

**BEFORE THE GUJARAT ELECTRICITY REGULATORY COMMISSION
GANDHINAGAR**

Petition No. 2364 of 2024.

In the matter of:

Petition under Section 86 (1) (b) of the Electricity Act, 2003 for approval of Battery Energy Storage Sale Agreement signed by GUVNL with Solar Energy Corporation of India Ltd. (SECI) for procurement of 150 MW/300 MWh Energy storage capacity procured by SECI under Tariff based Competitive Bidding Process from the 500 MW/1000 MWh pilot project to be set up by the BESSD at Fatehgarh - III substation of Power Grid in Rajasthan.

Petitioner : Gujarat Urja Vikas Nigam Limited
Sardar Patel Vidyut Bhavan, Race Course Circle
Vadodara – 390007.

Represented by : Mr. Sourav Nandy along with Mr. Sumit Harwani, and
Mr. Prasun Kumar
V/s.

Respondent No. 1 : Solar Energy Corporation India Limited
6th Floor, Plate – B, NBCC Office Block Tower-2,
East Kadwai Nagar, New Delhi – 110023.

Represented by : Nobody was present.

Respondent No. 2 : JSW Renew Energy Five Limited
Bandra Kurla Complex, Bandra (East),
Mumbai, Maharashtra – 400051.

Represented by : Nobody was present.

CORAM:

Mehul M. Gandhi, Member

S. R. Pandey, Member

Date: 23/09/2024.

ORDER

1. This Petition has been filed by the Petitioner Gujarat Urja Vikas Nigam Limited (GUVNL) under Section 63 read with Section 86(1)(b) of the Electricity Act 2003

interalia seeking following prayers:

- (a) *To admit this Petition.*
- (b) *To approve the Battery Energy Storage Sale Agreement (BESSA) dated 26.06.2023 appended as “Annexure – K” with the present petition, signed with SECI (Intermediary Agency) for procurement of 150 MW/300 MWh Battery Energy Storage Capacity from SECI’s 500 MW/1000 MWh Pilot Project to be set up by the BESSD at Fatehgarh - III Sub-Station in Rajasthan, at the tariff of Rs. 6,44,473.06 per MW per month (excluding the applicable GST, taxes and duties if any).*
- (c) *To condone any inadvertent omissions/errors/shortcoming and permit the Petitioner to make minor addition/change/modification/alter this filing and make further submissions as may be required at a future date.*
- (d) *To craves relief for filing any further submissions.*
- (e) *Pass any other Order as the Hon’ble Commission may deem fit and appropriate under the circumstances of the case, to avoid further delay and in the interest of justice.*

2. The Petitioner has filed this Petition under Section 86 (1) (b) of the Electricity Act, 2003 seeking approval of the Battery Energy Storage Sale Agreement BESSA by the Commission and hence, it is necessary to refer aforesaid Sections as under:

“.....

Section 86(1) The State Commission shall discharge the following functions, namely: -----

(b) regulate electricity purchase and procurement process of distribution licensees including the price at which electricity shall be procured from the generating companies or licensees or from other sources through agreements for purchase of power for distribution and supply within the State.”

.....”

As per the aforesaid provision, the Commission has to regulate the power procurement of the Distribution Licensees, including the procurement process, the price at which electricity shall be purchased from the generating company or the

Licenses or through other sources through agreement for purchase of power for distribution and supply within the State.

3. Thus, it is apparent from the aforesaid provisions that the Petition filed by the Petitioner is within the purview of the Commission's jurisdiction and in terms of the powers vested by the Electricity Act, 2003 and Regulations framed thereunder, the Commission decides to admit the present Petition.
4. Facts mentioned in the Petition in brief are as under:
 - 4.1. It is stated that the Government of Gujarat has notified the Gujarat Electricity Industry (Reorganization and Regulation) Act, 2003 in May, 2003 for reorganization of the entire power sector in the State of Gujarat and pursuant thereof, the Gujarat Electricity Industry Reorganization and Comprehensive Transfer Scheme, 2003 has been notified under the Gujarat Electricity Industry (Reorganization and Regulation) Act, 2003, whereby, erstwhile Gujarat Electricity Board was reorganized and its functions have been vested in different entities.
 - 4.2. As per the above re-organization scheme, the activities undertaken by erstwhile Gujarat Electricity Board of Generation, Transmission, Distribution, Bulk Power Purchase and Supply have been entrusted to separate seven functional entities. The generation activity is assigned to Gujarat State Electricity Corporation Limited (GSECL), transmission activity is assigned to Gujarat Energy Transmission Corporation Limited (GETCO) and the distribution activity is assigned to four distribution companies viz. Uttar Gujarat Vij Company Limited (UGVCL), Madhya Gujarat Vij Company Limited (MGVCL), Dakshin Gujarat Vij Company Limited (DGVCL) and Paschim Gujarat Vij Company Limited (PGVCL). Further, the function of bulk purchase and bulk sale of power is assigned to the Petitioner, Gujarat Urja Vikas Nigam Limited.
 - 4.3. The Distribution companies are mandated to procure power from Renewable Energy Sources as per the provision of Section 86(1)(e) of the Electricity Act, 2003 and in terms of the GERC (Procurement of Energy from Renewable Energy Sources) Regulations, 2010, as amended from time to time.
 - 4.4. On 22.07.2022, the Ministry of Power (MoP), Government of India, established a trajectory for Renewable Purchase Obligation (RPO) and Energy Storage Obligation

(ESO) until FY 2029-30 as amended from time to time. As per the said Notification, the ESO for the fiscal year 2023-24 is set at 1%, with subsequent yearly increments of 0.5% leading to a target of 4% for the fiscal year 2029-30. Further, Central Electricity Authority (CEA), while preparing the National Electricity Plan (NEP), 2023 has also calculated the ESS capacity required to integrate the upcoming Renewable Energy capacity in the country in order to satisfy the peak electricity demand.

- 4.5. It is stated that as per NEP, 2023, the energy storage capacity requirement is projected to be 16.14 GW (7.45 GW PSP and 8.68 GW BESS) in year 2026-27, with a storage capacity of 82.32 GWh (47.6 GWh from PSP and 34.72 GWh from BESS). The energy storage capacity required for 2029-30 is likely to be 60.63 GW (18.98 GW PSP and 41.65 GW BESS) with storage of 336.4 GWh (128.15 GWh from PSP and 208.25 GWh from BESS). By the year 2031-32, this requirement is expected to increase to 73.93 GW (26.69 GW PSP and 47.24 GW BESS) with a storage capacity of 411.4 GWh (175.18 GWh from PSP and 236.22 GWh from BESS).
- 4.6. In accordance with the same, the Petitioner on behalf of its four Distribution companies has been entering into Energy Storage Purchase Agreements/Energy Storage Sale Agreement amongst others with various Energy developers for procurement of Storage/Power from time to time.
- 4.7. Section 3 (1) of the Electricity Act 2003 requires the Central Government to formulate National Electricity Policy in consultation with CEA & State Government, *interalia*, for development of renewable sources of energy. In compliance with the provision, the Central Government had notified the NEP 2005 and Tariff Policy 2016 elaborating the role of Regulatory Commissions, mechanism for promotion and harnessing of renewable source of energy, time frame for implementation etc.
- 4.8. Section 86 (1) (b) of the Electricity Act, 2003 empowers the Commission to regulate electricity purchase and procurement process of distribution licensees including the price at which electricity shall be procured from the generating companies or licensees or from other sources through agreements for purchase of power for distribution and supply within the State.
- 4.9. Initially, SECI vide letter dated 07.12.2021 had requested the Petitioner GUVNL for giving consent for quantum of capacity requirement and if discovered rates are found

acceptable, based on that Battery Energy Storage Sale Agreement can be signed.

4.10. The Petitioner has stated brief regarding Tariff Based Competitive Bidding conducted by SECI as under:

- (a) Ministry of Power (MOP) vide Notification No. 23/16/2020-R&R Part(1) dated 11th March 2022 has notified "Guidelines for procurement and utilization of Battery Energy Storage System as part of Generation, Transmission and Distribution assets, along with Ancillary Services".
- (b) SECI has been designated as a Nodal Agency for developing and facilitating the establishment of the Grid connected Battery Energy Storage Capacity in India in terms of the Policy/Guidelines issued by the Government of India.
- (c) SECI had initiated a Tariff Based Competitive Bid Process for development of 500 MW/1000 MWh of ISTS connected Battery Energy Storage Project on the terms and conditions contained in the Request for Selection Documents issued by SECI vide RfS No SECI/C&P/IPP/15/0001/22-23 dated 13.04.2022 and subsequent amendment.
- (d) In proposal dated on 07.12.2021, SECI has provided details of calling bids of 1000 MWh of standalone Battery Energy Storage System with provision of daily utilization of 2 hours and 2 nos. of cycles with an annual average availability of 95% and round trip efficiency of 85%. The project is to be connected with ISTS and commissioned within 18 months of signing of Agreement between Developers.

