

File No.: VIS(2024-25)-PL399-349-473

Dated: 01-10-2024

LENDER'S INDEPENDENT ENGINEER'S REPORT

OF

4.00_{dc} ($\pm 5\%$) MWp GRID CONNECTED GROUND MOUNTED SOLAR POWER PLANT

PROPOSED TO BE SET-UP AT

M/S JK TYRE & INDUSTRIES LIMITED, BANMORE, MORENA, MADHYA PRADESH

DEVELOPER:

M/S TRUERE GALAXY PRIVATE LIMITED

REPORT PREPARED FOR

STATE BANK OF INDIA, SME BRANCH, SOUTH EX, DELHI

■ Corporate Valuers

■ Business/ Enterprise/ Equity Valuations

■ Lender's Independent Engineers (LIE)

■ Techno Economic Viability Consultants (TEV)

■ Agency for Specialized Account Monitoring (ASM)

■ Project Techno-Financial Advisors

■ Chartered Engineers

■ Industry/ Trade Rehabilitation Consultants

■ NPA Management

■ Panel Valuer & Techno Economic Consultants for PSU
Banks

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at info@rkassociates.org. We will appreciate your feedback in order to improve our services.*

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LIE REPORT

4.00 (± 5%) MWp GRID CONNECTED

GROUND MOUNTED SOLAR POWER PLANT

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PART A

INTRODUCTION

1.	Name of the Project	4.00 (±5%) MWp Grid Connected Ground Mounted Solar Power Plant
2.	Project Location	M/s JK Tyre & Industries Limited, JK Tyre & Industries Limited, Banmore, Morena, Madhya Pradesh
3.	Developer Company	M/s Truere Galaxy Private Limited
4.	Prepared for Organization	State Bank Of India, SME Branch, South Ex, Delhi
5.	LIE Consultant Firm	M/s. R.K. Associates Valuers & Techno Engineering Consultants (P) Ltd.
6.	Work Oder Details	30-09-2024
7.	Date of Survey	NA
8.	Date of Report	01-10-2024
9.	Details & documents provided by	Mr. Monu Prajapati (Manager Finance)
10.	Report Type	Lender's Independent Engineering Report
11.	Purpose of the Report	Review of Project cost, CUF and Irradiation Data, current status for lender's requirement
12.	Scope of the Report	To review Project cost, CUF and Irradiation Data, current status
13.	Documents produced for Perusal	a. Copy of Power Purchase Agreement (PPA) b. Copy of Plant Layout c. Copy of PVSyst report dated 25-09-2024 d. Project Cost e. Detailed Project Report (DPR) f. EPC Contract Agreement
14.	Annexure with the Report	• Market Comparables • Global Solar Atlas by World Bank Group • Documents provided by the client



PART B**PROJECT SNAPSHOT**

1. **NAME OF THE PROJECT:** 4.00_{dc} (± 5%) MWp Grid Connected Ground Mounted Solar Power Plant in RESCO Model to be installed at M/s JK Tyre & Industries Limited, Banmore, Morena, Madhya Pradesh by M/s Truere Galaxy Private Limited.
2. **PROJECT OVERVIEW:** M/s Truere Galaxy Private Limited (a SPV of M/s Oriana Power Limited) is a private limited company which is into Manufacturing, supplying, installing and distribution of electric power generation using solar energy.

M/s JK Tyre & Industries Limited had signed 01 nos. of Power Purchase Agreement (PPA) with M/s Truere Galaxy Private Limited under RESCO model for Design, Finance, Build and Operate of ground mounted solar power plant at its location having a total DC capacity of 4.00 (± 5%) MWp for 15 years of plant operation/ PPA tenure.

As per Detailed Project Report shared by the company, the estimated project cost is Rs. 15.80 Cr. including duties and taxes.

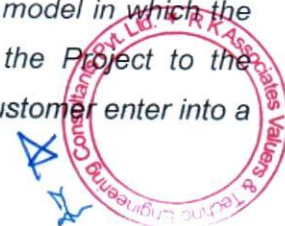
M/s Truere Galaxy Private Limited has approached State Bank of India, SME Branch, South Ex, Delhi for credit facility to construct these plants who have in turned appointed M/s R.K Associates Valuers & Techno Engineering Consultants Pvt. Ltd. as Lenders Independent Engineer for a specific scope of work.

As on date of site visit, presently physical work has not started yet. Thus, our scope of work includes only review & comment on total Project cost, CUF and Irradiation Data.

RESCO Model: -

*Under the RESCO model, a renewable energy service company ("**RESCO**"), (i.e., an energy service company that provides energy to consumers from renewable energy sources), develops, installs, finances, operates and owns the Ground Mounted solar power project ("**Project**"), and supplies power generated from the Project to the consumer on whose premises the Project is set up ("**Customer**") or to the grid through net-metering.*

'Build, Own, Operate and Transfer' (BOOT) is a special kind of RESCO model in which the RESCO constructs, owns, operates, and transfers the ownership of the Project to the Customer after the expiry of a predefined period. The RESCO and the Customer enter into a



long-term power purchase agreement ("**PPA**") for an agreed tenure, which sets out, among others, the terms at which the power generated from the Project will be sold to the Customer and the tariff at which the power will be sold. Excess power from the Project (if any) could be sold by the Customer to the distribution utility through net metering system – the net metering regulations differ from state to state.

Under the PPA, the RESCO owns the Project and is responsible for its installation as well as its operation and maintenance of the Project throughout the tenure of the Project, and at the end of the PPA term, the ownership of the Project is transferred to the Customer. Thereafter, the Customer may either choose to retain the RESCO for operation and maintenance services or engage a third-party operator.

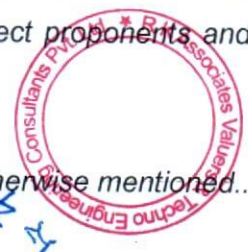
If the entity on whose premises the Project is located does not intend to buy the power generated from the Project and does not entered into a PPA with the RESCO, that entity can either lease the Ground Mounted premises to the RESCO by means of a lease agreement or enter into a license agreement granting the RESCO the right to use the premises for the limited purpose of setting up and operating the Project. The RESCO then operates the Project and exports the energy generated to the local distribution utility at a predetermined feed-intariff (FiT) approved by the State Electricity Regulator under relevant schemes issued by the relevant state.

