



Bundelkhand Saur Urja Limited

(A Joint Venture of NHPC Limited & UPNEDA)

CIN: U40300UP2015GOI068632

EXPRESSION OF INTEREST FOR DEVELOPMENT OF GRID CONNECTED SOLAR PV POWER PROJECT IN 1200 MW ULTRA MEGA RENEWABLE ENERGY POWER PARK, DISTT.: JALAUN (UTTAR PRADESH)

EOI No.	BSUL/2022-23/NIT/10
Tender ID	2022_BSUL_685944
EOI Issue date	27.04.2022
Last date and time of Submission of EOI online on CPP portal	18.05.2022 upto 18:55 hrs
Date of opening of EOI	20.05.2022 at 11:00 hrs

1. INTRODUCTION

Bundelkhand Saur Urja Limited (BSUL) is a joint venture of NHPC Limited and UPNEDA formed with objectives for development of Solar Power Projects in U.P. and conventional and non-conventional power projects entrusted to it by Government of Uttar Pradesh. BSUL has envisaged a long term capacity addition plan by development of Solar Power Projects and Parks of about 1510 MW capacity in various districts of Uttar Pradesh and these projects / parks are in different stages of implementation. Ministry of New & Renewable Energy has approved BSUL as Solar Power Park Developer (SPPD) for implementation of Jalaun Solar Park 1200 MW.

2. OBJECTIVE

The overall objective of setting up the Solar Park in the district of Jalaun in the State of Uttar Pradesh is to promote the development of the solar power projects for electricity generation. The overall aim is to install a capacity of around 1200 MW in the Solar Park under Ultra Mega Renewable Energy Power Park (UMREPP) scheme of MNRE, GoI. It is proposed that one or more blocks of land identified in the solar park will be allocated to different project developers in order to have a concentrated zone for solar development. Implementation of 1200 MW Jalaun Solar Park shall be taken up in line with the Scheme Guidelines of MNRE having necessary infrastructures like internal & external road, storm water drainage, water supply system, power evacuation system including transmission line, street lighting, fencing, administrative buildings, telecommunication system, security etc. in phased manner as follows (Tentative time line)

Particular	Timeline	Mar-2024	Aug-2024
Location		Tehsil: Madhogarh, District: Jalaun	Tehsil: Orai, District: Jalaun
Capacity in MW in respective Phase		600	600
Cumulative Park Capacity in MW		600	1200

Accordingly, BSUL invites Expression of Interest from the interested solar project developers (SPD) / parties / Public Sector Undertakings / Govt. bodies / Companies / Legal Entity / Domestic Private Entrepreneurs for development of Solar Power project (s) in above solar power park at Distt. Jalaun (Uttar Pradesh).

3. BRIEF ON 1200 MW JALAUN SOLAR PARK

3.1 LOCATION AND RESOURCES

The proposed park is divided into 2 locations, location 1 as Village group, Tehsil Orai, District Jalaun and location 2 as Village group, Tehsil Madhogarh, District Jalaun. The geographical coordinates of location 1 and location 2 are 25°50'03.5" N, 79°14'50.9" E and 26°23'27.8" N, 79°11'30.6" E respectively. The site has good accessibility & location 1 is approximately 32 Km from Orai Town (District HQ Jalaun Dist.) and 40 km from Jalaun, UP, whereas, location 2 is approximately 63 Km from Orai Town (District HQ Jalaun Dist.) and 41 km from Jalaun, UP. The location 1 and location 2 can be accessed through NH 27 which is approx. 8 km from

location 1 and approx. 70 km from location 2. Also, location 2 can be accessed through State Highway SH 70 which lies at an approx. distance of 25 km. The Jalaun District is suitably connected from Kanpur which is a major industrial city nearby. Further, Bundelkhand Expressway, presently under construction, is also connecting Jalaun which will be an added advantage.

The area of location 1 and location 2 is 1212.718 Ha and 1207.879 Ha respectively, which shall be utilised for solar power generation. The proposed 1200MW Solar Park is divided into 100 MW block for both location 1 and location 2. Area of approx. 193 Ha has been considered for each 100 MW block.

