Guidelines for Procurement and Utilization of Battery Energy Storage Systems as part of Generation, Transmission and Distribution assets, along with Ancillary Services

SECTION I: BACKGROUND AND INTRODUCTION

A. PREAMBLE

1. Background

a. The growth of renewable energy in India has been one of the key success stories of the nation's energy sector. Today, Solar and Wind power have become integral to the nation's energy mix at par with the conventional energy sources. India has already achieved installation of 100 GW of RE capacity enroute the ambitious journey of installing 450 GW of RE by FY 2029-30. With the share of RE in India's energy mix significantly increasing, and in view of the targeted energy mix by 2029-2030, it is pertinent to plan for optimum utilization of resources and selection of right resource mix to meet the projected energy demand of the country.

b. With various global developments in technology and manufacturing, RE power has become the most affordable and cheapest source for annual energy requirements. Initial capacities have been successfully integrated to the grids so far, but with increasing penetration of RE in the energy mix, further capacity addition is expected to face issues due to supply-demand mismatch, wherein generation from RE sources happens mainly during the low demand period and has an characteristic of being infirm in nature. Some utilities have already started experiencing the effects of the integration renewables into their grids and forcing curtailment of power. In this context, Central Electricity Authority (CEA), in its report titled "Optimal Generation Capacity Mix for 2029-30", dated January, 2020, has envisaged a key disruption of replacement of thermal based generation with renewable energy generation complemented with energy storage technology. In this regard, an excerpt from the above report is reproduced below:

"This has been possible with the downward trend of cost of solar panels and newer technology options like battery energy storage systems. In fact, the reduction in cost projections is very aggressive for Battery Energy Storage technology to render them financially viable in near future. In this context, planning for optimal generation capacity mix gains tremendous importance so as the future generation capacity mix is cost effective as well as environmental friendly, a horizon of 10-12 years is sufficient to gear up the systems and policies in the right direction to achieve the optimal generation mix."

c. In addition to the above, Ancillary Services have been an integral part of the electricity ecosystem all over the world. The basic services of frequency and voltage control are embedded in the electricity supply system and in order to enable provision of these basic services, specific support services are required to complement reliable and efficient grid operation. These support services which act as 'Value added Services' are known as 'Ancillary Services'. The Ancillary Services comprise of services required for maintaining load-generation balance (frequency control), maintaining voltage and reactive power support and maintaining generation & transmission reserves. As an initial step, the Central Electricity Regulatory Commission (CERC) had in 2013 floated

a Staff Paper on "Introduction of Ancillary Services in Indian Electricity Market". The Staff Paper had discussed about the types of Ancillary Services such as the real power support services or Frequency Support Ancillary Services/ Load following, Voltage or reactive power support services and Black start support services. It was envisaged that the generators having surplus capacity, (i.e. either un-requisitioned surplus capacity by the beneficiaries of that capacity or generators who could not sell their capacity in the market and/or surplus captive capacity) may be allowed to bid into the power exchange, in a separate market segment.

d. Pursuant to above, CERC floated draft Regulations on Ancillary Service operation in May, 2015. After consultations with the stakeholders, CERC decided that in order to meet the current requirement, tertiary frequency control through utilization of un-despatched surplus capacity available in generating stations at the inter-state level, whose tariff is determined/adopted by CERC, may be introduced as Reserve Regulation Ancillary Service (RRAS). The variable cost of RRAS provider is considered for merit order despatch. In order to facilitate Congestion management, transmission constraints (both interregional and intraregional) are considered during despatch of RRAS. Both the fixed charges and variable charges are paid to the RRAS providers with a mark-up as an incentive. The fixed charges are in turn refunded to the original beneficiary(s) in proportion to the power surrendered. Therefore, at present the ancillary services in India are provided by resources which are spinning and already scheduled at a certain MW level with both headroom and legroom margins available (as reserves) for regulating up and down. While, the scheduled MW is decided by the market participants, the System Operator utilizes only the headroom and legroom of generation margins as ancillary services for frequency control.

e. 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 and transmission mix. Guidelines for setting up of new RE capacity through tariff-based bidding mechanism are already in place. With respect to increasing the storage component in the energy mix, Ministry of Power had requested the CEA in April, 2021, to submit a report on identification of usage of storage as business case and for ancillary services. The Report identifies Pumped Hydro Storage System (PSP) and Battery Energy Storage Systems (BESS) as the commercially deployed solutions for providing requisite storage capacity. The said CEA Study has revealed that the planning model selects the battery energy storage system from the year 2027-28 onwards and a Battery Energy Storage capacity of 27,000 MW/108,000 MWh (4-hour storage) is projected to be part of the installed capacity in 2029-30. This will be in addition to 10,151 MW of Pumped Hydro Storage System envisaged to be a component of the installed capacity in 2029-30.

f. With the limited support available from existing Pumped Hydro Storage Plants and the long gestation period for the new Pumped Hydro Storage Plants, the circumstances merit consideration of Battery Energy Storage System (BESS) as one of the sources of resource adequacy for the Indian power system. It has emerged that RE plus storage/BESS can provide the required flexibility in generation apart from ensuring the resource adequacy.

2. **Objectives**

The specific objectives of these Guidelines are as follows:

a. To promote procurement of BESS, as part of individual RE power projects or separately, for addressing the variability/firming power supply / increasing energy output / extending the time of supply from an individual RE project or a portfolio of RE projects, augmentation of existing RE Projects and/or to provide ancillary, grid support and flexibility services for the grid.

b. To promote procurement of BESS for optimum utilization of transmission and distribution network.

c. To facilitate transparency and fairness in procurement processes/ and to provide for a framework for an Intermediary Procurer as an Aggregator / Trading licensees / Implementing Agency for the inter-state/intra-state sale-purchase of power.

d. To provide standardization and uniformity in processes and a risk-sharing framework between various stakeholders, involved in the RE power supply and procurement, thereby encouraging competition and enhanced bankability of the Projects.

e. The BESS may be charged through a combination of RE and non-RE power, in line with extant regulations, and these Guidelines will be applicable in all cases of charging/discharging the BESS.

B. SCOPE OF THE GUIDELINES

1. **Applicability of Guidelines**

These Guidelines are being issued under the provisions of Section 63 of the Electricity Act, 2003 for procurement of energy from BESS by the 'Procurers', through competitive bidding, from grid-connected Projects, with following minimum project size and bid capacity requirements:

(i) For Intra-State Projects: Minimum individual project size of power rating of 1 MW and above with suitable energy rating based on application at one site with minimum bid capacity of 1MW; and

(ii) For Inter-State Projects: Minimum individual project capacity of 50 MW and above with suitable energy rating based on application at one site with minimum bid capacity of 50 MW at the minimum voltage level as specified by the extant CERC regulations/Detailed Procedure.

(iii) These Guidelines shall also be applicable for augmentation/ reconfiguration of existing RE Projects through optimum use of storage

2. Unless explicitly specified in these Guidelines, the provisions of these Guidelines shall be binding on the Procurer/ Intermediary Procurer/End Procurer/Implementing Agency and the Authorised Representative of the Procurer. The process to be adopted in event of any deviation proposed from these Guidelines is specified in Clause A, Section V of these Guidelines**.**

3. **Business Cases**

Following business cases have been identified regarding utilization of BESS in supply of energy and grid maintenance:

(i) RE supply with BESS: In this case, the BESS is included as part of the RE Project, and ownership of the RE and BESS assets lies with the Generator. These Projects may also be utilized to meet Peak power and firm dispatchable RE requirements of Procurers.

(ii) BESS with transmission infrastructure: This model is aimed at maximization of the utilization of the Storage Asset, increasing duration of usage of transmission system and Strengthen Grid Stability. These systems will enable large-scale optimization of transmission infrastructure by optimum utilization of transmission capacity and reducing network congestion. As a result, the requirement of augmentation of evacuation and transmission infrastructure gets drastically reduced.

(iii) Storage as an asset for balancing services and flexible operations: The BESS, with fast ramp rate, is particularly suited for second-by-second management of interchange flows. The system operator (for eg. POSOCO and SLDCs) may use BESS for frequency control and balancing services to manage the inherent uncertainty/variations in load and generation.

(iv) Storage for Distribution:. This model aims at maximization of the utilization of the Storage Asset and strengthening DISCOM operations. Connected at the load centres, it may be suitably utilized by the Discom to manage its peak load, grid resilience, portfolio management and flexible operations. BESS can also be used to facilitate large scale expansion of electric mobility segment as part of major consumers for the Discoms. BESS can also be used as an optimum tool to achieve asset shifting by the Discoms, thereby increasing asset life.

(v) Along with the business cases mentioned at Sl. No (i) to (iv) above, it is possible that a certain component can also be earmarked for utilisation as merchant capacity by the BESS developer. This component may be traded in power market as per extant regulations.

(vi) Any other business model as found suitable by the Procurer/Intermediary Procurer.

4. These Guidelines shall be applicable for business cases identified above vide Sl. (ii) to (vi). However, for Sl. (i) above, i.e. in case of systems which contain RE generating stations along with BESS as a single Project (co-located or multi-located), the respective Standard Bidding Guidelines issued for procurement of power from Solar, Wind and Hybrid Power Projects, or the Unified Standard Bidding Guidelines, as issued by the Ministry of Power, shall be applicable.

SECTION II: DEFINITIONS

The terms used in these Guidelines will have the following meanings:

1. **"Act"** shall mean the Electricity Act, 2003, including subsequent amendments and clarifications issued thereof.

2. **"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 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;

    a. 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;
    b. An amount equal to the Adjusted Equity as on COD shall be deemed to be the base (the "Base Adjusted Equity");
    c. After COD, the Adjusted Equity hereunder shall be a sum equal to the Base Adjusted Equity, reduced by 0.333% (zero point three three three 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;

    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 BSPA period is extended, but the revision on account of WPI shall continue to be made.