4.11. GUVNL vide letter dated 17.02.2022 has informed SECI for in-principle consent for procurement of 300 MWh Battery Energy Storage System from 1000 MWh tender capacity of SECI. The approval was conditional that discovered rates from competitive bidding followed by reverse auction undertaken by SECI are found acceptable and based on that Battery Energy Storage Sale Agreement (BESSA) can be done between SECI & GUVNL. In addition to above, GUVNL has given approval subject to alignment of various key provision of agreement, i.e. Force Majeure, Change in law, Event of Default, Payment Security Mechanism, etc. in line with GUVNL' PPAs for procurement of RE power through Competitive Bidding Process.

- 4.12. SECI vide letter dated 14.11.2022 has informed GUVNL that 30% of capacity shall be utilized for POSOCO (Grid India) for ancillary services, 40% of capacity shall be utilized for merchant capacity by developer & balanced 30 % of capacity (150 MW/300 MWh) shall be offered to DISCOMs on monthly capacity charges. Where GUVNL may use excess generation for charging of BESS and while peak demand, GUVNL can reutilized that stored energy. The discovered rates under SECI's 1000 MWh BESS tender capacity procured under Competitive bidding followed by e-RA, L1 price discovered is Rs. 1083500 per MW per month, additional facilitation charges of Rs. 5417.5 per MW per month (0.5%) of applicable capacity charges, cumulatively capacity charges of Rs. 1088917.5 per MW per Month.
- 4.13. Ministry of Power vide its OM No. 10/1/2014-0M-(Vol-V) dated 22.02.2022 has provided 'in-principal' approval for providing an annual grant of upto Rs. 80 Crore / annum from Power System Development Fund (PSDF). Cumulatively capacity charges of Rs. 1088917.5 per MW per Month. In view of the aforementioned PSDF grant, the amount chargeable from GUVNL as mentioned at Article 1.1 would stand reduced by Rs. 4,44,444.44 per MW per month, the effective price of BESS capacity being offered is estimated to be Rs. 6,44,473.06 per MW per month (excluding the applicable GST, taxes and duties if any). With this levelized cost of storage is estimated to be Rs. 6.00/Kwh considering 8.35% Discount rate and project life of 12 Year. With assumption of maximum utilization of BESS i.e. 2 cycle of 2 hours per day by utility.
- 4.14. GUVNL vide letter dated 10.04.2023 has convey "in-Principle consent" from procurement of 150 MW/300 MWh capacity from SECI's standalone, ISTS connected Battery Energy Storage System of 500 MW/1000 MWh to be set up at Fatehgarh-111 Sub-Station of POWER GRID in State of Rajasthan at the rate of Rs. 6,44,473.06/- per MW per month (excluding the applicable GST, taxes and duties, if any). However, the approval is subject to alignment of various key-provision of Battery Energy Storage Sale Agreement (BESSA) viz. Force Majeure, Change in Law, Event of Default and Payment Security mechanism, in line with provisions of GUVNL' PPA for procurement of RE power through Competitive Bidding Process.
- 4.15. SECI vide letter dated 19.04.2023 has given remarks against various provisions Force Majeure, Change in Law, Event of Default and Payment Security mechanism etc., as given in reference letter and requested to sign Battery Energy Storage Sale

Agreement (BESSA) in line of SECI's tender provisions.

4.16. Ministry of Power (MoP), Government of India has held the meeting on 26.05.2023 for status of SECI 1000 MWh BESS project vide letter dated 18.05.2023 at New Delhi wherein it was directed that terms of BSSA shall be remain uniform as specified in SECI's tender which are required to be followed by all beneficiary States.

4.17. GUVNL vide letter dated 09.06.2023 has conveyed approval for signing of BESSA in line with MoP' Guidelines for procurement of 150MW/300MWh capacity at the rate of Rs. 644473.06 per MW per month (excluding applicable GST, taxes and duties, if any) from the standalone Battery Energy Storage System to be set up in Fatehgarh-III Sub-Station of POWER GIRD in the State of Rajasthan.

4.18. The Petitioner GUVNL has highlighted the salient features of the Battery Energy Storage Sale Agreement executed with the Respondents are as under:

- (I) The BESS project performance criteria, 95% of annual Availability, 85% of Round trip Efficiency with 2.5 % of degradation of Batter Storage capacity every Year Up to 70% at the end of 12th Year.
- (II) The charging power will be provided by GUVNL, for 150 MW 1300 MWh Battery Energy Storage System.
- (III) The Scheduled Commissioning Date (SCD) for commissioning of the full capacity of the Project shall be the date as on 18 months from the Effective Date of BESPA.
- (IV) The terms of BESSA is applicable for 12 Years from the Schedule Commissioning of project/actual date of commissioning of project. (COD shall be the next day after the date of commissioning of the Project, as indicated on the Commissioning Certificate, upon successful commissioning of the full capacity of the Project).
- (V) Minimum Capacity for acceptance of first and subsequent part(s) commissioning shall be 50 MW / 100 MWh or balance project capacity whichever is lower. The total number of instalments in which a Project can be commissioned will not be more than 3.

(VI) Late Payment Surcharge shall be payable on the outstanding payment as per the provisions of Late Payment Surcharge Rules, 2022 and subsequent amendments thereof.

(VII) "Rebate" For payment of any Bill on or before Due Date, the following Rebate shall be paid by the SECI to Buying Entity in the following manner

- (a) A Rebate of 1.5% shall be payable to the Buying Entity for the payments made within a period of five (5) days of presentation of bills through email.
- (b) Any payments made beyond a period of 5 days up to and including the 20th Day from the date of presentation of bills through email, shall be allowed a rebate of 1%.
- (c) No Rebate shall be payable on the Bills raised on account of Change in Law relating to taxes, duties, cess etc. and Late Payment Surcharge.

(VIII) Payment Security Mechanism

(A) Letter of Credit (LC):

2.5.1 The Buying Entity shall provide to SECI, in respect of payment of its Monthly Bills, a single, unconditional, revolving and irrevocable letter of credit ("Letter of Credit"), opened and maintained by the Buying Entity, which may be drawn upon by SECI in accordance with this Article. The Buying Entity shall provide SECI draft of the Letter of Credit proposed to be provided to SECI two (2) months before the Scheduled Commissioning Date.

2.5.2 Not later than one (1) Month before the Start of availability of the BESS Capacity, the Buying Utility shall through a scheduled bank at Vadodara, open a Letter of Credit in favour of SECI, to be made operative at least 15 days prior to the Due Date of its first Monthly Bill under this Agreement. The Letter of Credit shall have a term of twelve (12) Months and shall be reviewed after every 12 month for an amount equal to:

- (i) for the first Contract Year, equal to 110% of the monthly Tariff Payments;
- (ii) for each subsequent Contract Year, equal to 110% of the average of the monthly Tariff Payments of the previous Contract Year.

2.5.3 SECI shall not draw upon such Letter of Credit prior to the Due Date of the relevant Monthly Bill, and shall not make more than one drawl in a Month provided that there are no outstanding dues.

2.5.4 Provided further that if at any time, such Letter of Credit amount falls short of the amount specified in Article 2.5.2 due to any reason whatsoever, the Buying Entity shall restore such shortfall within seven (7) days.

2.5.5 The Buying Entity shall cause the scheduled bank issuing the Letter of Credit to intimate SECI, in writing regarding establishing of such irrevocable Letter of Credit and any of the changes therein.

2.5.6 The Buying Entity shall ensure that the Letter of Credit shall be renewed not later than its expiry.

2.5.7 All costs relating to opening, maintenance of the Letter of Credit shall be borne by the Buying Entity.

2.5.8 If the Buying Entity fails to pay a Monthly Bill or part thereof within and including the Due Date, then, subject to Article 2.5.3 and 2.9, SECI may draw upon the Letter of Credit, and accordingly the bank shall pay without any reference or instructions from the Buying Entity, an amount equal to such Monthly Bill or part thereof, by presenting to the scheduled bank issuing the Letter of Credit, the following documents:

- (i) a copy of the Monthly Bill which has remained unpaid by the Buying Entity;
- (ii) a certificate from SECI to the effect that the bill at item (i) above, or specified part thereof, is in accordance with the Agreement and has remained unpaid beyond the Due Date;

(IX) State Government Guarantee

The Buying Utility shall extend the 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 BESSD, to the extent the payments to the BESSD in terms of the BESPA are due.

Provided that, in cases where the Buying Entity is neither covered by Tri-Partite Agreement (TPA) nor is it able to provide the State Government Guarantee, in such cases, Buying Entity will provide Letter of Credit with respect to monthly billing, as per following:

- (a) For the 1st Contract Year, equal to 2.10 times the amount corresponding to the committed BESSA Capacity as per the BESSA.
- (b) For the subsequent years, equal to 2.10 times the average monthly bills of previous year.

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

(X) Payment Security Fund

In addition to provisions contained in Article 2.6 above, the Buying Entity may 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. The parties agree that proceeds of encashment of PBGs upon default of the BESSD under the respective BESPA shall be passed on to the Buying Utility subsequent to opening of the above Payment Security Fund.

