



**Delhi Electricity Regulatory Commission**  
**Viniyamak Bhawan, 'C' Block, Shivalik, Malviya Nagar, New Delhi – 110017.**

No. F.11(2186)/DERC/2023-24/7980

**Petition No. 02/2024**

**In the matter of:**      **Petition under Electricity Act, 2003 read with DERC Comprehensive (Conduct of Business) Regulations, 2001 and in compliance with directions contained in Communication dated 26.07.2023 issued by the Commission for approval of the Agreement for Battery Energy Storage System dated 22.12.2023 with Kilokari BESS Pvt. Ltd. And adoption of single-part tariff in the form of capacity charges.**

**BSES Rajdhani Power Limited**

....Petitioner

**Vs.**

**Kilokari BESS Private Limited & Ors.**

...Respondents

**Coram:**

**Hon'ble Justice (Retd.) Jayant Nath, Chairperson**

**Appearance:**

1. Mr. Buddy A Ranganadhan, Advocate, BRPL
2. Mr. Rahul Kinra, Advocate, BRPL
3. Mr. Pinkesh Kumar, Advocate, Respondent nos. 1 & 2

**ORDER**

(Date of Order: 01.05.2024)

1. The instant petition has been filed by BSES Rajdhani Power Ltd. (BRPL) under Section 86(1)(b) & (k) and Section 63 of the Electricity Act, 2003 read with DERC Comprehensive (Conduct of the Business) Regulations, 2001 more particularly Regulation 57 and in compliance with directions contained in Communication dated 26.07.2023 issued by the Commission for in-principle approval of the Agreement for Battery Energy Storage System dated 22.12.2023 with Kilokari BESS Pvt. Ltd. (BESS) and adoption of single-part tariff in the form of capacity charges. The Petitioner has made the following prayers:
  - a. Approve the Battery Energy Storage System Agreement dated 22.12.2023 executed between Petitioner/BRPL and Respondent No. 1/Kilokari BESS Pvt. Ltd. for setting up the Battery Energy Storage Project of 20 MW/40 MWh at 33/11 kV Kilokari Grid Sub-Station, for making the storage facility for charging and discharging of electricity for BRPL.

---

**WEAR FACE MASK**

**WASH HANDS REGULARLY**

**MAINTAIN SOCIAL DISTANCING**

- b. Approve the deviations in the Request for Proposal from the Guidelines for Procurement and Utilization of Battery Energy Storage System as part of Generation, Transmission and Distribution assets, along with Ancillary Services' notified by the Ministry of Power.
- c. Adopt the single-part tariff in the form of capacity charges being Annual fixed cost of Rs. 57,59610/- per MW per year which will be billed on a monthly basis.

### **Petitioner's Submission**

2. The Petitioner has submitted that:

- i. The Petitioner is a joint venture between R-Infra Ltd. and Delhi Power Company Limited ("DPCL"), with 51% of its shareholding and management control with R-Infra. The balance 49% equity is held by DPCL, being a company wholly owned by Government of NCT of Delhi ("Delhi Government"). The Petitioner is one of the successor entities of Delhi Vidyut Board. The Petitioner is operating as a distribution licensee supplying electricity in South and West Circles of the NCT of Delhi in accordance with the Licence granted by the Commission under Section 20 of the Delhi Electricity Reform Act, 2000 read with Section 14 of the Electricity Act, 2003.
- ii. The Respondent No. 1 i.e., Kilokari BESS Pvt. Ltd. is a Company incorporated under the provisions of the Companies Act. Respondent No. 1 is a special purpose vehicle incorporated by the successful bidding Consortium of IndiGrid 2 Limited and Amperehour Solar Technology Private Limited for executing the BESS Agreement. Petitioner has entered into the BESS Agreement with Respondent No. 1.
- iii. The Respondent Nos. 2 and 3 i.e., respectively, IndiGrid 2 Limited and Amperehour Solar Technology Private Limited are the successful consortium of companies which have been selected as the successful bidder for the execution of the BESS Agreement.
- iv. On 29.01.2022, Ministry of Power (MOP) issued a clarification regarding usage of Energy Storage System (ESS) wherein it recognized the importation of ESS.
- v. On 10.03.2022, the MOP notified "Guidelines for Procurement and Utilization of Battery Energy Storage System as part of Generation, Transmission and Distribution assets, along with Ancillary Services." (MOP Guidelines)
- vi. On 22.07.2022, the MOP released the Renewable Purchase Obligation (RPO) and Energy Storage Obligation (ESO) trajectory till 2029-30. According to this Order, total prescribed RPO will progressively increase from 24.61% in 2022-23 to 43.33% by 2029-30. This includes wind RPO, hydropower purchase obligation