Annual average ambient temperature of the proposed project site with location 1 and location 2 is 25.78° C and 25.77° C respectively. Hence, more generation can be captured from the solar power plant. Jalaun district has recorded a minimum rainfall in November and maximum rainfall in July. Monsoon unfolds mainly in June, July, August & September. Over a period of 12 years from 2009 to 2020, the maximum wind speed at Jalaun district has been recorded as 23.8 kmph (6.61 m/s). The district is observed to have fair wind speed with dominant wind blowing in the West- North-West (WNW) and West direction.

The state of Uttar Pradesh, receives sufficient amounts of solar radiation and has visibility i.e. 250-300 sunny days is an advantage of the location and accordingly, Jalaun has a potential of 1825~2008 KW per m² per year translating to 5 ~ 5.5 KWh per m² per day which is considered good for Solar projects/Renewable Energy.

Further, 765/400 kV Ait Substation of PGCIL is just 15 Kms apart from Location 1 and about 60 Kms from Location 2 and can evacuate 1200 MW power. The power from location 2 will be pooled to location 1 and therefore evacuated through the above GSS.

Above details are summarized as under:

DETAILS	DESCRIPTION
Total Land	6000 acres (27 Years lease hold land)
Solar Potential	5 ~ 5.5 (kWh/m ² /day)
Land Coordinates	Location 1 - 25°50'03.5"N, 79°14'50.9"E Location 2 - 26°23'27.8"N ,79°11'30.6"E
Rail Connectivity	Orai
Road Connectivity	NH 27 / SH 70
Power Evacuation	Through 765/400 kV PGCIL substation at Ait, Teshil Orai, Dist. Jalaun, UP. Central Transmission Utility of India Limited (CTUIL) has granted Stage-I Connectivity for 1200 MW solar park to ISTS, in line with CERC Connectivity Regulations, 2009.
Water Availability for cleaning	Ground Water

Solar Insolation and Ambient Temperature for Location 1*

Months	Global Horizontal Radiation (kWh/m ²)	Global Tilted Radiation – Fixed Tilt (kWh/m ²)	Ambient Temperature (°C)
Jan	108.9	135.9	14.6
Feb	134.1	162.0	18.7
Mar	181.5	201.9	25.1
Apr	196.8	202.3	30.6
May	208.6	201.9	34.5
Jun	172.4	163.2	33.3
July	158.2	150.5	30.9
Aug	150.5	148.6	29.7
Sep	153.7	162.8	28.8
Oct	146.4	167.8	26.4
Nov	121.6	152.2	20.5
Dec	112.3	146.9	15.9
Year	1845.0	1996.0	25.8

Solar Insolation and Ambient Temperature for Location 2*

Months	Global Horizontal Radiation (kWh/m ²)	Global Tilted Radiation – Fixed Tilt (kWh/m ²)	Ambient Temperature (°C)
Jan	104.8	131.7	14.5
Feb	132.3	160.4	18.7
Mar	181.5	203.0	25.1
Apr	197.7	203.7	30.7
May	210.9	204.7	34.5
Jun	170.3	161.5	33.2
July	156.0	148.7	30.9
Aug	156.6	155.9	29.8
Sep	154.1	163.6	28.8
Oct	146.1	168.2	26.4
Nov	118.6	148.3	20.5
Dec	109.3	142.9	15.8
Year	1838.2	1992.6	25.7

* Source: www.meteonorm.com

The Annual Average is 5 ~ 5.5 (kWh/m²/day) that is very good for Solar Power Generation.

4. EXPRESSION OF INTEREST:

4.1 CONTRIBUTION OF BSUL

The accessibility, connectivity, logistics, off-site facilities, arrangement of construction power, water for construction and power evacuation facilities, drainage, etc. shall be arranged by the SPPD i.e. BSUL. The construction power will be taken from the nearest grid substation through 11 kV transmission line. The provision of connecting respective block to 33/400 kV Main pooling substation (PSS) through 33 kV cables / transmission line along with the required switchyard shall be within the scope of individual solar project developer.