3. SCOPE OF THE REPORT: To verify and review the Project cost, CUF and Irradiation Data of the Solar Power Plants set-up/ being set-up by M/s Truere Galaxy Private Limited:-

- Industry/ sector research and demand & supply trend is out of scope of the report.
- Financial feasibility study of the Project is out of scope of the report.
- Providing any kind of design report or map is out-of-scope of the report.
- Scrutiny of contracts, Agreements and arrangement between the parties from legal perspective is out-of-scope of this report.
- Location feasibility is ascertained based on the PVSyst Report provided by the client.
- Any kind of technical & economic feasibility of the Project is out-of-scope of this Report.

All the assessment carried out for the Project is done based on the documents and information provided to us and various other discussions with the Project proponents and thus forming an opinion out of it.

Project assessment is done in totality and not component wise unless otherwise mentioned..



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GROUND MOUNTED SOLAR POWER PLANT

4. PURPOSE OF THE REPORT: To provide fair detailed analysis report to the Bank based on the "in-scope points" mentioned above.

5. METHODOLOGY ADOPTED:

- a. To gather relevant data/ information/ documents related to Project planning, execution, current status.
- b. Study of relevant data/ information provided by the company.
- c. To conduct research if required about the Project/ sector from the sources in the public domain.
- d. Correlation of the provided information, site inspection report against Industry/ sector benchmarks/ trend.
- e. Information compilation, analysis and reporting.



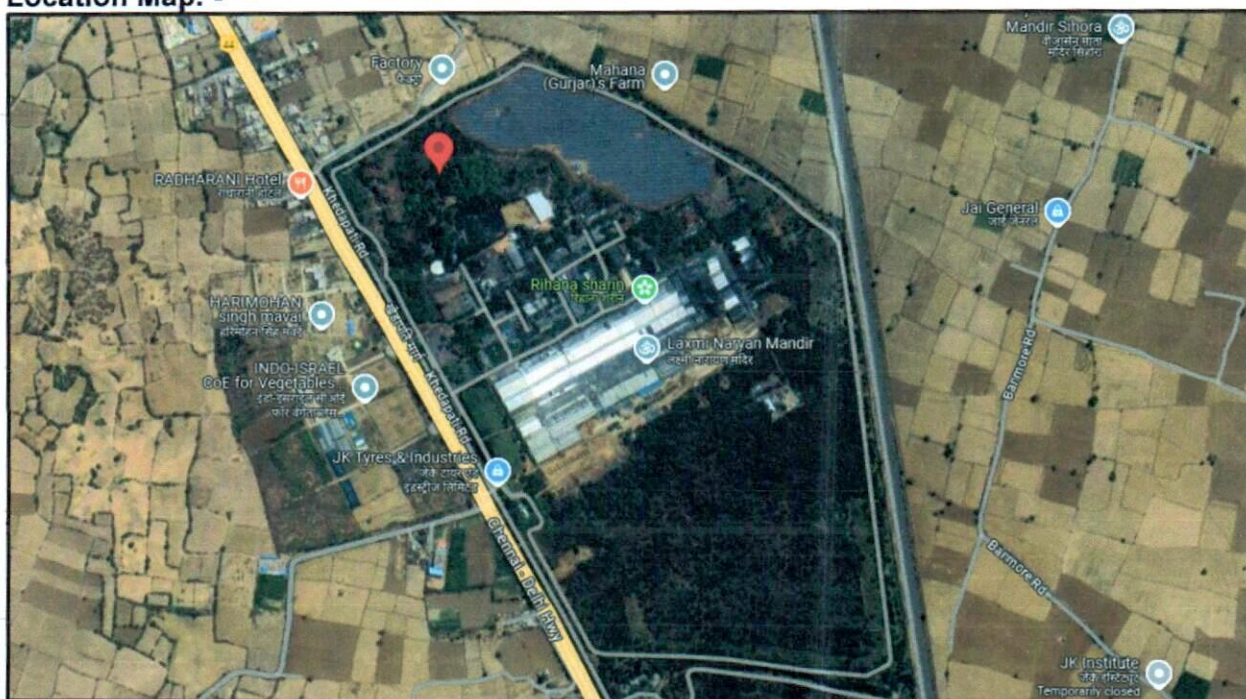
PART C

PROJECT DETAILS AND KEY TECHNICAL PARAMETERS

As per DPR shared by the management of the company, details of the subject plants has been tabulated below:

S. No.	Offtaker	DC Power (MWp)	AC Power (MWp)
1	JK Tyre & Industries Limited	~4.00	~3.10
Total		~4.00	~3.10

Location Map: -

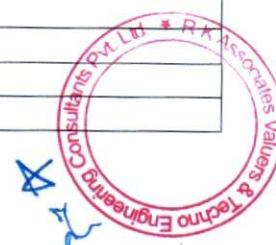


Location: JK Tyre & Industries Limited, Banmore

GPS: 26°23'52.9"N 78°04'16.0"E

Technical parameters/specifications (Proposed) of solar plant to be installed are as follow:-

S. No.	Particulars	JKTIL Plant
1	No. of modules	7280 Modules
2	Modules capacity	550 Wp - Mono-Crystalline of Trina/Goldi/Renew
3	PV Module Dimension	2279x1133x30 mm
4	PV Module	Goldi/Reputed Imported equivalent
5	Mounting Orientation	Portrait
6	Mounting Structure Angle	20°
7	Invertor Type	String Invertor
8	Invertor Make	Sungrow/Growwatt
9	Invertor Power	3098kW
10	Invertor Quantity	11 Nos.



