clarifications thereof.
- B. Kerala State Electricity Board Limited (hereinafter referred to as “KSEBL”), is the State Electricity Utility in the state of Kerala. Kerala has been allocated 500 MWh BESS Capacity by Ministry of Power, GoI under the Viability Gap Funding (VGF) under Power System Development Fund (PSDF) Development of Battery Energy Storage Systems (BESS).
- C. KSEBL through its Authorised Representative i.e. NTPC Vidyut Vyapar Nigam Limited

(hereinafter referred to as 'NVVN') had initiated a Tariff Based Competitive Bid Process for development of cumulative capacity of 250 MW/500 MWh of STU connected standalone Battery Energy Storage Systems (BESS) in the state of Kerala with Viability Gap Funding (VGF) Support on the terms and conditions contained in the Request for Selection Documents (herein after referred to as '**RFS**') issued by NVVN vide RfS No..... dated..... .

- D. KSEBL has issued the Letter of Award No..... dated.....in favor of the _____[Insert name of the Bidding Company] for development and establishment of the ____MW/____MWh of "Project" or "BESS" at a location provided at _____in the State of_____as per the terms and conditions contained in the RfS, this Battery Energy Storage Purchase Agreement (BESPA) and other bidding documents as well as the conditions contained in the Letter of Award.
- E.[**Insert Name of the Bidding Company**] has been selected in the Competitive Bidding Process {in case Bidding Company is executing the Project through SPV}, has constituted a [**Insert Name of the SPV**] (hereinafter referred to as '**BESSD**'), for development, and supply of BESS Capacity from the MW/____MWh of the Project / BESS to be established by BESSD in state of Kerala and for making available of such Battery Energy Storage Capacity to KSEBL (Buying Utility).
- F. KSEBL has agreed to purchase such Battery Energy Storage Capacity from the BESSD as Buying Utility as per the provisions of the RfS and as per the given provision of this Agreement. The terms and conditions of the agreement are valid, subject to the approval of KSERC. In the case of non-approval from KSERC, no party shall be liable in any manner.
- G. In terms of the RfS and the Bidding Documents, the BESSD has furnished the Performance Bank Guarantee in the sum of Rs.....in favour of KSEBL as per the format provided as a part of the Bidding Documents and a copy of the Bank Guarantee provided in Schedule – 1 to this Agreement.
- H. BESSD has fulfilled the terms of the RfS Documents and the terms of the Letter of Award for signing this Battery Energy Storage Purchase Agreement as a definitive agreement for developing the "Project" (or "BESS") of.....MW/ _____MWh at ____ (location of plant) _____in the State of Kerala for making available Battery Energy Storage Capacity by the BESSD to KSEBL/ Buying Utility.
- I. Viability Gap Funding: BESSD is eligible for grant of Central Financial Assistance in the

form of Viability Gap Funding (VGF), to be released as per the provisions contained in the RfS and this agreement. In line with the sanction Order, issued by the Ministry of Power vide Order No: F. No. 48-15/7/2025-NRE Section – MoP Dated 09.06.2025, Project selected under this RfS will be eligible for grant of Viability Gap Funding (VGF) support by the Government for development of Battery Energy Storage System and the same will be disbursed as per the procedure followed by Power System Development Fund Guidelines.

- J. The parties have agreed to execute this Battery Energy Storage Purchase Agreement in terms of the provisions of the RfS, the bidding documents and the Letter of Award in regard to the terms and conditions for development of the Project at, [Insert project location & name of state] on Build, Own Operate basis and for making available such Battery Energy Storage Capacity by the BESSD to KSEBL.

Now therefore, in consideration of the premises and mutual agreements, covenants and conditions set forth herein, it is hereby agreed by and between the Parties as follows:

ARTICLE 1: DEFINITIONS AND INTERPRETATION

1.1 Definitions

The terms used in this Agreement, unless as defined below or repugnant to the context, shall have the same meaning as assigned to them by the Electricity Act, 2003 and the rules or regulations framed there under, including those issued / framed by the Appropriate Commission (as defined hereunder), as amended or re-enacted from time to time.

“Act” or “Electricity Act, 2003”	shall mean the Electricity Act, 2003 and include any modifications, amendments and substitution from time to time;
“Adjusted Equity”	shall mean the Equity funded in Indian Rupees and adjusted on the first day of the current month (the “Reference Date”), in the manner set forth below, to reflect the change in its value on

	<p>account of depreciation and variations in Wholesale Price Index (WPI), and for any Reference Date occurring between the first day of the month of Appointed Date (the date of achievement of Financial Closure) and the Reference Date;</p> <ol style="list-style-type: none"> On or before Commercial Operation Date (COD), the Adjusted Equity shall be a sum equal to the Equity funded in Indian Rupees and expended on the Project, revised to the extent of one half of the variation in WPI occurring between the first day of the month of Appointed Date and Reference Date; An amount equal to the Adjusted Equity as on COD shall be deemed to be the base (the "Base Adjusted Equity"); After COD, the Adjusted Equity hereunder shall be a sum equal to the Base Adjusted Equity, reduced by 0.333% (zero point three threethree percent) thereof at the commencement of each month following the COD [reduction of 1% (one percent) per quarter of a year] and the amount so arrived at shall be revised to the extent of variation in WPI occurring between the COD and the Reference Date; <p>For the avoidance of doubt, the Adjusted Equity shall, in the event of termination, be computed as on the Reference Date immediately preceding the Transfer Date; provided that no reduction in the Adjusted Equity shall be made for a period equal to the duration, if any, for which the BESPAs period is extended, but the revision on account of WPI shall continue to be made.</p>
"Agreement" or "Battery Energy Storage Purchase Agreement" or "BESPA"	shall mean this Battery Energy Storage Purchase Agreement including its recitals and Schedules, amended or modified from time to time in accordance with the terms hereof;
"Appropriate Commission"	Unless otherwise stated, Appropriate Commission shall mean Kerala Electricity Regulatory Commission (KERC)
"APPC" or "Average Power Purchase Cost"	in Rs/kWh shall mean the weighted average cost of the power purchased by KSEB Ltd including the cost of self-generation by KSEB Ltd.
"Bill Dispute Notice"	shall mean the notice issued by a Party raising a Dispute regarding a Monthly Bill or a Supplementary Bill issued by the other Party;
"Battery Energy Storage Project" or "Project" or "BESS PROJECT", "Battery Energy Storage"	shall mean the system(s)/projects of[Insert capacity] MW/.....MWh, located at..... [Insert name of the place] in [Insert name of the District and State] having a separate control system, metering and single point of injection into the grid at Delivery/Interconnection/Metering point at STU

Systems” or “BESS”	<p>substation and utilizing methods and technologies such as electrochemical batteries (Lead Acid, Li-ion, solid state batteries, flow batteries etc.), providing a facility that can store energy and deliver the stored energy in the form of electricity, including ancillary facilities (grid support, for example).</p> <p>It also includes all units and auxiliaries, Battery Energy Management System including associated applications / software; bay/s for transmission system in the switchyard, dedicated transmission line up to the Delivery Point and all the other assets, buildings/structures, equipment, plant and machinery, facilities and related assets required for the efficient and economic operation of the power generation facility; whether completed or at any stage of development and construction or intended to be developed and constructed for the purpose of supply of above mentioned Battery Energy Storage Capacity as per this Agreement;</p>
“Business Day”	shall mean with respect to BESSD and KSEBL, a day other than Second Saturday or Sunday or a statutory holiday or KSEBL holiday, on which the banks remain open for business in Thiruvananthapuram, Kerala;
“Buying Entity” or “Buying Utility” or “Discom”	Buying Entity/ Utility shall mean Kerala State Electricity Board Limited (KSEBL)
“CERC”	shall mean the Central Electricity Regulatory Commission of India, constituted under sub – section (1) of Section 76 of the Electricity Act, 2003, or its successors;
“CTU” or “Central Transmission Utility”	shall mean the Government Company notified by the Central Government under Sub-Section (1) of Section 38 of the Electricity Act, 2003.
Charging Power	Shall mean the requirement of energy to charge the contracted capacity and additional energy considering minimum system efficiency as per RfS. Charging power shall be provided by KSEBL/Procurer under this agreement.
“Change in Law”	shall have the meaning ascribed thereto in Article 12 of this Agreement;
“Commissioning”	The Project will be considered as commissioned if all equipment as per rated Project Capacity has been installed, synchronized with Grid demonstrated all required parameters as per procedure in Schedule 3 of this Agreement.
“Commercial Operation Date (COD)”	shall mean the date of next day on which the Project Capacity or the last part capacity of the Project (as the case may be) has achieved successful commissioning (as per provisions of this Agreement and RfS Documents).

"Competent Court of Law"	shall mean any court or tribunal or any similar judicial or quasi-judicial body in India that has jurisdiction to adjudicate upon issues relating to this Agreement;
"Consents, Clearances and Permits"	shall mean all authorizations, licenses, approvals, registrations, permits, waivers, privileges, acknowledgements, agreements, or concessions required to be obtained from or provided by any concerned authority for the purpose of setting up of the Project and providing energy storage facility under this Agreement;
"Consultation Period"	shall mean the period of ninety (90) days or such other longer period as the Parties may agree, commencing from the date of issuance of a BESSD Preliminary Default Notice or KSEBL Preliminary Default Notice as provided in Article 13 of this Agreement, for consultation between the Parties to mitigate the consequence of the relevant event having regard to all the circumstances;
"Contract Year"	shall mean the period beginning from the Effective Date and thereafter each period of 12 months, provided that: (i) in the financial year in which the Scheduled Commissioning Date or date of full commissioning of the project which ever is later would occur, the Contract Year shall end on the date immediately before such Date and a new Contract Year shall commence once again from the Scheduled Commissioning Date or date of full commissioning of the project which ever is later and thereafter each period of twelve (12) months for illustration if date of Commissioning of the full project is 10 th April 2026, then the contract year shall end on 9 th April 2027 and (ii) provided further that the last Contract Year of this Agreement shall end on the last day of the Term of this Agreement
"Contracted Capacity"	shall mean MW/_____MWh, which is the Energy Storage Capacity contracted with KSEBL for supply by the BESSD to KSEBL at the Delivery Point from the Project. Moreover, it is clarified that the Project Capacity, i.e. _____ MW (Insert the Project Capacity) shall not be capacity demonstrated under any other tender concluded by any Central or State Agency as on the last date of bid submission of this RfS.
"Controlling Shareholding"	shall mean more than 50% of the voting rights and paid up share capital in the Company/ Consortium.
"Day"	shall mean a day, if not a Business Day, the immediately succeeding Business Day.

<p>“Debt Due”</p>	<p>shall mean the aggregate of the following sums expressed in Indian Rupees outstanding on the Transfer Date:</p> <ol style="list-style-type: none"> a. The principal amount of the debt provided by the Senior Lenders under the Financing Agreements for financing the Total Project Cost (the ‘Principal’) but excluding any part of the principal that had fallen due for repayment 2 (two) years prior to the Transfer Date; b. All accrued interest, financing fees and charges payable under the Financing Agreements on, or in respect of, the debt referred to in sub-clause (a) above until the Transfer Date but excluding: (i) any interest, fees or charges that had fallen due 2 (two) years prior to the Transfer Date, (ii) any penal interest or charges payable under the Financing Agreements to any Senior Lender, (iii) any prepayment charges in relation to accelerated repayment of debt except where such charges have arisen due to Procurer Default, and (iv) any Subordinated Debt which is included in the Financial Package and disbursed by equity investors or their Affiliates for financing the Total Project Cost. <p>Provided that if all or any part of the Debt Due is convertible into Equity at the option of Senior Lenders and/or the Concessionaire, it shall for the purposes of this Agreement be deemed not to be Debt Due even if no such conversion has taken place and the principal thereof shall be dealt with as if such conversion had been undertaken. Provided further that the Debt Due, on or after COD, shall in no case exceed 80% (eighty percent) of the Total Project Cost.</p>
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"Delivery Point"	<p>shall mean the interconnection point at the voltage level of 220 kV of Brahmapuram 220 kV Grid Interconnecting Sub-station including the dedicated transmission line (if any) connecting the Project with the substation system as specified in the RfS document.</p> <p>Metering shall be done at this interconnection point where the power is injected into / drawn. For interconnection with grid and metering, the BESSD shall abide by the relevant and applicable regulations, Grid Code notified by the CERC or (and) Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006 as amended and revised from time to time, or orders passed thereunder by the appropriate commission or CEA.</p> <p>Subject to provisions of this Agreement, for the Contracted Capacity, all charges and losses for charging, storing of energy and offtake of power shall be to the account of the Buying Entity. However, any charges / losses (if any) as per extant regulations /</p>
	<p>guidelines which are to be borne by the BESSD shall be borne by the BESSD. Moreover, any penalty or cost like deviation settlement mechanism etc. upto delivery point which is not attributable to Buying Entity shall be borne by the BESSD. In case it is paid by KSEBL on behalf of Buying Utilities / BESSD, the same shall be recovered from the Buying Utilities / BESSD (as applicable);;</p>
Discom	shall mean the Buying Entity i.e KSEBL
"Dispute"	shall mean any dispute or difference of any kind between KSEBL and the BESSD, in connection with or arising out of this Agreement including but not limited to any issue on the interpretation and scope of the terms of this Agreement as provided in Article 16 of this Agreement;
"Due Date"	shall mean the forty fifth (45 th) day after a Monthly Bill (including all the relevant documents) or a Supplementary Bill is received in hard copy or in soft copy over e-mail and duly acknowledged by the KSEBL or, if such day is not a Business Day, the immediately succeeding Business Day, by which date such Monthly Bill or a Supplementary Bill is payable by the KSEBL.
"Effective Date"	shall have the meaning ascribed thereto in Article 2.1 of this Agreement;

"Electricity Laws"	shall mean the Electricity Act, 2003 and the rules and regulations made there under from time to time along with amendments thereto and replacements thereof and any other Law pertaining to electricity including regulations framed by the Appropriate Commission;
"Energy Accounts"	shall mean the regional energy accounts/state energy accounts as specified in the Grid Code issued by the appropriate agency for each Month (as per their prescribed methodology), including the revisions and amendments thereof or where such regional energy accounts/ state energy accounts are not issued, Joint Meter Reading (JMR) will be considered; KSEBL reserves the right to choose from any of the above, i.e. JMR/SEA/REA;
"Event of Default"	shall mean the events as defined in Article 13 of this Agreement;
"Expiry Date"	Shall mean the date occurring as on sixteen (16) years from the Scheduled Commissioning Date (SCD) or the date of full commissioning of the Project, whichever is later, subject to the condition that the storage capacity shall be made available to KSEBL for a period upto 16 years from the from the Scheduled Commissioning Date (SCD) or the date of full commissioning of the Project, whichever is later, unless extended by the Parties as per this Agreement;
"Financial Closure"	shall mean compliance with the requirements under Article 3.1 of this Agreement;
"Financing Agreements"	shall mean the agreements pursuant to which the BESSD has sought financing for the Project including the loan agreements, security documents, notes, indentures, security agreements, letters of credit and other documents, as may be amended, modified, or replaced from time to time, but without in anyway increasing the liabilities of KSEBL;
"Force Majeure" or "Force Majeure Event"	shall have the meaning ascribed thereto in Article 11 of this Agreement;
"Guidelines" or "Scheme"	shall mean the Guidelines for "Procurement and Utilization of Battery Energy Storage Systems as part of Generation, Transmission and Distribution assets, along with Ancillary Services" issued by the Ministry of Power vide Gazette Resolution dated 10 th March 2022, including subsequent amendments and clarifications, issued until the last date of bid submission of the referred RfS and operations guidelines for Scheme for development of Battery Energy Storage Systems supported through Power System Development Fund (PSDF) dated 09th June 2025 and subsequent clarifications and amendments issued by Ministry of Power;

"Grid Code" / "IEGC" or "State Grid Code"	shall mean the Grid Code specified by the CERC under Clause (h) of Sub-section (1) of Section 79 of the Electricity Act, as amended from time to time, and/or the State Grid Code as specified by the concerned State Commission, referred under Clause (h) of Sub-section (1) of Section 86 of the Electricity Act 2003, as applicable;
InSTS	shall mean the Intra-State Transmission System;
"Indian Governmental Instrumentality"	shall mean the Government of India, Governments of state(s) [Insert the name(s) of the state(s) in India, where the Power Project, KSEBL and BESSD are located] and any ministry, department, board, authority, agency, corporation, commission under the direct or indirect control of Government of India or the above state Government(s) or both, any political sub-division of any of them; including any court or Appropriate Commission(s) or tribunal or judicial or quasi-judicial body in India;
"Insurances"	shall mean the insurance cover to be obtained and maintained by the BESSD in accordance with Article 8 of this Agreement;
"Interconnection Facilities"	shall mean the facilities on BESSD's side of the Delivery Point for scheduling, transmitting and metering the electrical output in accordance with this Agreement and which shall include, without limitation, all other transmission lines and associated equipment, transformers, relay and switching equipment and protective devices, safety equipment and RTU, Data Transfer and Acquisition facilities for transmitting data subject to Article 7, the Metering System required for supply of power as per the terms of this Agreement;
"Invoice" or "Bill"	shall mean either a Monthly Bill / Supplementary Bill or a Monthly Invoice/ Supplementary Invoice raised by any of the Parties;
"Joint Control"	shall mean a situation where none of the promoter shareholders has more than 50% shareholding in the paid-up share capital and voting rights in the BESSD, and the control is exercised jointly;
KSERC	shall mean the Kerala State Electricity Regulatory Commission
"Late Payment Surcharge"	shall have the meaning ascribed thereto in Article 10.3.3 of this Agreement;
"Law"	shall mean in relation to this Agreement, all laws including Electricity Laws in force in India and any statute, ordinance, regulation, notification or code, rule, or any interpretation of any of them by an Indian Governmental Instrumentality and having force of law and shall further include without limitation all applicable rules, regulations, orders, notifications by an Indian Governmental Instrumentality pursuant to or under any of them and shall include without limitation all rules, regulations, decisions and orders of the Appropriate Commissions;

"Letter of Credit" or "L/C"	shall have the meaning ascribed thereto in Article 10.4 of this Agreement;
"MNRE"	shall mean the Ministry of New and Renewable Energy, Government of India;
"MOP"	shall mean the Ministry of Power, Government of India;
"Month"	shall mean a period of thirty (30) days from (and excluding) the date of the event, where applicable, else a calendar month;
"Monthly Availability"	For a particular Contract month "Monthly Availability" shall be the average availability of the Contracted BESS capacity during that particular Contract month, calculated as per the RfS ;
KSEBL	Shall mean Kerala State Electricity Board Limited
"Party" and "Parties"	shall have the meaning ascribed thereto in the recital to this Agreement;
"Payment on Order Instrument" or "POI"	shall mean the irrevocable unconditional letter of undertaking issued by either of the three institutions, viz., (i) Indian Renewable Development agency Limited (IREDA) or (ii) Power Finance Corporation Limited or (iii) REC Limited.,
"Payment Security Mechanism"	shall have the meaning ascribed thereto in Article 10.4 of this Agreement;
"Performance Bank Guarantee" or "PBG"	shall mean the irrevocable unconditional bank guarantee, submitted by the BESSD to KSEBL in the form attached hereto as Schedule1;
"Preliminary Default Notice"	shall have the meaning ascribed thereto in Article 13 of this Agreement;
"Project Capacity"	Shall mean [Insert the capacity] MW/_____MWh [as per LOA] of BESS, which [Insert name of BESSD] is required to Build Own Operate and supply such Battery Energy Storage Capacity as per provisions of this Agreement read harmoniously with RfS Documents and LOA.