3. **"Affiliate"** in relation to a Company shall mean a person who controls, is controlled by, or is under the common control with such Company.

4. **"Annual Availability"** shall be as defined in the RfS.

5. "**Appropriate Commission"** shall have the same meaning as defined in the Act.

6. **"Authorised Representative"** of the Procurer: In cases, where the Battery Storage Purchase Agreement (BSPA) signing agency and the agency carrying out the tendering / bidding process are different, the agency carrying out the tendering / bidding process shall be deemed to be the Authorized Representative of the 'Procurer' 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.

7. **"Battery Storage System Developer"** or **"BSSD"** or **"Developer"** shall mean the entity owning/operating the BESS facility for supply of power under these Guidelines

8. **"Battery Energy Storage Systems"** or **"BESS"** or **"Project"** 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 ancillary facilities (grid support, for example). Such systems may be co-located with an RE Generating Stations, or may be operated on stand-alone basis.

9. **"Bidding Agency"** shall refer to the organization issuing tender documents and carrying out the selection process under these Guidelines.

10. **"Control"** shall mean the ownership, directly or indirectly, of more than 50% of the voting shares of such Company or right to appoint majority Directors.

11. **"Debt Due"** shall mean the aggregate of the following sums expressed in Indian Rupees outstanding on the Transfer Date:

    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 pre-payment 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.

    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.

12. **"End Procurer"** shall mean the ultimate Procurer of energy from the Intermediary Procurer or the Battery Storage System Developer as the case maybe; and shall include the distribution licensee, bulk consumers, etc, as applicable.

13. **"Financial Closure"** or **"Project Financing arrangements"** shall mean arrangement of necessary funds by the Battery 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.

14. **"Intermediary Procurer" or "Implementing Agency":** In some cases, an intermediary between the distribution licensee(s) and the BSSD(s), or an "Implementing Agency" as notified by the Government of India, may be required either to aggregate the power purchased and / or firming the same with large scale energy storage capacity from different developers, and sell it to the End Procurer(s). In such cases, the "Procurer" would be a trading licensee or an Implementing Agency, buying power from the Developer(s) and selling the same to one or more distribution licensees, such distribution licensees shall be the "End Procurer" and the trading licensee shall be "Intermediary Procurer" for the purpose of these Guidelines.

15. **"Procurer"** shall, as the context may require, shall mean the End Procurer, or an Intermediary Procurer.

16. **"Renewable Energy (RE) sources"** shall refer to 'solar photovoltaic' (hereinafter also referred as 'solar'), 'wind' and 'solar PV- wind hybrid' (hereinafter also referred as 'hybrid') and other renewable energy sources as notified by the Government of India from time to time.

17. **"Renewable Power" or "RE Power"** The term 'RE Power', wherever used in these Guidelines, shall refer to power from Renewable Energy sources.

18. **"RE Park"** shall refer to areas or parks developed, in accordance with the Guidelines and/or Policies issued by Central or State Governments, for setting-up of RE power projects, including Solar, Wind or Solar-Wind Hybrid Power projects.

19. **"Request for Selection"** or **"RfS"** or **"Tender"** or **"Bid Document"** shall mean the tender documents issued by the Bidding Agency, including Energy Purchase and Energy Sale Agreements as applicable, for procurement of power through a competitive bidding process under these Guidelines.

20. **"Solar"**: The term 'Solar', wherever used in these Guidelines, shall refer to Solar Photovoltaic (PV) and Solar Thermal technologies or the power plant based on such technologies.

21. **"Wind':** The term 'Wind', wherever used in these Guidelines, shall refer to Wind energy technology or the power plant based on such technology.

SECTION III: BIDDING PROCESS AND AWARD OF PROJECTS

A. PREPARATION FOR INVITING BIDS AND PROJECT PREPAREDNESS

1. Conditions to be met by Procurer

1.1. Bid Documentation:

a. The Procurer shall prepare the bid documents in accordance with these Guidelines, except as provided in sub clause b below.

b. The Procurer shall seek prior approval of the Appropriate Government for deviations, if any, in the draft RfS, draft BSPA, draft BSSA (if applicable) from these Guidelines, in accordance with the process described in Clause A, Section V of these Guidelines.

c. In case of an ongoing bidding under process prior to notification of these Guidelines, the provisions of the specific tender documents shall prevail.

1.2. Site-related Project preparatory activities including clearances

In order to ensure timely commencement of supply of electricity being procured and to convince the bidders about the irrevocable intention of the Procurer, it is necessary that various Project preparatory activities as mentioned in Clause 1.4 and Clause 1.5 below of these Guidelines are completed in time.

1.3. Arrangements related to site

As specified in the bidding documents to be issued by the Procurers, the Project may be set up either at the Project site specified by the Procurer, or at the Project site selected by the Developer. Multiple energy injection points in grid may be permitted, subject to provisions in the tender document. In case of multiple injection points, the capacity of Connectivity and Open Access for each individual energy injection point will be granted as per extant regulations as amended from time to time. Further, for a single Project with multiple injection points, scheduling and settlement as per Deviation Settlement Mechanism will be carried out for each injection point separately. In such cases, obligation of the Procurer will be to procure power from all or any of the points of injection, cumulatively upto the Contracted Capacity as per the BSPA, and connectivity granted at each injection point.

1.4. Project site specified by the Procurer

The Procurer may choose to locate the Project at a specified site and the same may be specified by the Procurer in the bidding documents. In such cases, to ensure timely commencement of supply of electricity, the Procurer shall ensure that various Project preparatory activities as indicated below have been completed by the Procurer and all entities involved as per the timelines indicated below.

Milestones	Deadline
Identification of 100% area of the land and substation (entails providing coordinates of land boundaries and substation location)- by the Procurer	Along with issuance of tender documents

Provision of documents/agreements to indicate in-principle availability of 100 % of land - by the Procurer	Along with issuance of tender documents
Tendering process	The bidding agency should try to conclude the tender within 3months of issuance of the tender documents
Signing of BSPA	30 days after issuance of LoA (may be extended depending on tender conditions)
Signing of Land lease/right-to-use Agreement	Along with signing of BSPA
Grant of possession/right to use of 100% of land area identified (free from all encumbrances) along with forest clearance if applicable- by the Procurer	Within 60 days of signing of BSPA
Application for grant of Connectivity and Open Access by the STU/CTU (as applicable)-to be facilitated/applied for by the Procurer/BSSD	Within 30 days after in-principle availability of 100 % of land (Note: This is to reduce the time in planning of requisite system, if required. Enabling provision in CERC Connectivity Regulation will be required to facilitate the same)
Financial Closure	In line with Clause B. of Section IV of these Guidelines.
Substation readiness for evacuation of power-by the Procurer	Matching with original SCOD of the Associated Transmission System
Other legal clearances as required-by the Procurer	15 days prior to SCD
Scheduled Commissioning Date (SCD)	In line with Clause C. of Section IV of these Guidelines.

1.5. <u>Project site specified by the Procurer in an RE Park</u>

The Procurer may choose to locate the Project in a concentrated zone characterized with proper infrastructure and access to amenities (RE Park) and the same may be specified by the Procurer in the bidding documents. The RE Park shall be developed as per the relevant Policies and/or Guidelines in this regard issued by MNRE/Central Government/State Government (for eg. "Guidelines for Development of Solar Parks", issued by MNRE for 'Solar Parks'). Notwithstanding this, to ensure timely commencement of supply of electricity, the Procurer shall ensure that various Project preparatory activities as indicated in the table below are initiated and completed by the concerned RE Park developer as per the timelines mentioned therein. For RE Parks, the responsibilities of the developer(s) of such Parks [for eg. Solar Power Park Developer

(SPPD) in case of 'Solar Park'] shall flow from the relevant Policies and/or Guidelines for development of such Parks, issued by MNRE/Central Government/State Government and Implementation Support Agreement, if any, which defines the relationship between the developer of such park and the BSSD.

Milestones	**Deadline**
Identification of 100% area of the land and substation (entails providing coordinates of land boundaries and substation location)- by the Park Developer	Along with issuance of tender documents
Provision of documents/ agreements to indicate in-principle availability of 100 % of land area at the initiation of bidding- by the Park Developer	Along with issuance of tender documents
Tendering process	The bidding agency should try to conclude the tender within 3 months of issuance of the tender documents
Signing of BSPA	30 days after issuance of LoA (may be extended depending on the tender conditions)
Signing of Land lease agreement	Along with signing of BSPA
Grant of possession/right to use of at 100% of land area identified (free from all encumbrances) along with forest clearance if applicable-by the Park Developer	Within 60 days of signing of BSSA
Payment of upfront charges to the Park Developer- by the BSSD	To be paid in 3 instalments: 25% along with signing of Land lease agreement. Next 25% within 30 days of signing of Land lease agreement. Remaining 50% at the time of grant of possession/right to use of 100% of land area identified by the Park Developer
Application for Grant of Connectivity and Open Access by the STU/CTU (as per extant regulations)- to be facilitated/applied by the Park Developer	30 days after signing of BSPA subject to in-principle availability of 100 % of land (Note: This is to reduce the time in planning of requisite system, if required. Enabling provision in CERC Connectivity Regulation will be required to facilitate the same)
Financial Closure	In line with Clause B. of Section IV of these Guidelines.

Substation readiness for evacuation of power-by the Park Developer	Matching with original SCOD of Associated Transmission System
Other legal clearances as required-by the Park Developer	15 days prior to SCD
Scheduled Commissioning Date (SCD)	In line with Clause C. of Section IV of these Guidelines.