It is hereby clarified that the State Government guarantee shall be invoked only after the SECI has been unable to recover its dues under the BESSA by

means of the Letter of Credit and the Payment Security Fund as provided by buying entity.

(XI) Disputed Bill

2.9.1 If the Buying Entity does not dispute a Monthly Bill raised by the other Party within fifteen (15) days of receiving such Bill shall be taken as conclusive and binding.

2.9.2 If Buying Entity disputes the amount payable under a Monthly Bill it shall pay undisputed amount of the invoice amount and it shall within fifteen (15) days of receiving such Bill, issue a notice (the "Bill Dispute Notice") to the invoicing Party setting out:

- (i) the details of the disputed amount;
- (ii) its estimate of what the correct amount should be; and
- (iii) all written material in support of its claim.

2.9.3 If the SECI agrees to the claim raised in the Bill Dispute Notice issued pursuant to Article 2.9.2, the SECI shall make appropriate adjustment in the next Monthly Bill. In such a case excess amount shall be refunded along with interest at the same rate as Late Payment Surcharge, which shall be applied from the date on which such excess payment was made by the Buying Utility and up to and including the date on which such payment has been received as refund.

2.9.4 If the SECI does not agree to the claim raised in the Bill Dispute Notice issued pursuant to Article 2.9.2 it shall, within fifteen (15) days of receiving the Bill Dispute Notice, furnish a notice (Bill Disagreement Notice) to the disputing Party providing:

- I. reasons for its disagreement;
- II. its estimate of what the correct amount should be; and
- III. all written material in support of its counter-claim.

2.9.5 Upon receipt of the Bill Disagreement Notice by the Buying entity under Article 2.9.4, authorized representative(s) or a director of the board of directors/ member of board of the Buying Entity and SECI

shall meet and make best endeavours to amicably resolve such dispute within fifteen (15) days of receipt of the Bill Disagreement Notice.

2.9.6 If the Parties do not amicably resolve the Dispute within fifteen (15) days of receipt of Bill Disagreement Notice pursuant to Article 2.9.5, the matter shall be referred to Dispute resolution in accordance with governing Laws and Dispute resolution in BESP.A.

2.9.7 For the avoidance of doubt, it is clarified that despite a Dispute regarding an Invoice, the Buying entity shall, without prejudice to its right to Dispute, be under an obligation to make payment of 50% of the invoice amount in the Monthly Bill.

4.19. It is stated about the National targets for RE that the Government of India has commitment in revised Nationally Determined Contribution (NDC) at global level, 50% of total electrical installed capacity of the Country is to be tied up from non-fossil fuel-based energy sources by 2030. GUVNL has been tying-up the wind and solar power considering the RPO targets notified by the Commission & MoP, Government of India from time to time.

4.20. It is stated that the Ministry of Power, Government of India, vide Office Order dated 22.07.2022 & 20.10.2023 has specified the long term RPO trajectory till 2029-30 and has fixed the minimum percentage of total consumption of electricity from RE sources. This trajectory is higher than the RPO trajectory notified by the Commission. The comparison of RPO Trajectory as notified by MoP vis-à-vis the Commission is tabulated as under (minimum percentage of total consumption of electricity):

FY	MoP RPO Trajectory (%)					GERC RPO Trajectory (%)				
	Wind	Hydro	Distributed RE	Other	Total	Wind	Solar	Hydro	Others	Total
2022-23	0.81	0.35	--	23.44	24.60	8.25	8.00	0.00	0.75	17.00
2023-24	1.60	0.66	--	24.81	27.07	8.40	9.50	0.05	0.75	18.70
2024-25	0.67	0.38	1.50	27.35	29.91	8.55	11.25	0.10	0.80	20.70
2025-26	1.45	1.22	2.10	28.24	33.01	Yet to be notified				
2026-27	1.97	1.34	2.70	29.94	35.95					
2027-28	2.45	1.42	3.30	31.64	38.81					
2028-29	2.95	1.42	3.90	33.10	41.36					
2029-30	3.48	1.33	4.50	34.02	43.33					

4.21. Accordingly, in order to fulfil Renewable Purchase Obligation (RPO) specified by Ministry of Power (MoP), Government of India, significant capacity addition of

Renewable Energy (RE) Source is necessary. Additionally, to address the intermittent nature of RE Sources, there is a need for Energy Storage solutions.

- 4.22. The Ministry of Power, Government of India has notified Energy Storage Obligation (ESO) trajectory till FY 2029-30 on 22.07.2022. In accordance with the same, the percentage of total energy consumed shall be through energy storage for the Obligated Entities to meet the Energy Storage Obligation (ESO) of Gujarat are as under:

F.Y.	% Storage
2023-24	1%
2024-25	1.50%
2025-26	2%
2026-27	2.50%
2027-28	3%
2028-29	3.50%
2029-30	4%

- 4.23. It is stated that if Energy Storage Obligation (ESO) meets through Battery Energy Storage System(BESS) considering 95% of annual availability, up to FY 2029-30, then the requirement of Battery Energy Storage capacity will be as below:

	Demand (BUs)	% Storage	ESO(BUs) / year	MWh requirement/ day	MW Storage Capacity (with 4 Hr /Day)(BESS)	Year On Year MW Storage Capacity Addition (with 4 Hr /Day)(BESS)
2023-24	130	1%	1.30	3,554	935	935
2024-25	139	1.50%	2.09	5,716	1,504	569
2025-26	150	2%	2.99	8,199	2,158	654
2026-27	161	2.50%	4.02	11,023	2,901	743
2027-28	173	3%	5.19	14,214	3,741	840
2028-29	186	3.50%	6.49	17,791	4,682	941
2029-30	201	4%	8.03	22,013	5,793	1,111

Source: DISCOM Demand Growth forecast from REPORT ON TWENTIETH ELECTRIC POWER SURVEY OF INDIA (VOLUME-I) (November-2022), Central Electricity Authority (CEA).

- 4.24. It is stated that SECI has awarded 500 MW/1000 MWh Pilot Project to be set up at Fatehgarh in Rajasthan to M/s JSW Renew Energy Five Limited (JSWREFL) on 25.08.2022 under Competitive Bidding Process followed by e-reverse auction and the Battery Energy Storage Purchase Agreement between M/s SECI Limited and M/s JSW Renew Energy Five Limited (JSWREFL) on 05.03.2024.
- 4.25. Based on the above, it is submitted that the present Petition has been filed seeking approval of Battery Energy Storage Sale Agreement (BESSA) dated 26.06.2023 appended herewith as (Annexure – K) signed with the Respondent SECI for

procurement of 150 MW/300 MWh Battery Energy Storage capacity from SECI's 500 MW/1000 MWh Pilot Project to be set up by the BESSD at Fatehgarh-III Sub-Station in Rajasthan, at the tariff of 6,44,473.06 per MW per month (excluding the applicable GST, taxes and duties if any), awarded by SECI to M/s JSW Renew Energy Five Limited (JSWREFL) as Battery Energy Storage System Developer(BESSD), for Procurement of Energy Storage capacity by GUVNL on behalf of four State DISCOMs.

5. The matter was heard on 28.06.2024. Office of the Commission had received an email dated 28.06.2024 from Mr. Rahul Ranjan - the counsel appearing the Respondent No. 1 Solar Energy Corporation of India Limited who while informing his unavailability to present during the hearing on 28.06.2024 also stated that the Respondent SECI has no objection to the approval of Battery Energy Storage Sale Agreement (BESSA) dated 26.06.2023 by the Commission as prayed by the Petitioner GUVNL and prayed to taken on record the consent of SECI in this regard.
- 5.1. The representative appearing on behalf of the Petitioner reiterating the facts of the Petition as stated in above para. The Commission has noted the submissions of the Petitioner in respect of discovered rate that under SECI's 1000 MWh BESS tender capacity procured under Competitive bidding followed by e-RA, L1 price discovered is Rs. 10,83,500 per MW per month, additional facilitation charges of Rs. 5,417.50 per MW per month (0.5%) of applicable capacity charges, cumulatively capacity charges of Rs. 10,88,917.50 per MW per Month. In response to query of the Commission about effective price of BESS, it is submitted that the effective price of BESS capacity being offered is estimated to be Rs. 6,44,473.06 per MW per month (excluding the applicable GST, taxes and duties if any) after grant from Power System Development Fund (PSDF). Moreover, the levelized cost of the storage is estimated to Rs. 6 per kWh considering the discount rate at 8.3% and life of project is of 12 years.
- 5.2. In further query of the Commission as to whether the discovered rate of the aforesaid BESS project justified?, the representative appearing on behalf of the Petitioner GUVNL, submitted that it is a pilot project, and Storage rates discovered under GUVNLs' Standalone BESS pilot project Phase-II bid is in range of Rs. 448996-449996 per MW per Month and recently in the BESS project Phase- III it was discovered as Rs. 3,72,978 per MW per month. On part of rates discovered was reduced it is submitted that due to reduction in cost of material by 40-50%, which

impacted the reduction in discovered rates.