"Prudent Utility Practices"	shall mean the practices, methods and standards that are generally accepted internationally from time to time by electric utilities for the purpose of ensuring the safe, efficient and economic design, construction, commissioning, operation and maintenance of Energy Storage System equipment and which practices, methods and standards shall be adjusted as necessary, to take account of: a) operation and maintenance guidelines recommended by the manufacturers of the plant and equipment to be installed / used for the Project Battery Energy Storage Project; b) the requirements of Indian Law; and the physical conditions at the site of the Project; c) Installation, Operation, Maintenance and Safety Guidelines / Rules / Regulations for BESS/ Projects / Power Projects issued by Central Government Instrumentality;
"RBI"	shall mean the Reserve Bank of India;
"Rebate"	shall have the same meaning as ascribed thereto in Article 10.3.4 of this Agreement;
"RLDC"	shall mean the relevant Regional Load Dispatch Centre established under Sub-section (1) of Section 27 of the Electricity Act, 2003;
"RPC"	shall mean the relevant Regional Power Committee established by the Government of India for a specific region in accordance with the Electricity Act, 2003 for facilitating integrated operation of the power system in that region;
"Rupees", "Rs.", ₹	shall mean Indian rupees, the lawful currency of India;
"Scheduled Commissioning Date" or "SCD" of the Project	shall mean [Insert Date]; in relation to the contracted capacity or the part of the contracted capacity, shall mean the date(s) corresponding to the date of commencement of supply of quoted storage capacity in the RfS (Request for Selection) (i.e. not more than 18 months from the date of signing of BESPAs or as extended in terms of the provisions of this agreement).
"SERC"	shall mean the Electricity Regulatory Commission of any State in India constituted under Section-82 of the Electricity Act, 2003 or its successors, and includes a Joint Commission constituted under Subsection (1) of Section 83 of the Electricity Act 2003;
"SLDC"	shall mean the center established under Sub-section (1) of Section 31 of the Electricity Act 2003, relevant for the State(s) where the Delivery Point is located;
"SLDC Charges"	shall mean the charges levied by the SLDC of the state wherein the Project is located;

"State Transmission Utility" or "STU"	shall mean the Board or the Government company notified by the respective State Government under Sub-section (1) of Section 39 of the Act and Transmission Wing of KSEBL.
"Tariff" or "Applicable Tariff"	Shall have the same meaning as provided for in Article 9 of this Agreement;
"Tariff Payment"	shall mean the payments to be made under Monthly Bills as referred to in Article 10 and the relevant Supplementary Bills;
"Termination Notice"	shall mean the notice given by either Parties for termination of this Agreement in accordance with Article 13 of this Agreement;
"Term of Agreement"	shall have the meaning ascribed thereto in Article 2 of this Agreement;
"Unit/ Part Commissioning"	Subject to the compliance of conditions / procedure as detailed under Schedule-3 of this Agreement, Unit / Part Commissioning shall mean the Energy Storage Power Capacity (AC MW/ AC MWh) to be commissioned as per provisions of this Agreement and RfS document. Subject to other applicable provisions, the minimum part commissioning capacity for the 1 st part will be 50% of the MWh capacity at the project location. The total number of instalments / phases / parts in which a Project can be commissioned will be not more than 3, i.e., 1 st Part of minimum 50% of the MWh Capacity and 2 subsequent parts.
"Unit Commercial Operation Date (UCOD)"	shall mean the date of the next day of commissioning of the respective part(s) of the Battery Energy Storage Project subsequent to the demonstration of the compliance of commissioning as per this Agreement and witnessed by the Committee (as applicable) duly constituted and also start of injection / drawl and scheduling of power from the BESS at the Delivery Point and availability / installation of all necessary arrangements / equipment including RTU for scheduling of power generated from the Project and transmission of data to the concerned authority as per applicable regulation;
Viability Gap Funding (VGF)	Viability Gap Funding is financial support to be provided by the Central Government to BESSD through KSEBL. The VGF shall be a non-recurring expenditure and shall be fully funded from central grant. VGF amount eligible for BESS Developer is limited to the amount calculated @Rs. 18,00,000/MWh (Rupees Eighteen Lakhs per MWh)
"Week"	shall mean a calendar week commencing from 00:00 hours of Monday, and ending at 24:00 hours of the following Sunday;

1.2 Interpretation

Save where the contrary is indicated, any reference in this Agreement to:

- 1.2.1 "Agreement" shall be construed as including a reference to its Schedules and/or Appendices and/or Annexures;
- 1.2.2 An "Article", a "Recital", a "Schedule" and a "paragraph / clause" shall be construed as a reference to an Article, a Recital, a Schedule and a paragraph/clause respectively of this Agreement;
- 1.2.3 A "crore" means a reference to ten million (10,000,000) and a "lakh" means a reference to one tenth of a million (1,00,000);
- 1.2.4 An "encumbrance" shall be construed as a reference to a mortgage, charge, pledge, lien or other encumbrance securing any obligation of any person or any other type of preferential arrangement (including, without limitation, title transfer and retention arrangements) having a similar effect;
- 1.2.5 "Indebtedness" shall be construed so as to include any obligation (whether incurred as principal or surety) for the payment or repayment of money, whether present or future, actual or contingent;
- 1.2.6 A "person" shall be construed as a reference to any person, firm, company, corporation, society, trust, government, state or agency of a state or any association or partnership (whether or not having separate legal personality) of two or more of the above and a person shall be construed as including a reference to its successors, permitted transferees and permitted assigns in accordance with their respective interests;
- 1.2.7 "Rupee", "Rupees", "Rs" or new rupee symbol "₹" shall denote Indian Rupees, the lawful currency of India;
- 1.2.8 The "Winding-up", "dissolution", "insolvency", or "reorganization" of a company or corporation shall be construed so as to include any equivalent or analogous proceedings under the Law of the jurisdiction in which such company or corporation is incorporated or any jurisdiction in which such company or corporation carries on business including the seeking of liquidation, Winding-up, reorganization, dissolution, arrangement, protection or relief of debtors;
- 1.2.9 Words importing the singular shall include the plural and vice versa;
- 1.2.10 This Agreement itself or any other agreement or document shall be construed as a reference to this or to such other agreement or document as it may have been, or may from time to time be, amended, varied, novated, replaced or supplemented;

- 1.2.11 A Law shall be construed as a reference to such Law including its amendments or re- enactments from time to time;
- 1.2.12 A time of day shall, save as otherwise provided in any agreement or document be construed as a reference to Indian Standard Time;
- 1.2.13 Different parts of this Agreement are to be taken as mutually explanatory and supplementary to each other and if there is any inconsistency between or among the parts of this Agreement, they shall be interpreted in a harmonious manner so as to give effect to each part;
- 1.2.14 The tables of contents and any headings or sub-headings in this Agreement have been inserted for ease of reference only and shall not affect the interpretation of this Agreement;
- 1.2.15 All interest, if applicable and payable under this Agreement, shall accrue from day to day and be calculated on the basis of a year of three hundred and sixty-five (365) days;
- 1.2.16 The words “hereof” or “herein”, if and when used in this Agreement shall mean a reference to this Agreement;
- 1.2.17 The terms “including” or “including without limitation” shall mean that any list of examples following such term shall in no way restrict or limit the generality of the word or provision in respect of which such examples are provided;
- 1.2.18 This Agreement and other documents such as Request for Selection Documents, Guidelines including subsequent clarifications, amendments and further clarifications in regard to the tender shall be read in conjunction with each other and interpreted in harmonious manner. However, in case of any mismatch/contradiction between provisions of different documents, following shall be the order of precedence:
1. Battery Energy Storage Purchase Agreement
 2. RfS Document & Letter of Award

ARTICLE 2: TERM OF AGREEMENT

2.1 *Effective Date*

- 2.1.1 The Effective Date of the BESPA shall be the date as on 30 days from the date of issue of LoA, or the date of signing of BESPA, whichever is later (for example, if the date of LoA is 07.04.2026, the Effective Date will be 06.05.2026 or date of signing of BESPA, whichever is later). Subsequent to expiry of the 30-day period after the issuance of LoA, in case KSEBL intimates to the Successful Bidder, a particular date as the date for signing of BESPA, the specified date shall become the Effective Date of the BESPA, irrespective of the date of signing of BESPA.
- 2.1.2 The Parties agree that decisions pertaining to adoption of the Tariff and approval of the same, for procurement of Contracted Capacity, shall be binding on all Parties concerned, as contained in the Electricity Act, 2003 and any amendments thereof.
- 2.1.3 Notwithstanding the Effective Date, the condition precedent for the enforcement of the obligations of either Party against the other under this Agreement shall be that, within 120 days after the Effective Date of the BESPA, KSEBL and/or the Buying Entity shall obtain adoption of tariff from Appropriate Commission, on the terms and conditions contained in this Agreement. The Parties agree that in the event, the order of adoption of tariff as mentioned above is not issued by the Appropriate Commission within the time specified above, the provisions of Article 2.1.4 shall apply. In the event such approval is not obtained within 12 months, KSEBL may terminate this agreement without liability.
- 2.1.4 In case the order from the Appropriate Commission is issued within the timeline as per Article 2.1.3, no extension for Financial Closure or Scheduled Commissioning Date shall be given. However, if the requisite Appropriate Commission order is issued after the timeline as per Article 2.1.3, this shall entail a corresponding extension in Scheduled Financial Closure and the Scheduled Commissioning Date for equal number of days for which the Appropriate Commission order has been delayed beyond such period as specified in Article 2.1.3.

2.2 Term of Agreement

2.2.1 Subject to Article 2.3 and 2.4 of this Agreement, this Agreement shall be valid for a term of 16 (sixteen years) from the Effective Date until the Expiry Date. This Agreement may be extended for a further period, at least one hundred eighty (180) days prior to the Expiry Date, on mutually agreed terms and conditions.

2.2.2 At the end of the 7th Contract Year after COD, the BESSD would be required to demonstrate the operational residue BESS capacity of a value not less than 82.5% of the Project Capacity. Such capacity demonstration shall be made by the BESSD in the beginning of the 8th Contract Year as per the procedure for capacity demonstration detailed under Commissioning Procedure and shall be witnessed by a Committee having KSEBL's representatives.

2.2.3 In case BESSD fails to demonstrate operational residue capacity of a minimum value as per Article 2.2.2 above, BESSD, at its own risk and cost, shall augment the BESS capacity to meet the minimum criteria as per Article 2.2.2 above, within 180 days of demonstration made as per Article 2.2.2 above, failing which, cost estimated by the KSEBL through a competitive bidding process for such augmentation of BESS shall be recovered from the tariff payable for the balance Term. Tariff payments as per Article 9 will not be applicable for the above period of rectification. Moreover, in case of non-payment of any aforementioned balance dues / compensation / penalty, KSEBL may debar the BESSD and Bidding Company including its Group Companies from participating for a period of 2 years in any of the Bidding Process conducted by the Procurer.

2.2.4 The BESPA shall be valid for a period of 16 years from the SCD or date of full commissioning of the Project, whichever is later. Any extension of the BESPA period beyond the term of the BESPA shall be through mutual agreement between the BESSD and KSEBL. BESPA shall be extended for a period upto 5 years at tariff not more than 60% of the BESPA tariff and mutually agreed between KSEBL and BESSD, provided the Minimum Dispatchable Energy after 15 years and through the extended period is more than 70% of the Contracted Capacity as on COD and RtE remaining more than 85%, subject to approval of

KSERC.

2.2.5 The extension of BESPAs beyond the initial 16 years would be for the part of Contracted Capacity as demonstrated after the 16-year period. e.g: If the Minimum Dispatchable Capacity demonstrated after the 16-year period is 400 MWh at 250MW, then the extension of BESPAs will be for 80% of the initial Contracted Capacity. A maintenance period upto 90 days will be allowed for Battery replacement / other maintenance activities, after the 16-year period.

2.3 ***Early Termination***

2.3.1 This Agreement shall terminate before the Expiry Date if either KSEBL or BESSD terminates the Agreement, pursuant to Article 13 of this Agreement.

2.4 ***Survival***

2.4.1 The expiry or termination of this Agreement shall not affect any accrued rights, obligations and liabilities of the Parties under this Agreement, including the right to receive penalty as per the terms of this Agreement, nor shall it affect the survival of any continuing obligations for which this Agreement provides, either expressly or by necessary implication, which are to survive after the Expiry Date or termination including those under Article 11 (Force Majeure), Article 13 (Events of Default and Termination), Article 14 (Liability and Indemnification), Article 16 (Governing Law and Dispute Resolution), Article 17 (Miscellaneous Provisions), and other Articles and Schedules of this Agreement which expressly or by their nature survive the Term or termination of this Agreement shall continue and survive any expiry or termination of this Agreement.

ARTICLE 3: CONDITIONS SUBSEQUENT

3.1 Satisfaction of conditions subsequent by the BESSD

The BESSD agrees and undertakes to duly perform and complete all of the following activities at its own cost and risk unless such completion is affected by any Force Majeure event, or for the activities specifically waived off in writing by KSEBL:

- (i) BESSD shall sign Right-to-Use/ Right of Use (ROU) Agreement with KSEBL in addition to signing of BESPA. The land area will be given to the BESSD by KSEBL for Right of Use (ROU) within 60 days from the signing of the BESPA as per provisions of RfS.
- (ii) BESSD at its own cost and risk by..... [Enter the date as on Six (06) Months after the Effective Date] shall make Project financing arrangements (i.e. *arrangement of necessary funds by the Battery Energy Storage System Developer towards 100 % project cost either by way of commitment of funds by the Company from its internal resources (by a resolution passed by the Board of Directors) and/or tie up of funds through a bank/financial institution by way of sanction of a loan or firm commitment letter agreeing to finance*) for Projects(s) and shall provide necessary certificates to KSEBL in this regard;
- (iii) Detailed Project Report (DPR) of the Project, detailing out project configuration, proposed commissioning schedule of the Project and all other important and relevant features/ schedules etc.
 - a) The BESSD shall also submit to KSEBL the relevant documents as stated above, complying with the Conditions Subsequent, within six (06) months from the Effective Date.
 - b) The BESSD will have to submit the required documents to KSEBL at least 14 days prior to the scheduled Financial Closure date. In case of delay in submission of documents mentioned above, KSEBL shall not be liable for delay in verification of documents and subsequent delay in Financial Closure.

3.2 Consequences of non-fulfilment of conditions subsequent and financial closure

- 3.2.1 In case of a failure to submit the documents as above, KSEBL shall encash the Performance Bank Guarantee submitted by the BESSD, terminate this

Agreement and remove the Project from the list of the selected Projects by giving a notice to the BESSD in writing of at least seven (7) days, unless the delay is on account of delay in allotment of Land not owing to any action or inaction on the part of the BESSD or caused due to a Force Majeure. Unless extended as per provisions of Article 3.2.1 (i) of this Agreement in writing, the termination of the Agreement shall take effect upon the expiry of the 7th day of the above notice.

In case delay in signing of Right-to-Use/Land Lease/Sub-Lease Agreement is due to reasons not attributable to BESSD, then the deadline to fulfil Conditions Subsequent will be extended commensurate with the delay in signing of Land Use/Right-to-Use/Sub-Lease Agreement beyond the deadline as per Article 3.1(i) above.

- 3.2.1 (i) An extension, without any impact on the Scheduled Commissioning Date, can however be considered, on the sole request of BESSD, on payment of Rs. 1000/- per day per MW (plus applicable GST) to KSEBL. Such extension charges are required to be paid to KSEBL in advance, for the period of extension required. In case of any delay in depositing this extension charge, BESSD shall pay an interest on this extension charge for the days lapsed beyond due date of Financial Closure @ SBI-MCLR (1Year) plus five percent. In case such delay in making payment of the extension charges to KSEBL is more than 7 days, the termination of the Agreement shall take effect pursuant to issuance of termination notice after 7 days which may be issued by KSEBL.

In case of the BESSD meeting the requirements of conditions subsequent and financial closure before the last date of such proposed delay period, the remaining amount deposited by the BESSD shall be returned by KSEBL without interest. This extension will not have any impact on the Scheduled Commissioning Date. Any extension charges paid so by the BESSD, shall be returned to the BESSD without any interest on achievement of successful commissioning within the Scheduled Commissioning Date, on pro-rata basis, based on the project capacity commissioned as on Scheduled Commissioning Date. However, in case the BESSD fails to commission the Contract Capacity by Scheduled Commissioning Date, the extension charges deposited by the BESSD shall not be refunded by KSEBL.

- 3.2.2 For the avoidance of doubt, it is clarified that this Article shall survive the

termination of this Agreement.

- 3.2.3. In case of inability of the BESSD to fulfil the conditions specified in Article 3.1 due to any Force Majeure event, the time period for fulfilment of the Conditions Subsequent and Financial Closure as mentioned in Article 3.1, shall be extended for the period of such Force Majeure event. Further, any delay in adoption of tariff by the Appropriate Commission, beyond 120 (one hundred twenty days) days after the Effective Date of this Agreement, shall entail a corresponding extension in the deadline as stipulated in Article 3.1.
- 3.2.4 Provided that due to the provisions of this Article 3.2.1, any increase in the time period for completion of conditions subsequent and financial closure mentioned under Article 3.1, shall not lead to an equal extension in the Scheduled Commissioning Date.

3.3 Performance Bank Guarantee

- 3.3.1 The Performance Bank Guarantee (PBG) having validity from the date of submission of PBG until 9 months after the SCD submitted for a value of 12,00,000/MW (being a genuine pre-estimate as agreed by the Parties) to be furnished under this Agreement shall be for guaranteeing the commencement of the supply (injection / drawl) of power / energy up to the Project Capacity within the time specified in this Agreement as per Schedule 1. Similarly, the payment made to KSEBL in lieu of the PBG shall be retained until 9 months after the SCD.
- 3.3.2 The failure on the part of the BESSD to furnish and maintain the Performance Bank Guarantee shall be a material breach of the term of this Agreement on the part of the BESSD.
- 3.3.3 If the BESSD fails to commence supply of power from the Scheduled Commissioning Date specified in this Agreement or any further extension thereof granted by KSEBL, subject to conditions mentioned in Article 4.5, KSEBL shall encash the Performance Bank Guarantee equivalent to the amount calculated as per liquidated damages applicable under Article 4.6 as on the date of encashment without prejudice to the other rights of KSEBL under this Agreement. It is to be noted that the damages/dues recovered by KSEBL by encashing the PBG, upon the default of the BESSD under the BESPA shall be retained by KSEBL till expiry of the term/ extended term of this agreement.

3.3.4 BESSD acknowledges and accepts that the amount of the Performance Bank Guarantee and the methodology specified herein above for calculation of the compensation payable for non fulfillment of conditions subsequent within the stipulated time as well as non commencement of supply within the stipulated time is a genuine and accurate pre-estimation of the actual loss that will be suffered by KSEBL. BESSD further acknowledges and accepts that a breach of any of the obligations contained herein result in injuries and that the amount of the liquidated damages or the method of calculating the liquidated damages specified in this document is a genuine and reasonable pre estimate of the damages that may be suffered by KSEBL in each case specified under this Agreement.

3.4 Return of Performance Bank Guarantee

3.4.1 Subject to Article 3.3, KSEBL shall return / release the Performance Bank Guarantee within 09 months after the successful Commissioning of the Project after taking into account any liquidated damages / penalties due to delays in commissioning as per provisions stipulated in this Agreement (as per article 4.1.1 n).

3.4.2 The return / release of the Performance Bank Guarantee shall be without prejudice to other rights of KSEBL under this Agreement.

ARTICLE 4: CONSTRUCTION & DEVELOPMENT OF THE PROJECT

4.1 BESSD's Obligations

4.1.1 The BESSD undertakes to be responsible, at BESSD's own cost and risk, for the following:

- a) The BESSD shall be offered land on Right to Use / Lease / Sub-lease / licensing arrangement (as applicable) not later than 60 days from the Effective Date of BESPA. BESSD shall promptly comply with all the statutory / non-statutory, legal requirements including but not limited to signing of any agreement, payment of considerations etc. as per the offer made for the land.

The BESSD shall submit duly executed documents/Agreements to establish possession/right to use the required land area in the name of the BESSD for a period not less than the complete term of the BESPA, on or

before the SCD failing which Commissioning of the Project will not be allowed.

- b) The BESSD shall be solely responsible and make arrangements for associated infrastructure for development of the Project and for Connectivity with the STU till Delivery Point for confirming the evacuation of power by the Scheduled Commissioning date and all clearances related thereto. . Connectivity has been assured to be provided to the BESSD, and necessary applications in this regard, will be required to be made by the BESSD. It is clarified that the Project shall be interconnected to the **220kV Bus of 220kV Substation, Brahmapuram** substation in Kerala. All the requisite costs associated including fees with obtaining connectivity shall be borne by the BESSD.
- c) Obtaining solely at its cost and responsibility all Consents, Clearances and Permits as required and maintaining all Consents, Clearances and Permits in full force and effect during the Term of this Agreement. KSEBL shall have no obligation to recommend to any department/agency or the Govt. for the grant/permission for the Project. The BESSD shall, on his own, obtain permissions/ sanctions from Government authorities, if any required for establishing and operating (including for Charging and Discharging from BESS) the project. Any steps that may be taken by KSEBL in regard to grant of such consents and permits or any other approval to be taken by the BESSD shall only be a voluntary endeavor with no intention of being bound by any legal or binding obligation.
- d) Designing, constructing, erecting, commissioning, completing and testing the Project in accordance with the applicable Law, the Grid Code, the terms and conditions of this Agreement and Prudent Utility Practices.
- e) The commencement of charging & discharging of power / energy up to the Contracted Capacity to KSEBL no later than the Scheduled Commissioning Date and continuance of the charging & discharging of power throughout the term of the Agreement.
- f) connecting the Project switchyard with the Interconnection Facilities at the Delivery Point; The BESSD shall make adequate arrangements (including construction of requisite bays) to connect the Project switchyard with the Interconnection Facilities at Interconnection / Metering Point / Delivery Point.