2. Project site selected by the BSSD

In case the Procurer does not specify a site and the Project site is selected by the BSSD, to ensure timely completion and commencement of supply of power, the bidder would be required to submit documents in respect of project milestones as per the time schedule specified in the bidding documents. Further, the BSSD/Procurer (as applicable) shall apply for Connectivity/Open Access to the CTU/STU Grid (as required) for technical feasibility of connectivity/Open Access of the plant to InSTS/ISTS substation which shall be processed as per the extant Regulations in vogue.

In addition to the documents as identified, a letter from State Transmission Utility (STU)/ Central Transmission Utility (CTU), (or RE power park developer, in case of selected site being in a RE park) as applicable, connectivity from STU/CTU, as applicable, shall be required to be submitted by the BSSD prior to commissioning of the Project. If the Project site is located in the same State as the Procurer/ End Procurer, State Government shall endeavour to provide necessary support to facilitate the connectivity of the plant to InSTS/ISTS substation.

Obtaining all other clearances prior to Project commissioning as required for Project execution, shall be entirely the responsibility of the BSSD, and the Procurer shall not be responsible in case of delay in obtaining the above clearances. Provisions regarding treatment of the same will be explicitly provided in the tender documents.

B. BID STRUCTURE

1. **Bid Package**

The bids will be designed in terms of total capacity of storage. The minimum Project and package sizes for the bids are indicated at Sl. B.1. of Section I above. However, in order to have economies of scale, the Procurer is permitted to specify the minimum project size, that a bidder is allowed to bid for, to be more than the above specified limits, as the case may be. Notwithstanding this, on due consideration of availability of land and transmission facility, smaller bid sizes can be kept in case of North-Eastern States, Special Category States, and Projects outside RE Parks. The Procurer may also choose to specify the maximum capacity that can be allotted to a single bidder including its Affiliates keeping in mind factors such as economies of scale, land availability, expected competition and need for development of the market.

2. **Bidding Parameters**

The Procurer may invite bids for the procurement in terms of (i) Capacity, or (ii) Energy or a combination of both. A Capacity Procurement would entail that the Procurer pays for the availability of power and an Energy Procurement would entail that the Procurer pays for the dispatch/storage of energy. The bidding parameter, accordingly, would be:

a) Availability based fixed charge/ Annuity (INR per kW/MW) per year for Term of the Agreement, to be paid on a monthly basis and/or
b) Energy charge (INR per kWh/MWh) basis for Term of the Agreement payable on a monthly basis based on actual utilization and/or
c) A quantum of VGF support required by the bidder for a pre-specified fixed Tariff / Annuity available, or
d) A combination of the aforementioned options or any other parameter as specified in the RfS

The Bidding Agency may specify in the RfS, one of the above bidding parameters, or a combination thereof, depending on the BESS application and the Procurer off-take arrangements. to be specified in the RfS.

The minimum Term of the BSPA is envisaged to be 8 years which could be increased as per requirement of procurement.

C. BIDDING PROCESS

1. The Procurer shall call for the bids adopting a single stage, two part (Technical Bid & Financial Bid), bidding process to be conducted preferably through electronic mode (e-bidding). The technical bid shall be opened first. The financial bids of only those bidders who qualify in the technical bid evaluation stage, shall be opened. The Procurer may adopt e-reverse auction if it so desires, for selection of successful bidders, however, in such a case, this will be specifically mentioned in the notice inviting bids and bid document. E-procurement platforms with a successful track record and with adequate safety, security and confidentiality features will be used. In case of a RE Park specific project, intimation about the initiation of the bidding process shall be given by the Procurer to the RE Power Park Developer, who has to engage actively in the bidding process by providing all the necessary land and infrastructure related details and making the same available in centralized data rooms accessible to bidders.

2. The Procurer shall invite the bidders to participate in the RfS for installation of BESS based Projects, in terms of these Guidelines.

3. The bidding documents including the RfS, draft BSPA and draft BSSA (if applicable), shall be prepared by the Procurer in consonance with these Guidelines. The Procurer shall also arrange the access of the bidders to the drafts of Implementation Support Agreement and land related agreements, in case the Project is required to be set up in a RE Park.

4. The Procurer shall publish the RfS notice in the Central/State Public Procurement Portal and/or its own website to accord wide publicity.

5. The Procurer shall provide opportunity for pre-bid conference to the prospective bidders, and shall provide written interpretation of the tender documents to any bidder which shall also be made available to all other bidders. All the concerned parties shall rely solely on the written communication. Any clarification or revision to the bidding documents shall be uploaded on the website of the Procurer for adequate information. In the event of the

issuance of any revision or amendment of the bidding documents, the bidders shall be provided a period of at least 7 days therefrom, for submission of bids.

D. REQUEST FOR SELECTION (RFS) DOCUMENT

The standard provisions to be provided by the Procurer in the RfS shall include the following:

1. Bid Responsiveness

The bid shall be evaluated only if it is responsive and satisfies conditions including inter-alia:

(a). Bidder or any of its Affiliates should not be a wilful defaulter to any lender;

(b). There should be no major litigation pending ~~or threatened~~ against the bidder or any of its Affiliates which are of a nature that could cast a doubt on the ability or the suitability of the bidder to undertake the Project.

2. Qualification requirements to be met by the bidders

a) **General Eligibility Criteria:** Bidders participating in the tenders issued under these Guidelines should 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.

b) **Technical Eligibility Criteria:** The Government would like to encourage competition by way of increased participation. However, in order to ensure proper implementation of the Projects, the Procurer may choose to specify Technical Eligibility Criteria such as past experience of the bidders, timely execution of infrastructure projects, etc. Such criteria should be set after an assessment of the number of project developers that are expected to meet the criteria so that an adequate level of competition is achieved. Cut-off date for meeting the technical criteria should generally be kept as the end date of the financial year that is previous to the financial year in which the bid is issued.

c) Financial Eligibility Criteria:

i. Net-worth/Asset Under Management (AUM) or Investible Funds: The Procurer shall specify financial criteria in the form of net-worth as a part of the qualification requirement. The net-worth requirement should be at least 20% (twenty per cent) of the estimated capital cost of the Project, for the financial year in which bids are issued. The estimated capital cost of the Project will be determined by an internal committee constituted by the Intermediary Procurer/End Procurer for determining qualification requirements of the tender, and the same will be duly approved by the MD/CEO of the respective organization. In case of the Bidder being a SEBI registered AIF, the cumulative value of Assets Under Management (AUM) with minimum requirement as decided by the Procurer/Intermediary Procurer shall be demonstrated as part of Financial Eligibility Criteria. In this context, AUM shall mean the amount as certified by the Statutory Auditor of the AIF.

The net-worth/value of AUM to be considered for the above purpose will be the cumulative net-worth of the bidding company/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 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.

It is clarified that the net-worth to be considered for this clause will be the total net-worth as calculated in accordance with the Companies Act, 2013, and AUM or investible funds to be considered under this clause will be calculated in accordance with applicable SEBI (AIF) Regulations.

For the limited purpose of meeting the technical and financial eligibility criteria in the tenders, the bidders may use credentials of those Affiliates who do not control more than 50% of 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. 100 Cr., and the strength of an Affiliate is used which owns 30% of the total shareholding in the bidder, the said Affiliate will be able to meet upto Rs. 30 Cr. of the Net Worth.

b. In case the strength of an Affiliate is being used for meeting the eligibility criteria, shareholding pattern of the respective Affiliate will be locked-in upto COD of the Project.

ii. Liquidity: It is necessary that the bidder has sufficient cash flow/ internal accruals/ any bank reference to manage the fund requirements for the Project. Accordingly, the Procurer may also stipulate suitable parameters such as annual turnover, PBDIT, internal resource generation, bank references/line of credit, etc.

E. BID SUBMISSION AND EVALUATION

1. Formation of consortium by bidders shall be permitted, in which case the consortium shall identify a lead member which shall be the contact point for all correspondences during the bidding process.
2. The Bidding Agency will specify suitable technical and financial eligibility criteria for the bidders, in the tender documents.
3. The Procurer shall constitute committee for evaluation of the bids (Evaluation Committee), with at least three members, including at least one member with expertise in financial matters / bid evaluation.
4. The bidders may be required to submit non-refundable processing fee and/or success fee, as specified in the RfS.
5. The bidders shall be required to submit separate technical and price bids. The bidders shall also be required to furnish necessary bid-guarantee in the form of an EMD along with the bids.

6. The technical bids shall be evaluated to ensure that the bids submitted meet the eligibility criteria set out in the RfS document on all evaluation parameters. Only the bids that meet the evaluation criteria set out in the RfS shall be considered for further evaluation on the price bids.
7. To ensure competitiveness, the minimum number of qualified Bidders should be two. If the number of qualified bidders is less than two, even after three attempts of bidding, and the Procurer still wants to continue with the bidding process, the same may be done with the consent of the Appropriate Commission.
8. The price bid shall be liable to be rejected, if the bid submitted by the Bidder contains any deviation from the tender conditions.
9. **Bid evaluation methodology to be adopted by the Procurer for evaluating the bids:** Bid Evaluation shall be carried out in terms of parameters as brought at Clause B2 above through ranking of Bids in ascending order of the Bidding Parameter. Wherever applicable, the Bidding Agency may choose to carry out electronic reverse auction for award of Projects.
10. The detailed procedure for evaluation of the bid and selection of the successful bidder(s) shall be provided for in the RfS.

F. INDICATIVE TIME TABLE FOR BID PROCESS

The bidding process should be completed within 3 months of the date of issuance of RfS by the Procurer. It is clarified that if the Procurer gives extended time for any of the events in the bidding process, on account of delay in achieving the activities required to be completed before the event, or any other reason, such extension of time shall not in any way be construed as deviation from these Guidelines.