- and other RPO. In addition, an energy storage obligation has also been specified for solar or wind energy based storage. This shall be calculated on energy basis and shall be treated as fulfilled only when at least 85% of energy stored in a system annually is from renewable power sources. The prescribed storage obligation is 1% in 2023-24 and increases up to 4% in 2029-30.
- vii. In November, 2022 the Forum of Regulators ("FoR") issued the Report on the Regulatory Framework for Energy Storage and Electric Vehicles ("FoR ESS Report"). A Working Group headed by Chairperson, WBERC was constituted for carrying out a detailed examination of all the issues connected to ESS and Electric Vehicles. The Member of the Commission was also a part of the Working Group. The report of the Working Group was endorsed with certain modifications including that the ESS should be encouraged to be charged with renewable energy.
  - viii. On 29 December 2022, the Electricity (Amendment) Rules, 2022 were notified adding Rule 18 related to ESS under which petitioner seeks to develop a BESS at one of its Grid Sub-Station.
  - ix. On 29 May 2023, the Ld. CERC notified the CERC (Indian Electricity Grid Code) Regulations, 2023 ('IEGC Regulations' for short). As per Regulation 43(3) of IEGC, SLDCs shall be responsible for "management of the reserves including energy storage system and demand response within its State control area...." Consequently, Regulation 3(33), DISCOM qualify as Control Centers for the purpose and meaning in Grid Code.
  - x. On 31.05.2023, CEA notified the National Electricity Plan (Volume I Generation) ('NEP' for short) which identifies Pumped Hydro Storage System and BESS as the commercially deployable solutions for providing requisite storage capacity. CEA's modelling for the NEP projects BESS requirement of 8.68 GW/ 34.72 GWh by the year 2027-28 and 47.24 GW/ 236.22 GWh by 2031-32, in addition to 26.69 GW of PSP envisaged to be installed by 2031-32. BESS can thus be an effective solution to address issues of RE integration; it provides capabilities for shifting generation, regulating dispatch of electricity, maintaining flow control in transmission system, and strengthening reliability of the power system without adding new capacity.
  - xi. On 28.06.2023, MOP issued the final Resource Adequacy Guidelines which *inter-alia* provided that a Distribution Licensee can contract storage capacity corresponding to the results of LT-DRAP capacity addition requirement for future years as per the guidelines issued under the provisions of Section 63 of the Electricity Act, 2003 for procurement of energy from BESS through competitive bidding, from grid connected Projects.
  - xii. On 07.07.2023, Petitioner submitted a fresh proposal seeking 'in-principle' approval of the Commission for 20 MW/40 MWh Battery Energy Storage System