- g) owning the Project throughout the Term of Agreement free and clear of encumbrances, except those expressly permitted under Article 15.
- h) maintaining its shareholding pattern as per provisions of the RfS Document.
- i) fulfilling all other obligations required to be undertaken by the BESSD under this Agreement for development of Project in Build, Own, Operate basis and supply of BESS Capacity during Term of this Agreement and as per provisions of this Agreement, RfS and LOA.
- j) The BESSD shall be responsible for directly coordinating and dealing with KSEBL (Buying Entity), Load Dispatch Centres, STU, Regional Power Committees, and other authorities in all respects in regard to declaration of availability, scheduling and dispatch of Stored Energy Capacity and due compliance with deviation and settlement mechanism and the applicable Grid code/State/Central Regulations, acknowledging that the BESSD and KSEBL is the Grid connected entities and KSEBL as an Intermediary Procurer/ trading licensee is not a Grid connected entity in respect of the Battery Energy Storage Capacity contracted under this Agreement.
- k) The BESSD shall fulfil the technical requirements according to criteria mentioned under Annexure A–Technical requirement for Project under the Guidelines and RfS.
- l) Further, the Project being implemented under this Agreement shall fulfil the criteria as per Central Electricity Authority (Technical Standards for Connectivity to the Grid) Regulations, 2007, and subsequent amendments and clarifications thereof,
- m) As part of scheduling of power / energy from / to the Project for discharging / charging, the BESSD will be required to punch-in their respective schedules and subsequent revisions, by themselves, at the interfaces of all the SLDCs concerned for the corridor of power flow, as per the Regulations in force, under intimation to KSEBL and in consultation with KSEBL/ Buying Entity. KSEBL may facilitate in identification of any discrepancy and assist the BESSD for its early rectification without any liability on KSEBL. The BESSD shall be solely responsible for discrepancy identification and its rectification to avoid any rejection/less payment of invoices / penalty.
- n) Not Used
- o) After signing of BESPAs, the BESSD shall apply for drawl NOC(s) from the

respective STU(s) of the State / SLDC as per the power mapping provided by KSEBL.

- p) BESSD will have to comply with the Charging and Discharging Schedule as intimated by SLDC/ KSEBL. Frequent deviations from schedule by BESSD on account of commercial gain shall be considered under the material breach of this agreement.
- q) The BESSD shall submit a detailed completion Schedule for the Project within 30 days from BESPA effective date. Broad details to be captured in the Schedule are the land procurement, grid connectivity; order, supply and erection status of various Project components; financial arrangement/ tie up etc. The BESSD shall also submit the progress report to KSEBL in a form acceptable to KSEBL and shall contain percentage completion achieved compared with the planned percentage completion for each activity, and any such other information as required by KSEBL. The BESSD shall be required to submit the progress status of Project to KSEBL as and when requested by KSEBL, strictly within the timelines provided by KSEBL. Further, on 5th day of every calendar month, the BESSD shall be required to submit the Project progress status by Buying Entity. In case of failure to comply with the same, KSEBL at its discretion, may or may not consider the SCD extension request of the BESSD, if any.
- r) After completion of BESPA tenure of 16 Years (or as mutually extended) or early termination or any other reason specified in agreement, BESSD shall within 180 days of expiry/ termination of this agreement, clear the land provided by the KSEBL on lease basis. All the infrastructure developed by BESSD needs to be cleared at the time of handing over the land to KSEBL and such expenses shall be borne by BESSD.

4.2 Information regarding Interconnection Facilities

- 4.2.1 The BESSD shall be required to obtain all information from the STU/CTU/concerned authority with regard to the Interconnection Facilities as is reasonably necessary to enable it to design, install and operate all interconnection facilities on the BESSD's side of the Delivery Point to enable injection / drawl of electricity at the Delivery Point. The transmission of power / energy to/ from up to the point of interconnection where the metering is done for energy accounting shall be the responsibility of the BESSD at its own cost.

- 4.2.2 Penalties, fines and charges imposed by the CTU/ STU/ KSEBL under any statute or regulation in relation to delay in commissioning of Project shall be payable by the BESSD and there shall be no recourse to KSEBL.
- 4.2.3 The responsibility of getting connectivity with the transmission system up to the Interconnection Point, will lie with the BESSD. The transmission of power up to the point of interconnection where the metering is done for energy accounting shall be the responsibility of the BESSD at his own cost. The maintenance of Transmission system up to the designated point as per the applicable terms and conditions shall be the responsibility of the BESSD. All costs, charges and losses up to and including at the Interconnection Point associated with this arrangement will also be borne by the BESSD.
- 4.2.4 The BESSD shall be responsible for obtaining Connectivity and executing connectivity agreement as per provision of latest Grid Connectivity and Intra-state Open Access Regulations issued by KSERC, for evacuation of the Contracted Capacity and maintaining it throughout the term of the Agreement. It is further clarified that the Entities (BESSD and Buying Entity) as indicated in the Detailed Procedure issued subsequently under the KSERC's relevant Grid Connectivity and Intra-state Open Access Regulations (As amended from time to time), will be responsible for their respective obligation as notified in the Detailed Procedure irrespective of the provisions of the RfS and BESPAs.
- 4.2.5 The arrangement of connectivity shall be made by the BESSD through a transmission line, if applicable. The entire cost of transmission including cost of construction of line, any other charges, losses etc. from the Project up to the Interconnection Point will be borne by the BESSD.
- 4.2.6 Treatment of STU Charges and losses (if any) shall be as per the extant regulation / orders / guidelines of Government of India.
- 4.2.7.1 Not Used
- 4.2.7.2 Following studies may be conducted (not limited to below) by BESS Developer(s) in this regard:
- i. Harmonic studies considering network and BESS system along with flicker studies
 - ii. Transient and dynamic studies
 - iii. Small signal stability studies
 - iv. Sub-Synchronous Oscillations/ Sub-Synchronous Resonance / Sub-Synchronous Torsional Interaction studies
 - v. Sub-synchronous control interactions studies between different converter

based equipment.

vi. Any other studies stipulated.

4.2.7.3 In addition, BESS system shall need comply to requirements/performance parameters stipulated in Central Electricity Authority (Technical Standards for Connectivity to the Grid) Regulations, 2007 and its amendments.

4.2.7.4 Communication Equipment Requirement at BESS end shall be as per stipulations of STU:

BESSD will provide communication equipment's as per Regulations on Communication System for transmission of electricity and other Regulations/Procedures (as amended from time to time) issued by Appropriate Commissions and Central Electricity Authority (CEA) and as stipulated by KSEBL.

4.3 *Purchase and sale of Contracted Capacity*

4.3.1 Subject to the terms and conditions of this Agreement, the BESSD undertakes to sell to KSEBL and KSEBL undertakes to pay Applicable Tariff as per this Agreement for the Battery Energy Storage Capacity upto the Contracted Capacity at the Delivery Point.

4.4 *Right to Project Capacity*

4.4.1 KSEBL, in any Contract Year, shall not be obliged to off-take any capacity beyond / over and above Contracted Capacity.

During a Day, in any Contract Year, the Buying Entity shall not ask for / schedule any BESS capacity / Energy in excess of 2 cycle of charge and discharge of 2 hours at rated power, subject to the maximum of 35 Operational Cycles in a Calendar Month and within 400 Operational Cycles in a Year.

Provided that, in a cycle for charging to the rated capacity at rated power, 2.35 hours is permitted which could be a single stretch of 2.35 hours or multiple stretches for achieving 100% charging of rated MWh capacity having total cumulative time period upto 10 hours.

Similarly, for discharge, there could be a single stretch of 2 hours or multiple stretch having total cumulative time period upto 8 hours for achieving 100% discharging of rated MWh capacity subject to condition that total scheduled discharge of energy from BESS as demanded by the Buying Entity shall be limited to Current RtE % of the energy supplied by the Buying Entity.

Similarly, the charging cycle may, if required, may be performed in a single session or upto three sessions, at rated power or, stretching upto 10 Hours when charged at below rated power, at sole discretion of KSEBL.

The BESSD shall make the BESS available for Single operational cycles per day, i.e. One complete charge-discharge cycle per day.

Provided that KSEBL, at its discretion, can split the discharge of the stored energy upto three sessions. The discharge may also be performed at below the rated power, stretching upto 8 Hours. For purpose of BESS operation, a day shall be reckoned as from 06:00 hrs on a day to 06:00 hrs on next day. The discharge extended beyond 24:00 hrs shall be reckoned to be performed on the same day. There shall be no mandatory cooling period between two sessions of same operation. (Charging or Discharging). Similarly, the charging may also be performed upto 10 hours and upto three sessions.

The BESS shall be operated for occasional dual cycles in a day subject maximum of 5 (Five) dual cycle days in a month, however subject to the annual limit of 400 cycles.

It is hereby clarified that the BESS should be designed to provide a minimum of 2 Hours of discharging capacity at rated power. However, KSEBL, at its sole discretion, can schedule discharging of the BESS upto three sessions each day, at rated power or stretching upto 8 Hours when discharged below rated power.

Illustration (Discharge) :

(1)

Session	Time	Power (MW)	Duration (Minutes)	Energy Discharged (MWh)
1	17:00 to 17:15	20	15	5
2	18:00 to 18:30	100	30	50
	18:30 to 19:30	250	60	250
	19:30 to 20:00	40	30	20
3	20:30 to 22:15	100	105	175
			195	500

(2)

Session	Time	Power (MW)	Duration (Minutes)	Energy Discharge d (MWh)
1	18:00 to 01:00	50	420	350
2	01:30 to 02:00	250	30	125
3	02:30 to 03:00	50	30	25
			480	500

The Contracted Capacity of the Project shall be in terms of “MW”, which shall also be referred to as the Project Capacity. KSEBL’s obligation shall be for off-take of entire Contracted Capacity and energy at Delivery point.

For example, for the Project Capacity of 250 MW/ 500 MWh, Contracted Capacity shall be 250 MW. The BESPAs shall entitle KSEBL to schedule discharge upto 500 MWh of energy from the BESS in each cycle, subject to the following:

- i. Buying entity will schedule charging of the BESS with equal amount of energy plus energy expected to be lost as conversion losses (determined from the Round-Trip Efficiency (RtE) of the system as declared by the BESSD on day ahead basis).

Illustration: For a Contracted Capacity of 250 MW/500 MWh, assuming an RtE of 85%, KSEBL shall schedule and supply charging power to the tune of 588.24 MWh, to expect a discharge of 500 MWh as per the desired schedule.

- ii. Energy scheduled for discharge in a given cycle during a year shall be more than or equal to the Min. Dispatchable Energy Capacity at the End of Year as specified under Article 4.4.2.(c) of BESPAs and as per Clause 8.1.e.iv. of RfS.

For example, during the end of the 3rd Year after COD, the energy scheduled for discharge from 250 MW/ 500 MWh capacity shall be more than or equal to $250 \times 0.925 \times 2 = 462.5$ MWh.

Contracted capacity shall be the project capacity at delivery point. KSEBL shall schedule provide the charging energy factoring the RtE, as declared by the BESSD on Day Ahead basis. ~~as per specified RtE in RfS.~~

4.4.2 Subsequent to commissioning of the Project, for any Contract Year, the BESSD shall be required to maintain and demonstrate the following performance parameters:

- a) **Minimum Annual Average Availability of 95%:** During any Contract Year for the Contracted Capacity, BESSD shall be required to maintain minimum Annual average availability of 95%. Annual Average Availability shall be calculated as per methodology given in the RfS.

In case of shortfall in meeting the above criteria, the BESSD shall be levied liquidated damages for such shortfall and shall duly pay such damages to KSREBL. Amount of such liquidated damages shall be 1.5 times the Capacity Charges (Capacity Charges shall mean Applicable Tariff as defined under Article 9 of the BESPAs) for the capacity not made available.

The Minimum Annual Average Availability as specified above, shall

however be relaxable by Buyer to the extent of grid non-availability for evacuation which is beyond the control of the BESSD (as certified by the SLDC/RLDC) and / or upon occurrence of Force Majeure event as identified in BESP (and occurrence of such Force Majeure event(s) has been mutually agreed) and affecting availability and supply of Contracted Capacity. If the maximum permissible un availability of 5% is reached during part of a year, the Monthly Capacity Charge for Subsequent months will be paid only after deducting the penalty for Un availability.

- b) **Round Trip Efficiency:** The BESSD shall maintain AC to AC roundtrip efficiency (RtE) of system on a monthly basis. Calculation of Round-Trip Efficiency shall be as per the methodology specified in RfS.

The BESSD shall be liable for liquidated damages, if any, as per following criteria:

(i) For $70\% \leq \text{RtE} < 85\%$ there shall be a liquidated damage levied @ APPC charges of previous financial year of KSEBL excess conversion losses considering system RtE = 85%

(ii) For $\text{RtE} < 70\%$, there shall be a liquidated damage levied @ APPC charges of previous financial year of KSEBL excess conversion losses considering system RtE = 85% , and tariff payment for the corresponding month shall not be made to the BESSD.

(iii) For $\text{RtE} > 85\%$, there shall be incentive @Rs. 0.50 per unit of excess discharge of energy considering system RtE = 85 %

- c) **Discharge Energy Commitment:** Taking into consideration capacity degradation, the minimum dispatchable capacity to be made available by the BESSD at the end of a given year shall be as follows:

Contract Year	Min. Dispatchable Capacity at the end of Year (as a % of Capacity at the Beginning of Life/COD)
1	97.5%
2	95.0%
3	92.5%
4	90.0%
5	87.5%
6	85.0%
7	82.5%

8	80.0%
9	77.5%
10	75.0%
11	72.5%
12	70.0%
13	70.0%
14	70.0%
15	70.0%
16	70.0%

Performance criteria to be demonstrated by the Project have been detailed out in Schedule-B of this Agreement.

The BESSD is required to meet the discharge energy commitment subject to schedule-B of BESP. The Discharge Energy Commitment shall be 95 % of the Energy scheduled for dispatch on monthly basis. The BESSD shall be liable for Liquidated Damages to the off-taker through Buyer, if any, on account of short fall in supply of committed energy at the Average Market Clearing Price (MCP) in peak hour (18:30Hrs-20:30Hrs) in Day Ahead Market (DAM) of Power Exchange for corresponding billing month period as per methodology given in the RfS.

The BESSD shall be eligible for incentive, from completion of one year after CoD of entire project capacity @ Rs.1.00 per unit for the excess discharge of energy for the quantum discharged by KSEBL in excess of the minimum dispatchable energy taking into consideration YoY capacity degradation as 2 %.

4.4.3 Shortfall in meeting Performance Criteria

Following provisions shall be applicable on the Contracted Capacity guaranteed to be off taken by KSEBL:

i) **Shortfall in demonstrating minimum Availability during charging cycles:**

The BESSD shall install, operate and maintain the BESS to offer facility to KSEBL to charge and discharge the BESS on an “on demand” basis. The BESSD shall guarantee a minimum system availability of 95% on annual basis for Charging Cycles. The BESSD shall pay the liquidated damages for

shortfall, if any, to KSEBL. Amount of such liquidated damages shall be 1.5 Times the Capacity Charges for the capacity not made available during charging cycles. The BESSD shall declare availability on Day Ahead Basis. The BESSD should provide the DC (Declared Capacity) for each time block for the day before 09:00 hours the previous day. The tentative instructions for scheduling of charging and discharging will be issued by SLDC by 15:00 hours on the previous day.

Schedule revisions will be issued by SLDC upto two clear 15-minute time blocks prior to the schedule period. However, as per Grid requirements, the SLDC shall request real-time schedule revisions, which shall be implemented real time and no later than the end of next time block.

Revisions to the Declared Capacity (DC) by the BESSD shall be submitted at least six clear 15-minute time block in advance. Frequent revision to DC, especially during evening peak hours, shall not be entertained and no more than two such revisions shall be permitted from 18:00 to 22:00 hours in a month. The discharge schedule from SLDC shall not be altered in such cases and will be treated as shortfall in discharge commitment.

Intrastate Deviation Settlement Mechanism (DSM) shall become applicable as and when notified by KSERC / CERC.

The Monthly Average Availability shall be calculated for each month. On the basis of monthly Availability, Annual Average Availability shall be calculated. The illustration is provided as under:

ILLUSTRATION:

Month	Monthly Average Availability	Annual Average Availability = $\{\Sigma (\text{Monthly Average Availability})\} / 12$
1	95%	$(95\%+95\%+93\%+97\%+93\%+98\%+95\%+92\%+96\%+95\%+91\%+90\%) / 12$ $= 94.16 \%$
2	95%	
3	93%	
4	97%	
5	93%	
6	98%	
7	95%	
8	92%	
9	96%	
10	95%	
11	91%	
12	90%	

“Availability” of the Project shall mean the ability of the BESS to execute a function i.e. charging or discharging, when called upon to do so, as per the schedule or signal provided by the off-taker, subject to the minimum system ratings specified herein. In addition, the BESSD shall also demonstrate, **on annual basis, 100% of the minimum dispatchable capacity of the BESS** as

required in the RfS.

For a given BESPA, the Annual availability guarantee during Charging period shall commence from the date of fully commissioning of the system and shall be calculated as below:

Monthly System Availability = Mean of the System availabilities of all time-blocks during the month in which the KSEBL has scheduled power for charging the BESS.

Where,

System Availability in a time-block=

$$\frac{\text{Actual Drawl } MU_i(A)}{\text{Scheduled Drawl } MU_i(B)}$$

where

- a) i refers to the i^{th} time-block in the Month where Scheduled Injection $MU_i \neq 0$.
- b) Actual Drawl MU_i is the Actual Energy for Charging in the i^{th} time-block, in MUs
- c) Scheduled Drawl MU_i is the Energy Scheduled for Charging in the i^{th} time-block, in MUs
- d) A and B shall be as per the DSM/UI Reports published by the SLDC or measurement at the Main ABT Meter at the Point of Interconnection.

System Annual availability shall be calculated as per above. The liquidated damages for **system availability below 95%** shall be settled on monthly basis and if it is not able to settle in the same/ current month, it will be carried forward for settlement in subsequent month(s).

If the Annual un-availability of 5% is already reached during part of a year, the Monthly Capacity Charges will be paid only after deducting the Penalty for Availability.

Liquidated damages on account of shortfall in meeting the minimum Availability criteria as per Clause 8.1.d.i., will be computed as follows:

$$\text{Liquidated damages} = (A - B) \times C \times D \times n \times 1.5$$

where,

$$n = 12$$

A is Guaranteed Annual Availability as per article 4.4.2 (a) above;

B is Actual Annual System Availability, as calculated as per Schedule B of this agreement;

C is BESS Power Capacity

D is Capacity Charges/MW/month as discovered through bidding process;

ii) **Shortfall in demonstrating minimum Round-trip-Efficiency:**

The BESSD shall guarantee a **minimum AC to AC roundtrip efficiency (RtE) of 85%** for the system on monthly basis. The BESSD shall be liable for Liquidated Damages to the off-taker, if any, on account of excess conversion losses, based on the following conditions:

- (a) For $RtE < 70\%$, there shall be a liquidated damage @ APPC tariff of previous financial year of the KSEBL, levied upon the excess conversion losses, considering system $RtE = 85\%$ and tariff payment for the corresponding month shall not be made to the BESSD;
- (b) For $70\% \leq RtE < 85\%$, there shall be a liquidated damage levied @ APPC tariff of previous financial year of KSEBL, levied upon excess conversion losses considering system $RtE = 85\%$.
- (c) For $RtE > 85\%$, there shall be incentive @Rs. 0.50 per unit of excess discharge of energy considering system $RtE = 85\%$

System Roundtrip Efficiency =

$$= \frac{\text{Sum Total of Actual Injection/Discharging MUSj in a month (C)}}{\text{Sum Total of Actual Drawal/Charging MUSj in a month (D)}}$$

Where,

j refers to the j^{th} month in a year;

$D \neq 0$;

$D \leq 2 \times E_{\text{bess}} \times (MD_{n-1} - (MD_{n-1} - MD_n) \times j/12) \times \text{No of Days in the } j^{\text{th}} \text{ month} / RtE_g$;

E_{bess} refers to Energy Rating specified in Clause 8.1.b. above;

MD_{n-1} refers to minimum guaranteed dispatchable energy at the end of the previous year (as a % of Capacity at the COD specified in Clause 8.1.e.iv. below);

MD_n refers to minimum guaranteed dispatchable energy at the end of the current year;

RtE_g refers to the guaranteed Round-Trip Efficiency under the BESPAs;

C and D shall be as per the DSM/UI Reports published by the Regional RPCs/SLDCs or measurement at the Main ABT Meter at the Point of Interconnection.