G. CONTRACT AWARD AND CONCLUSION

1. After the conclusion of bidding process, the Evaluation Committee constituted for evaluation of bids shall critically evaluate the bids and certify as appropriate that the bidding process and the evaluation has been conducted in conformity to the provisions of these Guidelines.

2. The BSPA shall be signed with the successful bidder/ project company or an SPV formed by the successful bidder.

3. The BSPA shall be executed between BSSD and Procurer. In case of involvement of the Intermediary Procurer, BSPA shall be executed between the BSSD and Intermediary Procurer and the BSSA shall be executed between the Intermediary Procurer and the End Procurer. The BSPA(s) should preferably be signed immediately after signing of the BSSA(s). The provisions of BSPA and BSSA will be on a back-to-back basis, except for tariff payment.

4. The Intermediary Procurer shall enter into the Battery Storage Purchase Agreement (BSPA) / Power Purchase Agreement with the Developer(s) and enter into an Battery Storage Sale Agreement (BSSA) /Power Sale Agreement with the distribution licensee(s)/ consumer(s). The BSSA shall contain the relevant provisions of the BSPA on a back-to-back basis. The Intermediary Procurer shall be entitled to charge trading margin of seven paise/kWh or 0.5% of the Capacity Charges (INR /MWh) as Capacity Charge Margin (as applicable) from the Buying entity / Procurer for purchase and sale of such power. As long as the Intermediary

Procurer follows these Guidelines for procurement of BESS, the End Procurer(s) shall be deemed to have followed these Guidelines for procurement of such power. The power procurement for Distribution licensees in some States is centralized through a holding company or another government agency. Such companies/ agencies will be considered as Procurer and not as Intermediary Procurer for the purposes of these Guidelines.

5. In case of delay in signing of BSPA beyond 6 months from the date of issuance of LoAs, or any other extended date as mutually agreed between the Bidding Agency and the successful bidders, the awarded capacity shall stand cancelled. In certain cases, after the above deadline, if the cumulative capacity eligible for signing of BSPAs is lower than the cumulative capacity awarded under the tender, further course of action will be decided by the Bidding Agency, which will be clearly specified in the tender document.

6. For the purpose of transparency, the Procurer shall, after the execution of the BSPA, publicly disclose the name(s) of the successful bidder(s) and the tariff / charges quoted by them together with breakup into components, if any. The public disclosure shall be made by posting the requisite details on the website of the Procurer for at least 30 (thirty) days.

7. Subject to provisions of the Act, the distribution licensee or the Intermediary Procurer, as the case may be, should approach the Appropriate Commission for adoption of tariffs (including capacity charges, if applicable) discovered and quantum of capacity / electricity to be procured, within 30 days of issuance of Letter(s) of Award to the successful bidder(s). In case the tariff (including capacity charges, if applicable) adoption procedure requires signed BSPA to be submitted alongwith, the above timeline may be extended suitably. In case of RE+ BESS projects, where separate contracts are issued by the intermediary procurer for procurement of RE power and Procurement of storage capacity, the storage capacity charges may need to be converted into tariff, in such case, the intermediary procurer will submit the proposal to the regulatory commission for the conversion of capacity charge to tariff.

8. In some cases, the Intermediary Procurer/Procurer may also stipulate a fixed value as one of the components of a two-part tariff. In such cases, the above fixed part of the tariff need not require any tariff adoption by the Appropriate Commission, and will be deemed to be applicable under these Guidelines.

9. Subsequent to the End Procurer/Intermediary Procurer approaching the Appropriate Commission for adoption of tariffs, in case, the Appropriate Commission does not decide upon the same within 120 days from the Effective Date of the BSPA, the Procurer(s) shall grant appropriate extension of time in financial closure deadline and scheduled commissioning date to the BSSDs, corresponding to the delay (beyond 120 days of Effective Date of BSPA) in adoption by the Appropriate Commission, till the date of adoption by the Appropriate Commission.

H. BANK GUARANTEES/PAYMENT ON ORDER INSTRUMENTS/ LETTERS OF UNDERTAKING

1. The BSSD shall provide the following instruments to the Procurer in terms of the RfS and the BSPA:
   a. Earnest Money Deposit (EMD), to be fixed by the Procurer, but not to be more than 1% (one percent) of the estimated capital cost of the Project, for the financial year in which the bids are invited, to be submitted along with response to RfS. The Bidding Agency / Procurer shall have the option to specify modes / forms of accepting EMD, taking into due consideration the notifications/Government Resolutions notified by the Appropriate Government, in the form of:
      i. Bank Guarantee(s);
         OR
      ii. "Payment on Order instrument" / Letter of Undertaking to pay in case situation of default of BSSD in terms of BSPA arises, from any agency as notified by the Government of India or State Governments from time to time, for this purpose, to be furnished by the bidders. Forfeiture of EMD or blacklisting/debarring etc, as defined in these Guidelines, shall be undertaken in the event of failure of the BSSD to execute the BSPA within the stipulated time period.

      "Payment on Order instrument" means Letter of Undertaking from any agency as notified by the Government of India or State Governments from time to time for this purpose, to pay in case situation of default of Battery Storage System Developer (BSSD) in terms of tender documents and/or Battery Storage Purchase Agreement (BSPA) arises. Such Letter(s) will have same effect as that of a Bank Guarantee issued by any public sector bank. Such "Payment on Order instrument" would have terms and conditions similar to that of any Bank Guarantee given by any public sector bank and would promise to pay the Procurer on demand within stipulated time. BSSD can seek such Letters(s) by offering due security to the above mentioned three non-banking financial institutions mentioned above. Procurer(s) shall not accept the instrument of 'Letter of Undertaking' as described above or in any other form, from any other non-banking financial institutions or bank, except from the institutions as notified above.

   b. Performance Bank Guarantee (PBG), to be fixed by the Procurer, but not to be more than 3% (three five percent) of the Project cost, for the financial year in which the bids are invited, to be submitted at the time of signing of the BSPA. The Bidding Agency / Procurer shall have the option to specify modes / forms of accepting EMD, taking into due consideration the notifications/Government Resolutions notified by the Appropriate Government, in the form of:
      i. Bank Guarantee(s);
         OR
      ii. "Payment on Order instrument" / Letter of Undertaking to pay in case situation of default of BSSD in terms of Power Purchase Agreement (BSPA) arises, from any agency as notified by the Government of India or State Governments from time to time for this purpose.

2. In addition to the other remedies, the PBG (or the alternative provided thereto as per these Guidelines) can be encashed to recover any damages/dues of the BSSD in terms of the BSPA. It is hereby clarified that the damages/dues recovered by the Intermediary Procurer by encashing the PBG, upon the default of the BSSD under the BSPA, shall be credited to the Payment Security Fund to be maintained by the Intermediary Procurer under Clause G, Section IV of these Guidelines. PBG (or alternatives provided thereto as per these Guidelines) shall be returned to the BSSD within 45 days of the commissioning of the project. In case of part commissioning, PBG/Payment on Order Instrument corresponding to the part capacity commissioned, should be released within 45 days of such part-commissioning. As an alternative to encashment of PBG/Payment on Order Instrument, the Procurer/Intermediary Procurer may also provide an option to the BSSD to furnish the requisite amount to the Procurer/Intermediary Procurer through DD/electronic payment, against release of the PBG/Payment on Order Instrument concerned without any encashments.

3. Procurer(s) may release the Bank Guarantees submitted by BSSD as 'Performance Bank Guarantee (PBG)' of any project, if the BSSD is able to replace the same with "Payment on Order instrument" / Letter(s) of Undertaking as per Clause H.1.b.ii. above, to pay in case situation of default of the BSSD in terms of BSPA arises. BSSD can seek such Letters(s) by offering due security to the notified agencies for seeking replacement of their Bank Guarantees already pledged with the Procurer.

I. TECHNICAL SPECIFICATIONS

Procurers shall promote commercially established and operational technologies to minimize the technology risk and to achieve the commissioning of the Projects. The detailed technical parameters, for type of RE projects covered and to be selected under these Guidelines, shall be specified by Ministry of Power from time to time. An indicative list of technical specifications is brought out in Appendix-2 to these Guidelines.

SECTION IV: IMPLEMENTATION OF THE PROJECT

A. BATTERY STORAGE PURCHASE AGREEMENT (BSPA)

The draft BSPA proposed to be entered into with the successful bidder and draft BSSA (if applicable) shall be issued along with the RfS. Standard provisions to be incorporated as part of this BSPA shall include inter alia the following, which, unless otherwise specified herein, shall be provided for, on a back-to-back basis in the BSSA.

1. **Term of the BSPA**
   In view of the currently prevailing life cycle of Battery systems being used without replacement, the minimum term of the BSPA period should be 8 (eight) years from the Scheduled Commissioning Date (SCD) or the date of full commissioning of the Project, whichever is later. The BSSD is free to operate the plants after the expiry of the BSPA period, in case the arrangements with the land and infrastructure owning agencies, the relevant transmission utilities and system operators so provide. It is hereby clarified that in cases where the Project site is specified by the Procurer to be located either in a RE Park or otherwise, the responsibility of the Procurers to arrange for the land in terms of Clauses A.1.1.4 and A.1.1.5 of Section III of the Guidelines shall be limited for the BSPA period.