BSUL will provide land plots / blocks of having capacity not less than 100 MW each having infrastructural facilities as per MNRE Scheme like internal & external road, storm water drainage, water supply system, power evacuation system including transmission line, street lighting, fencing, administrative buildings, telecommunication system, security etc.

Project Developer will pay annual lease rental of Rs.15000 for the land provided on per Acre basis to BSUL. These rates shall be enhanced every year at the rate of 2% per annum of the previous year. Applicable taxes shall also be payable in addition to annual rental.

An upfront one-time fee is charged as Rs. 47.25 Lakhs/ MW against the development of the solar park infrastructure (including Local Area Development charges). The annual maintenance fee and annual administrative charge are considered as Rs. 1.00 Lakhs/MW and Rs. 0.50 Lakhs/ MW respectively with 6% of annual escalation for both.

BSUL will procure power from the solar project developer at a fixed tariff for medium term / long term. The power purchase rate, in no case, will exceed Rs. 2.75/kWh considering all transmission losses. Sale of Power i.e. signing of (PSA) agreement / arrangement of power procurer will be the responsibility of BSUL. The power offtake will be done through long Term I-STS / Intra-STS power sale arrangement with reputed bulk procurer / consumer such as State DISCOM, Metro Rail Corporation, Railways, Power Sector CPSEs. Any applicable trading margin under relevant regulation shall be charged by BSUL from the respective power procurer. REMCL (A Joint Venture of Ministry of Railway & RITES Ltd.) has agreed to procure power from the solar park under optimum scheduling mode for Indian Railways.

BSUL will also provide requisite administrative support for project wherever required, however sole responsibility for development of solar project within the allocated land block / plot will be of solar project developer

4.2 SUBMISSION OF EXPRESSION OF INTEREST BY INTERESTED PARTIES:

The party is required to develop the Solar Power Project on the allocated land block / plot of BSUL at Tehsil – Madhogarh and Orai, Jalaun and operate the same for 25 years from COD. All the expenditures for installation of project, seeking various related clearances etc. shall be in scope of solar project developer.

Interested parties are required to submit Expression of Interest for Execution of Solar Power Project at Jalaun Solar Park, which may include but not limited to following:

- i. Arranging, obtaining and maintaining all permits, licenses, approvals, no objection certificates, clearances from all authorities concerned for the project, to enable unhindered smooth progress of all works during construction up-to power generation and injection to 33/400 PSS including operation of the Plant for 25 years from COD.
- ii. Procurement of all equipment / materials required for setting up of the rated capacity of the plant, power evacuation and transmission requirements at specified voltage.
- iii. Creation of infrastructure requirements inside plant like road, internal drainage & sewage systems including culverts, water line network, station lighting, internal fire control systems, lightning arrestor systems, fencing/boundary wall and security systems

including security gates etc. The solar project developers would be responsible for fencing their respective blocks.

- iv. Providing control room and administrative building inside plant and tele-communication network for inside plant communication and appropriate system for synchronization with centralized communication system.
- v. Providing SCADA system and solar radiation and weather monitoring system within plant for information and control of required parameters. Although, central weather monitoring station will be created by SPPD.
- vi. Providing suitable grid compliant Reactive power management system & metering system.
- vii. Compliance with all legal requirements of the Country and State where the Project is located.
- viii. Commissioning the power plant to its full capacity, delivering power to 33/400 kV pooling Substation.
- ix. Operation and maintenance of plant for a period of Twenty-Five (25) years from the date of commissioning for demonstration of agreed performance level and handover the entire plant to Company or its designated assignee.
- x. Any other activity deems fit and necessary for execution and operation of the Project as per prudent utility practices.
- xi. Estimated Cost (breakup) of the project, Proposed Time period for execution of project and plan for execution of project with capacity and time frame. However, time frame for execution of project shall not exceed 18 months.
- xii. Details of annual power generation. Annual Capacity Utilisation factor (CUF) is required to be mentioned. The declared annual CUF shall in no case be less than 21%. It shall be the responsibility of the project developer, entirely at its cost and expense to achieve the required CUF, and for this purpose SPD shall make its own study and investigation of the GHI and other factors prevalent in the area which have implication on the quantum of generation. The SPD shall maintain generation so as to achieve annual CUF within +10% and -15% of the declared value till the end of 10 years from COD, subject to the annual CUF remaining minimum of 21%, and within +10% and -20% of the declared value of the annual CUF thereafter till the end of the PPA duration of 25 years. The annual CUF will be calculated every year from 1st April of the year to 31st March next year.