For calculation of LD, RtE shall be calculated based on the above formula

rounded off to three decimal places.

Note:

- The Scheduled capacity shall be subject to the System Power Rating specified in Clause 8.1.a. above and 8.1.b above.
- The BESSD shall take separate, metered connection for the Auxiliary Power load of BESS
or

The BESSD can draw auxiliary power from Interconnection point. Separate meter shall be provided by Developer to measure Auxiliary consumption and that would be billed by KSEBL @ Industrial Tariff excluding demand charges, subject to approval of Hon'ble KSERC.

The BESSD shall declare RtE on Day Ahead basis along with Declared Capacity.

iii) Shortfall in supply of Energy Commitment during Discharge Cycle:

Liquidated damages as per the provisions as per article 4.4.2 c of BESPA shall be applicable in this case.

Liquidated damages as specified above are mutually exclusive and independent, therefore, in case of levying of liquidated damages against Availability, Round-Trip Efficiency and Discharge energy commitment, all damages shall be payable by the BESSD

4.5 Extensions of Time

4.5.1 In the event that the BESSD is prevented from performing its obligations under Article 4.1 by the Scheduled Commissioning Date due to:

- a) any KSEBL Event of Default; or
- b) Force Majeure Events affecting KSEBL/ Buying Entity, or
- c) Force Majeure Events affecting the BESSD,

the Scheduled Commissioning Date and the Expiry Date shall be deferred for a reasonable period but not less than 'day for day' basis, to permit the BESSD or KSEBL/ Buying Entity through the use of due diligence, to overcome the effects of the Force Majeure Events affecting the BESSD or KSEBL/ Buying Entity, or till such time such Event of Default is rectified by KSEBL.

4.5.2 Any delay beyond 120 days from the Effective Date of BESPA in issuance of Order for the adoption of tariff by Appropriate Commission, shall entail a corresponding extension in Scheduled Financial Closure and the Scheduled Commissioning Date for equal number of days for which the Appropriate

Commission order has been delayed beyond such period of 120 days from the Effective Date of BESPA.

- 4.5.3 In case of extension due to reasons specified in Article 4.5.1(b) and (c), and if such Force Majeure Event continues even after a maximum period of 180 days from the date of the Force Majeure Notice, any of the Parties may choose to terminate the Agreement as per the provisions of Article 11.10. In case neither party terminates the Agreement under this clause, the Agreement shall stand terminated on the expiry of twelve (12) months of the continuation of the Force Majeure event unless the parties mutually agree to extend the Agreement for the further period.
- 4.5.4 If the Parties have not agreed within thirty (30) days after the affected Party's performance has ceased to be affected by the relevant circumstance, on the time period by which the Scheduled Commissioning Date or the Expiry Date should be deferred, either Party may raise the Dispute to be resolved in accordance with Article 16.
- 4.5.5 As a result of such extension on account of Article 4.5.1 or Article 4.5.2, the newly determined Scheduled Commissioning Date and newly determined Expiry Date shall be deemed to be the Scheduled Commissioning Date and the Expiry Date for the purposes of this Agreement.
- 4.5.6 Subsequent to grant of connectivity, in case there is a delay in readiness of the STU substation at the Delivery Point, including readiness of the power evacuation and transmission infrastructure of the STU network until SCD of the Project, or delay in grant/operationalization of Grid Access, and it is established that:
- i. The BESSD has complied with the complete application formalities as per Article 4.2.4 of this Agreement,
 - ii. The BESSD has adhered to the applicable Regulations/Procedures in this regard as notified by the SERC/STU, and
 - iii. The delay in grant of connectivity by the STU and/or delay in readiness of the InSTS substation at the Delivery Point, including readiness of the power evacuation and transmission infrastructure of the InSTS network, is a factor attributable to the STU/transmission licensee and is beyond the control of the BESSD;

The above shall be treated as delays beyond the control of the BESSD and SCD for such Projects shall be revised as the date as on 30 days subsequent to the

readiness of the Delivery Point and power evacuation infrastructure and/or operationalization of the Grid Access. Decision on requisite extension on account of the above factor shall be taken by KSEBL as per the provisions the agreement. In case of delay in commissioning of Project due to reasons beyond the reasonable control of the BESSD, KSEBL may extend the SCD after examining the issue on a case-to-case basis.

- 4.5.7 Delay in commissioning of the project beyond the scheduled commissioning date for reasons other than those specified in Article 4.5.1 & Article 4.5.2 shall be an event of default on part of the BESSD and shall be subject to the consequences specified in the Article 4.6.

4.6 *Liquidated Damages not amounting to penalty for delay in Commissioning*

- 4.6.1 The Project shall be fully commissioned within the Scheduled Commissioning Date as defined in this Agreement. If the BESSD is unable to commission the Project by the Scheduled Commissioning Date for the reasons other than those specified in Article 4.5.1 & Article 4.5.2, the BESSD shall pay to KSEBL, damages for the delay in such commissioning and making the Contracted Capacity available for dispatch by the Scheduled Commissioning Date as per the following:
- (a) Delay beyond the Scheduled Commissioning Date upto (& including) the date as on 6 months after the Scheduled Commissioning Date, as part of the liquidated damages, the total PBG amount for the Project shall be encashed on per-day basis and proportionate to the balance capacity not commissioned. For the purpose of calculations of the liquidated damages, 'month' shall be considered consisting of 30 days. As an alternative to the above encashment of PBG, the BESSD may choose to make a payment of the amount corresponding to the liquidated damages, directly to KSEBL. The BESSD shall intimate to KSEBL, its chosen alternative out of the two options, within 10 business days of intimation of the liquidated damages to the BESSD, as calculated by KSEBL. In case no response is received from the BESSD until the lapse of the above deadline, KSEBL shall encash the PBG for the amount as per the liquidated damages. In case the BESSD chooses to make necessary payments in lieu of the liquidated damages, the said payment shall be credited to KSEBL's account through NEFT payment, no later than 5 business days from the above intimation by the BESSD. In case

of non-payment by the BESSD within the above deadline, the PBG will be encashed by KSEBL on the next business day.

- (b) Delay beyond Six (6) Months from SCD: The BESPA capacity shall stand reduced/amended to the Project Capacity commissioned, the entire PBG will be encashed by KSEBL, and the BESPA for the Project shall stand terminated for the balance un-commissioned capacity. Accordingly, Contracted Capacity will also stand reduced to Project Capacity commissioned as of six months from the SCD.
- (c) For avoidance of doubt it is clarified that provisions of Article 4.6.1 will be applicable even in cases where no capacity (**i.e. 0 MW**) is commissioned.

4.6.2 The BESSD further acknowledges and accepts that the amount of the liquidated damages as specified above is a fixed, genuine and reasonable pre-estimate of the damages that may be suffered by KSEBL/ Buying Entity.

4.7 Acceptance/Performance Test

4.7.1 Prior to synchronization of the Project, the BESSD shall be required to get the Project certified for the requisite test including for safety as may be laid down by Central Electricity Authority or an agency identified by the State government to carry out testing and certification for the Battery Energy Storage projects. Further, BESSD shall ensure that all technical, acceptance and performance criteria as specified in RfS Documents and Guidelines are also complied and maintained.

4.8 Third Party Verification

4.8.1 The BESSD shall be further required to provide entry to the site of the Project free of all encumbrances at all times during the Term of the Agreement to KSEBL (or its authorized representatives) and a third Party nominated by any Indian Governmental Instrumentality or KSEBL for inspection and verification of the works being carried out by the BESSD at the site of the Project. The BESSD shall provide full support to KSEBL and/or the third party in this regard.

4.8.2 The third party may verify the construction works/operation of the Project being carried out by the BESSD and if it is found that the construction works/operation of the Project is not as per the Prudent Utility Practices, it may seek clarifications from BESSD or require the works to be stopped or to comply with the instructions of such third party.

4.9 Breach of Obligations

- 4.9.1 The Parties herein agree that during the subsistence of this Agreement, subject to KSEBL being in compliance of its obligations & undertakings under this Agreement, the BESSD would have no right to negotiate or enter into any dialogue with any third party for the sale of Contracted Capacity which is the subject matter of this Agreement. It is the specific understanding between the Parties that such bar will apply throughout the entire term of this Agreement.

ARTICLE 5: SYNCHRONISATION, COMMISSIONING AND COMMERCIAL OPERATION

5.1 Synchronization, Commissioning and Commercial Operation

- 5.1.1 The BESSD shall give the concerned RLDC/SLDC, and KSEBL/ Buying Entity at least sixty (60) days' advanced preliminary written notice and at least thirty (30) days' advanced final written notice, of the date on which it intends to synchronize the Project to the Grid System.
- 5.1.2 Subject to Article 5.1.1, the Project may be synchronized by the BESSD to the Grid System, with permission from KSEBL and in presence of Authorized Representative of KSEBL, when it meets all the connection conditions prescribed in applicable Grid Code then in effect and otherwise meets all other Indian legal requirements for synchronization to the Grid System.
- 5.1.3 The synchronization equipment and all necessary arrangements / equipment including RTU / any other equipment for charge and discharge of power from the Project and transmission of data to the concerned authority as per applicable regulation shall be installed by the BESSD at its facility of the Project at its own cost. The BESSD shall synchronize its system with the Grid System only after the approval of synchronization scheme is granted by the head of the concerned substation/Grid System and checking/verification is made by the concerned authorities of the Grid System and SLDC, in line with the provisions of the Grid Code.
- 5.1.4 The BESSD shall immediately after each synchronization/tripping of system, inform the sub-station of the Grid System to which the Project is electrically connected in accordance with applicable Grid Code under intimation to KSEBL/ Buying Entity. In addition, the BESSD at its own risk and cost, will be required to arrange for the charging and discharging of power to carry out operational/ functional test prior to commercial operation as well as for commissioning of the Project. For avoidance of doubt, it is clarified that Synchronization / Connectivity of the Project with the grid shall not be considered as Commissioning of the Project.
- 5.1.5 The BESSD shall commission the Project as detailed in “**Schedule 3: Commissioning Procedure**” within eighteen (18) from the Effective Date of BESPA. Declaration of COD / UCOD shall only be done subject to the demonstration of the compliances as per Schedule-3.
- 5.1.6 Part commissioning of the Project, without prejudice to the imposition of any

liquidated damages in terms of the BESPA on the part which is not commissioned, shall be accepted by KSEBL subject to the condition that the minimum part commissioning capacity for the 1st part will be 50% of the specified MWh Capacity (250 MWh) at project location. The total number of instalments in which a Project can be commissioned will be not more than 3, i.e., 1st initial instalment of 50% of the specified MWh Capacity at the project location and 2 subsequent instalments.

However, the SCD will not get altered due to part commissioning. Irrespective of dates of part commissioning or full commissioning, the BESPA will remain in force for the Term as defined in this Agreement.

5.1.7 The Parties agree that for the purpose of commencement of the BESS capacity by the BESSD to KSEBL, liquidated damages for delay etc., the Scheduled Commissioning Date (or extended Scheduled Commissioning Date) as defined in this Agreement shall be the relevant date.

5.1.8 Early Commissioning

The BESSD shall be permitted for full commissioning as well as part commissioning of the Project even prior to the Scheduled Commissioning Date.

Early commissioning of the Project will be allowed solely at the risk and cost of the BESSD, and KSEBL will purchase the BESS capacity from such early commissioned Project at BESPA tariff (for the Contracted Capacity).

Such intimation for early commissioning shall be provided to KSEBL at least 15 days before the proposed early commissioning date as per the Commissioning Procedure. In case there is no response provided by KSEBL within 7 days from the receipt of such intimation, such early commissioned capacity shall be deemed to have been rejected by KSEBL. UCOD/COD of the Project under the BESPA will be the date on which the commissioning certificate is issued upon successful commissioning of the part/full capacity of the Project. Subject to the provisions of this Agreement, in case of early commissioning, if BESSD sells any capacity to KSEBL, the BESSD will have to again demonstrate 100% of Contracted Capacity (as per the Commissioning Procedure) to the Procurer from the date of commencement of off-take of capacity by the Procurer or SCD, whichever is later.

5.1.9 The BESSD shall submit requisite documents, as mentioned below, at least 30 days prior to trial run of the Project –

- i. Intimation regarding the timeline for commencement of supply of power from the Project.
- ii. Copy of Connectivity details.
- iii. Installation report duly signed by the authorized signatory. The BESSD is advised to take due care in furnishing such Installation Report.
- iv. CEI/CEIG/ State Electrical Inspectorate (as applicable) report containing approval for all the components, including Batteries, inverters, transformers, transmission system and protection system, along with all annexures/attachments. It would be the responsibility of the BESSD to obtain the certificate.
- v. Approval of metering arrangement/scheme from STU / KSEBL any other concerned authority as applicable.
- vi. Plant Layout, Plant (AC & DC) SLD.
- vii. Affidavit certifying that the BESSD has obtained all the necessary approvals for commencement of power supply from the Project, and indemnifying KSEBL against any discrepancies in the above details.
- viii. Affidavit from the BESSD certifying possession of land identified for the Project, bearing the details of such land parcels where Project is located, and indemnifying KSEBL against any discrepancies in the above details.
- ix. Documents to establish the compliance of technical requirement as per BESPA/RfS.
- x. Invoices against purchase of the Batteries, Inverters/PCUs, SCADA and BMS along with the summary sheet containing the list of all the invoices, inverters including details and number of items. Lorry Receipts for delivery of Project components at site along with certified summary sheet by the authorized signatory.
- xi. Fire clearances
- xii. Insurance Copy as specified in Article 08

It is clarified that KSEBL shall bear no responsibility in declaration of commissioning/COD of the Project. However, on the basis of above documents, the BESSD shall be required to obtain No-objection certificate (NOC)/BESPA Compliance Certificate from KSEBL prior to declaration of commissioning/SCD of

the Project.

KSEBL's scope will be limited to verifying the installation of rated capacity(ies) of the Project, as per the SCD certificate submitted by the BESSD. This verification will be at KSEBL's discretion and shall not constitute any certification/confirmation of commissioning/SCD of the Project by KSEBL. Prior to declaration of commencement of power supply, the BESSD shall submit SCD certificate for the corresponding Installed Capacity which has commenced power supply to KSEBL as part of the requisite documents.

ARTICLE 6: DISPATCH AND SCHEDULING

6.1 *Dispatch and Scheduling*

6.1.1 The BESSD, in consultation with KSEBL/ Buying Entity, shall be required to charge/ discharge the Battery System as per the applicable regulations / requirements / guidelines of CERC / SERC /SLDC / RLDC or any other competent agency and same being recognized by the SLDC or any other competent authority / agency as per applicable regulation/ law / direction and maintain compliance to the applicable Codes/ Grid Code requirements and directions, if any, as specified by concerned SLDC/RLDC from time to time. Any deviation from the Schedule will attract the provisions of applicable regulation / guidelines / directions and any financial implication on account of this shall be on the account of the BESSD.

6.1.2 The BESSD shall be responsible for directly coordinating and dealing with the KSEBL/ Buying Entity, RLDCs, SLDCs, Regional Power Committees, and other authorities in all respects in regard to declaration of availability, scheduling and dispatch of charging and discharging power and due compliance with deviation and settlement mechanism and the applicable Grid code Regulations, acknowledging that the BESSD and KSEBL/ Buying Entity are the Grid connected entities and KSEBL as an intermediary procurer/ trading licensee is not a Grid connected entity in respect of the Battery Storage Capacity contracted under this Agreement.

6.1.3 DSM penalties/ charges shall be levied separately on the BESSD and the Buying Entity as applicable, at their respective ends for the charging and

discharging activities. DSM charges on this account shall be directly paid by the BESSD or the Buying Entity as applicable.

Any Reactive power charges in respect of charging and discharging power as per applicable CERC/SERC regulations shall be on account of the BESSD/ Buying Entity at their respective ends.

- 6.1.4 The BESSD shall take separate, metered connection for the Auxiliary Power load of BESS. Cost of Auxiliary power shall be borne by the BESSD as per the concerned Central/State regulations.
- 6.1.5 Capacity procured from the Project awarded under this RfS shall be allocated to the Buying Entity/ KSEBL.
- 6.1.6 Further, in case of any difference in scheduled energy at the interfaces of all the SLDCs concerned for the corridor of the power flow, including the SLDC of the Buying Entity, KSEBL will make payments corresponding to the lowest of the individual energy values to the BESSD, until rectification of the above error.

6.2 Supply obligation of the BESSD:

In case the BESSD fails to offer the contracted power as per this Agreement to KSEBL/ Buying Entity and sells the contracted power without its consent to any other party, the BESSD, on a complaint to this effect by KSEBL to the load dispatch centre concerned, shall be debarred from participating in Power Exchanges and on the Discovery of Efficient Electricity Pricing portal and scheduling of any new short-term contracts from the Project for a period of three months from the date on which the default has been taken cognizance by the concerned load dispatch centre. The period of debarment shall increase to six months for second default and shall be one year for each successive default. Such debarment of the BESSD shall be without prejudice to the rights of KSEBL/ Buying Entity for seeking compensation for the default by the BESSD under this Agreement.

ARTICLE 7: METERING

7.1 Meters

- 7.1.1 For installation of Meters, Meter testing, Meter calibration and Meter reading and all matters incidental thereto, the BESSD shall follow and be bound by the Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006, the Grid Code, equivalent KSERC regulations as amended and revised from time to time.
- 7.1.2 The BESSD shall bear all costs pertaining to installation, testing, calibration, maintenance, renewal and repair of meters at BESSD side of Delivery Point for injection and drawl of power from the Grid during discharging and charging of BESS.
- 7.1.3 In addition to ensuring compliance of the applicable codes, the BESSD shall install Main & Check and Standby meters at the Delivery Point for both Charging and Discharging, along with Stand-by meter(s) as per the applicable Central/State regulations and Power Quality Meter shall also be provided as specified by KSEBL.

7.2 Reporting of Metered Data and Parameters

- 7.2.2 Online arrangement would have to be made by the BESSD for submission of metering data regularly for the entire period of this Agreement to the SLDC, KSEBL and the concerned Ministry or concerned agency as per applicable regulation / directions.
- 7.2.3 Reports on metering parameters on monthly basis, and/or as required by regulation / Guidelines, shall be submitted by the BESSD to KSEBL/ SLDC for entire Term of the BESPA.

7.3 Records

Each Party shall keep complete and accurate records and all other data required by each of them for the purposes of proper administration of this agreement and the operation of the Project. Among such other records and data, the BESSD shall maintain an accurate and up-to-date operating log at the Power Plant with records of:-

- a) Fifteen (15) minutes logs of real and reactive power generation, frequency, transformer tap position, bus voltage(s), Main Meter and Back up Meter Readings and any other data mutually agreed;
- b) any unusual conditions found during operation / inspections;

- c) chart and printout of event loggers, if any, for system disturbances/
outages;
- d) All the records will be preserved for a period of 36 months.

ARTICLE 8: INSURANCES

8.1 ***Insurance***

- 8.1.1 The BESSD shall effect and maintain or cause to be effected and maintained, at its own cost and expense, throughout the Term of BESPA, Insurances against such risks to keep the Project in good condition and shall take Industrial All Risk insurance policy/ Mega/ any Suitable Comprehensive Insurance policy as per Market practices covering all perils including but not limited to fire, theft, risk against loss or damage and others , with such deductibles and with such endorsements and co-insured(s), which the Prudent Utility Practices would ordinarily merit maintenance of and as required under the Financing Agreements, and under the applicable laws.
- 8.1.2 The BESSD shall submit the Insurance copy to KSEBL at the time of commissioning of project and shall submit and maintain each insurance renewed throughout the period of contract.
- 8.1.3 The BESSD shall provide KSEBL with copies of all insurance policies, endorsements, and renewal notices within 15 (fifteen) days of issuance or renewal. KSEBL shall have the right to review, verify and audit the insurance coverage to ensure compliance with this Article. Any shortfall or noncompliance shall be rectified by BESSD at its own cost within 30 (thirty) days of notice from KSEBL.

8.2 ***Application of Insurance Proceeds***

- 8.2.1 In case of the Project not being implemented through Financing Agreement(s), save as expressly provided in this Agreement or the Insurances, the proceeds of any insurance claim made due to loss or damage to the BESS or any part of the BESS shall be first applied to reinstatement, replacement or renewal of such loss or damage to the Contracted Capacity followed by the outstanding claims of KSEBL against BESSD, if any.