- 5.3. In response to query of the Commission as to whether any deviations from Ministry of Power guidelines, in respect of Change in Law clause, Payment Security Mechanism and Letter of Award to Letter of intent has been changed by SECI in their tender document, it is submitted that the Petitioner has given approval subject to alignment of various key provisions of agreements i.e., force Majeure, change in law, payment security mechanism, in line with GUVNL' PPAs for procurement of RE power through competitive bidding process and that the Respondent SECI did not take in any deviation from the MoP Guidelines. Upon the further query of the Commission that how the project capacity is being allotted, it is submitted that in the aforementioned RfS, 60% of project capacity shall be procured by SECI and 40% of project capacity shall be identified as market component and in case of any reduction the project capacity, bifurcation of 60% and 40% shall be done on pro-rata basis. Further, on the query of the Commission about the useful life of the project, it is submitted that it is of 12-year period and after the end of 12 years after commissioning of project the BESS developer will transfer the project to SECI at Re. 1/- with the project being free from any encumbrances. The Commission has asked the justification about variation in rates discovered in the earlier bid as well as present bid for such type of Battery Energy Storage System projects, the representative appearing for the Petitioner GUVNL has agreed to provide the submissions in the matter.
6. In response to the directives of the Commission vide above Daily Order dated 08.08.2024, the Petitioner GUVNL has filed its additional submissions vide affidavit dated 31.08.2024 before the Commission on 02.09.2024 in the present matter and submitted as under:
- 6.1. The Petitioner had filed the present petition under Section 63 read with 86(1)(b) of the Electricity Act, 2003 for approval of Battery Energy Storage Sale Agreement signed by the Petitioner Gujarat Urja Vikas Nigam Limited (GUVNL) with Solar Energy Corporation of India Limited (SECIL) for procurement of 150 MW / 300 MWh energy storage capacity procured by SECIL under tariff based Competitive Bidding Process from the 500 MW/1000 MWh pilot project to be set up at Fatehgarh-III Sub-Station in Rajasthan.

- 6.2. It is submitted that SECIL as the central nodal agency for Solar, Wind, Hybrid, and Energy Storage System (ESS) tenders; issued India's first-of-its-kind pilot project tender for a standalone Battery Energy Storage System (BESS) with a capacity of 500 MW/1000 MWh in April 2022. Further, Storage rates discovered under GUVNLS' Standalone BESS pilot project Phase-II bid was in range of Rs. 448996-449996 per MW per Month in March 2024 and recently in the BESS project Phase- III, it was discovered as Rs. 372978 per MW per month in June 2024. Where, SECIL has discovered the Battery Energy Storage System rates in April 2022.
- 6.3. Further, it is submitted that as per BLOOMBERG survey on price trends of manufacturing LFP cell and LFP cell price, depicts that during FY 2022 the price of LFP cell was \$ 118.3 per kilowatt-hour (USD) in March 2022 and during FY 2024 the price of LFP cell was reduced to \$ 52.6 per kilowatt-hour (USD) in March 2024. Above price trends provide corroborates the discovered tariff in SECIL (ESS-1) pilot project Phase-1.
- 6.4. Based on facts above, the Petitioner GUVNL has approached the Commission for seeking approval of Battery Energy Storage Sale Agreement signed by GUVNL with Solar Energy Corporation of India limited (SECIL) for Procurement of 150 MW/300 MWh Energy Storage capacity procured by SECI under Tariff Based Competitive Bidding Process for 500 MW/1000 MW Pilot Project to be set up by the BESSD at Fatehgarh-III Sub-Station of Power Grid in Rajasthan.
7. We have considered the submissions made by the Petitioner and the Respondents. The Petitioner has filed the present Petition under Section 86 (1) (b) of the Electricity Act, 2003. The Petitioner has sought the approval of the Commission for Battery Energy Storage Sale Agreement dated 26.06.2023 executed between the Petitioner GUVNL and the Respondent No. 1 SECI for procurement of 150 MW/300 MWh Battery Energy Storage Capacity from SECI's 500 MW/1000 MWh Pilot Project to be set up by the BESSD at Fatehgarh - III Sub-Station in Rajasthan, at the tariff of Rs. 6,44,473.06 per MW per month (excluding the applicable GST, taxes and duties if any).
- 7.1. It is necessary to refer Section 86(1) (b) & (e) of the Electricity Act, 2003 which reads as under:

"Section 86. (Functions of State Commission):

(1) The State Commission shall discharge the following functions, namely:

.....

(b) regulate electricity purchase and procurement process of distribution licensees including the price at which electricity shall be procured from the generating companies or licensees or from other sources through agreements for purchase of power for distribution and supply within the State;

.....

(e) promote co-generation and generation of electricity from renewable sources of energy by providing suitable measures for connectivity with the grid and sale of electricity to any person, and also specify, for purchase of electricity from such sources, a percentage of the total consumption of electricity in the area of a distribution licensee;

The aforesaid provision states the functions of State Commission regulating to electricity power procurement of the distribution licensee including the quantum of power, price and agreement between supplier of power and distribution licensee. Also, the State Government has to promote co-generation and generation of electricity from renewable sources of energy by providing suitable measures for connectivity with the grid and sale of electricity to any person and specify for purchase of electricity from such sources, a percentage of the total consumption of electricity in the area of a distribution licensee. Therefore, the power procurement of the distribution licensee needs approval of the Commission.

- 7.2. It is also necessary to refer the necessary provisions of guidelines for procurement of power by distribution licensee notified by the Commission vide Notification No. 2 of 2013. The relevant provisions of the said guidelines are reproduced below:

“.....

7. In case of procurement of power through competitive bidding, the Distribution Licensees shall initiate the process for long-term / medium-term power procurement in accordance with the Ministry of Power's 'Guidelines for Determination of Tariff by Bidding Process for Procurement of Power by Distribution Licensees' notified by the Ministry of Power on 19/01/2005 and in force from time to time. As provided in the MoP Guidelines:

- a) *The bid documentation shall be prepared in accordance with the MoP guidelines and the approval of the GERC shall be obtained unless the bid documents are as per the standard bid documents issued by the Central Government. In the latter case, intimation shall be sent by the Distribution Licensee to the GERC about initiation of the bidding process.*
- b) *Approval of the GERC shall be sought in the event of any deviations from the bidding conditions contained in the MoP guidelines, and in following the process described in the MoP guidelines.*
- c) *Approval of the GERC shall be sought prior to initiating the bidding process with regard to the following aspects:*
- i. *For the quantum of capacity / energy to be procured, in case the same exceeds the projected additional demand forecast for the next three years following the year of expected commencement of supply proposed to be procured. Such demand forecast shall be based on the latest available (at the time of issue of RFQ) Electric Power Survey published by the Central Electricity Authority (Both for Case 1 and Case 2).*
 - ii. *For the transfer price of fuel, in case of fuel specific procurement enquiry, if such price has not been determined by government, government approved mechanism or a fuel regulator (under Case 2).*
8. *In case of long-term / medium-term procurement of power from generating sources, where tariff is to be determined / adopted by the Central Electricity Regulatory Commission, the Distribution Licensee shall take prior approval of the GERC before entering into any such arrangement.*
9. *In case of long-term / medium-term procurement of power from generating sources, where tariff is to be determined by the GERC, the*

Distribution Licensee shall enter into such arrangement or agreement only after getting prior approval of the power purchase agreement.

10. *For getting approval of draft PPA, the Distribution Licensee shall submit an application along with the details of quantum of power, justification for selecting a particular source/technology and the draft PPA document.*

a) *The Distribution Licensee shall, within 7 days after registration of the application, publish a notice of his application in at least two daily newspapers, one in English language and one in vernacular language, having wide circulation in the relevant area.*

b) *The suggestions and objections, if any, on the proposal for procurement of power and draft PPA, may be filed before Secretary, GERC, by any person within 30 days of publication of this notice with a copy to the applicant.*

c) *The GERC shall, within ninety (90) days from the date of registration of a complete application and after considering all suggestions and objections received from the public, issue Order approving/rejecting the proposal and draft PPA with such modifications or such conditions as may be specified in that Order.*

.....”

The aforesaid provision provides that the distribution licensee whenever initiate process for procurement of power on long term/medium-term basis the same shall be following MoP guidelines for determination of tariff by bidding process. The bid documents shall be in accordance with the MoP guidelines. In case of any deviation from the standard bid documents prior approval of the Commission is required. Further, the prior approval with regard to quantum of the capacity/ energy to be procured also be obtain from the Commission. It also provides that in case of power procurement from the generating stations whose tariff determined by CERC in that case an approval of this Commission is needed prior to entering in the power procurement arrangement.