2. **Performance Parameters of the Project**
   The procurement of power could either be in capacity (kW/MW) and/or energy (kWh/MWh) terms.

   a) The bidding documents may specify performance parameters such as availability, charging/discharging rate, efficiency, ramp rate, etc. In case of availability being a performance parameter in a tender, in order to ensure the End Procurer's requirements are met, minimum availability to be maintained by the BESS should be specified in the RfS. Further, based on the specific usage of the BESS envisaged under the tender, the BSSD may be required to meet the minimum monthly and / or Annual Availability requirements, or to declare availability on a day-ahead basis. The minimum availability criteria to be met may also be limited to the specified hours in a day/peak hours in a day, on which the shortfall in meeting such criteria will be calculated. The hours of storage and the performance parameters may be decided by the Procurer.

   b) <u>Procurement of capacity (MW) and scheduling for energy</u>
   In case procurement is done for scheduling of energy in various time blocks, the Procurer will mention the capacity with clear conditions on "minimum availability to be provided by the BSSD and minimum off take energy schedule to be provided by the procurer". In such projects, the minimum off-take and availability should not be less than "xx%" of the contracted capacity.
      - <u>Availability based Capacity charge</u>: Irrespective of scheduling of energy by the procurer, the procurer shall pay the capacity charge for the capacity made available by the BSSD.

- If the energy is by the procurer, the BSSD will deliver the energy back after accounting for pre-specified conversion losses.
- If the energy also provided BSSD, the procurer shall pay for the pre-quoted energy charge, for the energy supplied also. However, the procurer would guarantee the minimum monthly and annual off take guarantee of power.
- Fixed charge: For the difference energy between the availability proposed by BSSD and scheduled by the Procurer, the Procurer shall pay pre-defined fixed charge which can be defined as xx % of the tariff.
- Excess availability: to ensure the availability of capacity during entire agreement period, the developer is allowed to install any extra capacity. In such a scenario, the BSSD is free to sell excess battery capacity / energy in open market beyond the committed capacity to the Procurer, with first right of refusal being vested with the Procurer.

"xx%" in the above provisions shall be determined as per the bidding documents.

c) **Liquidated Damages on account of shortfall in meeting performance criteria:** There will be liquidated damages payable for shortfalls against the performance parameters, the amount will be
   (i) On pro rata basis for the shortfall below the committed capacity availability @ capacity charge or any number predefined in RfS.
   (ii) On pro-rata basis For the shortfall in supply of committed energy at the tariff or any number predefined in RfS.
   (iii) the BSSD shall pay for the excess Energy loss @ Tariff of input energy provided by the procurer.
   (iv) For any performance deviations, related to the parameters for ancillary services, the predefined liquidated damages defined by the procurer in the RfS shall be levied.
   (v) Any other Liquidated Damages as defined in the RfS Document

d) The amount of the liquidated damages as detailed is genuine and reasonable pre-estimate of the damages that may be suffered by the Procurer/Intermediary Procurer(s) as specified under the BSPA or in the BSSA.

3. **Replenishing**

The BSSDs will be free to replenish the battery capacity time to time during the BSPA duration at their cost and expense to meet the performance criteria. However, the Procurer will be obligated to buy power only within the performance range as specified in the BSPA and at the charges applicable as per the existing agreements. Any excess supply will be dealt as specified in Clause A.2.(b) of Section IV of these Guidelines.

B. FINANCIAL CLOSURE

1. The BSSD shall attain the Financial Closure in terms of the BSPA, within the date as on 9 months after Effective Date of the BSPA. However, if for any reason, the time period for attaining the financial closure needs to be reduced than that provided in these Guidelines, the Procurer can do the same.

2. Failing the aforesaid, the Procurer/Intermediary Procurer shall encash the PBG/POI unless the delay is on account of delay in allotment of land by the Procurer in terms of Clause A.1.1.4 and Clause A.1.1.5 of Section III of these Guidelines or delay in allotment of land by the Government not owing to any action or inaction on the part of the BSSD or is caused due to a Force Majeure. An extension for the attainment of the financial closure can however be considered by the Procurer, on the sole request of the BSSD, on payment of extension charges of Rs. 1,000 per MW per day of delay in financial closure. This extension will not have any impact on the Scheduled Commissioning Date (SCD). Any extension charge paid so, shall be returned to the BSSD without any interest on achievement of successful commissioning of full Project capacity within the SCD. In other cases, such penalty / extension charges will be credited to the Payment Security Fund maintained by the Procurer / Intermediary Procurer.

3. Any delay in adoption of tariff by the Appropriate Commission, beyond 120 days after Effective Date of BSPA shall entail a corresponding extension in financial closure deadline.

C. COMMISSIONING

1. **Part Commissioning**

a. Part commissioning of the Project shall be accepted by the Procurer subject to the condition that the minimum capacity for acceptance of first part commissioning shall be 50% of Project Capacity or 50 MW, whichever is lower, without prejudice to the imposition of penalty, in terms of the BSPA on the part which is not commissioned. For ISTS-connected Projects, the minimum part commissioning capacity for the 1st part will be 50 MW. The total number of instalments in which a Project can be commissioned will be not more than 3, i.e., 1st initial instalment and 2 subsequent instalments. However, the Scheduled Commissioning Date (SCD) will not get altered due to part-commissioning. Irrespective of dates of part commissioning or full commissioning, the BSPA will remain in force for a period of minimum 8 years from the SCD or date of full commissioning of the Project capacity, whichever is later.

b. In case of part-commissioning of the Project, the BSSD shall be required to submit documents/Lease Agreement to establish possession/right to use of the required land, corresponding to part capacity being commissioned, in the name of the BSSD for a period not less than the complete term of the BSPA, on or before the date of such part-commissioning.

c. For capacity procurement contracts, in case of part commissioning, payments as per the BSPA may be made on pro-rata basis, proportionate to the capacity commissioned. The procurement of part commissioned capacity will be based on the sole discretion of the procurer/intermediary procurer. If the procurer/intermediary procurer are not interested to consider procurement of the part capacity till commissioning, the part commissioned capacity will be allowed to sell in the open market till SCD

2. **Early Commissioning**

The BSSD shall be permitted for full commissioning as well as part commissioning of the Project even prior to the SCD subject to availability of transmission connectivity and/or open access, if applicable. In cases of early part commissioning, till SCD, the BSSD will be free to sell the electricity generated / battery capacity, to any entity other than the Procurer(s), provided that the first right of refusal will be vested with the Procurer(s). The Procurer(s) /Intermediary Procurer shall provide refusal within 15 (fifteen) days from the receipt of the request, beyond which it would be considered as deemed refusal. In cases of early commissioning of full Project capacity prior to SCD, in case the Procurer agrees to purchase such early commissioned power, the Procurer/Intermediary Procurer shall purchase the generation at BSPA/BSSA tariff, as applicable.

3. **Commissioning Schedule**

a. The BSSD shall commission the Project, in terms of the BSPA, as per following timelines:

i. In case of Project capacity upto (and including) 250 MW, the Scheduled Commissioning Date (SCD), i.e., the maximum timeline for commissioning of Projects without any liquidated damages, shall be the date as on 15 months after the Effective Date of the BSPA.

ii. In case of Project capacity more than 250 MW the SCD shall be the date as on 24 months after the Effective Date of the BSPA.

However, if for some reason, the scheduled commissioning period needs to be reduced than that provided in these Guidelines, the Procurer can do the same subject to confirmation from CTU/STU regarding evacuation margins in ISTS/Intra-STS transmission system.

b. Subject to the provisions of these Guidelines regarding Force Majeure, delay in commissioning, beyond the Scheduled Commissioning Date shall involve liquidated damages on the BSSD, as detailed below:

i. For delay in commissioning upto 6 months after SCD, the BSSD shall be levied liquidated damages in the form of encashment of the PBG/POI on a per-day basis, pro-rata to the Contracted Capacity not commissioned. Payment of such liquidated damages could be done as follows:

- By direct payment of the damages of to the Procurer/Intermediary Procurer
- By encashment of the BG/POI

The BSSD would have the option of choosing between these two options and the time period for making this choice will be specified in the BSSA/BSPA.

ii. For delay in commissioning beyond 6 months after SCD, Contracted Capacity shall be reduced to the project capacity commissioned upto 6 months year after SCD, the entire Performance Guarantee will be encashed by the Procurer/Intermediary Procurer and the BSPA for the Project shall stand terminated for the balance un-commissioned capacity.

iii. However, if for some reason, the above period of liquidated damages needs to be reduced than that provided in these Guidelines, the Procurer can do the same.

c. Any delay in adoption of tariff (including capacity charges, if any) by the Appropriate Commission, beyond 120 days after Effective Date of the BSPA, shall entail a corresponding extension in SCD.

d. Land arrangements: It may be noted that commissioning/ part-commissioning of the Project will not be declared until the BSSD submits documents/ Lease Agreement to establish possession/ right to use of the required land, corresponding to full/ part capacity being commissioned, in the name of the BSSD for a period not less than the complete term of the BSPA, on or before the date of such full / part commissioning.

4. **Delay in Commissioning on account of delay in Connectivity/Long Term Access (LTA) Operationalisation:**

In certain Projects, Connectivity and Long Term Access (LTA) shall be required to be submitted by the BSSD prior to commissioning of the project. Subsequent to grant of connectivity, in case there is a delay in grant/operationalisation of LTA by the CTU/ STU and/or there is a delay in readiness of the ISTS/ InSTS substation at the Delivery Point/Injection Point, including readiness of the power evacuation and transmission infrastructure of the ISTS/ InSTS network until SCD of the Project, and it is established that:

i. The BSSD has complied with the complete application formalities as per the Connectivity Procedure.
ii. The BSSD has adhered to the applicable Procedure in this regard as notified by the CERC/ SERC/JERC/CTU/ STU, and
iii. The delay in grant of connectivity/ LTA by the CTU/ STU and/or delay in readiness of the ISTS/ InSTS substation at the Delivery Point, including readiness of the power evacuation and transmission infrastructure of the ISTS/ InSTS network, is a factor attributable to the STU/ CTU/ transmission licensee and is beyond the control of the BSSD;

The above shall be treated as delays beyond the control of the BSSD and SCD for such Projects shall be revised as the date as on 30 days subsequent to readiness of the Delivery Point and power evacuation infrastructure and/or operationalization of LTA. Decision on requisite extension on account of the above factor shall be taken by Procurer / Intermediary Procurer.