In case of the Project being financed through Financing Agreement(s), save as expressly provided in this Agreement or the Insurances, the proceeds of any insurance claim made due to loss or damage to the Project to any part of the BESS shall be applied as per such Financing Agreements.

- 8.2.2 If a Force Majeure Event renders the Project no longer economically and technically viable and the insurers under the Insurances make payment on a

“total loss” or equivalent basis, KSEBL shall have claim on such proceeds of such Insurance limited to outstanding dues of KSEBL and any other dues of the KSEBL against BESSD.

8.2.3 Insurance maintained by BESSD shall include coverage for third-party claims arising from bodily injury, death or property damage resulting from BESSD’s operations. KSEBL shall be entitled to claim directly under such insurance in case of BESSD default or failure to act.

8.2.4 BESSD shall ensure that all insurance claims are lodged, processed, and proceeds applied to reinstatement or compensation within a reasonable period, and in any event within 60 (sixty) days of occurrence of the insured event. Any delay attributable to BESSD shall be treated as a breach under Article 13 of this Agreement.

8.3 ***Effect on liability of KSEBL***

8.3.1 Notwithstanding any liability or obligation that may arise under this Agreement, any loss, damage, liability, payment, obligation or expense which is insured or not or for which the BESSD can claim compensation, under any Insurance shall not be charged to or payable by Buyer. It is for the BESSD to ensure that appropriate insurance coverage is taken for payment by the insurer for the entire loss and there is no under insurance or short adjustment etc.

8.3.2 Notwithstanding anything in this Agreement, KSEBL shall have the right to directly receive insurance proceeds applicable to its dues and indemnifiable claims under Article 14 in case of BESSD’s failure to effect proper insurance or claim settlement.

ARTICLE 9: APPLICABLE TARIFF

- 9.1 The BESSD shall be entitled to receive the Tariff of INR_____ /MW/Month [Insert the Tariff discovered through the bidding process conducted by NVVN for KSEBL], fixed for the entire term of this Agreement, with effect from the commissioning of the project, or part thereof, the Contracted Capacity made available to the KSEBL/ Buying Entity during BESPA Period, as per the provision of this agreement.
- 9.2 For each KVARH (Reactive Power) drawn from the grid, the BESSD shall pay at the rate determined by KSERC to KSEBL from time to time.
- 9.3 GST levied on the energy storage facility provided by the BESSD, (as applicable), shall be over and above the afore-mentioned tariff.
- 9.4 In case of early part/full commencement of power supply from the project, KSEBL will purchase the power generated from such Project at the BESPA charges as per Article 9.1 (for the Contracted Capacity) The developer shall give fifteen (15) days advance notice to KSEBL regarding the advance commissioning of full or part capacity. KSEBL will give acceptance for availing such capacity within 10 days from the date of service of notice.

ARTICLE 10: BILLING AND PAYMENT

10.1 General

10.1.1 Not Used

10.1.2 From the commencement of availability of BESS Capacity, KSEBL shall pay to the BESSD the monthly Tariff Payments subject to the adjustments as per provisions of this Agreement including Article 6, in accordance with Article 9. All capacity charge Payments by KSEBL shall be in Indian Rupees.

10.1.3 Not used.

10.1.4 Subject to the provision of this Agreement, BESSD shall be required to make arrangement of auxiliary power at its own risk and cost.

10.1.5 The parties acknowledge and accept that the Electricity (Late Payment Surcharge and related matters) Rules, 2022 [hereinafter referred to as '**Rules**'] notified by the Central Government in exercise of the power conferred by Sub-section (1) of Section 176 of the Electricity Act, 2003 shall apply and govern the terms and conditions of this Agreement in regard to matters contained in the said Rules including but not limited to the Late Payment Surcharge, adjustment towards the Late Payment Surcharge, Payment Security mechanism-its operations and consequences, actions of Defaulting Entities, supply obligation of BESSD, power not requisitioned by the Buying Entity, the order of payment and adjustment towards late payment surcharge and indemnification. The Rules referred to hereinabove being statutory shall, to the extent applicable, supersede any provisions in this BESPAs and the RfS which are inconsistent or contrary to the provisions of the Rules.

10.2 Delivery and Content of Monthly Bills/Supplementary Bills

10.2.1 The BESSD shall issue to KSEBL hard copy of a signed Monthly Bill/Supplementary Bill for the immediately preceding Month/relevant period, including the time-block-wise data in the tabular format as per Illustration in Schedule-2, along with all relevant documents. The BESSD shall also submit calculations of System Availability and Round-trip Efficiency in line with provisions of this Agreement, as part of the Monthly Bill/Supplementary Bill.

The BESSD shall issue to KSEBL hard copy of signed monthly bill / Supplementary bill for the immediately preceding month duly supported by REA/SEA/signed JMR along with all relevant documents (payment of reactive energy charges, metering charges or any other charges as per guidelines of SERC/CERC, if applicable).

10.2.2 As per applicable regulation(s) of the Appropriate Commission(s)/respective SERC(s), all charges pertaining to scheduling of power, if any, shall be borne by the Buying Entity, except the Auxiliary power which will be borne by BESSD.

10.3 ***Payment of Monthly Bills***

10.3.1 Subject to the provisions of Article 10.3.4, KSEBL shall pay the amount payable under the Monthly Bill/Supplementary Bill by the Due Date to such account of the BESSD, as shall have been previously notified by the BESSD. The BESSD shall open a bank account (the "BESSD's Designated Account") for all Tariff Payments (including Supplementary Bills) to be made by KSEBL to the BESSD, and notify KSEBL of the details of such account at least ninety (90) Days before the dispatch of the first Monthly Bill. KSEBL shall also designate a bank account at Thiruvananthapuram ("KSEBL Designated Account") for payments to be made by the BESSD to KSEBL, if any, and notify the BESSD of the details of such account ninety (90) Days before the Scheduled Commissioning Date. KSEBL and the BESSD shall instruct their respective bankers to make all payments under this Agreement to the BESSD's Designated Account or KSEBL's Designated Account, as the case may be, and shall notify either Party of such instructions on the same day. Provided that if due date for payment of any bill falls on a bank non-working day, the next bank working day shall be considered as due date for payment.

10.3.2 All payments required to be made under this Agreement shall also include any deduction or set off for:

- i) deductions required by the Law; and
- ii) amount claimed by KSEBL, if any, from the BESSD, will be adjusted from the monthly energy payment. In case of any excess payment adjustment, 1.25% surcharge will be applicable on day-to-day basis.

10.3.3 **Late Payment Surcharge**

In the event of delay in payment of a Monthly Bill by KSEBL beyond Due Date, a Late Payment Surcharge shall be payable on the payment outstanding after the Due Date, as per Late Payment Surcharge Rules 2022 as amended from Time to Time.

The Late Payment Surcharge may be claimed by the BESSD through the Supplementary Bill.

- 10.3.4 Subject to the Article 9 of this Agreement, in the event of early Commissioning of the Project and subject to acceptance by KSEBL, the payment for the Capacity charges may be accounted from the date of UCOD, and BESSD would be allowed to raise Bills against such capacity as per Article 10.2.1, subject to the conditions as stipulated in Article 9. However, payment against the 1st such bill raised by the BESSD, will be made subject to acceptance of the bill by the Buying Entity.

10.3.5 Rebate

For payment of any Bill on or before Due Date, the following Rebate shall be paid by the BESSD to KSEBL in the following manner:

- a) A Rebate of 2.0% shall be payable to the KSEBL for the payments made within a period of 10 (ten) days of the presentation of Bill along through hard copy/ email along with required supporting documents acceptable to KSEBL.
- b) Any payments made beyond a period of 10 days up to and including the 30th Day from the date of presentation of bills through hard copy/ email, shall be allowed a rebate of 1%.
- c) For the above purpose, the date of presentation of Bill shall be the next Business Day of delivery of the physical copy of the Bill at KSEBL
- d) No Rebate shall be payable on the Bills raised on account of Change in Law (except in case of annuity tariff model being implemented, where rebate will be applicable) relating to taxes, duties, cess etc. and Late Payment Surcharge.
- e) No rebate shall be payable on the bills raised on account of taxes, Duties, cess etc.

For the above purpose date of presentation of bill shall be the same day of delivery in hard or soft copy. However, for consideration of rebate, date of

presentation of bill shall be excluded for considering 10 days.

In case of computation of "10 days", the number of days shall be counted consecutively without considering any holiday. However, in case the last day or 10th day is official holiday, the 10th day for the purpose of Rebate shall be construed as the immediate succeeding Business Day.

10.4 Payment Security Mechanism

Letter of Credit (LC):

10.4.1 KSEBL shall provide to the BESSD, in respect of payment of its Monthly Bills and/or Supplementary Bills, a monthly unconditional, revolving and irrevocable letter of credit ("Letter of Credit"), opened and maintained which may be drawn upon by the BESSD in accordance with this Article.

10.4.2 Before the start of supply, KSEBL shall, through a scheduled bank, open a Letter of Credit in favour of the BESSD, to be made operative from a date prior to the Due Date of its first Monthly Bill under this Agreement. The Letter of Credit shall have a term of twelve (12) Months and shall be renewed annually, for an amount equal to:

- i) for the first Contract Year, equal to 100% of the estimated average monthly billing;
- ii) for each subsequent Contract Year, equal to 100% of the average of the monthly billing of the previous Contract Year.

10.4.3 Provided that the BESSD shall not draw upon such Letter of Credit prior to the Due Date of the relevant Monthly Bill and/or Supplementary Bill, and shall not make more than one drawl in a Month.

10.4.4 Provided further that if at any time, such Letter of Credit amount falls short of the amount specified in Article 10.4.2 due to any reason whatsoever, KSEBL shall restore such shortfall before next drawl.

10.4.5 KSEBL shall cause the scheduled bank issuing the Letter of Credit to intimate the BESSD, in writing regarding establishing of such irrevocable Letter of Credit.

10.4.6 KSEBL shall ensure that the Letter of Credit shall be renewed not later than its expiry.

10.4.7 All costs relating to opening, maintenance of the Letter of Credit shall be borne by KSEBL.

10.4.8 If KSEBL fails to pay undisputed Monthly Bill or Supplementary Bill or a part thereof within and including the Due Date, then, subject to Article 10.3.3, 10.4.6 & 10.5.2, the BESSD may draw upon the Letter of Credit, and accordingly the bank shall pay, an amount equal to such Monthly Bill or Supplementary Bill or part thereof, in accordance with Article 10.4.3 above, by presenting to the scheduled bank issuing the Letter of Credit, the following documents:

- i) a copy of the Monthly Bill or Supplementary Bill (only for energy related bills) which has remained unpaid to BESSD and;
- ii) a certificate from the BESSD to the effect that the bill at item (i) above, or specified part thereof, is in accordance with the Agreement and has remained unpaid beyond the Due Date
- iii) Undertaking from the BESSD that the bill is not disputed by KSEBL;

In case of wrongful drawal of the Letter of Credit, the BESSD would be liable to further interest equivalent to late payment surcharge considered from the date of drawal of letter of credit.

10.5 Disputed Bill

10.5.1 If KSEBL does not dispute a Monthly Bill or a Supplementary Bill raised by the BESSD within thirty (30) days of receiving such Bill shall be taken as conclusive.

10.5.2 If the KSEBL disputes the amount payable under a Monthly Bill or a Supplementary Bill, as the case may be, it shall pay 50% of the invoice amount or undisputed amount, whichever is higher and it shall within thirty (30) days of receiving such Bill, issue a notice (the "Bill Dispute Notice") to the invoicing Party setting out:

- i) the details of the disputed amount;
- ii) its estimate of what the correct amount should be; and
- iii) all written material in support of its claim.

10.5.3 If the BESSD agrees to the claim raised in the Bill Dispute Notice issued pursuant to Article 10.5.2, the BESSD shall revise such Bill and present along with the next Monthly Bill. In such a case excess amount shall be refunded along with interest at the same rate as Late Payment Surcharge, which shall be applied from the date on which such excess payment was made by the

disputing Party to the invoicing Party and up to and including the date on which such payment has been received as refund.

10.5.4 If the BESSD does not agree to the claim raised in the Bill Dispute Notice issued pursuant to Article 10.5.2, it shall, within fifteen (15) days of receiving the Bill Dispute Notice, furnish a notice (Bill Disagreement Notice) to the KSEBL providing:

- i) reasons for its disagreement;
- ii) its estimate of what the correct amount should be; and
- iii) all written material in support of its counter-claim.

10.5.5 Upon receipt of the Bill Disagreement Notice by the KSEBL under Article 10.5.4, authorized representative(s) or a director of the board of directors/member of board of the KSEBL and BESSD shall meet and make best endeavors to amicably resolve such dispute within fifteen (15) days of receipt of the Bill Disagreement Notice.

10.5.6 If the Parties do not amicably resolve the Dispute within fifteen (15) days of receipt of Bill Disagreement Notice pursuant to Article 10.5.4, the matter shall be referred to Dispute resolution in accordance with Article 16.

10.5.7 For the avoidance of doubt, it is clarified the despite a Dispute regarding an invoice, KSEBL shall, without prejudice to its right to Dispute, be under an obligation to make payment of 50% of the invoice amount or undisputed amount, whichever is higher in the Monthly Bill.

10.6 Quarterly and Annual Reconciliation

10.6.1 The Parties acknowledge that all payments made against Monthly Bills and Supplementary Bills shall be subject to quarterly reconciliation within 30 days of the end of the quarter at the beginning of the following quarter of each Contract Year and annual reconciliation at the end of each Contract Year within 30 days to take into account the Energy Accounts, Tariff adjustment payments, Tariff Rebate, Late Payment Surcharge, or any other reasonable circumstance provided under this Agreement.

10.6.2 The Parties, therefore, agree that as soon as all such data in respect of any quarter of a Contract Year or a full Contract Year as the case may be has been finally verified and adjusted, the BESSD and KSEBL shall jointly sign such reconciliation statement. Within fifteen (15) days of signing of a

reconciliation statement, the BESSD shall make appropriate adjustments in the next Monthly Bill. Late Payment Surcharge/ interest shall be payable in such a case from the date on which such payment had been made to the invoicing Party or the date on which any payment was originally due, as may be applicable. Any Dispute with regard to the above reconciliation shall be dealt with in accordance with the provisions of Article 16.

10.7 Payment of Supplementary Bill

10.7.1 BESSD may raise a ("Supplementary Bill") for payment on account of:

- i. Adjustments required by the Energy Accounts (if applicable); or
- ii. Change in Law as provided in Article 12, or
- iii. Incentive payment as per Article 4.4.2 (b),

And such Supplementary Bill shall be paid by the other Party.

KSEBL shall remit all amounts due under a Supplementary Bill raised by the BESSD to the BESSD's Designated Account after due verification of such bills.

10.8 Viability Gap Funding

10.8.1 In line with the sanction order O.M. issued by the Ministry of Power dated 09.06.2025, BESSD is eligible for grant of Viability Gap Funding (VGF) support by the Government for development of Battery Energy Storage Systems, and the same will be disbursed as per PSDF guidelines.

10.8.2. The VGF amount eligible for BESS is Rs. 90 for contracted capacity calculated @Rs. 18,00,000/MWh (Rupees Eighteen Lakhs per MWh).

10.8.3 BESS Developer shall submit certificate for the capital cost incurred for the Project awarded capacity, duly certified by the Statutory Auditors, within six months from the COD.

10.8.4 For each Project, disbursement of VGF will be carried out in 3 tranches, as follows:

Milestone for Disbursement of VGF	% of total VGF disbursed
On Financial Closure as per the BESPA, subject to submission of Bank Guarantee to KSEBL	20
On Commercial Operation Date (COD) of the Project	50
Completion of 1 st year from COD	30
Total	100

- 10.8.5 The VGF shall be disbursed to the BESSD, once KSEBL/ CEA certifies the achievement of the disbursement schedule milestone and submission of the required Bank Guarantee by BESSD. KSEBL shall disburse the tranche wise VGF to BESSD only after receipt of the same from the Govt. of India and Submission of BG by BESSD as per RfS Clause 12.6.
- 10.8.6 Each tranche of VGF will be disbursed only after submission of Bank Guarantees (BG) for the amount equal to the VGF amount to be disbursed to the BESSD in that tranche. These BGs are in addition to the Performance Bank Guarantee provided by the developer as per clause 19 of this RfS. The BGs for the VGF sanctioned up to COD will be retained by the KSEBL for a period of 1 year starting from the COD and will be returned after the end of 1 year from COD, taking into account recovery of VGF, if any. No BG is required against the disbursement of the last tranche of VGF post completion of one year of operation. These BGs shall be liable for encashment to recover the VGF amount in the event of non-fulfilment of the performance parameter(s) as per clause 4.4.2 and 4.4.3, if any plus interest @ SBI-MCLR (1-Year) plus five-percent, accrued from the date of disbursement on the disbursed amount.

If the BESSD fails to commission the project in the timeline provided in this BESPA, and project got terminated after disbursement of the quantum of VGF, KSEBL will have full right to recover the total amount of VGF being disbursed till the date of termination of BESPA plus interest @ SBI-MCLR (1 Year) plus five percent, as existing on the date of disbursement, accrued from the date of disbursement on the disbursed amount. In case Project capacity is being reduced as per article 4.6.1(b) of this PPA, recovery of VGF amount shall be made on pro-rata basis corresponding to the capacity being terminated.

KSEBL will have the right to recover the VGF disbursed through encashment of BG, if the BESPA gets terminated within the first 2 years after COD of the Project, on account of reasons solely attributable to the BESSD. Irrespective of the year of termination within the first 2 years after COD, the VGF amount to be recovered will be fixed as the amount disbursed plus interest @ SBI-MCLR (1 Year) plus five percent, as existing on the date of disbursement, accrued from the date of disbursement on the disbursed amount.

If the Project is transferred or sold to a third party during the above tenure, the

BG will be re-issued by the new entity, corresponding to the amount applicable. The sale/transfer of the Project shall be effective only on submission of BG by new entity.

ARTICLE 11: FORCE MAJEURE

11.1 Definition of Force Majeure

A 'Force Majeure' (FM) would mean one or more of the following acts, events or circumstances or a combination of acts, events or circumstances or the consequence(s) thereof, that wholly or partly prevents or unavoidably delays the performance by the Party (the Affected Party) of its obligations under this Agreement, but only if and to the extent that such events or circumstances are not within the reasonable control, directly or indirectly, of the Affected Party and could not have been avoided if the Affected Party had taken reasonable care or complied with Prudent Utility Practices.

An Affected Party means KSEBL or the BESSD whose performance has been affected by an event of Force Majeure.

11.2 Force Majeure Events

- a) Act of God, including, but not limited to lightning, fire and explosion (to the extent originating from a source external to the site), earthquake, volcanic eruption, landslide, flood, pandemic, cyclone, typhoon or tornado if it is declared / notified by the competent state / central authority / agency (as applicable), or verified to the satisfaction of Procurer;
- b) radioactive contamination or ionising radiation originating from a source in India or resulting from another Force Majeure Event mentioned above excluding circumstances where the source or cause of contamination or radiation is brought or has been brought into or near the Project by the Affected Party or those employed or engaged by the Affected Party.
- c) The discovery of geological conditions, toxic contamination or archaeological remains on the Project land that could not reasonably have been expected to be discovered through an inspection of the Project land and/or as per prudent industry practices.
- d) Exceptionally adverse weather condition which are in excess of the statistical measure of the last hundred (100) years.
- e) any act of war (whether declared or undeclared), invasion, armed conflict or

act of foreign enemy, blockade, embargo, revolution, riot, insurrection, terrorist or military action, or Industrywide strikes and labour disturbances, having a nationwide impact in India, if and only if it is declared / notified by the competent state / central authority / agency (as applicable)

- f) Nationalisation or any compulsory acquisition by any Indian Governmental Instrumentality/ State Government in national interest or expropriation of any material Project assets or rights of the BESSD, as a result of which the BESSD or its shareholders are deprived (wholly or partly) of their rights or entitlements under this BESP. Provided that such action does not constitute remedies or sanctions lawfully exercised by the Procurer or any other Government Authority as a result of any breach of any of the Applicable Laws or the Applicable Permits by the BESSD or the BESSD related parties

11.3 Force Majeure Exclusions

11.3.1 Force Majeure shall not include (i) any event or circumstance which is within the reasonable control of the Parties and (ii) the following conditions, except to the extent that they are consequences of an event of Force Majeure:

- a. Unavailability, late delivery, or changes in cost of the plant, machinery, equipment, materials, spare parts or consumables for the Power Project/ BESS;
- b. Delay in the performance of any contractor, sub-contractor or their agents;
- c. Non-performance resulting from normal wear and tear typically experienced in power generation / BESS materials and equipment;
- d. Strikes at the facilities of the Affected Party;
- e. Insufficiency of finances or funds or the agreement becoming onerous to perform; and
- f. Non-performance caused by, or connected with, the Affected Party's:
 - i. Negligent or intentional acts, errors or omissions or lack of due diligence expected from any prudent and rational human being;
 - ii. Failure to comply with an Indian Law; or
 - iii. Breach of, or default under this Agreement; and
- g. Non-insurance of the BESS project by the BESSD.