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4.00 ($\pm 5\%$) MWp GRID CONNECTED
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PART D

ENERGY YIELD ASSESSMENT

Company has used PVSyst V7.4.5 to assess energy yield calculation which is the standard Industry practice. The yearly average of main results of irradiation and energy yield from the provided PVSyst is as under:

Annual production probability (kWh/kWp/Year):

S. No.	Plant	As per PVSyst (In kWh/kWp/Year)		Performance Ratio (%)	CUF (%)
		P50	P90		
1	JK TYRE Plant	1540	1500	85.53%	17.60%

Estimated Annual production (kWh/Year):

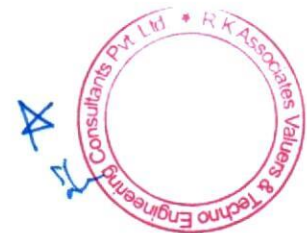
S. No.	Plant	As per PPA (kWh/Year)	As per PVSyst (kWh/Year)	As per Global Solar Atlas (kWh/Year)
1	JK TYRE Plant	56,19,600	60,05,024	62,23,600

Estimated Specific Production (kWh/kWp/Year):

S. No.	Plant	As per PPA (In kWh/kWp/Year)		As per PVSyst (In kWh/kWp/Year)	As per Global Solar Atlas (In kWh/kWp/Year)
		Estimated	Guaranteed		
1	JK TYRE Plant	1,562	1,405	1,540	1,555.9

Observations and Remarks:

1. Estimated annual production as found in PVSyst report & Global Solar Atlas is more than as specified in PPA.
2. Estimated specific production (Guaranteed) as mentioned in PvSyst report and Global Solar Atlas Report is more than of PPA.



LIE REPORT

4.00 (± 5%) MWp GRID CONNECTED
GROUND MOUNTED SOLAR POWER PLANT

Analysis of Irridiation & PV Output data: In respect to Irridiation & PV Output data, company has provided to us PVSyst Report V7.4.5 in which key Irridiation components and PV Output data is given as enumerated in table below. We have analysed and compared it with other data source points also such as Solar Resource by Global Solar Atlas of World Bank and ISRO Solar Calculator to confirm its legitimacy as mentioned in table below:

Particulars	JK Tyre & Industries Limited	
	As per Global Solar Atlas	As per PVSyst
Global horizontal Irradiation (kWh/m ²)	1834.7	1680.6
Diffuse horizontal Irradiation (kWh/m ²)	930.6	888.8
Direct Normal Irradiation (kWh/m ²)	1318.1	-
Specific Photovoltaic Power Output per year (kWh/kWp/year)	1555.9	1540.0
Annual Global Insolation (ISRO Solar Calculator) (kWh/m ² /year)	1541	
Capacity Utilization Factor (CUF)	17.76%	17.14%

Observations and Remarks:

1. As per comparative analysis, PVSyst Irridiation and PV Output data is slightly below to our analysis from Global Solar Atlas of World Bank and ISRO Solar Calculator.
2. The Specific PV Power Output as per Global Solar Atlas is 1555.9 kWh/kWp/year which is more than as per PVSyst report having PV output of 1540.0 kWh/kWp/year.
3. As mentioned above, the Capapcity Utilization Factor (CUF) for the propsed solar plant, as per Global Solar Atlas & PVSyst is 17.76% & 17.14% respectively.
4. However data from Global Solar Atlas may not consider the specific module factors which are covered in PVSyst report as its limitation.