7.3. We note that the Ministry of Power (MOP), Government of India vide its Notification

No. 23/16/2020-R&R Part(1) dated 11th March 2022 has notified "*Guidelines for procurement and utilization of Battery Energy Storage System as part of Generation, Transmission and Distribution assets, along with Ancillary Services*". As per the aforesaid Notification, the Respondent No. 1 SECI has been designated as a Nodal Agency for developing and facilitating the establishment of the Grid connected Battery Energy Storage Capacity in India in terms of the Policy/Guidelines issued by the Government of India. Accordingly, the Respondent SECI had initiated a Tariff Based Competitive Bid Process for development of 500 MW/1000 MWh of ISTS connected Battery Energy Storage Project on the terms and conditions contained in the Request for Selection Documents issued by SECI vide RfS No SECI/C&P/IPP/15/0001/22-23 dated 13.04.2022 and subsequent amendment.

- 7.4. The Respondent No. 1 SECI is a Government of India Enterprise and has been incorporated in order to promote the renewable power in the country and facilitate to implement the policies of MNRE, Government of India. The Respondent No. 1 vide letter No. SECI/BESS-1000MWH/2021/Solar/T46267 dated 07.12.2021 has requested the Petitioner to give their consent for quantum of capacity requirement and if discovered rates based on bidding process are found acceptable, Battery Energy Storage Sale Agreement (BESSA) can be signed. The relevant portion of the said letter is reproduced as under:

".....

No. SECI/BESS-1000MWh/ 2021/46267

Date: 07.12.2021

To,
The Managing Director
Gujarat Urja Vikas Nigam Limited
Sardar Patel Vidyut Bhavan, Race Course,
Vadodara – 390007, Gujarat.

Sub: *Development of Standalone Battery Energy Storage Project of 1000 MWh
- Request for indicating requirement of Power — Regarding.*

Respected,

At the outset. I would like to thank GUVNL for greatly supporting SECI in development of RE capacity and for contracting solar power and wind power from SECI. As on today, 8.32 GW of solar energy and 3.67 GW of wind energy has been commissioned under various SECI tenders. This quantum will increase over years as the country pushes for carbon-neutral power and RPO requirement increases.

2. As such RE power has achieved grid parity and RE Power is available at tariff of around Rs. 2.50 per unit and below. This is likely to go down further with advances in technology. However, RE power being inherently intermittent and variable source of generation, which would require to be complemented with the Energy Storage Capacity to make the generation flexible dispatchable as per the power demand needs. This would enable smoother penetration of RE capacity in the Grid in line with the national target of 500 GW of RE capacity by 2030, better integration of RE with other sources of generation and trouble-free functioning of the Grid.

3. In view of above Government of India through Solar Energy Corporation of India Limited (SECI) is in the process of calling bids for the development of Standalone Battery Energy Capacity of 1000 MWh with a provision of daily utilization of 2 hours and 2 cycles per day with an annual average availability of 95% and round the trip efficiency of 85%.. The capacity of the battery storage will be offered to Discoms for managing their RE power procurements, wherein Discoms may use the storage capacity to charge excess power and discharge the same during deficient times.

4. Project is to be ISTS connected and to be commissioned within 18 months of signing of Agreement by the Developer(s). Aforementioned capacity is being tendered out as pilot project and many enablers like providing land, assured connectivity, LTA, ISTS Charges waiver have been envisaged which likely to make it attractive to the market and we expect to get very competitive tariff. This would also enable further Energy Storage Capacity addition in the Country.

5. In view of the above, I request GUVNL, may initially give consent for quantum of capacity requirement and if discovered rates based on bidding process are found acceptable, Battery Energy Storage Sale Agreement (BESSA) can be signed. An early decision in this regard would be highly appreciated.

.....

Thanking You

Your faithfully,

Sd/-
Shailesh Kumar Mishra
Director (Power System)

.....”

From the above letter, it is observed that the Respondent No. 1 SECI while informing about the process of details of calling bids of 1000 MWh of standalone Battery Energy Storage System with provision of daily utilization of 2 hours and 2 nos. of cycles with an annual average availability of 95% and round trip efficiency of 85% and the project

to be connected with ISTS and commissioned within 18 months of signing of Agreement between Developers, has also sought the consent of the Petitioner GUVNL for quantum of capacity requirement at the discovered rates based on bidding process and if it is found acceptable, SECI has offered to the Petitioner to execute Battery Energy Storage Sale Agreement (BESSA).

- 7.5. We note that in response to the letter dated 07.12.2021 of SECI, the Petitioner GUVNL vide letter No. GUVNL/COM/2022/GM (RE&IPP)/BESS/152 dated 17.02.2022 informed the Respondent SECI about 'In-Principle' consent for procurement of 300 MWh Battery Energy Storage System from 1000 MWh tender capacity of SECI. The relevant portion of the said letter dated 17.02.2022 is reproduced as under:

".....

Ref. No. GUVNL/COM/2022/GM (RE&IPP)/BESS/152

Date: 17.02.2022

To,
Shri Shailesh Kumar Mishra
Director (Power System)
Solar Energy Corporation of India Ltd
6th Floor, Plate-B, NBCC Office Block Tower-2,
East Kidwai Nagar, New-Delhi 110023.

Sub: Development of Standalone Battery Energy Storage Project of 1000 MWh
- Request for indicating requirement of Power — Regarding.

Ref: (1) SECI letter no. SECI/BESS-1000MWh/2021/46267 dtd. 07.12.2021

Dear Sir,

This has reference to your letter dated 07.12.2021 requesting GUVNL to give in-principle consent for quantum of capacity requirement from their recent tender for development of Standalone Battery Energy Storage Project of 1000 MWh.

In the above context, GUVNL hereby conveys "**in-principal consent**" for procurement of **300 MWh** from SECI's tender for Development of Standalone Battery Energy Storage Project of 1000 MWh, and if the discovered rates based on the Competitive Bidding undertaken by SECI are found acceptable, Battery Storage Sale Agreement (BSSA) may be signed by GUVNL. However, the same shall be subject to alignment of various key-provisions of the Agreement viz. Force Majeure, Change in Law, Event of Default, Payment Security Mechanism, etc. in line with the provisions of GUVNL's PPA(s) for procurement of RE power through Competitive Bidding.

Thanking You

Your faithfully,

Sd/-
(Sailaja Vachhrajani)
General Manager (RE & IPP)

.....”

From the above letter, it is transpires that the Petitioner GUVNL has given “In-principle’ consent for procurement of 300 MWh Battery Energy Storage System from 1000 MWh tender capacity of SECI. It is also stated that that the said approval was conditional that discovered rates from competitive bidding followed by reverse auction undertaken by SECI are found acceptable and based on that Battery Energy Storage Sale Agreement (BESSA) can be done between SECI & GUVNL. In addition to above, GUVNL has given approval subject to alignment of various key provision of agreement, i.e. Force Majeure, Change in law, Event of Default, Payment Security Mechanism, etc. in line with GUVNL’ PPAs for procurement of RE power through Competitive Bidding Process.

- 7.6. Thereafter, in response to GUVNL’s letter dated 17.02.2022, the Respondent No. 1 SECI has made proposal to the Petitioner GUVNL for off-take of 150 MW/300 MW capacity by the Discoms under 500 MW/1000 MWh BESS pilot project. The contents of the aforesaid letter of SECI dated 14.11.2022 is reproduced as under:

“.....

No. SECI/BESS-1000MWh/PT/ 2022/52487

Date: 14.11.2022

To,
The General Manager (IPP)
Commerce Department
Gujarat Urja Vikas Nigam Limited
Sardar Patel Vidyut Bhavan, Race Course
Vadodara – 390007.

Sub: Proposal for off-take of 150MW/300MW capacity by the DISCOMs under 500MW/1000MWh BESS pilot project - Regarding.

Dear Sir,

Solar Energy Corporation of India Limited (SECI) has recently concluded the bidding process for the development of Standalone, ISIS connected Battery Energy Storage System (BESS) of 500MW/1000 MWh at Fatehgarh-Ill substation of POWERGRID in the state of Rajasthan. 30% of capacity being developed shall be utilised by POSOCO for Ancillary

services whereas, 40% of the capacity is to be used by the Project Developer for Merchant operations. The balance 30% capacity of 150MW/ 300 MWh is being offered to Discoms for managing their power procurements against fixed monthly capacity charges, wherein DISCOMs may use the excess power for changing storage capacity and discharge the same during the deficient times / peak hours. The capacity, being developed under a Pilot Scheme of the Government of India, has many enablers like land allocation by POWERGRID (within the Fatehgarh III substation), assured connectivity, ISIS Charges and losses waiver (as per extant CERC regulations). fund support through PSDF.

As per the terms of the RfS, the DISCOM shall be entitled to utilise the Project capacity procured under the RfS ('Contract Capacity') for up to 2 cycles (where 1 cycle refers to 1 charge-discharge of the BESS) per day. The L1 price discovered through the e-Reverse auction is Rs. 10,83,500 per MW per month. With the proposed estimated PSDF fund support to the Pilot Scheme, the effective price of the BESS capacity being offered is estimated to be Rs. 6,40,000 per MW per month. With this, the levelized cost of storage is estimated to be Rs. 6.00/kWh (considering a Discount rate of 8.35%) and project life of 12 years, excluding the round-trip energy conversion (AC-DC-AC) losses and assuming the maximum utilization of BESS i.e. 2 cycles of 2 hours per day by the utility. Please refer to Annexure 1 for other salient features of the Project viz. Performance Guarantees, Project timelines etc.