11.4 Notification of Force Majeure Event

11.4.1 The Affected Party shall give notice to the other Party of any event of Force Majeure as soon as reasonably practicable, but not later than fifteen (15) days

after the date on which such Party knew or should reasonably have known of the commencement of the event of Force Majeure. If an event of Force Majeure results in a breakdown of communications rendering it unreasonable to give notice within the applicable time limit specified herein, then the Party claiming Force Majeure shall give such notice as soon as reasonably practicable after reinstatement of communications, but not later than one (1) day after such reinstatement. The Party who receives the Force Majeure Notification, shall take a decision on the claim of occurrence of Force Majeure Event, within 30 days of the receipt of the intimation, accompanied with supporting documents available with the Affected Party.

11.4.2 Provided that such notice shall be a pre-condition to the Affected Party's entitlement to claim relief under this Agreement. Such notice shall include full particulars of the event of Force Majeure, its effects on the Party claiming relief and the remedial measures proposed. The Affected Party shall give the other Party regular (and not less than weekly) reports on the progress of those remedial measures and such other information as the other Party may reasonably request about the Force Majeure Event.

11.4.3 The Affected Party shall give notice to the other Party of (i) the cessation of the relevant event of Force Majeure; and (ii) the cessation of the effects of such event of Force Majeure on the performance of its rights or obligations under this Agreement, as soon as practicable after becoming aware of each of these cessations.

11.5 *Performance Excused*

11.5.1 The Affected Party, to the extent rendered unable to perform its obligations or part of the obligation thereof under this Agreement as a consequence of the Force Majeure Event, shall be excused from performance of the obligations, provided that the period shall not exceed 180 (one hundred and eighty) Days from the date of issuance of the FM Notice or any extended period as mutually agreed. The Parties may mutually agree to extend the period for which performance is excused due to a Force Majeure Event. However, in case of the FM continuing upto a period of 180 days or any extended period as mutually agreed, either Party has the right to terminate the BESPA.

11.5.2 For the time period, as mutually agreed by the Parties, during which the performance shall be excused, the BESSD shall be entitled for a day to day

extension of the period provided for Financial Closure or Scheduled Commissioning Period or the BESPA period, as the case may be. However, adjustment in tariff shall not be allowed on account of Force Majeure event.

11.5.3 Provided always that a Party shall be excused from performance only to the extent reasonably warranted by the Force Majeure Event.

11.5.4 Provided further that, nothing shall absolve the Affected Party from any payment obligations accrued prior to the occurrence of the underlying Force Majeure Event.

11.6 *No Liability for Other Losses*

Save as otherwise provided in this Agreement, no Party shall be liable in any manner, whatsoever, to the other Parties in respect of any loss relating to or arising out of the occurrence or existence of any Force Majeure Event.

11.7 *Resumption of Performance*

During the period that a Force Majeure Event is subsisting, the Affected Party shall, in consultation with the other Parties, make all reasonable efforts to limit or mitigate the effects of such Force Majeure Event on the performance of its obligations under the BESPA. The Affected Party shall also make efforts to resume performance of its obligations under this Agreement as soon as possible and upon resumption, shall notify other Parties of the same in writing. The other Parties shall afford all reasonable assistance to the Affected Party in this regard.

11.8 *Duty to Perform and Duty to Mitigate*

To the extent not prevented by a Force Majeure Event pursuant to Article 11.2, the Affected Party shall continue to perform its obligations pursuant to this Agreement. The Affected Party shall use its reasonable efforts to mitigate the effect of any Force Majeure Event as soon as practicable.

11.9 *Available Relief for a Force Majeure Event*

Subject to this Article 11:

- (a) no Party shall be in breach of its obligations pursuant to this Agreement except to the extent that the performance of its obligations was prevented, hindered or delayed due to a Force Majeure Event;

- (b) every Party shall be entitled to claim relief in relation to a Force Majeure Event in regard to its obligations, including but not limited to those specified under Article 4.5;
- (c) For avoidance of doubt, neither Party's obligation to make payments of money due and payable prior to occurrence of Force Majeure events under this Agreement shall be suspended or excused due to the occurrence of a Force Majeure Event in respect of such Party.
- (d) Provided that no payments shall be made by either Party affected by a Force Majeure Event for the period of such event on account of its inability to perform its obligations due to such Force Majeure Event.

11.10 Available Relief & Termination Due to Force Majeure Event

- a) If, prior to the completion of the 180 (one hundred and eighty) Day period (or any extended period) for a Force Majeure Event commencing from the date of issuance of the Force Majeure Notice, the Parties are of the reasonable view that a Force Majeure Event is likely to continue beyond such 180 (one hundred and eighty) Day period or any extended period agreed in pursuance of Article 11.5 (Performance Excused); or that it is uneconomic or impractical to restore the affected Unit, then the Parties may mutually decide to terminate the BESPAs, and the termination shall take effect from the date on which such decision is taken.
- b) In case of occurrence of an event which is not a Force Majeure as per provision of this Agreement, but causes some hardship in development of the Project, which may or may not be recognized by the Government of India and for which the Government of India has or hasn't granted any extension of time or any other relief; such event, even if sustained beyond 180 days shall not be considered as a reason for termination of PPA under this Article.
- c) Without prejudice to the provisions of Article 11.10.(a) above, the Affected Party shall, after the expiry of the period of 180 (one hundred and eighty) Days or any other mutually extended period, be entitled to forthwith terminate the BESPAs in its sole discretion by issuing a notice to that effect.
- d) On termination of the BESPAs pursuant to Article 11.10.(b):
 - i. In case of termination on account of event listed as Force Majeure as

under Article 11.2 (a), (b), (c) and (d), no Termination Compensation shall be payable to the BESSD.

- ii. In case of termination at the instance of the BESSD, on account of an event listed as Force Majeure as per Article 11.2 (e) and (f) above, the Procurer will have the option to (but will not be obliged to) take- over the Project Assets by paying Debt Due. In case the Procurer chooses not to exercise the aforementioned option, and the same is not agreed to by the BESSD, it will result in a dispute as per the BESPA and will be resolved as per the Dispute Resolution mechanism under the BESPA.
- iii. the BESSD shall be eligible for undisputed payments under outstanding Monthly Bill(s), before the occurrence of Force Majeure Event.

ARTICLE 12: CHANGE IN LAW

12.1.1 In the event of occurrence of any of the events as provided under clause 2 of Electricity (Timely Recovery of Costs due to Change in Law) Rules, 2021 which results in any adverse financial loss/ gain to the BESSD/Buying Entity then, in order to ensure that the BESSD/Buying Entity is placed in the same financial position as it would have been had it not been for the occurrence of the Change in Law, the BESSD/ Buying Entity shall be entitled to compensation by the other party, as the case may be. The compensation payment on account of such 'Change in Law' shall be determined in accordance with the Electricity (Timely Recovery of Costs due to Change in Law) Rules, 2021 notified by Ministry of power vide notification dated 22nd October'2021 including amendments and clarifications thereof issued from time to time (Schedule-A) and shall be effective from such date as may be decided by the Appropriate Commission.

12.2 Definitions

In this Article 12, the following terms shall have the following meanings:

12.2.1 In this Article 12, the term Change in Law shall refer to the occurrence of any of the following events, after the last date of the bid submission, which have a direct effect on the Project, leading to corresponding changes in the cost requiring change in tariff, and includes:

- i. change in interpretation of any law by a competent court; or
- ii. the enactment of any new law; or
- iii. a change in any domestic tax, including duty, levy, cess, charge or surcharge by the Central Government, State Government or Union Territory administration leading to corresponding changes in the cost; or;
- iv. a change in any condition of an approval or license obtained or to be obtained for purchase, supply or transmission of electricity, unless specifically excluded in the agreement for the purchase, supply or transmission of electricity, which results in any change in the cost.

However, Change in Law/ Regulation shall not include

- (i) any change in any taxes on corporate income or any change in any withholding tax on income or dividends, or
- (ii) change in respect of settlement charges or frequency intervals by an

Appropriate Commission.

- (iii) Any event occurring after the SCD/extended SCD, which would not have affected the Project had the Project been commissioned before the SCD/extended SCD.

The term “law” in this provision, includes any Act, Ordinance, order, bye-law, rule, regulation, notification, for the time being in force, in the territory of India.

12.2.2 In the event of occurrence of any of events as provided under Article 12.2.1 which results in any adverse financial loss/ gain to the BESSD/Procurement then, in order to ensure that the BESSD/Procurement is placed in the same financial position as it would have been had it not been for the occurrence of the Change in Law, the BESSD/ Procurement shall be entitled to compensation by the other party, as the case may be. Compensation payment on account of such ‘Change in Law’ shall be determined and shall be effective from such date as may be decided by the Appropriate Commission.

12.2.3 Not used.

12.3 Relief for Change in Law

12.3.1 In case of Change in Law taking place prior to commissioning of the Project, the compensation will be passed through on in the form of increase/decrease in the tariff, linked with increase/decrease in the Project cost, which will be automatically paid through the monthly energy billing. The pass through in this case shall be as per the formula / provisions as stipulated in Schedule-A and shall be effective from date of commissioning of the Project. BESSD shall be required to provide a statutory auditor certificate supported by Board Resolution in regard to implications (loss/ gain) arising out of Article 12.

12.3.2 In case of Change in Law taking place subsequent to commissioning of the Project capacity, and changes in taxes/duties/cess etc. are defined as a percentage or the ratio of the tariff, the changes will be automatically passed on as appropriate increment/decrement in the tariff, and will be paid through monthly energy billing. BESSD shall be required to provide a statutory auditor certificate supported by Board Resolution in regard to implications (loss/ gain) arising out of Article 12.

12.3.3 For the purpose of Article 12.2.2 above, the affected party, which intends to adjust and recover the costs due to change in law, shall give a 21 days’ prior notice to the other party about the proposed impact in the tariff or charges,

positive or negative, to be recovered from such other party.

The affected party shall furnish to the other party, the computation of impact in tariff or charges to be adjusted and recovered, within 30 days of the occurrence of the change in law or on the expiry of 21 days from the date of the notice referred above, whichever is later, and the recovery of the proposed impact in tariff or charges shall start from the next billing cycle of the tariff.

- 12.3.4 Within 30 days of coming into effect of such relief of Change in Law, the BESSD shall approach the Appropriate Commission for Truing up of the calculations on account of the above Change in Law events, failing which further payment will be discontinued and KSEBL shall make such deductions in the monthly tariff payments on immediate basis. In the event of any decision by the Appropriate Commission which modifies or cancels any changes in the tariff, recovery/additional payment of the amount already paid until then, will be done immediately.

The Appropriate Commission shall verify the calculation and adjust the amount of the impact in the monthly tariff or charges within sixty days from the date of receipt of the relevant documents as required above.

- 12.3.5 Further, in case of Change in Law during the operational period of the Project, and where such change is not applicable as an automatic modification in the tariff, suitable compensation will be provided as decided by the Appropriate Commission.
- 12.3.6 In case Change in Law results in delay in commissioning of the Project, where cause and effect between these two can be clearly established, BIA may provide suitable time-extension in Financial Closure, Scheduled Commissioning Date or Scheduled Date of Commencement of Supply of Power, as the case may be.
- 12.3.7 If the event of any decrease in the project cost by the BESSD or any income to the BESSD on account of any of the events as indicated above, BESSD, as per methodology / formula specified in Schedule-A, shall pass on the benefit of such reduction to KSEBL. In the event of the BESSD failing to comply with the aforementioned requirement, KSEBL shall make such deductions in the monthly tariff payments on immediate basis.
- 12.3.8 After the adjustment of the amount of the impact in the tariff, the BESSD, shall adjust the monthly tariff or charges annually based on actual amount recovered/ paid, to ensure that the payment to the affected party is not more than the yearly

annuity amount.

- 12.3.9 The recovery of the impacted amount, in case of the fixed amount shall be,—
- (a) within a period of one-hundred eighty months; or
 - (b) in case of recurring impact, until the impact persists

12.4 Notification of Change in Law

- 12.4.1 In case any increase or decrease in the Project Cost occurs due to Change in Law affecting the Tariff payable under this Agreement, in accordance with Article 12, the BESSD shall serve notice to KSEBL of such Change in Law for giving a three weeks prior notice about the proposed impact in tariff, positive or negative, to be recovered. BESSD, within thirty days of the occurrence of the change in law or on the expiry of three weeks from the date of the aforementioned notice referred whichever is later, shall furnish KSEBL, the computation of impact in tariff or charges to be adjusted and recovered. Such recovery and adjustment of the proposed impact in tariff or charges shall start from the next billing cycle of the tariff.
- 12.4.2 Any notice service pursuant to this Article 12, shall provide, amongst other things, precise details of the Change in Law and its effect on the Project Cost and computation of change in Tariff which shall be supported by documentary evidences including Statutory Auditor Certificate to this effect so as to establish one to one correlation and its impact on the Project Cost.

ARTICLE 13: EVENTS OF DEFAULT AND TERMINATION

Notwithstanding any thing provided in this section or in this agreement, it is clarified that BESS system being acquired out of Government Grants, it shall not be disposed of during the contract period without the prior approval of the sanctioning authority of Grants-in-Aid {Rule 230(9)}.

13.1 *BESSD Event of Default*

13.1.1 The occurrence and/or continuation of any of the following events, unless any such event occurs as a result of a Force Majeure Event or a breach by KSEBL or Buying Entity of its obligations under this Agreement, shall constitute an BESSD Event of Default:

- (i) the failure to commence availability of BESS for providing Energy Storage capacity to KSEBL up to the Contracted Capacity, by the end of the period specified in Article 4, or failure to demonstrate guaranteed availability of such energy storage capacity to KSEBL within six months from the identification of reduced monthly availability during the term of this Agreement, or if
 - a) the BESSD assigns, mortgages or charges or purports to assign, mortgage or charge any of its assets or rights related to the Project in contravention of the provisions of this Agreement; or
 - b) the BESSD transfers or novates any of its rights and/ or obligations under this agreement, in a manner contrary to the provisions of this Agreement; except where such transfer
 - is in pursuance of a Law; and does not affect the ability of the transferee to perform, and such transferee has the financial capability to perform, its obligations under this Agreement or
 - is to a transferee who assumes such obligations under this Agreement and the Agreement remains effective with respect to the transferee;
- (ii) if (a) the BESSD becomes voluntarily or involuntarily the subject of any bankruptcy or insolvency or winding up proceedings and such proceedings remain uncontested for a period of thirty (30) days, or (b) any winding up or

bankruptcy or insolvency order is passed against the BESSD, or (c) the BESSD goes into liquidation or dissolution or has a receiver or any similar officer appointed over all or substantially all of its assets or official liquidator is appointed to manage its affairs, pursuant to Law, provided that a dissolution or liquidation of the BESSD will not be a BESSD Event of Default if such dissolution or liquidation is for the purpose of a merger, consolidation or reorganization and where the resulting company retains creditworthiness similar to the BESSD and expressly assumes all obligations of the BESSD under this Agreement and is in a position to perform them; or

- (iii) the BESSD repudiates this Agreement and does not rectify such breach within a period of thirty (30) days from a notice from KSEBL in this regard; or
- (iv) except where due to any KSEBL's failure to comply with its material obligations, the BESSD is in breach of any of its material obligations pursuant to this Agreement, and such material breach is not rectified by the BESSD within thirty (30) days of receipt of first notice in this regard given by KSEBL.
- (v) change in controlling shareholding before the specified time frame as mentioned in Article 4.1.1 of this Agreement; or
- (vi) occurrence of any other event which is specified in this Agreement to be a material breach/ default of the BESSD.

13.2 KSEBL Event of Default

13.2.1 The occurrence and the continuation of any of the following events, unless any such event occurs as a result of a Force Majeure Event or a breach by the BESSD of its obligations under this Agreement, shall constitute the Event of Default on the part of defaulting KSEBL:

- (i) KSEBL fails to pay (with respect to a Monthly Bill or a Supplementary Bill), subject to Article 10.3.3 & 10.5, for a period of ninety (90) days after the Due Date and the BESSD is unable to recover the amount outstanding to the BESSD through the Letter of Credit,
- (ii) KSEBL repudiates this Agreement and does not rectify such breach even within a period of sixty (60) days from a notice from the BESSD in this regard; or
- (iii) except where due to any BESSD's failure to comply with its obligations, KSEBL is in material breach of any of its obligations pursuant to this

Agreement, and such material breach is not rectified by KSEBL within sixty (60) days of receipt of notice in this regard from the BESSD to KSEBL; or if

- a. KSEBL becomes voluntarily or involuntarily the subject of any bankruptcy or insolvency or winding up proceedings and such proceedings remain uncontested for a period of sixty (60) days, or
 - b. any winding up or bankruptcy or insolvency order is passed against KSEBL, or
 - c. KSEBL goes into liquidation or dissolution or a receiver or any similar officer is appointed over all or substantially all of its assets or official liquidator is appointed to manage its affairs, pursuant to Law, provided that it shall not constitute a KSEBL Event of Default, where such dissolution or liquidation of Buyer or KSEBL is for the purpose of a merger, consolidation or reorganization and where the resulting entity has the financial standing to perform its obligations under this Agreement and has creditworthiness similar to KSEBL and expressly assumes all obligations of KSEBL and is in a position to perform them; or;
- (iv) If Buying Entities are subject to any of the above defaults and KSEBL does not designate another or other Buying Entities for purchase of power.

13.3 Procedure for cases of BESSD Event of Default

13.3.1 Upon the occurrence and continuation of any BESSD Event of Default under Article 13.1, KSEBL shall have the right to deliver to the BESSD, with a copy to the representative of the lenders to the BESSD with whom the BESSD has executed the Financing Agreements, a notice stating its intention to terminate this Agreement (KSEBL Preliminary Default Notice), which shall specify in reasonable detail, the circumstances giving rise to the issue of such notice.

13.3.2 Following the issue of a KSEBL Preliminary Default Notice, the Consultation Period of ninety (90) days or such longer period as the Parties may agree, shall apply and it shall be the responsibility of the Parties to discuss as to what steps shall be taken with a view to mitigate the consequences of the relevant

Event of Default having regard to all the circumstances.

13.3.3 During the Consultation Period, the Parties shall continue to perform their respective obligations under this Agreement.

13.3.4 Within a period of seven (7) days following the expiry of the Consultation Period unless the Parties shall have otherwise agreed to the contrary or the BESSD Event of Default giving rise to the Consultation Period shall have ceased to exist or shall have been remedied, KSEBL may terminate this Agreement by giving a written Termination Notice of sixty (60) days to the BESSD.

13.3.5 Subject to the terms of this Agreement, upon occurrence of an BESSD Event of Default under this Agreement, the BESSD shall be liable to pay to KSEBL, liquidated damages, as provided in Article 4.6 of the BESPAs for failure to commission within stipulated time and Article 4.4.1 for failure to supply power in terms of the BESPAs. For other cases, the BESSD shall be liable pay to KSEBL, damages, equivalent to 6 (six) months, or balance BESPAs period whichever is less, of charges for its contracted capacity. KSEBL shall have the right to recover the said damages by way of forfeiture of bank guarantee/Payment on Order Instrument, if any, without prejudice to resorting to any other legal course or remedy. In addition to the levy of damages as aforesaid, the lenders in concurrence with the Buying Entity and KSEBL, may exercise their rights, if any, under Financing Agreements, to seek substitution of the BESSD by a selectee for the residual period of the Agreement, for the purpose of securing the payments of the total debt amount from the BESSD and performing the obligations of the BESSD. However, in the event the lenders are unable to substitute the defaulting BESSD within the stipulated period, and if the Buying Entity desires to acquire the Project assets, it may do so, by paying to the BESSD, a compensation as mutually decided by the Buying Entity and the lender. In case the Buying Entity chooses not to exercise the above option, or the Buying Entity and the lender are unable to come to an agreement, the lenders may liquidate the Project assets and recover their dues, as the last resort. Provided that any substitution under this Agreement can only be made with the prior consent of KSEBL including the condition that the selectee meets the eligibility requirements of Request for Selection (RfS)

issued by KSEBL and accepts the terms and conditions of this Agreement.