- (‘BESS’ for short) at 33/11 kV Kilokari Grid of BRPL.
- xiii. On 26.07.2023, the Commission granted ‘*in-principle*’ approval to the BESS proposal submitted by the Petitioner.
  - xiv. In August 2023, MOP notified the National Framework for Promoting Energy Storage Systems. The key objectives of this framework are to ensure a constant supply of renewable energy (Renewable Energy- Round the Clock), reduce emissions, and lower energy costs by incentivizing ESS deployment while reducing the reliance on fossil fuel power plants. It also seeks to enhance grid stability and reliability through ESS deployment, stimulate innovation in energy storage technologies, and ensure equitable access to energy storage for all segments of the population.
  - xv. On 24.08.2023, the Petitioner gave its consent to The Energy and Research Institute (‘TERI’ for short) to publish and to act as Bid Manager for the Request for Proposal (‘RfP’ for short) related to the setting up a distribution-level Grid Scale BESS of 20MW/ 40MWh.
  - xvi. On 01.09.2023, TERI issued the RfP to invite bids from the intending bidders for the BESS Project. Subsequently, five (5) Corrigendum and response to the bid queries were issued to amend the RfP.
  - xvii. On 17.10.2023, TERI issued a letter to BRPL giving a detailed report of the Tender Evaluation Process. It was *inter-alia* informed that IndiGrid 2 Limited is the successful Bidder whose Bid has been determined to be the least-cost bid after reverse auction (RA) as per the evaluation criteria mentioned in the RfP.
  - xviii. On 23.10.2023, Petitioner issued the LOI to the L1 Bidder being the consortium of Respondent No. 2 and 3 for BESS Project.
  - xix. On 25.10.2023, Respondent No. 1 gave its acceptance to the LOI issued by the Petitioner. On 22.12.2023, the BESS Agreement was executed between the Petitioner and Respondent No. 1.
  - xx. In December 2023, Grid Controller of India Limited published a Report on Electricity Demand Pattern Analysis which *inter-alia* examines the electricity demand growth in India on national, regional, and state levels, spanning from 2009 to the present.
  - xxi. The bidding process undertaken by the Petitioner for execution of the BESS Agreement is in line with the MoP Guidelines, with certain minor deviations. The same is also in line with the FoR ESS Report. In terms of the MoP Guidelines, the Petitioner by its communication dated 07.07.2023 submitted its proposal for implementation of the BESS project. After receipt of the ‘*in-principle*’ approval from the Commission by communication dated 26.07.2023, the Petitioner had undertaken the bidding process through TERI. It is relevant to note that:
    - a) Four bids were received in the response to RFP on 03.10.2023. The participants included: JSW Neo Energy Limited, IndiGrid 2 Limited, Hero

Solar Energy Private Limited and Fourth Partner Energy Pvt. Ltd. The bid submitted by Fourth Partner Energy Pvt. Ltd. was submitted beyond the deadline and was incomplete, and therefore, deemed to be disqualified.

- b) The Technical Bid was opened on 04.10.2023 in the presence of Petitioner and TERI executives supported by Deloitte Team. Minimum eligibility criteria were checked as per Volume 2 of RFP. The bid submitted by JSW Neo Energy Ltd., IndiGrid 2 Ltd. and Hero Solar Energy Pvt. Ltd. fulfilled the minimum eligibility criteria.
- c) JSW Neo Energy Ltd., IndiGrid 2 Ltd. and Hero Solar Energy Pvt. Ltd. scored higher than the minimum score threshold of 30 marks and were shortlisted for Technical Evaluation 2.
- d) The final score of the bidders were calculated by adding up the Score in Technical Evaluation 1 (which was scaled down to 80 marks) and the Technical Presentation Score (20 Marks). Final Scores of the bidders were as follows:

| S. No. | Criteria                          | JSW Neo Energy | IndiGrid 2 | Hero Solar Energy |
|--------|-----------------------------------|----------------|------------|-------------------|
| 1.     | Technical Evaluation 1 Score (80) | 35.50          | 59.05      | 51.62             |
| 2.     | Technical Evaluation 2 Score (20) | 14.20          | 17.38      | 16.75             |
|        | Final Score (100)                 | 49.70          | 76.44      | 68.37             |
|        | Ranking                           | T3             | T1         | T2                |

- e) Indigrid 2 was discovered to be T1 in the Technical Evaluation. All three bidders were then shortlisted for the financial bid opening.
- f) The Financial Bid was opened on 12.10.2023. Hero Solar Energy was identified as the L 1 bid with a quoted levelized tariff of Rs 80,52,000 per MW per year.
- g) The E-Reverse Auction with the three bidders was held on the 13.10.2023. The start price of the auction was set at the L 1 bid of Rs. 80,52,000/- and the minimum decrement bid was set at 0.25% of the L 1 bid (Rs 20,130).

