



GUJARAT URJAVIKAS NIGAM LIMITED

Sardar Patel Vidyut Bhavan, Race Course, Vadodara 390007

PBX : (0265) 2310582-86, Web : www.guvnl.com

CIN U40109GJ2004SGC045195

PUBLIC NOTICE

Gujarat Urja Vikas Nigam Limited (GUVNL) has filed under petition 2389 / 2024 under Section 86 (1) (b) of the Electricity Act, 2003 before the Hon'ble Gujarat Electricity Regulatory Commission (GERC) for approval of the Power Purchase Agreement signed by GUVNL with GSECL under the bilateral mode from Pilot Project of grid connected 35 MW of Solar PV and 57 MWh Battery energy storage system (BESS) to be set up in Kutch Lignite Thermal Power Station at Pandhro.

The stakeholders / objectors may file their objections/suggestion in this matter to the Secretary, Gujarat Electricity Regulatory Commission, 6th Floor, GIFT one, Road 5C, Zone 5, GIFT city, Gandhinagar – 382 355 in five copies along with affidavit in support of their submissions with a copy to the Petitioner within 2 (two) weeks of issuance of public notice. The petition is uploaded on www.guvnl.com

Date: 28/09/2024

Chief Finance Manager (PT)-GUVNL



GUVNL

ગુજરાત ઊર્જા વિકાસ નિગમ લિમિટેડ (GUVNL)

સરદાર પટેલ વિદ્યુત ભવન, રેસકોર્સ - વડોદરા-૩૯૦૦૦૭

જાહેર સૂચના

ગુજરાત ઊર્જા વિકાસ નિગમ લિમિટેડ (GUVNL) એ વીજ અધિનિયમ, ૨૦૦૩ની કલમ ૮૬ (૧) (બ) હેઠળ માનનીય ગુજરાત ઇલેક્ટ્રીસિટી રેગ્યુલેટરી કમિશન (GERC) સમક્ષ પીટીશન નંબર : ૨૩૮૯ / ૨૦૨૪ ફાઇલ કરી છે. ઉપરોક્ત પીટીશનમાં ગુજરાત સ્ટેટ ઇલેક્ટ્રીસિટી કોર્પોરેશન લિમિટેડ દ્વારા સ્થાપવામાં આવેલ, ૩૫ મેગાવોટ સોલાર ફોટોવોલ્ટેક અને ૫૭ મેગા વોટઅવર બેટરી એનર્જી સ્ટોરેજ સિસ્ટમ (BESS) પાયલોટ પ્રોજેક્ટ માટે જીયુવીએનએલ દ્વારા જીએસઈસીએલ સાથે દ્વિપક્ષીય મોડ હેઠળ હસ્તાક્ષર કરવાના પાવર પરચેઝ એગ્રીમેન્ટની મંજૂરી માટે માનનીય ગુજરાત ઇલેક્ટ્રીસિટી રેગ્યુલેટરી કમિશન સમક્ષ મંજૂરી આપવા માટે દરખાસ્ત કરેલ છે.

આ સંદર્ભે નામદાર આયોગ દ્વારા તા: ૨૬/૦૯/૨૦૨૪ના આદેશ દ્વારા જીયુવીએનએલને ઉપરોક્ત અરજી પર હિતધારકો પાસેથી ટિપ્પણીઓ / સૂચનો આમંત્રિત કરતી જાહેર સૂચના જારી કરવાનો નિર્દેશ આપ્યો છે.

જીયુવીએનએલ દ્વારા દાખલ કરવામાં આવેલી અરજી તેની વેબસાઇટ www.guvnl.com પર નોટીસ વિભાગમાં અપલોડ કરવામાં આવી છે. આથી, અસરકર્તા હિતધારકો / રજુઆતકર્તાએ આ પિટિશન ઉપર તેમની ટીપ્પણીઓ/ વાંધાઓ/ સૂચનો લેખિતમાં એફીડેવિટ કરાવીને પાંચ નકલમાં સચિવશ્રી, ગુજરાત વીજ નિયમન આયોગ, દફતો માળ, ગિફ્ટ ૧, રોડ નં. ૫-૮, ગિફ્ટ સિટી, ગાંધીનગર - ૩૮૨૩૫૫ સરનામે મોકલવા તથા એક નકલ પિટિશનર GUVNL ને સૂચનાના ૨ (બે) અઠવાડિયા અંદર રજુ કરવાની રહેશે.