D. COMMERCIAL OPERATION DATE (COD)

In case of part commissioning, Commercial Operation Date (COD) will be declared only for that part of project capacity. The Commercial Operation Date (COD) of the project [Project COD] shall be considered as the next day after the actual date of 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 BSPA. Similarly, for each part commissioning, COD will be the next day after actual date of commissioning of the respective part capacity.

The BSSD shall obtain necessary safety clearances from the Central Electricity Authority/CEIG prior to commissioning of the Project.

Commissioning shall be as per the Commissioning Procedure as per extant CERC Regulation.

E. TRANSMISSION CONNECTIVITY

1. The Project shall be designed for inter-connection with InSTS / ISTS substation, either directly, or through a Pooling Substation where other projects also inter-connect prior to the InSTS / ISTS substation, through a transmission network as per applicable regulations, at the appropriate voltage level, as specified by the Procurer/STU/CTU, in line with the applicable CERC/SERC Regulations. The entity responsible for the construction of the relevant transmission infrastructure shall be clearly specified in the bidding documents. Depending on the implementation arrangements and design of the evacuation system, the capital costs of the transmission lines and substations prior to the InSTS / ISTS substation may either be directly paid by the BSSD, or paid by the RE park developer or another implementation agency and claimed from the BSSD as directly attributed or apportioned and recovered in lump sum or as payments over the years.

2. In cases, where the Project site is not specified by the Procurer, the responsibility of getting Connectivity and LTA/ Access to the transmission system owned by the STU / CTU/ Transmission Licensee will lie with the BSSD and shall be at the cost of the BSSD. In this regard, the Bidding Agency, in consultation with the CTU/STU, may provide a list of substations, from which the bidders may choose the delivery points in a particular tender..

3. In cases, where the Project site specified by the Procurer is not in a RE Park, the Procurer could choose to require the BSSD to bear the responsibility and cost of getting Transmission Connectivity and LTA/ Access.

4. In case there are multiple procurers with Battery Storage Purchase Agreements for different periods of a year, the transmission access and connectivity may be provided by nodal agency as per extant regulations.

5. In cases where the Procurer specifies a RE Park, where the Project is to be located, damages, fines and charges imposed by the CTU/ STU under any statute or regulation in relation to delay in commissioning of Project shall be payable by the BSSD to the extent the delay is attributable to the BSSD and the balance shall be payable by the Procurer.

6. The benefit of waiver of Inter-State Transmission System (ISTS) charges and losses, if any, as per the extant regulations/directions in this regard, will be applicable on the Projects.

7. The Metering Point, which is the point at which energy supplied to the Procurer shall be measured, shall be the low voltage bus bar of the InSTS / ISTS substation at which the power is injected in the transmission system of STU/CTU or any additional point(s) as specified in the Bidding Document. Unless otherwise provided, the transmission of power

up to the point of interconnection where the metering is done for energy accounting shall be the responsibility of the BSSD at his own cost.

8. In case of RE Park, the metering point (as specified in the Bidding Document) is the final evacuation InSTS / ISTS substation with which the internal transmission from all the pooling substations is connected. All expenses including but not limited to transmission / wheeling charges and losses etc. between the Project and the Metering Point shall be paid by the BSSD without any reimbursement by the Procurer. All expenses including 'transmission charges and losses' (if any) and 'wheeling charges and losses' in relation to the transmission and distribution beyond the Metering Point shall be borne by the Procurers, except as provided specifically in the RfS. Arrangements shall be put in place for billing by the RE Park Developer to the Projects/BSSDs or any other entity, as the case may be who may in turn, recover the same directly from the Procurer.

9. For interconnection with grid and metering, availing Open Access and commercial accounting & settlement, the BSSDs shall abide by the provisions of the CERC Regulations/Procedure & RE connectivity procedure and the various CEA Regulations/Standards including Grid Code, Technical Standards as issues by CEA in this regard, Grid Connectivity Regulations, Regulations on Communication System for transmission of electricity and other regulations (as amended from time to time) issued by Appropriate Commission and CEA.

10. The BSSD shall comply with CERC/ SERC/ JERC regulations on Forecasting, Scheduling and Deviation Settlement, as applicable and are responsible for all liabilities applicable in this regard.

11. The transmission connectivity to the BSSD may be provided by the CTU/ STU, as the case may be, prior to commissioning of the project on the request of the BSSD, to facilitate testing and allow flow of infirm power generated into the grid, subject to existing conditions and such application should be made within the stipulated timeline as specified in the Applicable Regulations.

12. In case of BESS projects as transmission element, the project would planned in tandem with transmission network, and associated RE projects. In case of delay of RE projects associated in the associated network, the capacity charge payable to the to the BESS provider shall be levied on the RE project developers on pro-rata basis by intermediary procurer

F. COMPENSATION FOR OFFTAKE CONSTRAINTS

The Procurer may be constrained not to off-take the power scheduled/offered by the BSSD on account of unavailability of the Grid or in the eventuality of a Backdown and limited to such cases, the applicable Compensation shall be as under.

1. **Offtake constraints due to Backdown**

The BSSD and the Procurer shall follow the forecasting and scheduling process as per the regulations in this regard by the Appropriate Commission. In case of BESS being a part of

RE Projects, compensation applicable for offtake constraints due to backdown as per the corresponding Guidelines for the respective RE Projects. In case of standalone BESS Projects, there will not be any compensation applicable in case of offtake constraints due to backdown.

2. **Offtake constraint due to reduced offtake by the Procurer**
   The Procurer will mandatorily schedule for offtake of power made available as per the availability/schedule offered by the BSSD. In case offtake by Procurer is lower than the minimum offtake capacity declared in BSPA, the BSSD will be eligible for deemed payment, and accordingly, the Procurer will pay 100% of the BSPA tariff to the BSSD for the energy not off-taken below the minimum declared offtake capacity in BSPA.

G. PAYMENT SECURITY MECHANISM

The Procurer shall provide adequate payment security measures, as specified below.

1. **Scenario 1: Direct Procurement by End Procurer from BSSD**

   The Procurer shall provide payment security to the BSSD through:

   a. **Revolving Letter of Credit (LC)** of an amount not less than 1 (one) months' average billing from the Project under consideration.
      AND
   b. **Payment Security Fund,** which shall be suitable to support payment for at least 3 (three) months' billing of all the Projects tied up with such fund.
   c. As a combination of the above two mechanisms, the Procurer shall provide a total payment security for a total of 4 months' energy billing, out of which, LC should be provided for a minimum period of 1 month's energy billing.
   d. In addition to payment security as per clauses (a) & (b) above, the Procurer may also choose to provide **State Government Guarantee**, in a legally enforceable form, ensuring that there is adequate security to the BSSD, both in terms of payment of energy charges and termination compensation if any. This will not be applicable in case the Procurer is a transmission utility or a system operator.

2. **Scenario 2: Intermediary-Procurer procures from the BSSD and sells to the End Procurer**

   a. **<u>Payment Security by Intermediary Procurer to the BSSD:</u>**

      The Intermediary Procurer shall provide payment security to the BSSD through:

      i. **Revolving Letter of Credit (LC)** of an amount not less than 1 (one) months' average billing for the Project under consideration.
         AND
      ii. **Payment Security Fund**, which shall be suitable to support payment of at least 3 (three) months' billing of all the Projects tied up with such fund. For the purpose of this Payment Security Fund, the Intermediary Procurer will collect a non-refundable amount of Rs. 5.0 Lacs/MWh (Rupees Five Lacs per MWh)

from the BSSD(s) as one of the routes for strengthening the Payment Security Mechanism pool. Such charges shall be stipulated clearly in the RfS and shall go to the Payment Security Fund (along with accrued interest) set up by the Government of India for such Intermediary Procurer.

b. **Payment Security by End Procurer to Intermediary Procurer:**

The End Procurer shall provide payment security to the Intermediary Procurer through:

i. **Revolving Letter of Credit (LC)** of an amount not less than 1 (one) months' average billing for the Project(s) under consideration.
OR

ii. **State Government Guarantee**, in a legally enforceable form, such that there is adequate security, both in terms of payment of energy charges and termination compensation if any [for the purpose of this clause, the Tri-Partite Agreement (TPA) signed between Reserve Bank of India, Central Government and State Government shall qualify as State Government Guarantee covering the security for payment of energy charges]. The Intermediary Procurer shall ensure that upon invoking this guarantee, it shall at once, pass on the same to the BSSD, to the extent the payments to the BSSD in terms of the BSPA are due. Provided that in cases where the End Procurer is neither covered by Tri-Partite Agreement (TPA) nor is able to provide the State Government Guarantee, the following, shall be adopted:

In case a particular Procurer does not provide State Government Guarantee as part of the payment security, the LC amount will be enhanced to 2.1 times the average monthly billing.

iii. In addition to payment security as per clauses (i) & (ii) above, the End Procurer may also choose to provide **Payment Security Fund**, which shall be suitable to support payment of at least 3 (three) months' billing of all the Projects tied up with such fund.

It is hereby clarified that the State Government guarantee shall be invoked only after the Intermediary Procurer has been unable to recover its dues under the BSPA by means of the Letter of Credit and the Payment Security Fund, if any.