- h) The winning bidder was IndiGrid 2 with a tariff of Rs 57,59,610/MW/year.  
A summary of the final quoted bids is given below:

| S. No. | Criteria                              | JSW Neo Energy | IndiGrid 2 | Hero Solar Energy |
|--------|---------------------------------------|----------------|------------|-------------------|
| 1.     | Final e-RA quote                      | 58,20,000      | 57,59,610  | 57,79,740         |
| 2.     | Ranking                               | L3             | L1         | L2                |
| 3.     | Percentage reduction from start price | 27.72%         | 28.47%     | 28.22%            |

As such, the consortium wherein IndiGrid 2 Limited was the lead bidder was declared as the successful Bidder whose Bid was determined to be the least-cost bid after reverse auction as per the evaluation criteria mentioned in the RFP.

xxii. The BESS Agreement terms are as under:

- a) Effective date of the Agreement is either (i) the date of signing of this Agreement; or (ii) the date of receipt of approval from Commission; or (iii) the date when vacant land is made available to Respondent No. 1 by the Petitioner, whichever occurs later;
- b) Term of the Agreement is twelve (12) years from the Commercial Operation Date i.e, date on which the commissioning certificate is issued;
- c) Respondent No. 1 is *inter-alia* responsible for: -
  - i. Designing, constructing, erecting, commissioning, completing, and testing the BESS in accordance with the applicable Law.
  - ii. operating and maintaining the BESS for the Term of the Agreement.
  - iii. make the BESS available for 8,760 operational cycles over the operational period of 12 years.
  - iv. Bearing all requisite costs associated with obtaining connectivity including fees and obtaining all consents, clearances and permits.
  - v. liable to pay the liquidated damages in case the annual Availability is less than the specified minimum availability and BESS fails to meet the monthly Round Trip Efficiency.
  - vi. Connectivity till Delivery Point Interconnection/Metering point for confirming the evacuation of power and all clearances related thereto.

- vii. Fulfilling all other obligations required to be undertaken for development of Project in Build, Own, Operate and Transfer basis and supply of BESS Capacity.
- viii. all the losses from the BESS up to Interconnection/Delivery/Metering Point.

d) Petitioner is *inter-alia* responsible for:

- i. Providing land at the Project Location for setting up of the BESS.
- ii. Making payment of the Monthly Bill/Supplementary Bill by the Due Date.
- iii. all the losses including transmission losses in respect of power evacuated beyond the Delivery Point to its receiving substation.

e) Tariff applicable for sale of BESS Capacity to Petitioner is capacity-based Tariff of Rs. 57,59,610/- per MW per year and will be billed by Respondent No. 1 to Petitioner on monthly basis.

xxiii. Tariff applicable for sale of BESS Capacity to Petitioner is capacity-based Tariff of Rs. 57,59,610/- per MW per year and will be billed by Respondent No. 1 to Petitioner on monthly basis. The Tariff discovered in the bidding process and agreed in the BESS Agreement of Rs. 57,59,610/- per MW per year is lesser in comparison to the price submitted along with proposal of the Petitioner i.e., AFC of Rs. 101.2 Lakh per MW. The Commission vide letter dated 26.07.2023 had granted *in-principle* approval on the said proposal.

xxiv. There were certain minor deviations from the MoP BESS Guidelines, which were required to made considering the nature of the present Project and the peculiar facts and circumstances of the Petitioner:

| S.No | Relevant Clauses of Guidelines | Clause Description   | Clause in RFP   | Justification   |
|------|--------------------------------|--|---|---|
| 1.   | Section IV, Clause C, 1(a)     | <i>“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</i> | No part commissioning allowed. (Clause 4.6 of the SCC – Part A of RfP and BESS Agreement) | Since project size is only 20 MW/ 40 MWh and schedule commissioning date is 12 months from getting the approval from the Commission. Therefore, clause relating to part commissioning was not made a part of the RfP. |