13.3.6 The lenders in concurrence with the KSEBL, may seek to exercise right of substitution under Article 13.3.5 by an amendment or novation of the BESPA in favour of the selectee. The BESSD shall cooperate with KSEBL to carry out such substitution and shall have the duty and obligation to continue to operate the Project in accordance with this BESPA till such time as the substitution is finalized. In the event of Change in Shareholding/Substitution of Promoters triggered by the Financial Institutions leading to signing of fresh BESPA with a new entity, an amount of Rs. 10 Lakh per Project+ 18% GST per transaction as facilitation fee (non-refundable) shall be deposited by the BESSD to KSEBL.

13.4 Procedure for cases of KSEBL Event of Default

13.4.1 Upon the occurrence and continuation of any KSEBL Event of Default specified in Article 13.2, the BESSD shall have the right to deliver to KSEBL, a BESSD Preliminary Default Notice, which notice shall specify in reasonable detail the circumstances giving rise to its issue.

13.4.2 Following the issue of a BESSD Preliminary Default Notice, the Consultation Period of ninety (90) days or such longer period as the Parties may agree, shall apply and it shall be the responsibility of the Parties to discuss as to what steps shall be taken with a view to mitigate the consequences of the relevant Event of Default having regard to all the circumstances.

13.4.3 During the Consultation Period, the Parties shall continue to perform their respective obligations under this Agreement.

13.4.4 After a period of two hundred ten (210) days following the expiry of the Consultation Period and unless the Parties shall have otherwise agreed to the contrary or KSEBL Event of Default giving rise to the Consultation Period shall have ceased to exist or shall have been remedied, KSEBL under intimation to Buying Entity and BESSD shall, subject to the prior consent of the BESSD, novate its part of the BESPA to any third party, including its Affiliates, within the stipulated period. In this case, KSEBL shall pay amount equivalent to 3 (three) months of energy billing based on the declared availability, or balance

Term of the BESPA, whichever is less, for its Contracted Capacity, with the Project assets being retained by the BESSD, and exit from the BESPA. In the event the aforesaid novation is not acceptable to the BESSD, or if no offer of novation is made by KSEBL within the stipulated period, then the BESSD may terminate the BESPA and choose to either continue operating the Project by itself finding an alternate procurer or to discontinue the operation of the Project. If the BESSD chooses to continue operating the project, KSEBL will pay to the BESSD, 'termination compensation' equivalent to 6 (six) months of energy billing corresponding to the declared availability, or balance Term of the BESPA, whichever is less, for its Contracted Capacity. If the BESSD decides to discontinue the operation of the Project, it may require KSEBL to make a payment of the 'termination compensation' which will be equivalent to the amount of the Debt due and 110% (one hundred and ten per cent) of the Adjusted Equity, less Insurance Cover if any.

Provided further that at the end of three (3) months period from the period mentioned in this Article 13.4.4, this Agreement may be terminated by the BESSD.

In the event of termination of BESPA, on account of Event of Default by the BESSD/ KSEBL, any damages or charges payable to the STU/ CTU, for the connectivity of the plant, shall be borne by the entity due to whose failure, the termination was triggered.

13.5 *Termination due to Force Majeure*

If the Force Majeure Event or its effects continue to be present beyond the period as specified in Article 4.5.3, either Party shall have the right to cause termination of the Agreement. In such an event, this Agreement shall terminate on the date of such Termination Notice without any further liability to either Party from the date of such termination.

- 13.6 In all cases, the lenders may also step in where appropriate as provided in the financing documents. Further, in all cases, the defaulting Party will be required to pay the applicable compensation including VGF disbursed (VGF disbursement as a compensation only when the defaulting party is BESSD) by BIA within 3 months from the date of such default, subsequent to which, the defaulting Party will be required to pay a monthly interest @1% of the compensation.

ARTICLE 14: LIABILITY AND INDEMNIFICATION

14.1 *Indemnity*

14.1.1 The BESSD shall indemnify, defend and hold KSEBL harmless against:

- a) any and all third party claims against KSEBL for any loss of or damage to property of such third party, or death or injury to such third party, arising out of a breach by the BESSD of any of its obligations under this Agreement or due to the BESSD's willful misconduct, gross negligence or fraudulent behavior or violations of Applicable Law; and
- b) any and all losses, damages, costs and expenses including legal costs, fines, penalties and interest actually suffered or incurred by KSEBL from third party claims arising by reason of a breach by the BESSD of any of its obligations under this Agreement, (provided that this Article 14 shall not apply to such breaches by the BESSD, for which specific remedies have been provided for under this Agreement).

14.1.2 KSEBL shall cause the Buying Entity(ies) to indemnify, defend and hold the BESSD harmless from and against:

any and all claims, liabilities, actions, demands, judgments, losses, costs, expenses, suits, actions and damages arising by reason of bodily injury, death or damage to property sustained by third parties that are caused by an act of negligence or the willful misconduct of KSEBL, or by an officer, director, sub-contractor, agent or employee of KSEBL except to the extent of such injury, death or damage as is attributable to the willful misconduct or negligence of, or breach of this Agreement by, the BESSD, or by an officer, director, sub-contractor, agent or employee of the BESSD.

14.2 *Procedure for claiming Indemnity*

14.2.1 *Third party claims*

- a. Where the Indemnified Party is entitled to indemnification from the Indemnifying Party pursuant to Article 14.1.1(a) or 14.1.2(a), the Indemnified Party shall promptly notify the Indemnifying Party of such claim referred to in Article 14.1.1(a) or 14.1.2(a) in respect of which it is entitled to be indemnified. Such notice shall be given as soon as reasonably practicable after the

Indemnified Party becomes aware of such claim. The Indemnifying Party shall be liable to settle the indemnification claim within thirty (30) days of receipt of the above notice. Provided however that, if:

- i) the Parties choose to refer the dispute in accordance with Article 16.3.2; and
- ii) the claim amount is not required to be paid/ deposited to such third party pending the resolution of the Dispute,

the Indemnifying Party shall become liable to pay the claim amount to the Indemnified Party or to the third party, as the case may be, promptly following the resolution of the Dispute, if such Dispute is not settled in favour of the Indemnified Party.

- b. The Indemnified Party may contest the claim by referring to the Appropriate Commission for which it is entitled to be Indemnified under Article 14.1.1(a) or 14.1.2(a) and the Indemnifying Party shall reimburse to the Indemnified Party all reasonable costs and expenses incurred by the Indemnified party. However, such Indemnified Party shall not settle or compromise such claim without first getting the consent of the Indemnifying Party, which consent shall not be unreasonably withheld or delayed.

An Indemnifying Party may, at its own expense, assume control of the defence of any proceedings brought against the Indemnified Party if it acknowledges its obligation to indemnify such Indemnified Party, gives such Indemnified Party prompt notice of its intention to assume control of the defence, and employs an independent legal counsel at its own cost that is reasonably satisfactory to the Indemnified Party.

14.3 *Indemnifiable Losses*

- 14.3.1 Where an Indemnified Party is entitled to Indemnifiable Losses from the Indemnifying Party pursuant to Article 14.1.1(b) or 14.1.2(b), the Indemnified Party shall promptly notify the Indemnifying Party of the Indemnifiable Losses actually incurred by the Indemnified Party. The Indemnifiable Losses shall be reimbursed by the Indemnifying Party within thirty (30) days of receipt of the notice seeking Indemnifiable Losses by the Indemnified Party. In case of nonpayment of such losses after a valid notice under this Article 14.3, such

event shall constitute a payment default under Article 13.

14.4 *Limitation on Liability*

14.4.1 Except as expressly provided in this Agreement, neither the BESSD nor KSEBL nor Buying Entity nor its/ their respective officers, directors, agents, employees or affiliates (or their officers, directors, agents or employees), shall be liable or responsible to the other Party or its affiliates, officers, directors, agents, employees, successors or permitted assigns or their respective insurers for incidental, indirect or consequential damages, connected with or resulting from performance or non-performance of this Agreement, or anything done in connection herewith, including claims in the nature of lost revenues, income or profits (other than payments expressly required and properly due under this Agreement), any increased expense of, reduction in or loss of power generation or equipment used therefore, irrespective of whether such claims are based upon breach of warranty, tort (including negligence, whether of Buying Entity, the BESSD or others), strict liability, contract, breach of statutory duty, operation of law or otherwise.

14.4.2 KSEBL shall have no recourse against any officer, director or shareholder of the BESSD or any Affiliate of the BESSD or any of its officers, directors or shareholders for such claims excluded under this Article. The BESSD shall have no recourse against any officer, director or shareholder of KSEBL or Buying Entity, or any affiliate of KSEBL or any of its officers, directors or shareholders for such claims excluded under this Article.

14.5 KSEBL's Liability

14.5.1 Notwithstanding anything to the contrary contained in this Agreement, the Parties acknowledge and accept that the KSEBL is a utility governed by provisions of the Electricity Act 2003 and, therefore, the performance of the obligations of the KSEBL under this Agreement shall be subject to the ability of the KSEBL to enforce the obligations as per provisions of the Electricity Act 2003 subject to approval of the Kerala State Electricity Regulatory Commission. It is however, specifically agreed that the payment of money becoming due from the KSEBL to the BESSD under this Agreement for supply of Energy / Capacity to the extent of the Contracted Capacity shall be as per the recourse in the BESPA.

KSEBL shall discharge the tariff payment obligation in terms of the provisions of this Agreement.

14.6 Duty to Mitigate

14.6.1 The Parties shall endeavour to take all reasonable steps so as mitigate any loss or damage which has occurred under this Article 14.

ARTICLE 15: ASSIGNMENTS AND CHARGES

15.1 *Assignments*

This Agreement shall be binding upon, and inure to the benefit of the Parties and their respective successors and permitted assigns. This Agreement shall not be assigned by any Party, other than by mutual consent between the Parties to be evidenced in writing. Such assignment shall be agreed to by

KSEBL subject to the compliance of provisions contained in this Agreement and more specifically to the provisions of Article 4.1.1 of this Agreement. In no case, such assignment shall be permissible prior to the declaration of COD.

Notwithstanding above, this Agreement may be assigned to the Project Lenders or Lender's Representative under the Financing Agreements, under intimation to KSEBL.

Provided that, such consent will not be withheld if KSEBL seeks to transfer to any transferee all of its rights and obligations under this Agreement.

The enforcement of the rights and obligation between the BESSD and the Buying Utility provided in this Agreement shall not be treated as an assignment but an enforcement of the terms agreed under this Agreement.

Provided further that any successor(s) or permitted assign(s) identified after mutual agreement between the Parties may be required to execute a new agreement on the same terms and conditions as are included in this Agreement. An amount of Rs. 5 Lakh per Transaction as Facilitation Fee (non-refundable) shall be deposited by the BESSD to KSEBL. Provided further that, such consent shall not be withheld by the BESSD if KSEBL seeks to transfer to any affiliate all of its rights and obligations under this Agreement.

In the event of Change in Shareholding/Substitution of Promoters triggered by the Financial Institutions leading to signing of fresh BESPA with a new entity, an amount of Rs. 10 Lakh per Transaction as Facilitation Fee (non-refundable) shall be deposited by the BESSD to KSEBL.

15.2 *Permitted Charges*

15.2.1 BESSD shall not create or permit to subsist any encumbrance over all or any of its rights and benefits under this Agreement, other than as set forth in Article 15.1 and the Guidelines.

ARTICLE 16: GOVERNING LAW AND DISPUTE RESOLUTION

16.1 *Governing Law*

16.1.1 This Agreement shall be governed by and construed in accordance with the Laws of India. Any legal proceedings in respect of any matters, claims or disputes under this Agreement shall be under the jurisdiction of appropriate courts in Thiruvananthapuram, Kerala. The courts at Thiruvananthapuram, Kerala, shall have exclusive jurisdiction over all matters arising out of or in connection with this Agreement, subject always to the adjudicatory powers of the Kerala State Electricity Regulatory Commission under the Electricity Act, 2003.

16.2 *Amicable Settlement and Dispute Resolution*

16.2.1 *Amicable Settlement*

- i. Either Party is entitled to raise any claim, dispute or difference of whatever nature arising under, out of or in connection with this Agreement ("Dispute") by giving a written notice (Dispute Notice) to the other Party, which shall contain:
 - (a) a description of the Dispute;
 - (b) the grounds for such Dispute; and
 - (c) all written material in support of its claim.
- ii. The other Party shall, within thirty (30) days of issue of Dispute Notice issued under Article 16.2.1(i), furnish:
 - (a) counter-claim and defences, if any, regarding the Dispute; and
 - (b) all written material in support of its defences and counter-claim.
- iii. Within thirty (30) days of issue of Dispute Notice by any Party pursuant to Article 16
 - (i) if the other Party does not furnish any counter claim or defence under Article 16
 - (ii) or thirty (30) days from the date of furnishing counter claims or defence by the other Party, both the Parties to the Dispute shall meet to settle such Dispute amicably. If the Parties fail to resolve the Dispute amicably within thirty (30) days from the later of the dates mentioned in

this Article 16.2.1.

- (iii) the Dispute shall be referred for dispute resolution in accordance with Article 16.3.

16.3 *Dispute Resolution*

16.3.1 Dispute Resolution by the Appropriate Commission

- i) Where any Dispute or differences arises in relation to this agreement of any nature whatsoever including the construction, interpretation or implementation of the provisions of this Agreement as well as claim made by any Party for any change in or determination of the Tariff or any matter related to Tariff or claims made by any Party which partly or wholly relate to any change in the Tariff or determination of any of such claims could result in change in the Tariff, and relates to any matter agreed to be referred to the Appropriate Commission, shall be submitted to adjudication by the Appropriate Commission. Appeal against the decisions of the Appropriate Commission shall be made only as per the provisions of the Electricity Act, 2003, as amended from time to time.

16.4 *Parties to Perform Obligations*

- 16.4.1 Notwithstanding the existence of any Dispute and difference referred to the Appropriate Commission and save as the Appropriate Commission may otherwise direct by a final or interim order, the Parties hereto shall continue to perform their respective obligations (which are not in dispute) under this Agreement.

ARTICLE 17: MISCELLANEOUS PROVISIONS

17.1 *Amendment*

17.1.1 This Agreement may only be amended or supplemented by a written agreement between the Parties.

17.2 *Third Party Beneficiaries*

17.2.1 Subject to provisions contained in this agreement, this Agreement is solely for the benefit of the Parties and their respective successors and permitted assigns and shall not be construed as creating any duty, standard of care or any liability to, any person not a party to this Agreement.

17.3 *Waiver*

17.3.1 No waiver by either Party of any default or breach by the other Party in the performance of any of the provisions of this Agreement shall be effective unless in writing duly executed by an authorised representative of such Party.

17.3.2 Neither the failure by either Party to insist on any occasion upon the performance of the terms, conditions and provisions of this Agreement nor time or other indulgence granted by one Party to the other Parties shall act as a waiver of such breach or acceptance of any variation or the relinquishment of any such right or any other right under this Agreement, which shall remain in full force and effect.

17.4 *Confidentiality*

17.4.1 The Parties undertake to hold in confidence this Agreement and not to disclose the terms and conditions of the transaction contemplated hereby to third parties, except:

- a) to their professional advisors;
- b) to their officers, contractors, employees, agents or representatives, financiers, who need to have access to such information for the proper performance of their activities; or
- c) disclosures required under Law, without the prior written consent of the other Party.

17.5 Severability

17.5.1 The invalidity or unenforceability, for any reason, of any part of this Agreement shall not prejudice or affect the validity or enforceability of the remainder of this Agreement, unless the part held invalid or unenforceable is fundamental to this Agreement.

17.6 Notices

17.6.1 All notices or other communications which are required to be given under this Agreement shall be in writing and in the English language.

17.6.2 If to the BESSD, all notices or other communications which are required must be delivered personally or by registered post or facsimile or any other method duly acknowledged to the addresses below:

Address :

Attention :

Email :

Fax. No. :

Telephone No. :

17.6.3 If to KSEBL, all notices or communications must be delivered personally or by registered post or facsimile or any other mode duly acknowledged to the address(es) below:

(i) Address :

Attention :

Email :

Fax. No. :

Telephone No. :

17.6.4 All notices or communications given by facsimile shall be confirmed by sending a copy of the same via post office in an envelope properly addressed to the appropriate Party for delivery by registered mail. All notices shall be deemed validly delivered upon receipt evidenced by an acknowledgement of the recipient, unless the Party delivering the notice can prove in case of delivery

through the registered post that the recipient refused to acknowledge the receipt of the notice despite efforts of the postal authorities.

17.6.5 Any Party may by notice of at least fifteen (15) days to the other Party change the address and/or addresses to which such notices and communications to it are to be delivered or mailed.

17.7 *Language*

17.7.1 All agreements, correspondence and communications between the Parties relating to this Agreement and all other documentation to be prepared and supplied under the Agreement shall be written in English, and the Agreement shall be construed and interpreted in accordance with English language.

17.7.2 If any of the agreements, correspondence, communications or documents are prepared in any language other than English, the English translation of such agreements, correspondence, communications or documents shall prevail in matters of interpretation.

17.8 *Restriction of Shareholders / Owners' Liability*

17.8.1 Parties expressly agree and acknowledge that none of the shareholders of the Parties hereto shall be liable to the other Parties for any of the contractual obligations of the concerned Party under this Agreement. Further, the financial liabilities of the shareholder/s of each Party to this Agreement, shall be restricted to the extent provided in the Indian Companies Act, 2013.

17.9 *Taxes and Duties*

17.9.1 The BESSD shall bear and promptly pay all statutory taxes, duties, levies and cess, assessed/ levied on the BESSD, contractors or their employees that are required to be paid by the BESSD as per the Law in relation to the execution of the Agreement and for supplying power as per the terms of this Agreement.

17.9.2 KSEBL shall be indemnified and held harmless by the BESSD against any claims that may be made against KSEBL in relation to the matters set out in Article 17.9.1.

17.9.3 KSEBL shall not be liable for any payment of, taxes, duties, levies, cess

whatsoever for discharging any obligation of the BESSD by KSEBL on behalf of BESSD.

17.10 *Independent Entity*

17.10.1 The BESSD shall be an independent entity performing its obligations pursuant to the Agreement.

17.10.2 Subject to the provisions of the Agreement, the BESSD shall be solely responsible for the manner in which its obligations under this Agreement are to be performed. All employees and representatives of the BESSD or contractors engaged by the BESSD in connection with the performance of the Agreement shall be under the complete control of the BESSD and shall not be deemed to be employees, representatives, contractors of KSEBL and nothing contained in the Agreement or in any agreement or contract awarded by the BESSD shall be construed to create any contractual relationship between any such employees, representatives or contractors and KSEBL.

17.11 *Compliance with Law*

Despite anything contained in this Agreement but without prejudice to this Article, if any provision of this Agreement shall be in deviation or inconsistent with or repugnant to the provisions contained in the Electricity Act, 2003, or any rules and regulations made there under, such provision of this Agreement shall be deemed to be amended to the extent required to bring it into compliance with the aforesaid relevant provisions as amended from time to time.

The Agreement for Battery Energy Storage System and supply of electricity to the Buying entity(s), to be read particularly, to fulfill the Energy Storage Obligations under the provisions of the Electricity Act, 2003 and the Regulations notified thereunder.

17.12 *Breach of Obligations*

The Parties acknowledge that a breach of any of the obligations contained herein would result in injuries. The Parties further acknowledge that the

amount of the liquidated damages or the method of calculating the liquidated damages specified in this Agreement is a genuine and reasonable pre-estimate of the damages that may be suffered by the non-defaulting party in each case specified under this Agreement.

17.13 Order of priority in application

In case of inconsistencies between the agreement(s) executed between the Parties, applicable Law including rules and regulations framed thereunder, the order of priority as between them shall be the order in which they are placed below:

- i. applicable Law, rules and regulations framed thereunder;
- ii. the Grid Code; and
- iii. the terms and conditions of this Agreement;

Now therefore, in consideration of the premises and mutual agreements, covenants and conditions set forth herein, it is hereby agreed by and between the Parties as follows:

IN WITNESS WHEREOF the Parties have caused the Agreement to be executed through their duly authorized representatives as of the date and place set forth above.

For and on behalf of
[KSEBL]

For and on behalf of
[BESSD]

Name, Designation and Address
Signature with seal

Name, Designation and Address
Signature with seal

Witness:
1.

2.

Witness:
1.

2.