In the above reference, you may consider procurement of BESS capacity through SECI under the Pilot Scheme, for integration/management of Renewable energy and/or to meet your peak demand. It is requested to convey your consent to sign the Battery Energy Storage Supply Agreement (BESSA) with SECI, indicating the Contract Capacity (up to 150MW/300 MWh) at the earliest.

.....

Thanking You

Encl. Annexure I

Your faithfully,

Sd/-

Atulya Kumar Naik

General Manager

Power Trading Department

.....”

From the above letter, it is transpires that the SECI has informed the Petitioner GUVNL that 30% of capacity shall be utilized for POSOCO (Grid India) for ancillary services, 40% of capacity shall be utilized for merchant capacity by developer &

balanced 30 % of capacity (150 MW/300 MWh) shall be offered to DISCOMs on monthly capacity charges. It is stated that the Petitioner GUVNL may use excess generation for charging of BESS and while peak demand and can reutilized that stored energy. The discovered rates under SECI's 1000 MWh BESS tender capacity procured under Competitive bidding followed by e-RA, L1 price discovered is Rs. 1083500 per MW per month and additional facilitation charges of Rs. 5417.5 per MW per month (0.5%) of applicable capacity charges, cumulatively capacity charges of Rs. 1088917.5 per MW per Month. It is also requested to the Petitioner GUVNL to convey their consent to sign the Battery Energy Storage Supply Agreement (BESSA) with SECI, indicating the Contract Capacity (up to 150MW/300 MWh) at the earliest.

7.7. We also note that the Ministry of Power, Government of India vide its OM No. 10/1/2014-0M-(Vol-V) dated 22.02.2022 also provided 'In-principal' approval for providing an annual grant of upto Rs. 80 Crore/annum from Power System Development Fund (PSDF). Cumulatively capacity charges of Rs. 1088917.5 per MW per Month. In view of the aforementioned PSDF grant, the amount chargeable from GVUNL as mentioned at Article 1.1 would stand reduced by Rs. 4,44,444.44 per MW per month, the effective price of BESS capacity being offered is estimated to Rs. 6,44,473.06 per MW per month (excluding the applicable GST, taxes and duties if any). With this leveled cost of storage is estimated to be Rs. 6.00/Kwh considering 8.35% Discount rate and project life of 12 Year. With assumption of maximum utilization of BESS i.e. 2 cycle of 2 hours per day by utility.

7.8. We note that in response to SECI's letters dated 14.11.2022 and 01.02.2023, the Petitioner GUVNL has conveyed 'in-principle consent' for procurement of 150 MW/300 MWh capacity from SECI's Standalone, ISTS connected Battery Energy Storage System of 500MW/1000 MWh to be set up at Fatehgarh-Ill Sub-Station of POWERGRID in the State of Rajasthan at the rate of Rs. 6,44,473.06/- per MW per month (excluding the applicable GST, taxes and duties, if any). The content of the said letter is reproduced as under:

“

Ref. No. GUVNL/COM/2023/GM (RE)/389.

Date: 10.04.2023

*To,
Mr. Atulya Kumar Naik,
General Manager,*

Power Trading Department
Solar Energy Corporation of India (SECI)
6th Floor, Plate-B, NBCC Office Block Tower-2,
East Kidwai Nagar, Kidwai Nagar
New-Delhi 110023.

Sub: Solar Energy Corporation of India (SECI)'s proposal to GUVNL to off-take up to 150 MW/300 MWh capacity from your Standalone, ISTS connected Battery Energy Storage System of 500MW/1000 MWh to be set up at Fatehgarh-III substation of POWERGRID in the state of Rajasthan.

Ref: (1) SECI's letter to GUVNL. ref. no. SECI/BESS-1000MWh/PT/2022/52487, dtd. 14 11.2022

(2) SECI's letter to GUVNL. ref no. SECI/BESS-1000MWh/PT/2023/53626, dtd.01 02.2023

Dear Sir,

This has reference your letter under ref.(1) & (2) wherein Solar Energy Corporation of India (SECI) has offered GUVNL to off-take up to 150 MW/300 MWh capacity on the long term basis for the period of 12 years from your Standalone, ISTS connected Battery Energy Storage System of 500MW/1000 MWh to be set up at Fatehgarh-III substation of POWERGRID in the state of Rajasthan.

In the above context. GUVNL hereby conveys "in-principle consent" for procurement of 150 MW/300 MWh capacity from SECI's Standalone. ISTS connected Battery Energy Storage System of 500MW/1000 MWh to be set up at Fatehgarh-III substation of POWERGRID in the state of Rajasthan at the rate of Rs.6,44,473.06/- per MW per month (excluding the applicable GST, taxes and duties, if any).

However, the same shall be subject to alignment of various key-provisions of the Battery Storage Sale Agreement (BSSA) viz. Force Majeure, Change in Law, Event of Default and Payment Security mechanism etc. in line with provisions of GUVNL's PPA for procurement of RE power through Competitive Bidding. The relevant articles of PPA are attached herewith for your reference.

Thanking You

Your faithfully,

Sd/-

*(H.N. Shah)
General Manager (RE)
GUVNL, Vadodara
....."*

From the above letter, it seems that the Petitioner GUVNL has conveyed its "in-Principle consent" from procurement of 150 MW/300 MWh capacity from SECI's standalone, ISTS connected Battery Energy Storage System of 500 MW/1000 MWh to be set up at Fatehgarh-111 Sub-Station of POWER GRID in State of Rajasthan at the rate of Rs. 6,44,473.06/- per MW per month (excluding the applicable GST, taxes and duties, if any), subject to alignment of various key-provision of Battery Energy Storage Sale Agreement (BESSA) viz. Force Majeure, Change in Law, Event of Default and Payment Security mechanism, in line with provisions of GUVNL' PPA for procurement of RE power through Competitive Bidding Process.

7.9. We also note that the Respondent SECI vide its letter dated 19.04.2023 has given remarks against various provisions Force Majeure, Change in Law, Event of Default and Payment Security mechanism etc., and also requested the Petitioner GUVNL to sign Battery Energy Storage Sale Agreement (BESSA) in line of SECI's tender provisions. The said letter dated 19.04.2023 of the Respondent SECI is reproduced as under:

"

No. SECI/BESS-1000MWh/PT/2023/55117

Date: 19.04.2023

To,
The General Manager (RE)
Commerce Department
Gujarat Urja Vikas Nigam Limited
Sardar Patel Vidyut Bhavan, Race Course
Vadodara - 390007.

Kind Attn: Shri H.N. Shah

Sub: Procurement of 150MW/300MWh capacity under 500MW/1000MWh BESS pilot project - Regarding.

Ref: (1) SECI Letter No. SECI/BESS-1000MWh/PT/2022/52487 dated 14.11.2022

(2) SECI Letter No. SECI/BESS-1000MWh/PT/2023/53626 dated 01.02.2023

(3) GUVNL letter No. GUVNL/COM/2023/GM(RE)/389 doted 10.04.2023

Sir,

This has reference to GUVNL's letter cited above under reference wherein GUVNL has provided in - principle consent for procurement of 150 MW/300 MWh BESS capacity at the rate of INR 6,44,473.06 per MW per Month (excluding the applicable GST, taxes and duties, if any). SECI hereby confirm the allocation of offered 150 MW / 300 MWh BESS capacity to

GUVNL at mentioned rate of INR 6,44,473.06 per MW per Month (excluding the applicable GST, taxes and duties, if any).

SECI's remarks in response to various key provisions mentioned by GUVNL are attached as Annexure 1 for your kind consideration. It is requested to sign the Battery Energy Storage Supply Agreement (BESSA) at the earliest.

Thanking You

Encl. Annexure I

Your faithfully,

*Sd/-
Atulya Kumar Naik
General Manager (PT)*

.....”

From the above letter, it is observed that in response to 'In principle consent' of the Petitioner, the Respondent SECI has confirmed the allocation of offered 150 MW / 300 MWh BESS capacity to the Petitioner GUVNL at the rate of Rs. 6,44,473.06 per MW per Month (excluding the applicable GST, taxes and duties, if any).

7.10. We note that the Ministry of Power (MoP), Government of India held the meeting on 26.05.2023 for status of SECI's 1000 MWh BESS project at New Delhi wherein it was directed that terms of BESSA shall be remained uniform as specified in SECI's tender which are required to be followed by all beneficiary States.

7.11. Thereafter, the Petitioner GUVNL vide its letter dated 09.06.2023 has conveyed approval for signing of BESSA in line with MoP' Guidelines for procurement of 150MW/300MWh capacity at the rate of Rs. 644473.06 per MW per month (excluding applicable GST, taxes and duties, if any) from the standalone Battery Energy Storage System to be set up in Fatehgarh-III Sub-Station of POWER GIRD in the State of Rajasthan. The aforesaid letter dated 09.06.2023 is reproduced as under:

“.....