|    |   |   |   |   |
|----|---|---|---|---|
|    |   | <i>BESPA on the part which is not commissioned.”</i>  |   |   |
| 2. | Section IV, Clause I: Event of Default and the Consequences thereof, 1(b) | <i>“Upon being in default, the BESSD shall pay to the Procurer, damages, equivalent to energy payments corresponding to the declared minimum performance criteria as per the BESPA for 6 (six) months, or balance BESPA 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.”</i> | BESSD shall be liable to pay to Buying Utility, liquidated damages, as provided in articles 2.4.4 of SCC – Part A for failure to commission within stipulated time. For other cases, the BESSD shall be liable to pay to Buying Utility, damages equivalent to 4 (four) months, as detailed in clause 1.1 of Applicable Tariff in SCC – Part B, or balance BESSA period whichever is less, of charges for its contracted capacity. Buying Utility shall have the right to recover the said damages by way of forfeiture of performance bank guarantee, if any, without prejudice to resorting to any other legal course or remedy. (8.2.4 of the RfP of the General Conditions of Contract and 7.2.4 of the BESS Agreement) | As penalty under the clause refers to forfeiting of PBG and PBG amount under this project is corresponding to 4 months in terms of Section IV, Clause I,1(b) hence Minimum performance criteria duration is reduced to 4 months.<br>As per proposal submitted to this the Commission, proposed estimated Capex was Rs. 125.72 Crs.<br>Performance Bank Guarantee Amount as per estimated project cost was 5% of 125.72 Cr = 6.286Cr.<br>Estimated Capacity charges as per Proposal was 101.2 Lakhs per MW per Annum.<br>Equivalent loss for four months based on capacity charges was 6.74Cr.<br>Hence in RFP, minimum performance criteria were kept as 4 months instead of 6 months since calculated PBG amount was equivalent to the damages of 4 months.<br>After the e-RA process, the Capacity charges reduced to 57.59 lakhs per MW per Annum and capex requirement will be 115.41 Cr. Corresponding capex, PBG is 5.77 Cr which |



|    |   |   |  |   |
|----|---|---|--|---|
|    |   |   |  | is equivalent to damage of 6 months.  |
| 3. | Section IV, Clause I: Event of Default and the Consequences thereof, 2(c) | <i>“If the BESSD 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 110% (one hundred and ten per cent) of the Adjusted Equity, less Insurance Cover if any.”</i> | After the expiry of Consultation Period and unless Parties have otherwise agreed to the contrary or Buying Utility Event of Default giving rise to the Consultation Period shall have ceased to exist or shall have been remedied, Buying Utility under intimation and prior consent to BESSD shall, novate its part of the BESSA to any third party, including its Affiliates within the stipulated period. In the event the aforesaid novation is not acceptable to the BESSD, or if no offer of novation is made by Buying Utility within the stipulated period, then the BESSD may terminate the BESSA and at its discretion require Buying Utility to either (i) takeover the Project assets by making a payment of the termination compensation equivalent to the amount of the Debt Due and Adjusted Equity less Insurance Cover or ii) take an exit from the BESSA after release of PBG, | Termination compensation paid by buying utility is reduced from 110% to 100% of the Adjusted Equity, less Insurance Cover if any for the benefit of consumer of BRPL and accepted by BESS developer also. This deviation is beneficial for the consumers in case of event of default. |

|    |   |  |   |  |
|----|---|--|---|--|
|    |   |  | subject to the payment of all dues from the Buying Utility to the BESSD till the date of exit. Provided further that at the end of three (3) months period from the Consultation Period, this BESSA may be terminated by the BESSD. (Clause 7.2.4 of the BESS Agreement and 8.4.3 of the RfP) |  |
| 4. | Section III: Clause G: Contract Award and Conclusion, Point 8 | <i>“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 BESPAs to be submitted along with, the above timeline may be extended suitably.”</i> | No such clause in the RfP.  | Capacity charge approvals from the Commission require signed BESS Agreement with the BESS and concessional funding agreement between developer and funding agency therefore it was considered therefore timeline of 30 days was not considered in the RfQ. |
| 5. | Section IV: Clause C: Commissioning, 3 (d)                    | <i>“Land arrangements: It may be noted that commissioning/ part-commissioning of the Project will not be declared until the BESSD submits documents/ Lease Agreement to establish possession/ right to use of the required land,</i>   | No such clause in the RfP.  | Not applicable since in terms of the in-principle approval granted by the Commission on 26.07.2023, the land is being provided by the Petitioner for establishing the BESS.  |