Schedule-A:

FORMULA FOR DETERMINATION OF IMPACT IN TARIFF OR CHARGES DUE TO CHANGE IN LAW:

Formula to calculate adjustment in the tariff due to the impact of Change in Law, which is non-recurring in nature—

Let financial impact of change in law = **P**; then the modification in the monthly tariff (**MT**) for compensating the financial impact is given by—

$$MT = \frac{Y}{X}$$

where **X** = Contracted Capacity (MW) / (Average Availability during the Month⁻¹);

$$\text{and } Y = \frac{(P \times M_r)(1 + M_r)^n}{(1 + M_r)^n - 1};$$

where,—

n = No. of months over which the financial impact has to be paid (subject to a maximum of 180 months in case of the non-recurring fixed amount but in case of recurring impact it will

be till the impact persists); and M_r = monthly rate of interest = $\frac{R}{12 \times 100}$;

where **R** = annual rate of interest on loan component (in %) as considered by the Central Electricity Regulatory Commission in its Order for Tariff determination from Conventional or Renewable Energy Sources (whichever is applicable) for the year in which the project is commissioned. In absence of relevant Orders of the Central Electricity Regulatory Commission for the concerned year, the interest rate shall be average interest rate plus 200 basis points above the average State Bank of India Marginal Cost of Funds based leading rate, of one year tenor, prevalent during the last available six months for such period.

Further, the BESSD shall true up the MT annually so as to ensure that the payment to the affected party is capped at the yearly annuity amount.

Any such change shall be considered upto three digits after the decimal point, and remaining digits, if any, shall be ignored.

For e.g. in case the change in tariff payable is calculated as Rs. 0.14678/MW, it shall be modified as Rs. 0.146/MW.

Schedule-B Performance Criteria & Calculation under BESP A:

1. Power rating of the project capacity of 500 MWh (250 MW x 2 hrs) BESS will be 250 MW, i.e., the maximum value of the active output at the Delivery Point. Input energy shall be provided by KSEBL at delivery point for contract capacity as illustrated in 8.1 (b). The Energy rating of 500 MWh of the system will be the dispatchable capacity at COD of the system, as measured at the Metering Point. Terms and definitions of terminologies related to BESS shall be as defined in IEC 62933-2-1.
2. The BESSD shall make the BESS available for **Single operational cycles per day**, i.e. One complete charge-discharge cycle per day.

Provided that KSEBL, at its discretion, can split the discharge of the stored energy upto three sessions. The discharge may also be performed at below the rated power, stretching upto 8 Hours. For purpose of BESS operation, a day shall be reckoned as from 06:00 hrs on a day to 06:00 hrs on next day. The discharge extended beyond 24:00 hrs shall be reckoned to be performed on the same day. There shall be no mandatory cooling period between two sessions of same operation. (Charging or Discharging). Similarly, the charging may also be performed upto 10 hours and upto three sessions.

The BESS shall be operated for occasional dual cycles in a day subject maximum of 5 (Five) dual cycle days in a month, however subject to the annual limit of 400 cycles.

It is hereby clarified that the BESS should be designed to provide a minimum of 2 Hours of discharging capacity at rated power. However, KSEBL, at its sole discretion, can schedule discharging of the BESS upto three sessions each day, at rated power or stretching upto 8 Hours when discharged below rated power.

Illustration (Discharge) :

(1)

Session	Time	Power (MW)	Duration (Minutes)	Energy Discharged (MWh)
1	17:00 to 17:15	20	15	5
2	18:00 to 18:30	100	30	50
	18:30 to 19:30	250	60	250
	19:30 to 20:00	40	30	20
3	20:30 to 22:15	100	105	175
			195	500

(2)

Session	Time	Power (MW)	Duration (Minutes)	Energy Discharged (MWh)
1	18:00 to 01:00	50	420	350
2	01:30 to 02:00	250	30	125
3	02:30 to 03:00	50	30	25
			480	500

b. Following provisions shall be applicable on the entire Project Capacity guaranteed to be off taken by KSEBL:

- i. The procurement shall be in power (MW) terms. The BESSD shall install, operate and maintain the BESS to offer facility to KSEBL to charge and discharge the BESS on an “on demand” basis. The BESSD shall guarantee a minimum system availability of 95% on annual basis for Charging Cycles. The BESSD shall pay the liquidated damages for shortfall, if any, to KSEBL. Amount of such liquidated damages shall be 1.5 Times the Capacity Charges for the capacity not made available during charging cycles. The BESSD shall declare availability on Day Ahead Basis. The BESSD should provide the DC (Declared Capacity) for each time block for the day before 09:00 hours the previous day. The tentative instructions for scheduling of charging and discharging will be issued by SLDC by 15:00 hours on the previous day.

Schedule revisions will be issued by SLDC upto two clear 15-minute time blocks prior to the schedule period. However, as per Grid requirements, the SLDC shall request real-time schedule revisions, which shall be implemented real time and no later than the end of next time block.

Revisions to the Declared Capacity (DC) by the BESSD shall be submitted at least six clear 15-minute time block in advance. Frequent revision to DC, especially during evening peak hours, shall not be entertained and no more than two such revisions shall be permitted from 18:00 to 22:00 hours in a month. The discharge schedule from SLDC shall not be altered in such cases and will be treated as shortfall in discharge commitment.

Intrastate Deviation Settlement Mechanism (DSM) shall become applicable as and when notified by KSERC / CERC.

The Monthly Average Availability shall be calculated for each month. On the basis of monthly Availability, Annual Average Availability shall be calculated. The illustration is provided as under:

ILLUSTRATION:

Month	Monthly Average Availability	Annual Average Availability = $\{\Sigma (\text{Monthly Average Availability})\} / 12$
1	95%	
2	95%	
3	93%	
4	97%	

5	93%	
6	98%	
7	95%	
8	92%	
9	96%	
10	95%	
11	91%	
12	90%	

$$(95\%+95\%+93\%+97\%+93\%+98\%+95\%+92\%+96\%+95\%+91\%+90\%) / 12$$

$$= 94.16 \%$$

- ii. “Availability” of the Project shall mean the ability of the BESS to execute a function i.e. charging or discharging, when called upon to do so, as per the schedule or signal provided by the off-taker, subject to the minimum system ratings specified herein. In addition, the BESSD shall also demonstrate, **on annual basis, 100% of the minimum dispatchable capacity of the BESS** as required under Clause 8.1.e.iv below.

For a given BESPA, the Annual availability guarantee during Charging period shall commence from the date of fully commissioning of the system and shall be calculated as below:

Monthly System Availability = Mean of the System availabilities of all time-blocks during the month in which the KSEBL has scheduled power for charging the BESS.

Where,

System Availability in a time-block=

$$\frac{\text{Actual Drawl } MU_i(A)}{\text{Scheduled Drawl } MU_i(B)}$$

where

- i refers to the i^{th} time-block in the Month where Scheduled Injection $MU_i \neq 0$.
- Actual Drawl MU_i is the Actual Energy for Charging in the i^{th} time-block, in MUs
- Scheduled Drawl MU_i is the Energy Scheduled for Charging in the i^{th} time-block, in MUs
- A and B shall be as per the DSM/UI Reports published by the SLDC or measurement at the Main ABT Meter at the Point of Interconnection.

System Annual availability shall be calculated as per above. The liquidated damages for **system availability below 95%** shall be settled on monthly basis and if it is not able to settle in the same/ current month, it will be carried forward for settlement in subsequent month(s).

If the Annual un-availability of 5% is already reached during part of a year, the Monthly Capacity Charges will be paid only after deducting the Penalty for Availability.

- iii. The BESSD shall guarantee a **minimum AC to AC roundtrip efficiency (RtE)** of

85% for the system on monthly basis. The BESSD shall be liable for Liquidated Damages to the off-taker, if any, on account of excess conversion losses, based on the following conditions:

- (d) For $RtE < 70\%$, there shall be a liquidated damage @ APPC tariff of previous financial year of the KSEBL, levied upon the excess conversion losses, considering system $RtE = 85\%$ and tariff payment for the corresponding month shall not be made to the BESSD;
- (e) For $70\% \leq RtE < 85\%$, there shall be a liquidated damage levied @ APPC tariff of previous financial year of KSEBL, levied upon excess conversion losses considering system $RtE = 85\%$.
- (f) For $RtE > 85\%$, there shall be incentive @Rs. 0.50 per unit of excess discharge of energy considering system $RtE = 85\%$

System Roundtrip Efficiency =

$$= \frac{\text{Sum Total of Actual Injection/Discharging MUSj in a month (C)}}{\text{Sum Total of Actual Drawal/Charging MUSj in a month (D)}}$$

Where,

j refers to the j^{th} month in a year;

$D \neq 0$;

$D \leq 2 \times E_{\text{bess}} \times (MD_{n-1} - (MD_{n-1} - MD_n) \times j/12) \times \text{No of Days in the } j^{\text{th}} \text{ month/}$

RtE_g ;

E_{bess} refers to Energy Rating specified in Clause 8.1.b. above;

MD_{n-1} refers to minimum guaranteed dispatchable energy at the end of the previous year (as a % of Capacity at the COD specified in Clause 8.1.e.iv. below);

MD_n refers to minimum guaranteed dispatchable energy at the end of the current year;

RtE_g refers to the guaranteed Round-Trip Efficiency under the BESPAs;

C and D shall be as per the DSM/UI Reports published by the Regional RPCs/SLDCs or measurement at the Main ABT Meter at the Point of Interconnection.

For calculation of LD, RtE shall be calculated based on the above formula rounded off to three decimal places.

Note:

- The Scheduled capacity shall be subject to the System Power Rating specified in Clause 8.1.a. above and 8.1.b above.
- The BESSD shall take separate, metered connection for the Auxiliary Power load of BESS
or

The BESSD can draw auxiliary power from Interconnection point. Separate meter shall be provided by Developer to measure Auxiliary consumption and that would be billed by KSEBL @ Industrial Tariff excluding demand charges, subject to approval of Hon'ble KSERC.

The BESSD shall declare RtE on Day Ahead basis along with Declared Capacity.

3. The nameplate 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. The energy discharged from the battery shall be greater than that specified above.
4. The BESSD is required to meet the Discharge energy commitment subject to Clause (4) above. The Discharge Energy Commitment shall be 95 % of the Energy scheduled for dispatch on monthly basis. The BESSD shall be liable for Liquidated Damages to KSEBL, if any, on account of short fall in supply of committed energy at the Average Market Clearing Price (MCP) in peak hour (18:30Hrs-20:30Hrs) in Day Ahead Market (DAM) of Power Exchange for corresponding billing month period.
5. The BESSD shall be eligible for incentive, from completion of one year after CoD of entire project capacity @ Rs.1.00 per unit for the excess discharge of energy for the quantum discharged by KSEBL in excess of the minimum dispatchable energy taking into consideration YoY capacity degradation as 2 %.
6. SLDC shall, in accordance with Applicable Laws and Regulations thereunder, issue instructions to the BESSD on behalf of KSEBL for dispatch of electricity to the Grid during such period and in such volume as it may specify in its instructions. The BESSD shall clearly specify the maximum recovery times required to restore the BESS for functional availability between duty cycles. The maximum allowed cooling time between Charge to Discharge or Discharge to charge would be 1 hr. There shall be no cooling or recovery time between two sessions during charging or discharging operation.
7. Operational Window: Operational Window shall mean the expected hours/duration of system (capacity) availability on each day during the term of the Contract, excluding:
 - a. Maximum BESS recovery time as specified in this document
 - b. Grid Outages (duly certified to this effect by the Grid Operator)
 - c. Planned Maintenance Outage duly informed by the BESSD to the off-taker with at least one month's prior notice, subject to total no. of planned outage period being not more than 34 hours in a two-month period.
 - d. The Scheduled maintenance must be carried out during monsoon season, subject to prior approval from KSEBL.

BESSD will have to comply with the Charging and Discharging Schedule as intimated by SLDC.

8. In addition to above, the BESSD shall also submit Available energy Test Report for the Project Capacity as per IEC 62933-2-1 on Annual basis.
9. It shall be the responsibility of the BESSD to make periodic replacements/replenishments of system capacities at its own cost to ensure annual guaranteed system ratings, if and when required, up to the Term of the Contract. Outage time as a result of replacement will also be counted as an “Accountable BESS Outage” for the purpose of computing BESS Availability.

SCHEDULE 1: PERFORMANCE BANK GUARANTEE (PBG)

(to be attached herewith separately for each Project)

SCHEDULE 2:

ILLUSTRATIONS

(Please refer Article 4.4 of this Agreement)

Illustration

1. System Availability

Under a BSSPA between an off-taker 'X' and BESSD 'Y' for a capacity 'C', the Schedule and Actual Injection into/Drawl from the Grid from the Project, as per the DSM/ UI Reports published by the SLDC for a Sample day is shown below:

date	block	Drawl (from Grid) MW (Charging) (X)	Injection (into Grid) MW (Discharging) (Y)	Scheduled Mus (Z)	Time-block Availability, (TA) =(Xi/Zi) or (Yi/Zi)
01-May-28	1	250	0	250	1
01-May-28	2	250	0	250	1
01-May-28	3	240	0	250	0.96
01-May-28	4	240	0	250	0.96
01-May-28	5	235	0	250	0.94
01-May-28	6	235	0	250	0.94
01-May-28	7	240	0	250	0.96
01-May-28	8	240	0	250	0.96
01-May-28	9	0	0	12.5	0
01-May-28	10	12.5	0	0	0
01-May-28	11	0	0	0	NA
01-May-28	12	0	0	0	NA
01-May-28	13	0	0	0	NA
01-May-28	14	0	0	0	NA
01-May-28	15	0	0	0	NA
01-May-28	16	0	0	0	NA
01-May-28	17	0	0	0	NA
01-May-28	18	0	0	0	NA
01-May-28	19	0	0	0	NA
01-May-28	20	0	0	0	NA
01-May-28	21	0	0	0	NA
01-May-28	22	0	0	0	NA
01-May-28	23	0	0	0	NA

01-May-28	24	0	190	250	0.76
01-May-28	25	0	190	250	0.76
01-May-28	26	0	200	250	0.8
01-May-28	27	0	200	250	0.8
01-May-28	28	0	200	250	0.8
01-May-28	29	0	200	250	0.8
01-May-28	30	0	200	250	0.8
01-May-28	31	0	200	250	0.8
01-May-28	32	0	0	0	NA
01-May-28	33	0	0	0	NA
01-May-28	34	0	0	0	NA
01-May-28	35	0	0	0	NA
01-May-28	36	0	0	0	NA
01-May-28	37	0	0	0	NA
01-May-28	38	0	0	0	NA
01-May-28	39	0	0	0	NA
01-May-28	40	0	0	0	NA
01-May-28	41	0	0	0	NA
01-May-28	42	0	0	0	NA
01-May-28	43	12.5	0	12.5	1
01-May-28	44	245	0	250	0.98
01-May-28	45	240	0	250	0.96
01-May-28	46	240	0	250	0.96
01-May-28	47	235	0	250	0.94
01-May-28	48	240	0	250	0.96
01-May-28	49	250	0	250	1
01-May-28	50	250	0	250	1
01-May-28	51	250	0	250	1
01-May-28	52	0	0	0	NA
01-May-28	53	0	0	0	NA
01-May-28	54	0	0	0	NA
01-May-28	55	0	0	0	NA
01-May-28	56	0	0	0	NA
01-May-28	57	0	0	0	NA
01-May-28	58	0	0	0	NA
01-May-28	59	0	0	0	NA
01-May-28	60	0	0	0	NA
01-May-28	61	0	0	0	NA
01-May-28	62	0	0	0	NA
01-May-28	63	0	0	0	NA
01-May-28	64	0	0	0	NA
01-May-28	65	0	0	0	NA
01-May-28	66	0	0	0	NA
01-May-28	67	0	0	0	NA
01-May-28	68	0	0	0	NA

01-May-28	69	0	0	0	NA
01-May-28	70	0	0	0	NA
01-May-28	71	0	0	0	NA
01-May-28	72	0	0	0	NA
01-May-28	73	0	0	0	NA
01-May-28	74	0	0	0	NA
01-May-28	75	0	0	0	NA
01-May-28	76	0	0	0	NA
01-May-28	77	250	0	250	1
01-May-28	78	0	0	0	NA
01-May-28	79	0	0	0	NA
01-May-28	80	0	0	0	NA
01-May-28	81	0	230	250	0.92
01-May-28	82	0	235	250	0.94
01-May-28	83	0	235	250	0.94
01-May-28	84	0	230	250	0.92
01-May-28	85	0	200	250	0.8
01-May-28	86	0	190	250	0.76
01-May-28	87	0	185	250	0.74
01-May-28	88	0	230	250	0.92
01-May-28	89	0	0	0	NA
01-May-28	90	0	0	0	NA
01-May-28	91	0	0	0	NA
01-May-28	92	0	0	0	NA
01-May-28	93	0	0	0	NA
01-May-28	94	0	0	0	NA
01-May-28	95	0	0	0	NA
01-May-28	96	0	0	0	NA
Total		3905	3295	8025	29.7
		No of Block with Active Charging			20
		SYSTEM AVAIL ABILITY during Charging period			0.87

Note: For calculating the System Availability for day/month, schedule provided by Procure/SLDC to be considered. Shortfall in System Availability will be calculated as per below methodology. DSM / UI charges shall be treated separately as per applicable regulations and paid by BESSD.

If KSEBL has scheduled for charging of BESS & discharge of BESS and BESSD has not charge & discharge the BESS according to schedule then TA will be calculated as $TA = (X/Z) + (Y/Z)$ for that time block.

If KSEBL has not scheduled for charging of BESS & discharge of BESS and if BESS performs charging or discharging then TA will be 0 (zero) for that time block.

Any discharge/ injection to the grid without scheduling by KSEBL is not allowed and will not be considered as discharge/ injection from BESS.

i is the i^{th} Time block in the day.

The System Availability for the day is calculated as the mean of **Column TA**, for all time- blocks where **Column Z is not zero**.

Further any drawl/ injection without scheduling will be treated as zero availability.

From the above table, Day's System Availability for charging period= 0.87

Similarly, the System availability shall be calculated for Monthly, 2880 time-blocks (96*30) in a Month (31 Days in a month considered in above), excluding time-blocks where Grid is unavailable or in case of Force Majeure.

Assuming the following parameters:

- a. Total Contract Capacity=250 MW, **C**
- b. Quoted monthly Capacity charges=2 lakhs /MW/month, **D**
- c. Annual system availability (as per procedure above) is calculated to be 0.87, **B**
- d. $n = 12$

Liquidated Damages on account of shortage in annual system Availability, as calculated from formula provided in Clause 9.2:

$$\begin{aligned}\text{Liquidated damages} &= (A - B) \times C \times D \times n \times 1.5 \\ &= (0.95 - 0.87) \times 250 \times 2 \times 12 \times 1.5 \\ &= 720 \text{ lakhs}\end{aligned}$$

2. System Round Trip Efficiency

The present illustration is for calculating the Daily System Efficiency as demonstration only. The same methodology shall be used for calculation of monthly system efficiency as per Clause 9.1.d.3.

$$\text{System Efficiency} = \frac{\text{Total of Column(Y)}}{\text{Total of Column(X)}} = \frac{3295}{3905} = 0.8437 \sim 0.84 \text{ (rounded off to 2 decimal places)}$$

Assuming:

- a. Monthly System Efficiency = 0.84,
- b. Total Monthly Drawl form Grid(Charging Power) = 41.1MUs

Liquidated Damages is calculated @ APPC tariff for excess loss of energy considering expected System Efficiency to be 85%

Excess conversion losses = $(0.85 - 0.84) \times \text{Total Drawl from the grid in the month (i.e., Charging Energy)}$

$$\begin{aligned}\text{Liquidated Damages for the month} &= \text{Rs. } 0.01 \times 41.1 \times \text{APPC tariff or e.g. Rs. } 3.15) \\ &= \text{Rs } 1.295 \text{ Millions} \\ &= \text{Rs } 12.95 \text{ lakhs}\end{aligned}$$

c. **Discharge Energy Commitment:**

Scheduled Energy for Discharge = $(500 \times 1000) \times 32 = 16 \text{ MU}$

Minimum Guaranteed Availability = 95 %

Discharge Energy Commitment = 15.2 MU

Say if, Short fall during the month = 0.02 MU

Liquidated Damages for

Short fall in Supply of Committed Energy = $0.02 \times (\text{AMCP Peak DAM eg.10/-})$

= $0.02 \times 10/-$

= 0.2 Million ie Rs. 2 Lakh

SCHEDULE 3: COMMISSIONING PROCEDURE AND INDICATIVE SINGLE LINE DIAGRAM (SLD)