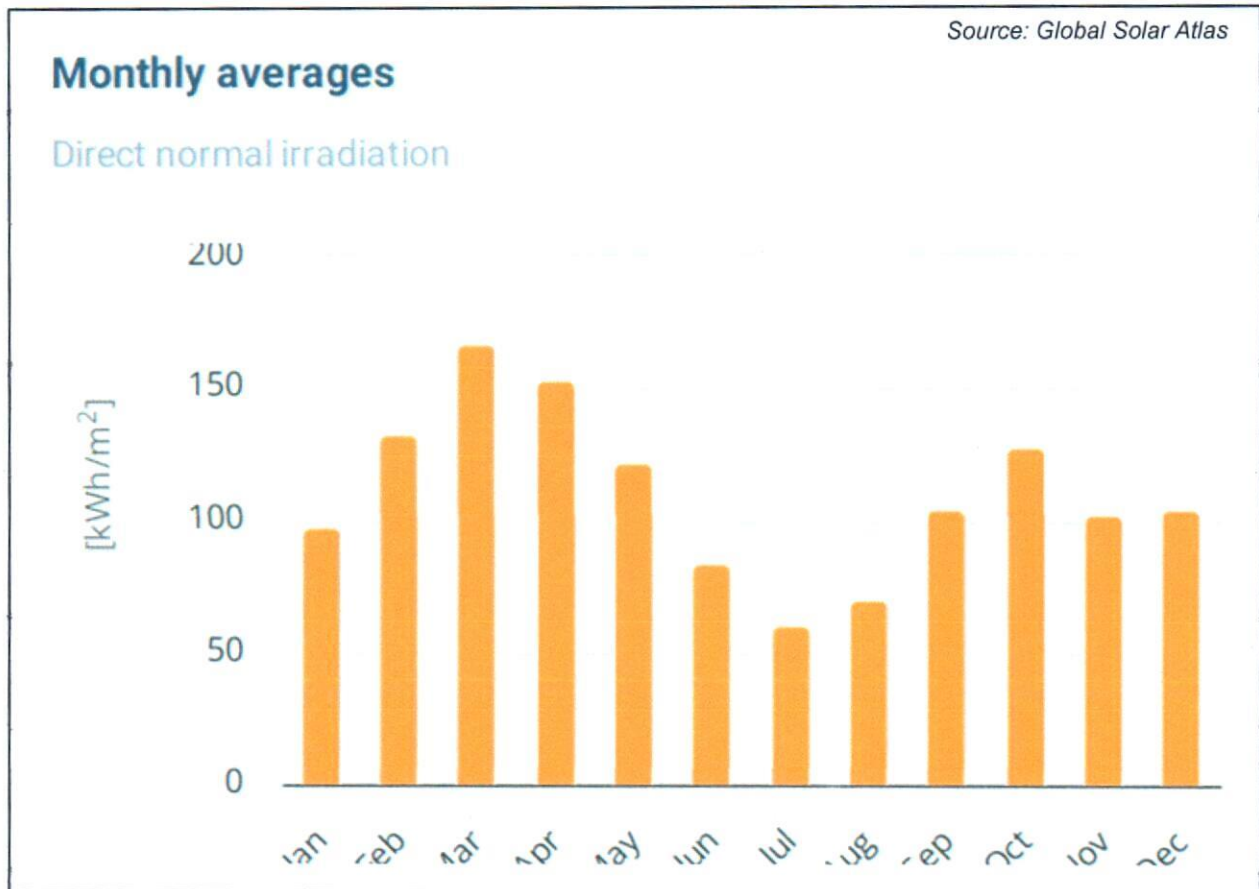


LIE REPORT

4.00 (± 5%) MWp GRID CONNECTED

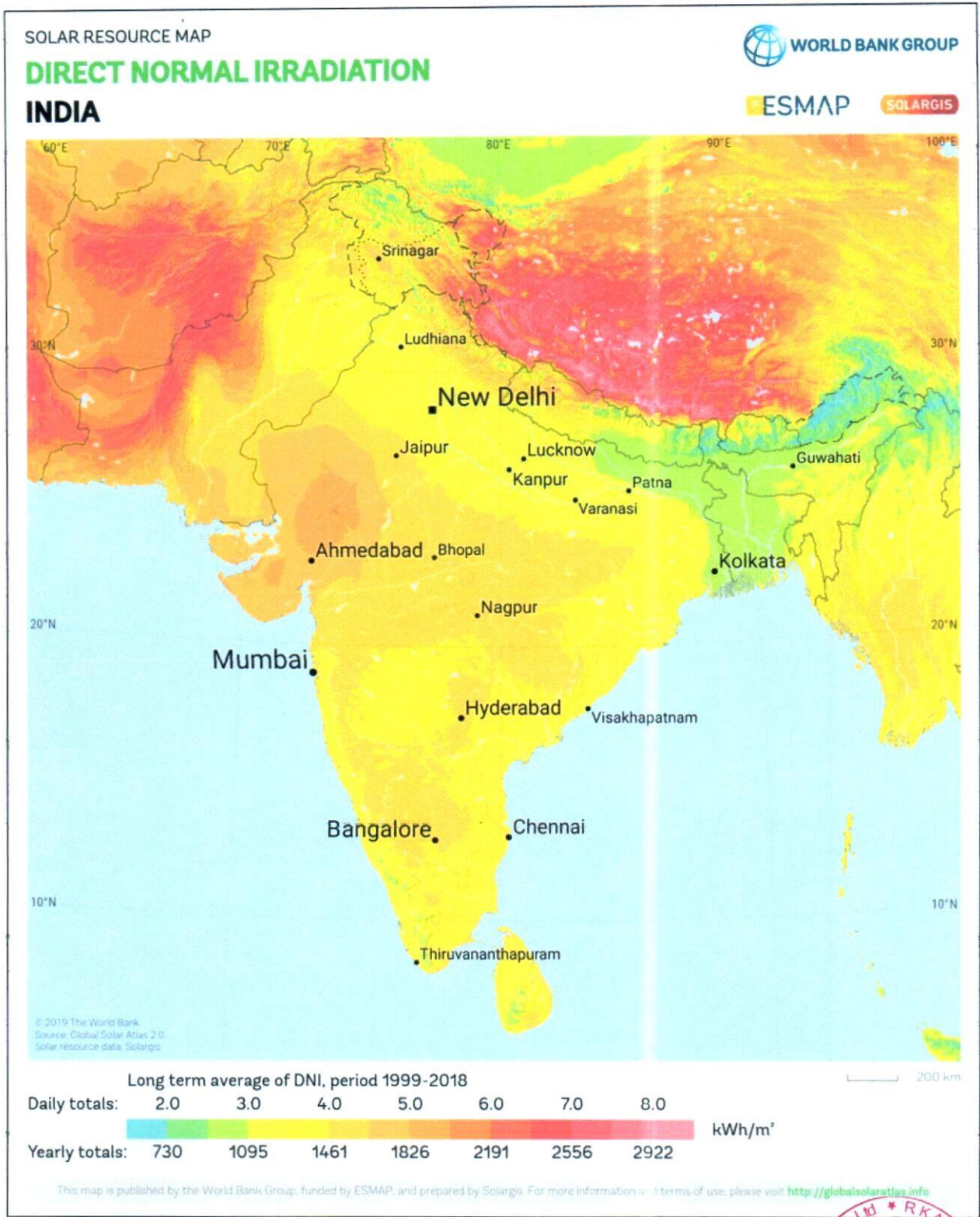
GROUND MOUNTED SOLAR POWER PLANT

Monthly averages- Direct Normal Irradiation (kWh/m²)