Ref. No. GUVNL/COM/2023/GM (RE)/671.

Date: 09.06.2023

*To,
Mr. Atulya Kumar Naik,
General Manager,
Power Trading Department
Solar Energy Corporation of India (SECI)
6th Floor, Plate-B, NBCC Office Block Tower-2,*

East Kidwai Nagar, Kidwai Nagar
New-Delhi 110023.

Sub: Solar Energy Corporation of India (SECI)'s proposal to GUVNL to off-take up to 150 MW/300 MWh capacity from your Standalone, ISTS connected Battery Energy Storage System of 500MW/1000 MWh to be set up at Fatehgarh-III substation of POWERGRID in the state of Rajasthan.

Ref: (1) SECI's letter no. SECI/BESS-1000MWh/PT/2022/52487, dated 14.11.2022

(2) SECI's letter no. SECI/BESS-1000MWh/PT/2023/53626, dated 01.02.2023

(3) GUVNL's letter no. GUVNL/COM/2023/GM (RE)389 Dated 10.04.2023

(4) SECI's letter no. SECI/BESS-1000MWh/PT/2023/55117, dated 19.04.2023

Dear Sir,

With reference to Solar Energy Corporation of India (SECI) offer to GUVNL vide letter under ref. 1,2 & 4, for off-take upto 150 MW/300 MWh storage capacity from their Standalone, ISTS connected Battery Energy Storage System of 500MW/1000 MWh to be set up at Fatehgarh-III substation of POWERGRID in the state of Rajasthan, we would like to convey our consent for signing the BSSA with SECI's standalone battery energy storage for the procurement of 150 MW/300 MWh capacity at the rate of 6,44,473.06 per MW per month (Excl applicable GST, taxes and duties if any) from its standalone battery storage project as offered by SECI.

it is kindly requested to revert back with details of authorised person name & designation for signing of BSSA with GUVNL at Vadodara office alongwith tentative scheduled date for the same.

Thanking You

Your Sincerely,

Sd/-

(H.N. Shah)
General Manager (RE)
GUVNL, Vadodara
....."

7.12. We note the silent features of the Battery Energy Storage Sale Agreement dated 26.06.2023 executed between the Petitioner GUVNL and the Respondent SECI as under:

- (I) The BESS project performance criteria, 95% of annual Availability, 85% of Round trip Efficiency with 2.5 % of degradation of Batter Storage capacity every Year Up to 70% at the end of 12th Year.
- (II) The charging power will be provided by GUVNL, for 150 MW 1300 MWh Battery Energy Storage System.
- (III) The Scheduled Commissioning Date (SCD) for commissioning of the full capacity of the Project shall be the date as on 18 months from the Effective Date of BESPA.
- (IV) The terms of BESSA is applicable for 12 Years from the Schedule Commissioning of project/actual date of commissioning of project. (COD shall be the next day after the date of commissioning of the Project, as indicated on the Commissioning Certificate, upon successful commissioning of the full capacity of the Project).
- (V) Minimum Capacity for acceptance of first and subsequent part(s) commissioning shall be 50 MW / 100 MWh or balance project capacity whichever is lower. The total number of instalments in which a Project can be commissioned will not be more than 3.
- (VI) Late Payment Surcharge shall be payable on the outstanding payment as per the provisions of Late Payment Surcharge Rules, 2022 and subsequent amendments thereof.
- (VII) "Rebate" For payment of any Bill on or before Due Date, the following Rebate shall be paid by the SECI to Buying Entity in the following manner
- (a) A Rebate of 1.5% shall be payable to the Buying Entity for the payments made within a period of five (5) days of presentation of bills through email.
 - (b) Any payments made beyond a period of 5 days up to and including the 20th Day from the date of presentation of bills through email, shall be allowed a rebate of 1%.
 - (c) No Rebate shall be payable on the Bills raised on account of Change in Law relating to taxes, duties, cess etc. and Late Payment Surcharge.

(VIII) Payment Security Mechanism

(A) Letter of Credit (LC):

2.5.1 The Buying Entity shall provide to SECI, in respect of payment of its Monthly Bills, a single, unconditional, revolving and irrevocable letter of credit ("Letter of Credit"), opened and maintained by the Buying Entity, which may be drawn upon by SECI in accordance with this Article. The Buying Entity shall provide SECI draft of the Letter of Credit proposed to be provided to SECI two (2) months before the Scheduled Commissioning Date.

2.5.2 Not later than one (1) Month before the Start of availability of the BESS Capacity, the Buying Utility shall through a scheduled bank at Vadodara, open a Letter of Credit in favour of SECI, to be made operative at least 15 days prior to the Due Date of its first Monthly Bill under this Agreement. The Letter of Credit shall have a term of twelve (12) Months and shall be reviewed after every 12 month for an amount equal to:

- i. for the first Contract Year, equal to 110% of the monthly Tariff Payments;
- ii. for each subsequent Contract Year, equal to 110% of the average of the monthly Tariff Payments of the previous Contract Year.

2.5.3 SECI shall not draw upon such Letter of Credit prior to the Due Date of the relevant Monthly Bill, and shall not make more than one drawl in a Month provided that there are no outstanding dues.

2.5.4 Provided further that if at any time, such Letter of Credit amount falls short of the amount specified in Article 2.5.2 due to any reason whatsoever, the Buying Entity shall restore such shortfall within seven (7) days.

2.5.5 The Buying Entity shall cause the scheduled bank issuing the Letter

of Credit to intimate SECI, in writing regarding establishing of such irrevocable Letter of Credit and any of the changes therein.

2.5.6 The Buying Entity shall ensure that the Letter of Credit shall be renewed not later than its expiry.

2.5.7 All costs relating to opening, maintenance of the Letter of Credit shall be borne by the Buying Entity.

2.5.8 If the Buying Entity fails to pay a Monthly Bill or part thereof within and including the Due Date, then, subject to Article 2.5.3 and 2.9, SECI may draw upon the Letter of Credit, and accordingly the bank shall pay without any reference or instructions from the Buying Entity, an amount equal to such Monthly Bill or part thereof, by presenting to the scheduled bank issuing the Letter of Credit, the following documents:

- (i) a copy of the Monthly Bill which has remained unpaid by the Buying Entity;
- (ii) a certificate from SECI to the effect that the bill at item (i) above, or specified part thereof, is in accordance with the Agreement and has remained unpaid beyond the Due Date;

(IX) State Government Guarantee

The Buying Utility shall extend the 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 BESSD, to the extent the payments to the BESSD in terms of the BESPAs are due.

Provided that, in cases where the Buying Entity is neither covered by Tri-Partite Agreement (TPA) nor is it able to provide the State Government Guarantee, in such cases, Buying Entity will provide Letter of Credit with respect to monthly billing, as per following:

- (a) For the 1st Contract Year, equal to 2.10 times the amount corresponding to the committed BESSA Capacity as per the BESSA.
- (b) For the subsequent years, equal to 2.10 times the average monthly bills of previous year.

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

(X) Payment Security Fund

In addition to provisions contained in Article 2.6 above, the Buying Entity may 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. The parties agree that proceeds of encashment of PBGs upon default of the BESSD under the respective BESPA shall be passed on to the Buying Utility subsequent to opening of the above Payment Security Fund.

It is hereby clarified that the State Government guarantee shall be invoked only after the SECI has been unable to recover its dues under the BESSA by means of the Letter of Credit and the Payment Security Fund as provided by buying entity.

(XI) Disputed Bill

2.9.1 If the Buying Entity does not dispute a Monthly Bill raised by the other Party within fifteen (15) days of receiving such Bill shall be taken as conclusive and binding.

2.9.2 If Buying Entity disputes the amount payable under a Monthly Bill it shall pay undisputed amount of the invoice amount and it shall within fifteen (15) days of receiving such Bill, issue a notice (the "Bill Dispute Notice") to the invoicing Party setting out:

- i. the details of the disputed amount;
- ii. its estimate of what the correct amount should be; and
- iii. all written material in support of its claim.

2.9.3 If the SECI agrees to the claim raised in the Bill Dispute Notice issued pursuant to Article 2.9.2, the SECI shall make appropriate adjustment in the next Monthly Bill. In such a case excess amount shall be refunded along with interest at the same rate as Late Payment Surcharge, which shall be applied from the date on which such excess payment was made by the Buying Utility and up to and including the date on which such payment has been received as refund.

2.9.4 If the SECI does not agree to the claim raised in the Bill Dispute Notice issued pursuant to Article 2.9.2 it shall, within fifteen (15) days of receiving the Bill Dispute Notice, furnish a notice (Bill Disagreement Notice) to the disputing Party providing:

- (i) reasons for its disagreement;
- (ii) its estimate of what the correct amount should be; and
- (iii) all written material in support of its counter-claim.

2.9.5 Upon receipt of the Bill Disagreement Notice by the Buying entity under Article 2.9.4, authorized representative(s) or a director of the board of directors/ member of board of the Buying Entity and SECI shall meet and make best endeavours to amicably resolve such dispute within fifteen (15) days of receipt of the Bill Disagreement Notice.

