



**Petition No. 1868 of 2022**

**BEFORE**

**THE UTTAR PRADESH ELECTRICITY REGULATORY COMMISSION**

**LUCKNOW**

**Date of Order: 20.09.2022**

**PRESENT:**

Hon'ble Shri Raj Pratap Singh, Chairman

Hon'ble Shri Kaushal Kishore Sharma, Member

Hon'ble Shri Vinod Kumar Srivastava, Member (Law)

**IN THE MATTER OF:** Petition under Section 86 (1)(b) of the Electricity Act, 2003 for seeking approval of the long-term battery energy storage purchase agreement i.e., battery energy storage purchase agreement and bidding document for invitation of E-Tender for the installation of energy storage system of 10MW x 4 Hrs. in the state of Uttar Pradesh.

**U.P. Power Corporation Ltd. (UPPCL)**

(Through its Chief Engineer- PPA),

14<sup>th</sup> Floor, Shakti Bhawan Extn., 14-Ashok Marg, Lucknow

..... Petitioner

The following were present:

1. Sh. Deepak Raizada, CE-PPA, UPPCL
2. Sh. Mahendra Singh, SE-PPA, UPPCL
3. Sh. Arun, Consultant, UPPCL

**ORDER**

**(Date of Hearing: 25.08.2022)**

1. The Petitioner, UPPCL has decided to invite bid to install 10MWx4hrs Battery Energy Storage System (BESS) at identified substation in the state of Uttar Pradesh under Build Own Operate and Transfer (BOOT) mode for a period of Twelve years commencing from the Commercial Operations Date, in accordance with the provisions of the Battery Energy Storage Purchase Agreement (BESPA) to be entered into under and in accordance with the provisions of the Electricity Act, 2003. The present Petition is filed for approval of bidding documents, namely RFP and PPA between Discom of U.P., UPPCL and successful bidder(s).
2. The Petitioner has made the following prayers:





- a) Take the Petition on record.
- b) Issue necessary orders to accord approval to initiate Bidding process for Procurement of energy storage service through Competitive route.
- c) Issue necessary orders for approval of bid documents namely the Request for Proposal and Power Purchase Agreement.
- d) Condone any inadvertent omissions/errors/shortcoming.
- e) pass any such further orders as this Commission may deem fit in the facts and circumstances of the case.

**Brief Facts:**

3. There is a deficit of 2500-3000 MW during peak hours. The deficit requires alternate sources to tie up with, so that the availability during peak hours can be effectively encountered. Battery Energy Storage System will help reducing deficit during peak. Further, Installation of Battery Energy Storage System will also help UPPCL in fulfilling Energy Storage Obligations (ESO).
4. The Petitioner has undertaken proposal to procure battery energy storage service on behalf of the Discoms. The said procurement shall lead to benefit consumers/buyers by ensuring supply of electricity in electricity deficient areas.
5. UPPCL has conducted feasibility study at various load centers for BESS and decided to install 5 BESS of capacity 10MW x 4 hrs to optimize power purchase cost. UPPCL intends to use Battery Energy Storage System for energy storage during low load period and utilize stored energy during peak load hours.
6. The successful Bidder/Supplier, selected through transparent competitive bidding process, shall be responsible for financing, construction, operation and maintenance and supply of electricity and fulfill all other obligations of the Parties as set forth in the Battery Energy Storage Purchase Agreement (BESPA) and in accordance with the provisions of the Request for Proposal (RFP). Accordingly, UPPCL has prepared the bidding documents (RFP and BESPA) as per said SBGs notified by MoP.
7. The key details of Bidding Documents which are reproduced herein below:

Parameter	Details
Bid Type	Single Stage, Two Envelop, Online Bid
E-bidding portal	Etender.up.nic.in
Project mode	Build Own Operate and Transfer
E-Reverse Auction (e-RA)	Yes