For illustration, CUF shall be calculated based on the annual energy injected and metered at the Delivery Point. In any Contract Year, if 'X' MWh of energy has been metered out at the Delivery Point for 'Y' MW Project capacity, $CUF = (X \text{ MWh} / (Y \text{ MW} \times 8766)) \times 100\%$.

- xiii. To maintain maximum efficiency, the plant will require cleaning during long dry spells. Cleaning may require large quantities of water depending on the manual labour available and degree of soiling. Water pipelines from reservoirs / water source till the individual blocks boundaries will be provided by solar park developer and thereafter, solar project developers will be responsible to build internal pipelines with pumping system within

their individual blocks. Sole responsibility for arrangement of internal water system for respective block for site construction and cleaning modules as part of the O&M strategy shall be responsibility of Contractor.

- xiv. The construction power will be taken from the nearest grid substation through 11 kV transmission line. Solar project developer may arrange an appropriately sized diesel generator set or by any other suitable alternative arrangement for backup / construction power.
- xv. Power rate / tariff, fixed for 25 years, but should not exceed Rs.2.75/kWh. Tariff requirement shall be quoted as a fixed amount in Indian Rupees up to two decimal places only. Conditional proposal shall be summarily rejected.
- xvi. Any other details as are deemed necessary for the project.
- xvii. Govt. of India guidelines, MNRE Guidelines, Make in India policy, Domestic Content Requirement policy of Govt. of India, DPIIT Guidelines and all other Government prescribed regulation of Central as well as State Government to be followed. List of such guidelines applicable on the solar power project may also be mentioned in the EoI.
- xviii. Further parties are also required to submit information regarding:
 - a. Information regarding past experience in executing Solar Power Projects in India on turn-key/EPC basis. Evidence to be supported by Purchase Orders and Project completion certificates. In case of work orders from private firms, the experience shall be supported by TDS certificates.
 - b. Annual average turnover in the area of Solar Power Plants in last three completed financial years on 31st March 2022 i.e. 2019-20, 2020-21, 2021-22. The parties are required to submit audited balance sheets / Chartered Accountant Certified Statement for the last three years ending with 31.03.2022.
 - c. Details of established registered office in India with valid GST registration certificate.
- xix. Parties may also be required to make presentation regarding the proposed Solar Project in front of authorised committee/ Directors/ KMP of the company. Accordingly, parties shall submit copy of presentation with the EOI.
- xx. Prospective parties may submit their “Expression of Interest (EOI) for Development of Solar Power Project at Jalaun Solar Park 1200 MW” along-with relevant details online by uploading scanned copy (signed & stamped by the authorized signatory) in pdf, duly signed by authorized signatory on CPP portal. The EoI shall be addressed to:

Chief Executive Officer
Bundelkhand Saur Urja Limited
TC-43/V, Vibhuti Khand
Gomti Nagar, Lucknow (UP) – 226010

No EMD/ Bid Security is envisaged in the EOI stage. Bidders/ Parties willing to participate in the open tender at later stage, will be required to submit Bid Security/ EMD as per the requirements of Bid Document. Details regarding Bid Security and CPG will be elaborated in Bid Documents at the time of open tender stage.

For any clarification, you are requested to contact through Email: cnp.bsul@gmail.com or umreppbsul@gmail.com

Bidders / Parties are requested to keep themselves updated with the website www.bsulindia.com and www.eprocure.gov.in on regular basis for any addition / deletion / modification / clarification or notification in respect of this EOI. No separate notification will be issued in any other media.