તા: ૨૮/૦૯/૨૦૨૪

ચીફ ફાઇનાન્સ મેનેજર (પાવર ટ્રેડિંગ) - GUVNL

0/c

**BEFORE THE GUJARAT ELECTRICITY REGULATORY COMMISSION
GANDHINAGAR**

FILING No:
PETITION No:

IN THE MATTER OF:

Approval of Power Purchase Agreement to be signed by Gujarat Urja Vikas Nigam Limited (GUVNL) with Gujarat State Electricity Corporation Limited (GSECL) under the bilateral mode from Pilot project of grid connected 35 MW Solar PV Project with 57 MWh of Battery Energy Storage System to be set-up in Kutch Lignite Thermal Power Station at Pandhro.

PETITIONER

Gujarat Urja Vikas Nigam Limited
Sardar Patel Vidyut Bhavan,
Race Course,
Vadodara - 390 007



RESPONDENT

Gujarat State Electricity Corporation Limited
Sardar Patel Vidyut Bhavan,
Race Course,
Vadodara - 390 007

PETITION UNDER SECTION 86(1) (b) OF THE ELECTRICITY ACT, 2003 FOR APPROVAL OF POWER PURCHASE AGREEMENT TO BE SIGNED BY GUJARAT URJA VIKAS NIGAM LIMITED (GUVNL) WITH GUJARAT STATE ELECTRICITY CORPORATION LIMITED (GSECL) UNDER THE BILATERAL MODE FROM PILOT PROJECT OF GRID CONNECTED 35 MW OF SOLAR PV AND 57 MWH BATTERY ENERGY STORAGE SYSTEM TO BE SET-UP IN KUTCH LIGNITE THERMAL POWER STATION AT PANDHRO.

MOST RESPECTFULLY SHOWETH:

- 1) The present Petition is being filed by the Petitioner, Gujarat Urja Vikas Nigam Limited (GUVNL), a company incorporated under the provisions of the Companies Act, 1956 with its registered office at Sardar Patel Vidyut Bhavan, Race Course, Vadodara. The Petitioner is a licensee and the entity undertaking bulk purchase of electricity from generating companies and other sources and bulk sale of electricity to the State Distribution Licensees.



- 2) The Government of Gujarat ("GoG") has notified the Gujarat Electricity Industry (Reorganization and Regulation) Act 2003 in May 2003 for the reorganization of the entire power sector in the State of Gujarat.
- 3) Pursuant to the Gujarat Electricity Industry Reorganization and Comprehensive Transfer Scheme, 2003 notified under the Gujarat Electricity Industry (Reorganization and Regulation) Act 2003, erstwhile Gujarat Electricity Board has been reorganised and its functions have been vested in different entities.
- 4) The activities of Generation, Transmission, Distribution, Bulk power purchase and supply undertaken by erstwhile Gujarat Electricity Board has been entrusted to separate seven functional entities. The generation activity is assigned to Gujarat State Electricity Corporation Ltd. (GSECL), the transmission activity is assigned to Gujarat Energy Transmission Corporation Ltd. (GETCO) and the distribution activity is assigned to four Distribution companies viz. Uttar Gujarat Vij Company Ltd. (UGVCL), Madhya Gujarat Vij Company Ltd. (MGVCL), Dakshin Gujarat Vij Company Ltd. (DGVCL) and Paschim Gujarat Vij Company Ltd. (PGVCL). Further, the function of Bulk purchase and Bulk sale of power on behalf of the State DISCOMs is assigned to the Petitioner - Gujarat Urja Vikas Nigam Ltd. (GUVNL) as per the re-organization scheme.
- 5) The Distribution Companies are mandated to procure power from Renewable Energy Sources as per the provisions of section 86(1)(e) of the Electricity Act, 2003 and in terms of Gujarat Electricity Regulatory Commission (Procurement of Energy from Renewable Energy Sources) Regulations, 2010 as amended from time to time.
- 6) In accordance with the same, the Petitioner on behalf of its four Distribution Companies has been entering into Power Purchase Agreements amongst others with various Renewable Energy Generators/Energy Storage System for procurement of renewable power and Energy Storage System from time to time.
- 7) Section 3 (1) of the Electricity Act 2003 requires the Central Government to formulate National Electricity Policy in consultation with CEA & State Government for inter alia, development of renewable sources of energy. In compliance with this provision the Central Government has 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.