LIE REPORT

4.00 (± 5%) MWp GRID CONNECTED
GROUND MOUNTED SOLAR POWER PLANT



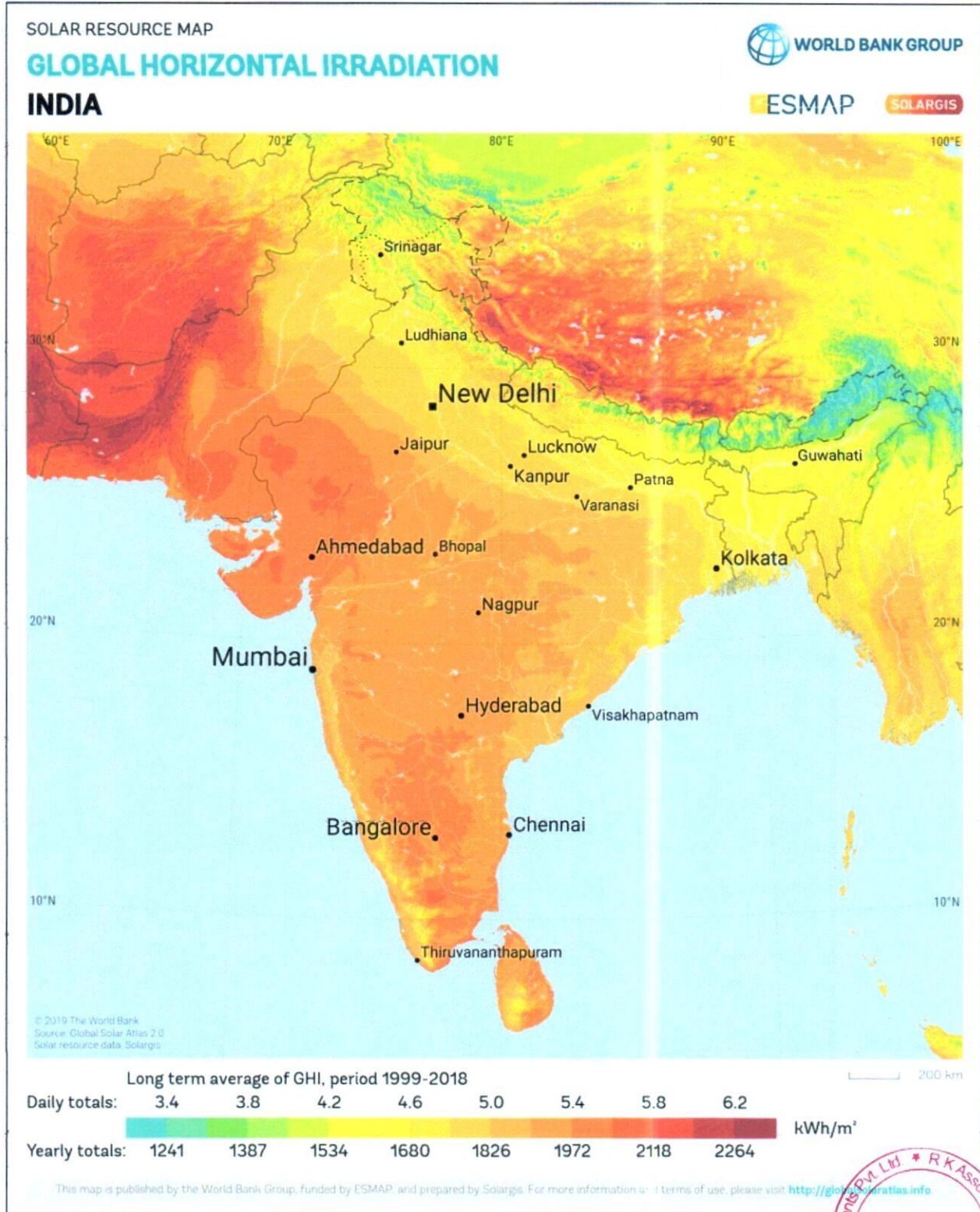
JK Tyre & Industries Limited Plant is between 3.0 to 4.0.



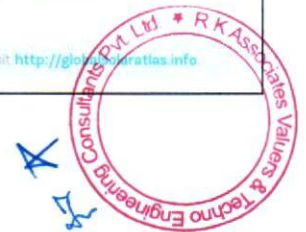
LIE REPORT

4.00 (± 5%) MWp GRID CONNECTED

GROUND MOUNTED SOLAR POWER PLANT

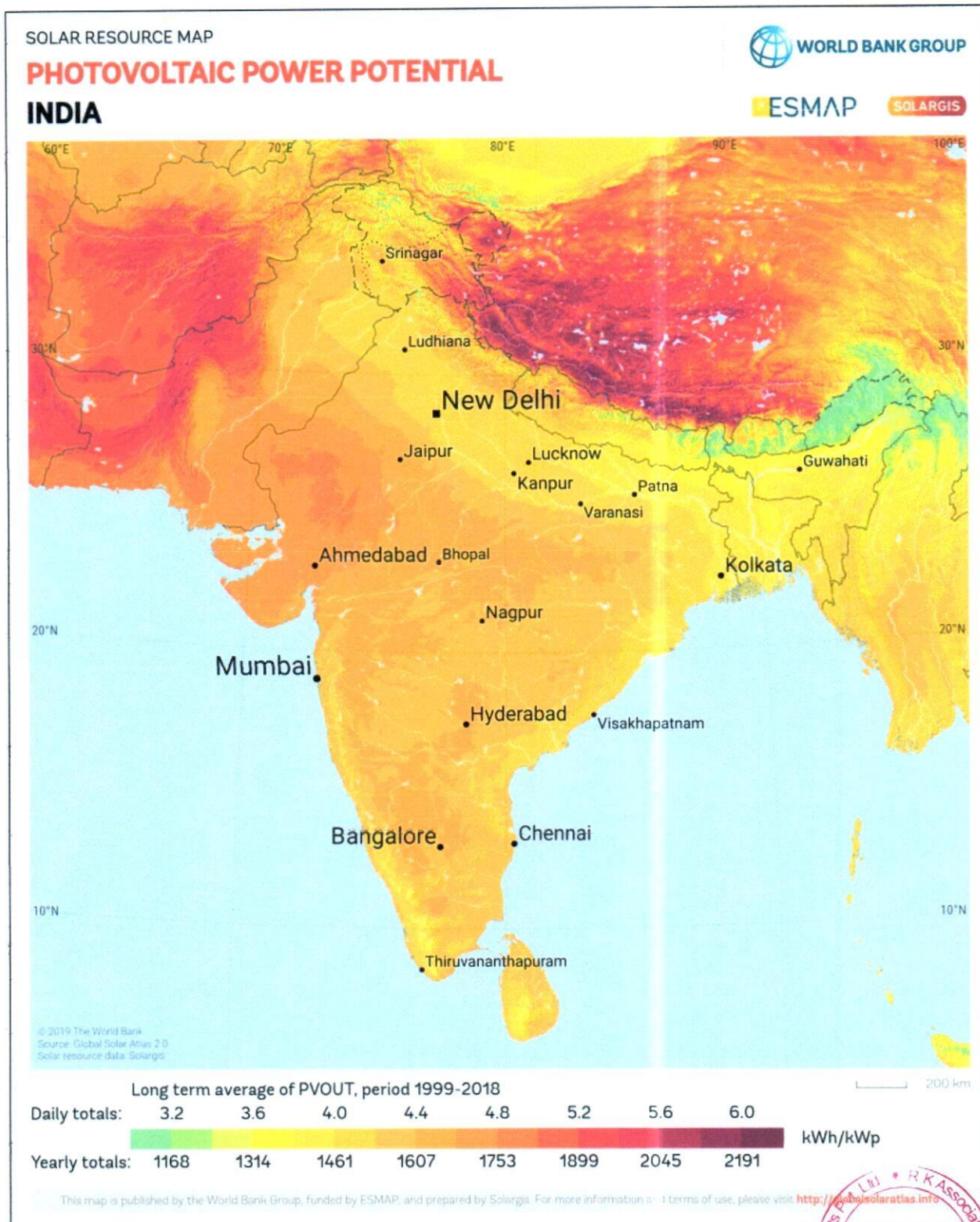


JK Tyre & Industries Limited Plant 5.0 to 5.4.