|  |  |  |  |  |
|--|--|--|--|--|
|  |  | <p><i>corresponding to full/ part capacity being commissioned, in the name of the BESSD for a period not less than the complete term of the BESPA, on or before the date of such full / part commissioning.”</i></p> |  |  |
|--|--|--|--|--|

xxv. The Petitioner is filing the present Petition considering the long-term impact and benefits of the BESS on the operational requirement consumers based on the present power supply scenario and also accounting for year-on-year load growth. The deviations from the guidelines are only minor deviations and it is requested that in the interest of justice and in light of the larger benefit to the consumers, post facto approval for the same be granted by this Commission.

**Commission’s Analysis**

3. The instant Petition has been filed by the Petitioner seeking approval of the BESS Agreement dated 22.12.2023 executed between the Petitioner and Respondent No.1 for setting up the Battery Energy Storage Project of 20MW/40MWh at 33/ 11 kV Kilokari Grid Sub-Station, for making the storage facility for charging and discharging of electricity for BRPL and adoption of single-part tariff in the form of capacity charges.
4. It has been observed that the bidding process conducted by the Petitioner for the execution of the BESS Agreement is in line with the MoP Guidelines, with certain minor deviations outlined in the RfP. These deviations have been justified by the Petitioner to achieve a single-part tariff in the form of a capacity charge at Rs. 57,59,610/- per MW per Year, which is lower than the anticipated capacity charge of Rs. 101.20 Lakh/MW/year as proposed by the Petitioner on 07.07.2023.
5. Further, taking into account the nature of this project, where the Petitioner is not investing any CAPEX and the Petition for approval of the BESS Agreement is part of the power procurement process of the Petitioner, any financial benefits from this project will be transferred to the consumers of the Petitioner as a net offset in the power purchase cost of the Petitioner in the ARR.
6. Also, the Petitioner has sought certain deviations as enumerated in Para 2(xxiv) of this order, the Commission approves the minor deviations as outlined by the Petitioner. However, with regard to "Section IV, Clause I: Event of Default and the Consequences thereof, 2(c)", it is directed that in the event of default and in case

BRPL takes over the project, BRPL will only be entitled to the discovered tariff of Rs. 57,59,610/ MW/ Year, subject to the performance of the BESS in accordance with the RFP, corrigendum, clarification, and BESSA. It is further directed that any payment from BRPL to KBPL for termination, the compensation will not be included in BRPL's ARR determination; only the discovered tariff shall be considered as the power purchase cost for BRPL.

7. Based on above, the Commission accords approval to the following:
  - a) the BESS Agreement dated 22.12.2023 executed between the Petitioner and Respondent No. 1 for the establishment of the Battery Energy Storage Project of 20MW/ 40MWh at the 33/ 11 kV Kilokari Grid Sub-Station;
  - b) adopts the single-part tariff in the form of capacity charges, set at an Annual fixed cost of Rs. 57,59,610/- per MW per year, which will be billed monthly as per the Agreement dated 22.12.2023 as part of the Petitioner's power purchase cost subject to terms and conditions in respect of performance of BESS, as per agreement;
  - c) The deviations as enumerated in Para 2(xxiv), with the directions as per Para 6 of this Order, in the RfP from the MoP Guidelines dated 10.03.2022.
8. Further, it is also stated that any monetary benefits to BRPL resulting from operation of this project, in line with benefits mentioned in the petition, shall be entirely passed on to consumers in the Petitioner's ARR as a net-off in the power purchase cost.
9. The Petition is disposed of in terms of the observations and directions contained in Para 6-8 cumulative of this Order.
10. Ordered Accordingly.

**Sd/-**  
**(Justice (Retd.) Jayant Nath)**  
**Chairperson**