- 8) Clause (b) of the Section 86(1) of the Electricity Act 2003 provide that the State Commission shall discharge following functions, namely:

(a) *"determine the tariff for generation, supply, transmission and wheeling of electricity, wholesale, bulk or retail, as the case maybe, within the State:*

Provided that where open access has been permitted to a category of consumers under section 42, the State Commission shall determine only the wheeling charges and surcharge thereon, if any, for the said category of consumers;

(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."*

- 9) Gujarat State Electricity Corporation Limited (GSECL) is a Gujarat Govt. promoted entity engaged in Power Generation activity from various renewable and conventional sources across Gujarat and subsidiary company of GUVNL. GSECL has approached GUVNL vide letter dated 02.08.2021 (**Annexure-A**) for In-principle approval for power purchase on cost plus basis under Electricity Act, 2003 from a Pilot Project of Grid connected 35 MW Solar PV with Battery Energy Storage System (BESS) project at Kutch Lignite Thermal Power Station.
- 10) GSECL has approached GUVNL for in-principle approval purchase of power from Solar PV with BESS vide letter dated 12.01.2022 (**Annexure-B**), stating GSECL require in-principle approval from GUVNL to issue LOI to successful bidder under tender of EPC contractor M/s L&T Ltd, with contract rates & condition mentioned in letter.
- 11) GUVNL has given in-principle approval for Purchase of power from GSECL pilot project of grid connected 35 MW of Solar PV and 57 MWh of BESS project on cost plus basis under Section 62 of Electricity Act, 2003 vide letter dated 07.02.2022 (**annexure-C**). GUVNL has considered 17.52 MUs annual assured energy from the Battery Energy Storage System co-located with Solar PV.
- 12) The salient features of above projects are as under:
- Project Capacity: 35 MW Solar PV with 57 MWh of BESS.
- Output Units: 70 % of Energy from 35 MW of solar plant injected to Grid & 30 % of energy supplied to BESS for charging.



Solar PV Panels: Bifacial Solar modules with real time solar tracker.

Solar Plant CUF: 23.72 %

Solar PV PPA period: 35 MW Solar PV for 25 Years with 23.72 % CUF.

Battery Storage capacity: 57 MWh.

Battery Support to Grid: 4 hrs of Battery support to grid (Non solar hours).

Guaranteed output from BESS: 17.52 MUs annually for 12 years.

BESS PPA period: 57 MWh battery storage with assured energy of 17.52 MUs for 12 Years.

- 13) GUVNL vide letter 16.01.2023 (**Annexure-D**) has raised various aspects to reduce the levelized tariff offered from the above project of GSECL. Considering the aspects provided in above letter, GSECL has approached Ministry of New and Renewable Energy (MNRE) for Viability Gap Funding (VGF) vide letters 28.04.2023 & 21.09.2023 (**Annexure-E**). Recently, Ministry of Power has come up with Viability Gap Funding Scheme on 15.03.2024(**Annexure-F**), where Nodal agency will publish Battery Energy Storage RfS and only those participants are eligible for obtaining the benefits of VGF scheme. GSECL has provided levelized tariff of Rs. 5.35 per KWh including Solar Power and Storage for initial 12 years and for subsequent 13 years only Solar Power from the project.
- 14) In the view of above in-principle approval, GUVNL has put up the matter before GUVNL Board and Board has accorded an approval for purchase of power from the Solar and Battery Energy Storage System project to be set up at KLTPS by GSECL with the cap of Rs. 5.35 per KWh, vide BR 132.12/2145 dated 07.03.2024(**Annexure-G**).
- 15) In the view of above, GUVNL has forwarded the draft PPA to GSECL prepared in accordance with the Ministry of Power (MoP) guidelines of "Guidelines for Tariff Based Competitive Bidding Process for Procurement of Power from Grid Connected Solar PV Power Projects." dated 28.07.2023(**Annexure-H**). The Guidelines for Procurement and Utilization of Battery Energy Storage Systems as part of Generation, Transmission and Distribution assets, along with Ancillary Services dated 10.03.2022(**Annexure-I**), under Scope of the guideline various business cases are mentioned. At point No. 4, where it is mentioned that "these Guidelines shall be applicable for business cases identified above vide Sl. (ii) to (vii). For Sl. (i) above, i.e. in case of systems which contain RE generating stations along with BESS as a single Project (co-located or multi-located), the respective Standard Bidding Guidelines issued for procurement of power from Solar, Wind and Hybrid Power Projects, or the Unified Standard Bidding Guidelines, as issued



by the Ministry of Power, shall be applicable." In accordance with above GUVNL has framed draft PPA in line with grid connected Solar PV Power Project.