5. Prospective Bidders / Parties acknowledges and agrees that:

- (a) BSUL has issued this Expression of Interest with the best intention to explore the market for eligible and interested parties and has no compulsions to enter into definitive contractual agreements. This EOI does not guarantee conversion of this EOI into any definitive contractual agreements. BSUL may issue separate open tender for solar power project at later stage.
- (b) It is also agreed that BSUL in its sole discretion, may reject any and all proposals made by Bidders / Parties, may change the conditions relating to the EOI or cancel this EOI at any time without assigning any reason.
- (c) Prospective Bidders / Parties acknowledge and agree that response to the EOI is purely voluntary action on their part and for any expenditure on this account by them, BSUL will have no obligation or liability to the prospective bidders / parties in the event of cancellation of EOI.
- (d) The details mentioned in this EOI document are indicative only and party is required to visit the site and gather the detailed on site information regarding the project, before submission of EOI.

(To be submitted separately for each Project on Letter head)

Ref. No. _____

Date: _____

From: _____ (Insert name and address)

Tel.#:

Fax#:

E-mail address#

To

Chief Executive Officer, Bundelkhand Saur Urja Limited,
TC-43/V, Vibhuti Khand, Gomti Nagar, Lucknow Email: cnp.bsul@gmail.com
Website: www.bsulindia.com

Sub: Response to EOI No. _____ dated _____ for DEVELOPMENT OF GRID CONNECTED SOLAR PV POWER PROJECT IN 1200 MW ULTRA MEGA RENEWABLE ENERGY POWER PARK, DISTT.: JALAUN (UTTAR PRADESH).

Dear Sir,

We, the undersigned [insert name of the 'Bidder / Party'] having read, examined and understood in detail the EOI including terms and conditions, hereby submit our response to EOI with following details:

Project Capacity..... MW

Location: Tehsil: Madhogarh / Orai, District Jalaun, UP

Execution Time.....Months (Execution plan alongwith activity wise schedule is required to be attached separately in bar chart

format)

CUF %

Annual EnergyMU

Fixed Tariff for 25 years from COD: Rs...../kWh.

PRELIMINARY ESTIMATE OF COST OF SOLAR POWER PROJECT

Sr. No.	Particulars	Estimated Cost (in Lakh INR) (in figures)	Estimated Cost (in Lakh INR)(in words)
1.	PV Modules		
2.	Civil and General Works		
3.	Mounting Structures		
4.	Power Conditioning Unit		
5.	Evacuation Cost up to Inter- connecting point (Cables and Transformers)		
6.	Preliminary and Pre- Operative Expenses including IDC and Contingency		
7.	Others (Please specify)		
8.	Total Project Cost		

**Note: Documents in support of Past experience, Financials and other requirements of EOI are required to be attached separately along with copy of presentation.*

2. We hereby unconditionally and irrevocably agree and accept that the decision made by BSUL in respect of any matter regarding or arising out of the EOI shall be binding on us.

3. We confirm that we have studied the provisions of the relevant Indian Laws and Regulations as required to enable us to submit this response to EOI.

4. We are submitting our response to the EOI with formats duly signed as desired by you in the EOI online for your consideration.

5. It is confirmed that our response to the EOI is consistent with all the requirements of submission as stated in the EOI, including all clarifications and amendments and subsequent communications from BSUL.

6. The information submitted in our response to the EOI is correct to the best of our knowledge and understanding. We would be solely responsible for any errors or omissions in our response to the EOI.

7. We confirm that all the terms and conditions of our EOI are valid up to ___ (Insert date in dd/mm/yyyy) for acceptance [i.e. a period of 180 (One Hundred Eighty) Days from the last date of submission of response to EOI].

8. Contact Person - Details of the representative to be contacted by BSUL are furnished as under:

Name:
Designation:
Company:
Address:
Phone Nos.:
Mobile Nos.:
Fax Nos.:
E-mail address:

9. We have neither made any statement nor provided any information in this EOI, which to the best of our knowledge is materially inaccurate or misleading. Further, all the confirmations, declarations and representations made in our EOI are true and accurate.

Dated the _____ day of _____, 2022

Thanking you,

We remain,

Yours faithfully,

Name, Designation, Seal and Signature of Authorized Signatory.