H. FORCE MAJEURE

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 the relevant BSPA, 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.

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; if a hydro power plant is a part of the package of the RE project to be set up the bidder, then in such case drought may be considered a relevant Force Majeure event for the hydro power plant component of the RE project.

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 Power 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 Industry-wide strikes and labour disturbances, having a nationwide impact in India.

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 BSSD, as a result of which the BSSD or its shareholders are deprived (wholly or partly) of their rights or entitlements under the BSPA. 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 BSSD or the BSSD related parties.

2. Force Majeure Exclusions

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;
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 materials and equipment;
d. Strikes or labour disturbances 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.

3. Notification of Force Majeure Event

a) 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.

b) Provided that such notice shall be a pre-condition to the Affected Party's entitlement to claim relief under the BSPA. 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.

c) 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 the BSPA, as soon as practicable after becoming aware of each of these cessations.

4. Performance Excused

a) The Affected Party, to the extent rendered unable to perform its obligations or part of the obligation thereof under the BSPA 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 BSPA.

b) For the time period, as mutually agreed by the Parties, during which the performance shall be excused, the BSSD shall be entitled for a day-to-day extension of the period provided for Financial Closure or Scheduled Commissioning Period or the BSPA period,

as the case may be. The Term of the BSPA and BSSA will be suitably extended as per the above extension.

c) Provided always that a Party shall be excused from performance only to the extent reasonably warranted by the Force Majeure Event.

d) Provided further that, nothing shall absolve the Affected Party from any payment obligations accrued prior to the occurrence of the underlying Force Majeure Event.

5. No Liability for Other Losses

Save as otherwise provided in these Guidelines, 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.

6. 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 BSPA. 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 Party shall afford all reasonable assistance to the Affected Party in this regard.

7. Termination Due to Force Majeure Event

a) If, prior to the completion of the 180-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-day period or any extended period agreed in pursuance of Clause 4 above (Performance Excused); or that it is uneconomic or impractical to restore the affected Unit, then the Parties may mutually decide to terminate the BSPA, and the termination shall take effect from the date on which such decision is taken.

b) Without prejudice to the provisions of Clause 7 (a) above, the Affected Party shall, after the expiry of the period of 180 days or any other mutually extended period, be entitled to forthwith terminate the BSPA in its sole discretion by issuing a notice to that effect.

c) On termination of the BSPA pursuant to Clause 7(b):
   i. In case of termination on account of an event listed as Force Majeure as per Clauses 1. (a), (b), (c) and (d) above, no Termination Compensation shall be payable to the BSSD.
   ii. In case of termination at the instance of the BSSD, on account of an event listed as Force Majeure as per Clauses 1. (e) and (f)above, the Procurer will have the option to (but will not be obliged to) take-over the Project assets by paying the Debt Due. In case the Procurer chooses not to exercise the above option, and the same is not agreed to by the BSSD, it will result in a dispute as per the BSPA, and will be resolved as per the Dispute Resolution mechanism under the BSPA.

iii. The BSSD shall be eligible for undisputed payments under outstanding Monthly Bill(s), before the occurrence of Force Majeure Event.

8. The provisions of Force Majeure contained herein above related to the BSPA affecting the BSSD or the Intermediary Procurer, as the case may be, shall be read mutatis mutandi as the provisions of Force Majeure under the BSSA and the Force Majeure affecting the End Procurer under the BSSA shall be read as Force Majeure affecting the Intermediary Procurer under the BSPA and similarly the Force Majeure affecting the BSSD under the BSPA shall be read as Force Majeure affecting the Intermediary Procurers under the BSSA. The BSPA and BSSA shall be construed as back-to-back agreements.

I. EVENT OF DEFAULT AND THE CONSEQUENCES THEREOF

While detailed provisions with regard to the event of default of the concerned parties and its resulting consequences shall be detailed in the BSPA/BSSA, this clause lays down the broad principles of contractually dealing with the default of the BSSD and the Procurers (excluding the Intermediary Procurer).

1. BSSD Event of Default and the consequences thereof

a) In the event the BSSD fails to supply power in terms of the BSPA, or assigns or novates any of its rights or obligations contrary to the terms of the BSPA, or repudiates the BSPA, or effectuates a change in control or shareholding of its promoters in breach of the provisions of the BSPA, or commits any other acts or omissions or commissions, as laid down in the BSPA and is also unable to cure any of the aforesaid within the cure period, as may be provided in the BSPA, the BSSD shall be construed to be in default.

b) Upon being in default, the BSSD shall pay to the Procurer, damages, equivalent to energy payments corresponding to the declared minimum performance criteria as per the BSPA for 6 (six) months, or balance BSPA period whichever is less, for its contracted capacity. The Procurer shall have the right to recover the said damages by way of forfeiture of bank guarantee, if any, without prejudice to resorting to any other legal course or remedy.

c) In addition to the levy of damages as aforesaid, in the event of a default by the BSSD, following sequence of events will be followed:
   i. Project lenders will have the first right of substitution of the BSSD, within a specified time period.
   ii. In case the lender is unable to substitute the BSSD within the above specified timeline, the Procurer will have the right (but will not be obliged) to takeover the Project assets, by paying to the BSSD, a compensation as mutually decided by the Procurer and the lender.
   iii. In case the Procurer chooses not to exercise the above option, or the Procurer 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.

2. **Procurer Event of Default and the consequences thereof**

a) If the Procurer is in default on account of reasons including inter-alia failure to pay the monthly and/or supplementary bills within the stipulated time period or repudiation of the BSPA, the defaulting Procurer shall, subject to the prior consent of the BSSD, novate its part of the BSPA/BSSA to any third party, including its Affiliates within the stipulated period. In this case, the Procurer shall pay amount equivalent to 3 (three) months of energy billing based on the declared availability, or balance BSPA period, whichever is less, for its contracted capacity, with the Project assets being retained by the BSSD, and exit from the BSPA/BSSA. In case of direct procurement by the Procurer from the BSSD, the above payment will be made by the Procurer to the BSSD. In case of procurement of power through an Intermediary Procurer, the above payment will be made by the End Procurer to the Intermediary Procurer.

b) In the event the novation of the BSPA is not acceptable to the BSSD, or if no offer of novation of BSPA is made by the defaulting Procurer within the stipulated period, then the BSSD may terminate the BSPA and choose to either continue operating the project by itself finding an alternate procurer or to discontinue the operation of the project. If the BSSD chooses to continue operating the project, the Procurer will pay to the BSSD, 'termination compensation' equivalent to 6 (six) months of energy billing corresponding to the declared availability, or balance BSPA period whichever is less, for its contracted capacity.

c) If the BSSD decides to discontinue the operation of the Project, it may require the defaulting Procurer to make a payment of the 'termination compensation' which will be equivalent to the amount of the Debt due and the 110% (one hundred and ten per cent) of the Adjusted Equity, less Insurance Cover if any.

d) In the scenario of procurement by more than one Procurer through an Intermediary Procurer under a single tender, the Intermediary Procurer may provide for suitable provisions to deal with default by one or more Procurers under their respective BSSAs.

e) In the event of termination of BSPA, any damages or charges payable to the STU/ CTU, for the connectivity of the plant, shall be borne by the Procurer.

Note: 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 within 3 months from the due date of such payment, subsequent to which, the defaulting Party will be required to pay a monthly interest @1% of the compensation.

J. CHANGE IN LAW/ REGULATION

1. In these Guidelines, the term 'Change in Law/ Regulation' shall refer to the occurrence of any of the following events, after the last date of the bid submission, including (i) the enactment of any new law/ regulation; or (ii) an amendment, modification or repeal of an existing law/ regulation; or (iii) the requirement to obtain a new consent, permit or license; or (iv) any modification to the prevailing conditions prescribed for obtaining a consent,

permit or license, not owing to any default of the BSSD; or (v) any change in the rates of any Taxes, duties or cess, which have a direct effect on the Project. However, Change in Law/ Regulation shall not include any change in taxes on corporate income or any change in any withholding tax on income or dividends. For avoidance of any doubt, in case the Project as well as the End Procurer are located in different States, it is clarified that for bids where the Procurer specifies the location outside the procuring State, Change in Law/Regulations in the host State, i.e. the State where the Project is located, will be compensated by the Procurer as per the provisions of the BSPA/BSSA. For other cases, if any aforementioned event is the result of action/inaction/omission/commission by the Government of the host State, such event will not qualify for any financial compensation under this clause. Normally, a single application will be made by the concerned Party in a particular Contract Year, covering all the Change in Law events taking place in that year. In an exceptional year, in case there is more than one Change in Law event taking place, wherein the total impact on account of all such events in the year is more than 1 paise/kWh in the BSPA tariff, more than one application can be made in such year.

2. In the event a Change in Law/ Regulation results in any adverse financial loss/ gain to the BSSD/Procurer then, in order to ensure that the BSSD/Procurer is placed in the same financial position as it would have been had it not been for the occurrence of the Change in Law / Regulation, the BSSD/ Procurer shall be entitled to compensation by the other party, as the case may be, subject to the condition that the such 'Change in Law / Regulation' is recognized by the Appropriate Commission. Compensation payment on account of such 'Change in Law / Regulation' shall be determined and shall be effective from such date as may be decided by the Appropriate Commission.

3. However, for certain 'Change in Law / Regulation' such as change in rates of duties/ taxes/ cess/ charges/ levies, if it has already been specified in the RfS with explicit mention of the specific name of duties/ taxes/ cess/ charges/ levies concerned, that change in rates of such duties/ taxes/ cess/ charges/ levies will be treated as 'Change in Law / Regulation', then the quantum of compensation payment on account of change in rates of such duties/ taxes/ cess/ charges/ levies shall be provided to the affected party by the other party, without the need for any prior approval from the Appropriate Commission. In such cases, the Appropriate Commission will be approached by the Parties for truing up of the calculations as arrived at, for providing applicable compensation on account of such Change in Law.