In line with above, GSECL has done due diligence on the terms & conditions of above draft PPA and given confirmation to GUVNL on dated 03.08.2024 **(Annexure-J)**, that GSECL has agreed on term & condition on draft PPA under the bilateral mode from pilot project of grid connected 35 MW Solar PV Project with 57 MWh of Battery Energy Storage System to be set-up in Kutch Lignite Thermal Power Station at Pandhro.

16) GSECL has approached to GUVNL in consent of above draft PPA, the salient features of PPA are as under:

- i) As per Ministry of Power **guidelines for Tariff Based Competitive Bidding Process for Procurement of Power from Grid Connected Solar PV Power Projects dated 28.07.2022** , the term of the PPA has been kept as 25 years from the commercial operation date of the entire project.
- ii) The Project to be set up at spare land of Kutch Lignite Thermal Power station, connected with STU grid.
- iii) Capacity Utilization Factor (CUF) is 23.72%. The Power Producer shall maintain generation so as to achieve annual CUF within + 10% and -15% of the contracted CUF till the end of 10 years from SCSD, subject to the annual CUF remaining minimum of 15%, and within +10% and -20% of the contracted annual CUF thereafter till the end of the PPA duration of 25 years.

The CUF shall be calculated on the Contracted Capacity as per under:

- a. For the first contract year starting from the SCSD and ending on 31st March of respective year, the CUF shall be calculated as under: if 'X' MWh of energy has been metered out at the Delivery Point for 'Y' MW Project capacity, $CUF = (X \text{ MWh} / (Y \text{ MW} * Z)) * 100\%$, where "Z" = No. of days from SCSD to 31st March of respective year * 24.
- b. In any Contract Year except for first and last contract year, the CUF shall be calculated as under: if 'X' MWh of energy has been metered out at the Delivery Point for 'Y' MW Project capacity, $CUF = (X \text{ MWh} / (Y \text{ MW} * 8760)) * 100\%$.
- c. For the last contract year, the CUF shall be calculated as under: if 'X' MWh of energy has been metered out at the Delivery Point for 'Y' MW Project capacity, $CUF = (X \text{ MWh} / (Y \text{ MW} * Z)) * 100\%$, where "Z" = No. of days from 1st April of respective year up to end date of PPA * 24.



- iv) In addition to above, Power Producer must maintain supply of 17.52 MUs on annual basis from the Battery Energy storage system co-located with the solar PV project, at KLTPS
- v) Power Producer shall inject 70% of energy directly to the grid and 30% of solar PV energy is to be stored in the battery energy storage system during the first 12 years of the agreement. Power Producer shall give priority for charging of Battery energy storage system based on available generation from the solar PV project to meet the required supply on daily basis, as per SLDC/ GUVNL schedule. From 13th year onwards, the entire generation from the Solar PV shall be injected directly into the grid.
- vi) The power producer is obligated to charge the full capacity of BESS during solar hours. SLDC in consultation with GUVNL shall provide the discharge schedule for the BESS during non-solar hours. Further, it is clarified that the schedule for discharge can be in any time-blocks between solar hours of two subsequent days. The Power Producer obligated to discharge accordingly.
- vii) The day-ahead schedule provided by SLDC in coordination with GUVNL shall be required to be confirmed by power producer, subject to discharge of energy corresponding to 4-hr Non-Solar Generation of Power supply from co-located BESS, in a day.

viii) **Shortfall in Generation:**

In case the project generates and supplies energy less than the energy corresponding to the minimum CUF & guaranteed energy from battery energy storage on an annual basis, the Power Producer will be liable to pay to GUVNL penalty for the shortfall in availability below such contracted CUF level & assured energy from battery storage on an annual basis, at 100% of the PPA Tariff. This will, however, be relaxable by GUVNL to the extent of grid non-availability for evacuation (beyond the Delivery Point) which is beyond the control of the Power Producer.

However, this compensation shall not be applicable in events of Force Majeure identified under the PPA with GUVNL, affecting supply of power by the Power Producer.

For example,

- i. For the Contract year starting from the SCSD and ending on 31st March of respective year, penalty on reduced CUF shall be calculated as under:
If 'X' MWh of energy has been metered out at the Delivery Point for 'Y' MW Project capacity, $CUF = (X \text{ MWh} / (Y \text{ MW} * Z)) * 100\%$,
where "Z" = No. of days from SCSD to 31st March of respective year * 24. If it is lesser than declared capacity than applied penalty on reduced CUF = $[(\text{Actual CUF} * Y * Z) - (\text{Declared CUF} * Y * Z)] * \text{PPA tariff}$.
- ii. For the Contract year starting from the SCSD and ending on 31st March of respective year, penalty on reduced CUF shall be calculated as under:
If 'X' MWh of energy has been metered out at Battery Energy Storage Point, Assured Energy from Battery Energy storage system = 17.52 MUs annually.