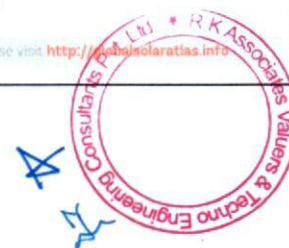


LIE REPORT

4.00 (± 5%) MWp GRID CONNECTED
GROUND MOUNTED SOLAR POWER PLANT



JK Tyre & Industries Limited Plant 4.4 to 4.8.



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4.00 (± 5%) MWp GRID CONNECTED

GROUND MOUNTED SOLAR POWER PLANT

PART E

POWER PURCHASE AGREEMENT TERMS

As per copy copy of PPA dated 23rd August 2024, the total proposed capacity of the solar power plant is 4.00 MWp (± 5%). As on date, company has signed PPA to install the power plant and supply power. The PPA had been signed between **M/s JK Tyre & Industries Limited** and **M/s Truere Galaxy Private Limited**. Details as mentioned in PPA are tabulated below:

S. No.	Offtaker	DC Capacity (kWp)	Tariff (Rs./kWh)	PPA Date	PPA Tenure
1	JK Tyre & Industries Limited	~4000	4.25	23-08-2024	15 Years
Total		~5000			

Units as per PPA (Units/Contract Year)		
Year	Estimated Energy	Guaranteed Energy
1 st	62,44,000	56,19,600
2 nd	60,87,900	54,79,110
3 rd	60,44,192	54,39,773
4 th	40,00,484	54,00,436
5 th	59,56,776	53,61,098
6 th	59,13,068	53,21,761
7 th	58,69,360	52,82,424
8 th	58,25,652	52,43,087
9 th	57,81,944	52,03,750
10 th	57,38,236	51,64,412
11 th	56,94,528	51,25,075
12 th	56,50,820	50,85,738
13 th	56,07,112	50,46,401
14 th	55,63,404	50,07,064
15 th	55,19,696	49,67,726

Note:- Only relevant terms are mentioned above which are important in report in respect to energy generation only for illustration purpose.



PART F

CURRENT STATUS OF WORK

As on date, Solar Panel Installation work has not been started yet. As per desktop analysis using Google tool, we did not find any shadow/obstruction on shed where solar panels are proposed to be installed.

As per google satellite measurement tools, total ground area is about 45,000 sqm. The approximate size of 550 Wp Solar Panel is 2279 x 1133 x 30 (mm) and the total quantity of solar panels to be installed is ~7280 nos. Thus, 19,000 sqm are is sufficient to install 4.00 MW solar plant.

Please refer to the image attached below:-



Based on analysis using Google's imagery tool, no significant shadows or obstructions were detected on the ground that could block direct sunlight. Additionally, an existing ground-mounted solar power plant was observed in the area, indicating that the location has been previously assessed and utilized for solar energy generation.



PART G**PROJECT COST & EXPENDITURE**

1. **PROJECT COST:** As per DPR shared by the company, the total project cost for installation of 4.00 MW solar project is Rs. 15.80 Cr. including GST. Cost break-up shared by the company is as follows:-

S.No.	Item	Cost/kW (In Rs. Cr.)
1	EPC Cost + GST	14.00
	Pre-Operational Expenses	0.70
2	IDC	1.10
Total Cost of the project (In Rs. Crore)		15.80
Total Cost In Rs. per kW		39,500

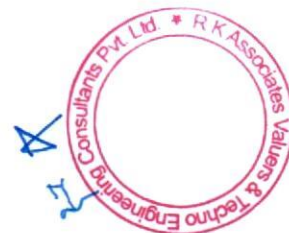
Further, a contract agreement dated 23rd August 2024 for Engineering, procurement, Installation & Commissioning of Ground Mounted Solar PV Plant was signed between M/s Truere Galaxy Private Limited (Owner) and M/s Oriana Power Private Limited (Developer) to supply of Power to the Manufacturing Unit and requires around 4.00 MWp a Developer for design, engineering, procurement, supply, erection, construction, testing and commissioning and post successful commissioning and operation and maintenance of the said Facility for 15 years. the contract Vlaue is Rs. 14.00 Cr.

Observations and Remarks:

- a. Project cost calculated on the basis of the Benchmark Cost provided by the MNRE has been tabulated below:

S. No.	Particulars	Benchmark Cost (In Rs./kW)	Project Capacity (In MW)	Total Project Cost (Excluding GST) (In Rs.)	Total Project Cost (Including ~14% GST) (In Rs.)
1	As per Ministry of New & Renewable Energy	35,886*	4.00	14,35,44,000	16,33,53,072
			4.00 MWp		~Rs. 16.34 Cr.

*Benchmark cost for 2021-22 Excludes GST



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GROUND MOUNTED SOLAR POWER PLANT

b. Project cost calculated on the basis of market comparable:

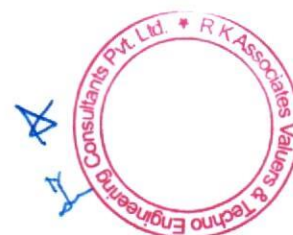
S. No.	Particulars	Including GST	Remark
		Per KW Cost (In Rs.)	
1	Subject project installation cost	39,500	As per Company
Market Research Details			
Market Research			
2	Reference- 1	44,564	Refer Annexures
3	Reference- 2	46,088	
5	Reference- 4	41,500	
6	Reference- 5	35,800	

- c. The overall project cost is slightly higher than that of Benchmark cost.
- d. As per our analysis and market research, the installation cost of Solar Power Plant varies from **Rs. 35,800/- per KW to Rs. 46,000/- per KW**. For the smaller setups the price is higher and for large set-up, price is less.
- e. The implementation cost of the said project is Rs. 39,500/- per kW which is in between of market comparable. Thus, we can say that the cost of the project is satisfactory.
- f. The project cost solely depends upon the project location, contractors profit, type of module and its supporting structures, make, etc.