Parameter	Details
Project Capacity	10MWx4 Hrs.
Project location	Land will be provided at identified substations on lease/right-to use basis to the BESSD through suitable agreement with the Transmission licensee, and the same shall be facilitated by UPPCL
Interconnection voltage	33 kV at 132/33 kV substation
No. of sites	1
Offtake by UPPCL	100%
Storage Hours	4 hours charging / 4 hours discharging per cycle
No. of cycles per day	2
Guaranteed minimum system availability	98%
Guarantee AC to AC roundtrip efficiency (RtE)	97.5% on monthly basis
Scheduled Commissioning Date (SCD)	18 months from the date of BESPA
Tenure	12 years from the COD as per BESPA
Tender Fee	Rs. 25000 plus GST
Document processing fee	Rs. 100000 plus GST per project
Earnest Money Deposit (EMD)	Rs. 740000 per MW per project
Performance Bank Guarantee (PBG)	Rs. 1110000 per MW per project
Net Worth qualification criteria	11600000 per MW
Turnover qualification criteria	2900000 per MW
Profit Before Depreciation Interest and Taxes (PBDIT) qualification criteria	580000 per MW
Line of Credit qualification criteria	725000 per MW

#### Records of Proceedings:

8. The matter was heard on 25.08.2022. Sh. Raizada stated that instant tender document is similar to the SECI tender of BESS and there is no deviation from the MoP guidelines issued in this regard. On the specific query of the Commission about the status of the said SECI tender, Sh. Raizada responded that technical evaluation is under process, and the financial bid is yet to be opened. Further, Sh. Raizada added that instant tender is technologically agnostic with single part tariff for ₹/MW/month.





9. The Commission observed that the term liquidated damages may be reviewed legally. The Commission observed that DSM treatment would be proportionate to the capacity. Regarding the location of the project, Sh. Raizada submitted that considering the size of the tendered capacity, 600-700 sqm of land area is required at the identified substation of Ethawa, Hathras, Aligarh, Mathura & Ghaziabad.
10. On the specific query of the Commission about the technological evaluation, Sh. Arun, consultant of UPPCL submitted that the bidders shall have option to change technology from that at the time of bid submission but before financial closure.

**Commission's Analysis & Decision:**

11. With the increased penetration of intermittent Renewable Energy, further addition in RE capacity is expected to face issues due to supply demand mismatch as generation from some of the Renewable Energy sources is generally available during low demand periods. In order to utilize 100% Renewable Energy (RE), UPPCL may have to back down energy from other sources which is available at lower cost.
12. The adoption of grid scale energy storage system shall be a key component for large scale grid integration of renewable energy sources and shall aid in improving the power system reliability and cost. For energy planning, integrating Energy Storage Systems (ESS) with existing and upcoming RE capacity can optimize generation mix along with better utilization of the transmission infrastructure in the state.
13. This Commission vide its order dated 08.03.2022 in Petition 1799/2021 directed UPPCL to explore energy storage opportunity within or outside the state. Further, the Commission in its order dated 11.03.2022 in Petition 1805/2021 has again directed UPPCL to prepare a document to come up with a plan to install minimum 100 MW of battery storage projects at various load centers in Uttar Pradesh.
14. In the instant matter UPPCL has proposed to procurement & Utilization of BESS capacity of 10MW/40MWh which would be installed at the STU substation for Discom's use for peak power management as well as optimum energy management in a cost-efficient manner. Further, there is no deviation in the tender document from the MoPs Guidelines dated 10.03.2022 for Procurement & Utilization of Battery Energy Storage System.





**Commission's View:**

15. In view of the above, the Commission allows UPPCL to proceed with the bidding process with the following directions:

- a) UPPCL shall select Revenue Surplus locations, this being first project, viability is important, subject to availability, and
- b) UPPCL shall specify the locations(s) of the project in the bid.
- c) Performance Parameters:
  - i) UPPCL shall specify minimum RtE of 90% instead of 97.5% on monthly basis.
  - ii) For BESS monthly availability less than 70%, no tariff would be payable.
- d) Legally validate the term "Liquidated damages" in the bid document.
- e) Specify treatment of DSM for charging / discharging schedule for the BESS.

The Commission, therefore, approves the bidding document with liberty to approach this Commission for changes required, if any, based on the Pre-bid meeting.

(Vinod Kumar Srivastava)  
Member

(Kaushal Kishore Sharma)  
Member

(Raj Pratap Singh)  
Chairman

Place: Lucknow

Dated: 20.09.2022