4. **Compensation payable on account of Change in Law:**
   a. 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 effective from date of commissioning of the Project. The bidding documents shall contain the appropriate formula/provision to calculate the applicable increase/decrease in the tariff.
   b. 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.

c. In the above two cases, the pass through according to the formula stipulated in the BSPA, will come into effect automatically after 60 days of submission of the all the necessary documents by the affected party to substantiate its claim for relief under such change in law event.
d. Truing up of the calculations on account of the above Change in Law events will be done by the Appropriate Commission. 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 suitably.
e. 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.
f. In case of Project being located in a State different than that of the End Procurer, wherein the End Procurer has not specified the Project location, the financial risk of any Change in Law taking place in the host State will not be borne by the End Procurer. However, in such cases, the BSSD will be provided relief only by way of time extensions for obligations under the BSPA and will be excused from any penalty/liquidated damages on this account.
g. In case a Change in Law/Regulations results in delay in commissioning, where cause and effect between these two can be clearly established, the Procurer may provide suitable extension to financial closure and commissioning deadlines of the Project.

K. MINIMUM PAID UP SHARE CAPITAL TO BE HELD BY THE PROMOTER

1. The successful bidder, if being a single company, shall ensure that its shareholding in the SPV/ project company executing the BSPA shall not fall below 51% (fifty-one per cent) at any time prior to Commercial Operation Date (COD). In the event the successful bidder is a consortium, then the combined shareholding of the consortium members in the SPV/ project company executing the BSPA, shall not fall below 51% at any time prior to COD. Further, the successful bidder shall ensure that its promoters shall not cede Control of the bidding company/consortium till the COD. In this case it shall also be essential that the successful bidder shall provide the information about its promoters and their shareholding to the Procurer before signing of the BSPA with Procurer.

2. Any change in the shareholding after the COD can be undertaken under intimation to Procurer.

3. In the event the BSSD is in default to the lender(s), lenders shall be entitled to undertake "Substitution of Promoter" in concurrence with the Procurers.

L. CONSTRUCTION & PERFORMANCE MONITORING

All grid-connected projects, covered under these Guidelines, must install necessary equipment to continuously record the Project's performance. The BSSD will be required to submit this data to Appropriate Commission, Intermediary Procurer/ Procurer(s), MOP,

MNRE, CEA, STU/CTU or any other designated agency including but not limited to RLDC / SLDC (as applicable), online for the entire duration of BSPA. In this regard, they shall also mandatorily grant access to Procurer and MNRE or any other designated agency, to the remote monitoring portal of the power plants on a 24×7 basis. Geo-tagging of the Projects shall be mandatory.

M. ROLE OF STATE NODAL AGENCIES AND OTHER FACILITATORS

The State Nodal Agencies appointed by respective State Governments will provide necessary support to facilitate the required approvals and sanctions in a time bound manner so as to achieve commissioning of the projects within the scheduled timeline. This may include facilitation in the following areas:

i. Co-ordination among various State and Central agencies for speedy implementation of projects.
ii. Support during commissioning of projects.

SECTION V: MISCELLANEOUS PROVISIONS

A. DEVIATION FROM PROCESS DEFINED IN THE GUIDELINES

In case there is any deviation from these Guidelines, the same shall be subject to prior approval by the Appropriate Government.

B. DISPUTE RESOLUTION MECHANISM

The Government of India can issue suitable orders providing for a dispute resolution mechanism at the Centre and request the State Government to consider such a mechanism at the State Level. These dispute Resolution Mechanisms will be additional forums beyond the provisions of the law and can be used by the relevant parties at their option.

C. APPLICABLE LAWS AND REGULATIONS

All activities / procurement being undertaken under these Guidelines will be subject to applicable laws and regulations of the Government, as amended from time to time.

Appendix-1

Notes regarding timelines indicated at Clauses 1.4 and 1.5 of Section III of these Guidelines

a) Lease/Right to use tenure should ideally be at least concurrent with Term of the BSPA. However, lesser lease period may be allowed depending on the applicable laws in the respective States. In such cases, failure by government entities to extend the land lease/ right to use should be included as a Force Majeure event that would require compensation to be paid by the Procurer to the BSSD, provided the above event results in the Project not being allowed to operate.

b) Payment schedule for payment of land lease/rental charges by the BSSD, will be clearly specified in the RfS/BSPA documents and changes from the above schedules will not be considered as a deviation from these Guidelines that requires approval.

c) In case of site identified by the Procurer, if a particular milestone is not within the operational domain of the Procurer, the Procurer will on best endeavour basis, support the facilitation in securing necessary approval from the concerned authorities within the above timelines.

d) In case of Projects being set up in an RE Park, the timelines for fulfilment of obligations by the RE Park Developer as identified above may be required to be aligned with the timelines as provided in the respective RE Park Guidelines issued by the Government of India.

e) In case of Projects being set up in an RE Park, the above timelines will form part of the Land Lease Agreement/Right to Use Agreement to be executed between the BSSD and Park Developer. There will be another Agreement executed between the two entities, called as "Implementation Support Agreement (ISA)", which will clearly specify, among other items, roles and responsibilities of each Party of the Agreement. The facilities to be provided by the Park developer in line with the applicable RE Park Guidelines will be clearly identified in the above Agreement, and milestones of essential and non-essential infrastructure activities to be undertaken, along with additional payment terms, if any, to be indicated without any ambiguity.

f) In both the above scenarios, delay in fulfilment of any milestone under the obligation of the Procurer/Park Developer, will result in suitable extension of BSPA signing, FC and SCD deadlines. The same will be suitably brought out in the RfS, BSPA, ISA and Land Lease Agreements.

g) In case of delay in payment by the BSSD towards its obligations, the respective Agreements will stipulate the applicable liquidated damages to be levied on the BSSD.

h) In case of delay in signing of any Agreement and/or delay in making payments due to the reasons solely attributable to the BSSD, there will not be any extension in the Project milestones.

Appendix-2

Technical Parameters of BESS, BESS Characterization and Performance Parameters

A. Codes and Standards

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

Standard	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

Power Conditioning Unit Standards for BESS	
IEC 62909-1	Bi-directional grid connected power converters - Part 1: General requirements
IEC 62909-2 (if applicable)	Bi-directional grid-connected power converters - Part 2: Interface of GCPC and distributed energy resources
IEC 61683 Ed.1	Photovoltaic systems - Power conditioners - Procedure for measuring efficiency
IEC 61000-6-2 Ed. 2	Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity standard for industrial environments
IEC 61000-6-4 Ed. 2.1	Electromagnetic compatibility (EMC) - Part 6-4: Generic standards - Emission standard for industrial environments
IEC 62116 Ed. 2	Utility-interconnected photovoltaic inverters - Test procedure of islanding prevention measures
IEC 60068-2-1:2007	Environmental testing - Part 2-1: Tests - Test A: Cold
IEC 60068-2-2:2007	Environmental testing - Part 2-2: Tests - Test B: Dry heat
IEC 60068-2-14:2009	Environmental testing - Part 2-14: Tests - Test N: Change of temperature
IEC 60068-2-30:2005	Environmental testing - Part 2-30: Tests - Test Db: Damp heat, cyclic (12 h + 12 h cycle)

B. General Specifications

1. **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.

2. **Other Sub-systems/Components:** Other subsystems/components used in the BESS must also conform to the relevant international/national Standards for Electrical Safety besides that for Quality required for ensuring Expected Service Life and Weather Resistance.

3. **Fire Protection:** The BSSD 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 BSSD shall also obtain thermal runaway characterization of the battery storage systems.

4. **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.

5. **Warranty:** BSSD shall procure performance guarantees 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.

C. Performance Monitoring

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

a. The BSSD 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 the concerned authorities/organizations on line and/or through a report on regular basis every month for the entire duration of contract.

b. The SPDs shall provide access to the concerned authorities/organisations or their authorized representatives for installing any additional monitoring equipment to facilitate on-line transfer of data.

c. All data shall be made available as mentioned above for the entire duration of the Contract.

d. The plant SCADA should be OPC version 2.0a (or a later version including OPC UA) compliant and implement appropriate OPC-DA server as per the specification of OPC Foundation. All data should be accessible through this OPC server for providing real time online data (BESS parameters) to the concerned authorities/organisations. This time series data shall be available from the Project SCADA system to facilitate monitoring and should include among others as stated before, parameters to facilitate daily, monthly and annual report for performance monitoring.

e. Web-based monitoring should be available, which should not be machine dependent. The web-based monitoring should provide the same screens as available in the plant. Also, it should be possible to download reports from a remote web-client in PDF or Excel format.

D. Safe Disposal of unit Batteries from the BESS

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

(Guidelines are forwarded herewith as framed by the Steering Committee constituted by Ministry of Power to monitor and implementing a Pilot Project on Battery Energy Storage System (BESS) and other activities, vide MOP Office Order No. 23/16/2020-R&R-(Part 1) dated 16.07.2021)

Sr. No.	Name of Committee Member with Designation	Name of Organization	Signature
1	Shri B.K. Arya Member (GO&D) / Committee Chairman	CEA	
2	Shri Nitin Aggarwal, Dy. Chief (Engg.) / Member	CERC	
3	Shri KVS Baba, CMD / Member	POSOCO	
4	Shri S.R. Narasimhan, Dir (System Operation) / Member Convenor	POSOCO	
5	Shri S.K. Mishra, Director (Power System) / Member	SECI	
6	Shri Subir Sen, COO / Member	CTU	