Note:

- Project cost is analyzed based on lump sum cost only and not item wise.
- Project cost is assessed for the date of this report only and due to price fluctuations, it may vary from time to time.

2. EXPENDITURE: Details of expenses incurred till date are not shared with us. Thus, we cannot comment upon expenditure incurred till date on the project.



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PART H

PHOTOGRAPHS

Since the installation work related to solar panels is yet to start and this is just a Desktop LIE based upon documents provided. Thus, Photographs are not available



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GROUND MOUNTED SOLAR POWER PLANT

PART I

OTHER DOCUMENTS & REFERENCES

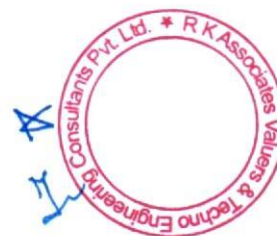
Market Comparables:

Annexure-1

3.24MWp Roof/Ground Mounted Solar PV Plant – Commercial.

SN	Description	Qty.	Price
1	Solar Panel: multi/Mono-Si, IEC certification, BIS certification and other relevant standard as per Government	3240kWp	Rs. 7,79,68,800 Including duties and taxes
2	Solar Inverter: String inverter with multiple MPPT provision, Outdoor Mounted, IP65 Protection and all relevant standards as per Government	3240kWp	Rs. 1,15,38,800 Including duties and taxes
3	BOS: Module Mounting Structure, DC Cable, AC Cable, LT Panel, Civil material, Conduit, MCS, RMS, Earthing and Protection Systems, Lightning Arrester, Weather Sensor and monitoring system, Metering Unit, Discom approvals etc.	3240kWp	Rs. 4,33,35,500 Including duties and taxes
4	I&C: Supply of civil material, Installation, testing and commissioning of Solar Power plant as per site requirement	3240kWp	Rs. 1,15,43,350 Including duties and taxes
		3240kWp	Rs. 14,43,86,450 Including duties and taxes

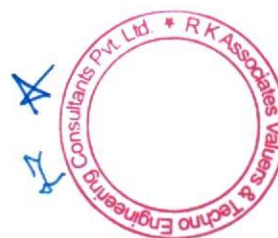
- Freight & Transit Insurance: Inclusive
- Taxes: GST – as per government norms.
- Net-metering fee will be paid by consumer
- Any change in Tax/ Duties shall be borne by the Purchaser
- Excludes:
 - Any approval
 - Anything out of given BOQ



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SN	Description	Qty.	Price
1	Solar Panel: multi/Mono-Si, IEC certification, BIS certification and other relevant standard as per Government	1190kWp	Rs. 29,916,000 Including duties and taxes
2	Solar Inverter: String inverter with multiple MPPT provision, Outdoor Mounted, IP65 Protection and all relevant standards as per Government	1190kWp	Rs. 44,32,000 Including duties and taxes
3	BOS: Module Mounting Structure, DC Cable, AC Cable, LT Panel, Civil material, Conduit, MCS, RMS, Earthing and Protection Systems, Lightning Arrester, Weather Sensor and monitoring system, Metering Unit, Discom approvals etc.	1190kWp	Rs. 16,620,000 Including duties and taxes
4	I&C: Supply of civil material, Installation, testing and commissioning of Solar Power plant as per site requirement	1190kWp	Rs. 38,77,174 Including duties and taxes
		1190kWp	Rs. 54,845,174 Including duties and taxes
<ul style="list-style-type: none">• Freight & Transit Insurance: Inclusive• Taxes: GST – as per government norms.• Net-metering fee will be paid by consumer• Any change in Tax/ Duties shall be borne by the Purchaser• Excludes-<ul style="list-style-type: none">▪ Any approval▪ Anything out of given BOQ			



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GROUND MOUNTED SOLAR POWER PLANT



CleanHedge Verde Pvt Ltd
A-87, Okhla Phase-II, New Delhi - 110020
01143536666
www.clean-hedge.com

ANNEXURE B: LAND + INFRASTRUCTURE

PROJECT COST

#	Commercial Particulars	Unit (MWp)	Total INR
1	Supply of 3.3 MWp Solar PV Plant with a fix tilted structure	3.3	13,69,50,000 (excluding GST)

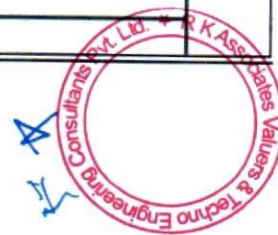
		authorities in all respects,	
		h) Ensure the adherence to all applicable rules regarding project registration with the State Nodal Agency (JDVNL) in line with the provisions of the applicable policies / regulations of the State of Rajasthan.	
	Total Price	INR 5.64 Crores (inclusive of GST)	
	Payment terms	Refer Annexure – II	
	Insurance	All kind of coverage of insurances (Contractor's All Risk, workmen insurance policy etc.) will be the responsibility of the contractor and the price is inclusive of insurance cost. Contractor shall also take any Transit	

Sub: Supply Order for the Supply of Solar Modules for 3.53 MWdc Kusum Solar Projects