2.9.6 If the Parties do not amicably resolve the Dispute within fifteen (15) days of receipt of Bill Disagreement Notice pursuant to Article 2.9.5, the matter shall be referred to Dispute resolution in accordance with governing Laws and Dispute resolution in BESP.A.

2.9.7 For the avoidance of doubt, it is clarified that despite a Dispute regarding an Invoice, the Buying entity shall, without prejudice to its right to Dispute, be under an obligation to make payment of 50% of the invoice amount in the Monthly Bill.

7.13. It is stated by the Petitioner about the National targets for RE that the Government of India has commitment in revised Nationally Determined Contribution (NDC) at

global level, 50% of total electrical installed capacity of the Country is to be tied up from non-fossil fuel-based energy sources by 2030. GUVNL has been tying-up the wind and solar power considering the RPO targets notified by the Commission & MoP, Government of India from time to time. Moreover, the Ministry of Power, Government of India, vide Office Order dated 22.07.2022 & 20.10.2023 has specified the long term RPO trajectory till 2029-30 and has fixed the minimum percentage of total consumption of electricity from RE sources. This trajectory is higher than the RPO trajectory notified by the Commission. Therefore, in order to fulfil Renewable Purchase Obligation (RPO) specified by Ministry of Power (MoP), Government of India, significant capacity addition of Renewable Energy (RE) Source is necessary. Additionally, to address the intermittent nature of RE Sources, there is a need for Energy Storage solutions.

7.14. We further note that the Ministry of Power, Government of India has notified Energy Storage Obligation (ESO) trajectory till FY 2029-30 on 22.07.2022. In accordance with the same, the percentage of total energy consumed shall be through energy storage for the Obligated Entities to meet the Energy Storage Obligation (ESO) of Gujarat are as under:

F.Y.	% Storage
2023-24	1%
2024-25	1.50%
2025-26	2%
2026-27	2.50%
2027-28	3%
2028-29	3.50%
2029-30	4%

7.15. It is also stated that if Energy Storage Obligation (ESO) meets through Battery Energy Storage System (BESS) considering 95% of annual availability, up to FY 2029-30, then the requirement of Battery Energy Storage capacity will be as below:

	Demand (BUs)	% Storage	ESO(BUs) / year	MWh requirement/ day	MW Storage Capacity (with 4 Hr /Day)(BESS)	Year On Year MW Storage Capacity Addition (with 4 Hr /Day)(BESS)
2023-24	130	1%	1.30	3,554	935	935
2024-25	139	1.50%	2.09	5,716	1,504	569
2025-26	150	2%	2.99	8,199	2,158	654
2026-27	161	2.50%	4.02	11,023	2,901	743
2027-28	173	3%	5.19	14,214	3,741	840
2028-29	186	3.50%	6.49	17,791	4,682	941
2029-30	201	4%	8.03	22,013	5,793	1,111

- 7.16. We note that despite being liberty granted to all the parties to file their reply, the Respondents have chosen not to file their reply in the present matter.
- 7.17. We also note that the Commission had received an email dated 28.06.2024 from Mr. Rahul Ranjan, the counsel appearing the Respondent No. 1 Solar Energy Corporation of India Limited who while informing his unavailability to present during the hearing held on 28.06.2024 also stated that the Respondent SECI has no objection to the approval of Battery Energy Storage Sale Agreement (BESSA) dated 26.06.2023 by the Commission as prayed by the Petitioner GUVNL and prayed to taken on record the consent of SECI in this regard.
- 7.18. We note that in response to query of the Commission vide Daily Order dated 08.08.2024 about effective price of BESS, it is submitted that the effective price of BESS capacity being offered is estimated to be Rs. 6,44,473.06 per MW per month (excluding the applicable GST, taxes and duties if any) after grant from Power System Development Fund (PSDF). Moreover, the levelized cost of the storage is estimated to Rs. 6 per kWh considering the discount rate at 8.3% and life of project is of 12 years. Moreover, it is a pilot project, and Storage rates discovered under GUVNLs' Standalone BESS pilot project Phase-II bid is in range of Rs. 448996- 449996 per MW per Month and recently in the BESS project Phase- III it was discovered as Rs. 3,72,978 per MW per month. On part of rates discovered was reduced it is submitted that due to reduction in cost of material by 40-50%, which impacted the reduction in discovered rates.
- 7.19. We further note that in response to query of the Commission as to whether any deviations from Ministry of Power guidelines, in respect of Change in Law clause, Payment Security Mechanism and Letter of Award to Letter of intent has been changed by SECI in their tender document, it is submitted that the Petitioner has given approval subject to alignment of various key provisions of agreements i.e., force Majeure, change in law, payment security mechanism, in line with GUVNL' PPAs for procurement of RE power through competitive bidding process and that the Respondent SECI did not take in any deviation from the MoP Guidelines. Upon the further query of the Commission that how the project capacity is being allotted, it is submitted that in the aforementioned RfS, 60% of project capacity shall be procured by SECI and 40% of project capacity shall be identified as market component and in case of any reduction the project capacity, bifurcation of 60% and 40% shall be done

on pro-rata basis. Further, on the query of the Commission about the useful life of the project, it is submitted that it is of 12-year period and after the end of 12 years after commissioning of project the BESS developer will transfer the project to SECI at Re. 1/- with the project being free from any encumbrances. The Commission has asked the justification about variation in rates discovered in the earlier bid as well as present bid for such type of Battery Energy Storage System projects, the representative appearing for the Petitioner GUVNL has agreed to provide the submissions in the matter.

7.20. We also taken on record an additional submissions filed vide affidavit dated 31.08.2024 by the Petitioner before the Commission on 02.09.2024 in the present matter pursuant to Daily Order dated 08.08.2024 passed by the Commission wherein the Petitioner submitted that the present petition has been filed under Section 63 read with 86(1)(b) of the Electricity Act, 2003 for approval of Battery Energy Storage Sale Agreement signed by the Petitioner GUVNL with the Respondent SECI for procurement of 150 MW/300 MWh energy storage capacity procured by SECI under tariff based Competitive Bidding Process from the 500 MW/1000 MWh pilot project to be set up at Fatehgarh-III Sub-Station in Rajasthan. SECIL being the Central Nodal Agency for Solar, Wind, Hybrid, and Energy Storage System (ESS) tenders, has issued India's first-of-its-kind pilot project tender for a standalone Battery Energy Storage System (BESS) with a capacity of 500 MW/1000 MWh in April 2022. Further, Storage rates discovered under GUVNL Standalone BESS pilot project Phase-II bid was in range of Rs. 448996-449996 per MW per Month in March 2024 and recently in the BESS project Phase- III, it was discovered as Rs. 372978 per MW per month in June 2024. Where, SECIL has discovered the Battery Energy Storage System rates in April 2022. Further, as per BLOOMBERG survey on price trends of manufacturing LFP cell and LFP cell price, depicts that during FY 2022 the price of LFP cell was \$ 118.3 per kilowatt-hour (USD) in March 2022 and during FY 2024 the price of LFP cell was reduced to \$ 52.6 per kilowatt-hour (USD) in March 2024. The aforesaid price trends provides the corroborates discovered tariff in SECIL (ESS-1) pilot project Phase-1. Based on this, the Petitioner GUVNL has approached the Commission for seeking approval of Battery Energy Storage Sale Agreement signed by GUVNL with Solar Energy Corporation of India limited (SECIL) for Procurement of 150 MW/300 MWh Energy Storage capacity procured by SECI under Tariff Based Competitive Bidding Process for 500 MW/1000 MW Pilot Project to be set up by the BESSD at Fatehgarh-III Sub-Station of Power Grid in Rajasthan

7.21. In view of the above, the Commission hereby approved the Battery Energy Storage Sale Agreement (BESSA) executed between the Petitioner GUVNL and the Respondent No. 1 SECI on 26.06.2023 for procurement of 150 MW/300 MWh Battery Energy Storage capacity from SECI's 500 MW/1000 MWh Pilot Project to be set up by the BESSD at Fatehgarh-III Sub-Station in Rajasthan, at the tariff of 6,44,473.06 per MW per month (excluding the applicable GST, taxes and duties if any), awarded by SECI to M/s JSW Renew Energy Five Limited (JSWREFL) as Battery Energy Storage System Developer(BESSD), for Procurement of Energy Storage capacity by GUVNL on behalf of four State DISCOMs

7.22. We note that the Petitioner has already executed Battery Energy Storage Sale Agreement (BESSA) with Solar Energy Corporation of India Limited on 26.06.2023. We direct the Petitioner that for the purpose of transparency, to publicly disclose the name (s) of the successful bidder(s) and the tariff quoted by them together with the breakup with the component, for 30 days on its website in terms of the bidding guidelines as amended for knowledge and information of the stakeholders.

8. Order accordingly.

9. With this Order the present Petition stand disposed of.

Sd/-
[S. R. Pandey]
Member

Sd/-
[Mehul M. Gandhi]
Member

Place: Gandhinagar

Date: 23/09/2024.