If energy from BESS is lesser than declared assured energy than applied penalty on reduced energy = [17.52 MUs annually energy from BESS- Energy measured at BESS point]*PPA tariff

ix) **Excess Generation:**

In case the generation is over and above declared annual CUF and annual assured generation from BESS, the Power Producer will be free to sell it to any other entity provided first right of refusal will vest with GUVNL. GUVNL shall inform the power producer for procurement of excess power within 15 days of receiving a written intimation from the power producer for such excess generation. If in case GUVNL fails to reply to the power producer within the above stipulated time period then the generator shall be free to sell it to any other entity.

In case GUVNL purchases the excess generation than 23.72 CUF from the Solar PV and BESS project, the same may be done at 50 % (Fifty per cent) of the PPA tariff.

In case at any point of time, the peak of capacity reached is higher than the rated capacity and causes disturbance in the system at the point where power is injected, the power producer will have to forego the excess generation and reduce the output to the rated capacity to ensure compliance with grid requirement.

GUVNL Obligation:

GUVNL shall grant Must Run Status to the Project subject however to the considerations as stated under the PPA.

The Power Producer will be free to re-power their Plant(s) from time to time during the PPA duration, with intimation to GUVNL. However, GUVNL will be obliged to buy power only within the range of CUF (including energy from BESS) specified in the PPA.

x) **Constraints due to Grid Unavailability:**

During the operation of the plant, there can be some periods where the plant can generate power but due to temporary transmission unavailability beyond Delivery Point the power is not evacuated, for reasons not attributable to the Power Producer. In such cases the generation compensation shall be addressed by GUVNL in following manner:

| Duration of Grid Unavailability beyond Delivery Point | Provision for Generation Compensation |
|---|---|
| Grid unavailability beyond 175 hours in a Contract Year (as defined in the PPA) | <p><i>Generation Compensation =</i> <i>((Applicable Tariff x RE power (MW) offered but not scheduled by GUVNL) X 1000 X No. of hours of grid unavailability)</i></p> <p>However, in case of third-party sale or sale in the power exchange, as price taker, the 95% of the amount realized, after deducting expenses, shall be adjusted against the Generation compensation payable, on monthly basis.</p> |



(b) Payment in case of reduced off take:

The Power Producer and the GUVNL shall follow the forecasting and scheduling process as per the regulations in this regard by the Appropriate Commission (i.e. GERC). In case the Project is available to supply power but the off-take of power is not done by the GUVNL, including non-dispatch of power due to non-compliance with "Electricity (Late Payment Surcharge and Related Matters) Rules, 2022 notified by the Ministry of Power vide Gazette notification dated 3rd June 2022" and any clarifications or amendment thereto, considering the principle of 'must run' status for RE Power the Power Producer shall be eligible for payment from the GUVNL, corresponding to the reduced offtake, in terms of following manner.

| Reduced Offtake | Provision for Generation Compensation |
|---|---|
| Reduced Offtake beyond 175 hours in a year, as defined in the PPA | Generation Compensation = <i>((Applicable Tariff x RE power (MW) offered but not scheduled by GUVNL) X 1000 X No. of hours of Reduced Off-take</i> However, in case of third-party sale or sale in the power exchange, as price taker, the 95% of the amount realized, after deducting expenses, shall be adjusted against the Generation compensation payable, on monthly basis. |

For claiming compensation as above (a) & (b), the Power Producer must sell its power in the power exchange as a price taker. Thus, the compensation would be limited to the difference of the actual generation up to declared capacity subject to a maximum of up to the demand profile in the respective time-block and the quantum of power scheduled by the Buying Entity.

xi) **Change in Law:**

"Change in Law" shall refer to the occurrence of any of the following events notified after the date of issuance of order by GERC for adoption of tariff for the Project.

- (i) In case Change in Law results in the Power Producer's costs directly attributable to the Project being decreased or increased by one percent (1%), of the estimated revenue from the Electricity for the Contract Year for which such adjustment becomes applicable or more, during Operation Period, the Tariff Payment to the Power Producer shall be appropriately increased or decreased with due approval of GERC.