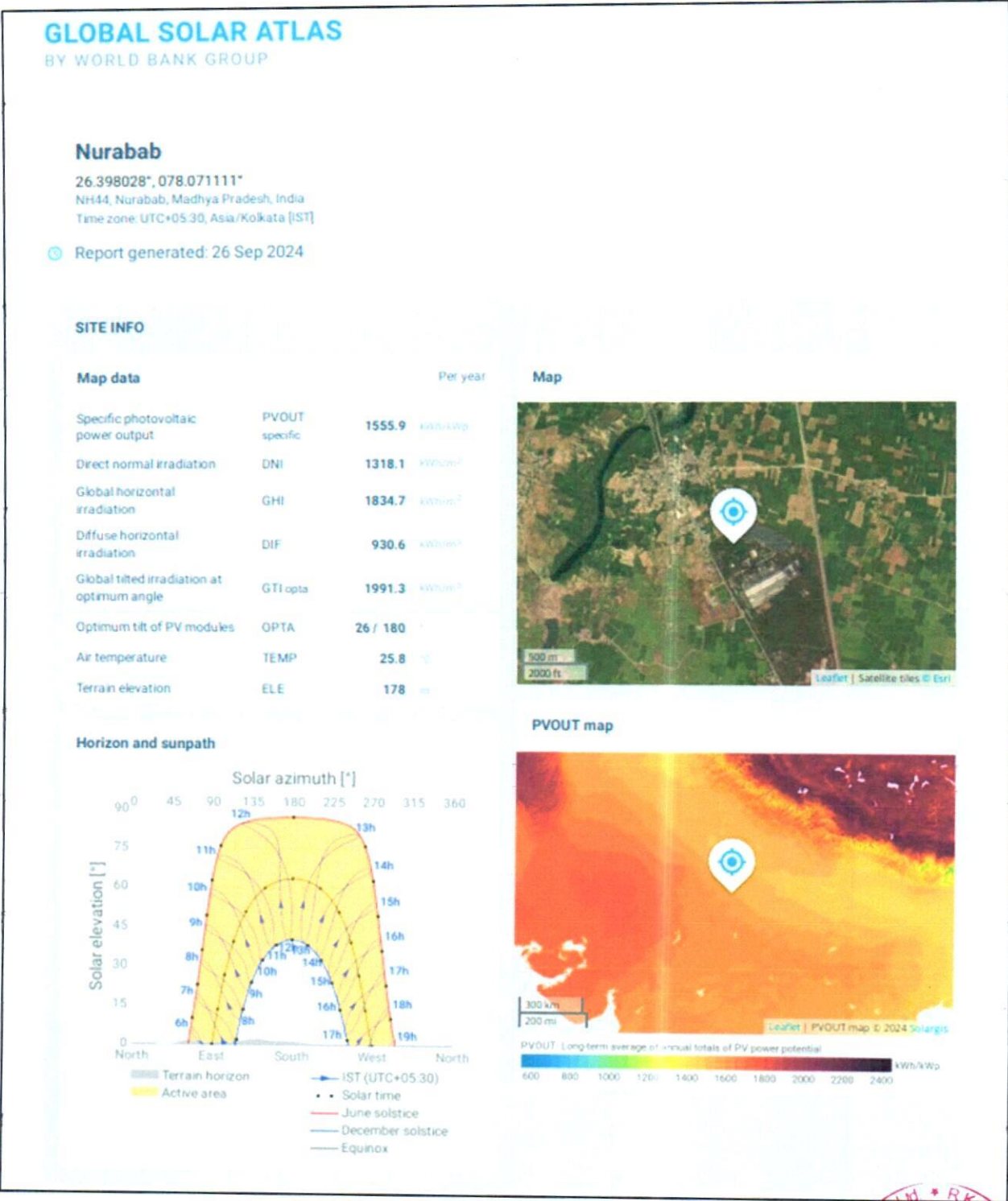
Dear sir,

We are pleased to place this Supply Order (SO) to the captioned subject on following terms & conditions.

Material Description	Supply Order for Supply of Solar PV Modules for 3.53 MWdc Kusum Solar Projects, at different locations as per details attached along with Annexure 1
Total SO Amount	INR 7.00 Crores (Inclusive of GST)
Quantity & Specifications	Refer to the Annexure 1



Data by Global Solar Atlas by World Bank Group



LIE REPORT

4.00 (± 5%) MWp GRID CONNECTED
GROUND MOUNTED SOLAR POWER PLANT

GLOBAL SOLAR ATLAS BY WORLD BANK GROUP

PV ELECTRICITY AND SOLAR RADIATION

Annual averages

Direct normal irradiation

1325.9

kWh/m² per year

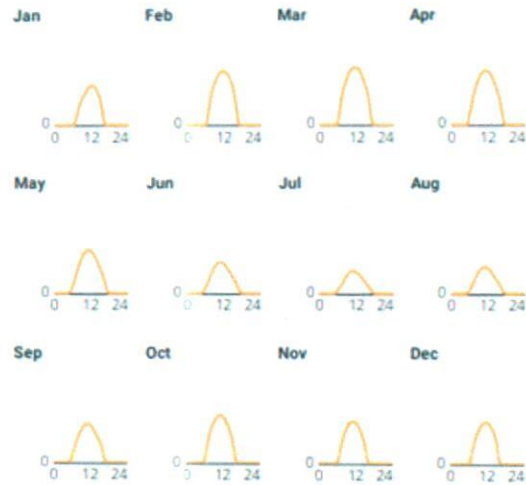
Monthly averages

Direct normal irradiation



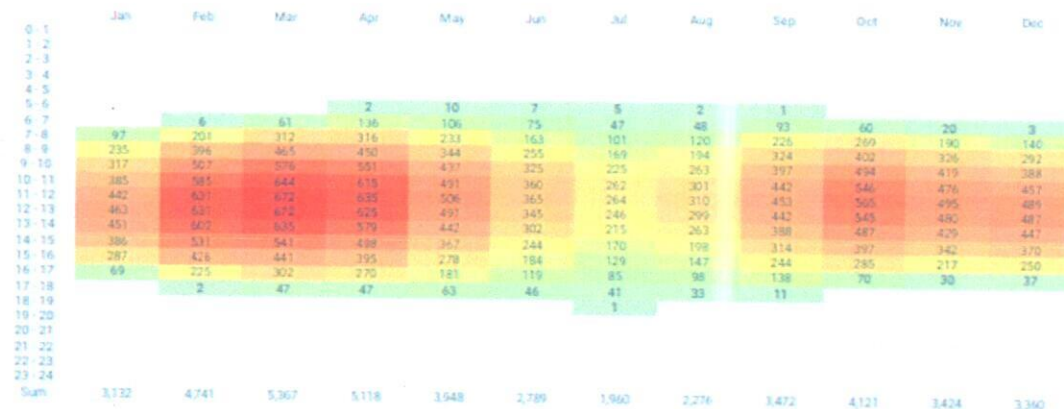
Average hourly profiles

Direct normal irradiation [W/m²]



Average hourly profiles

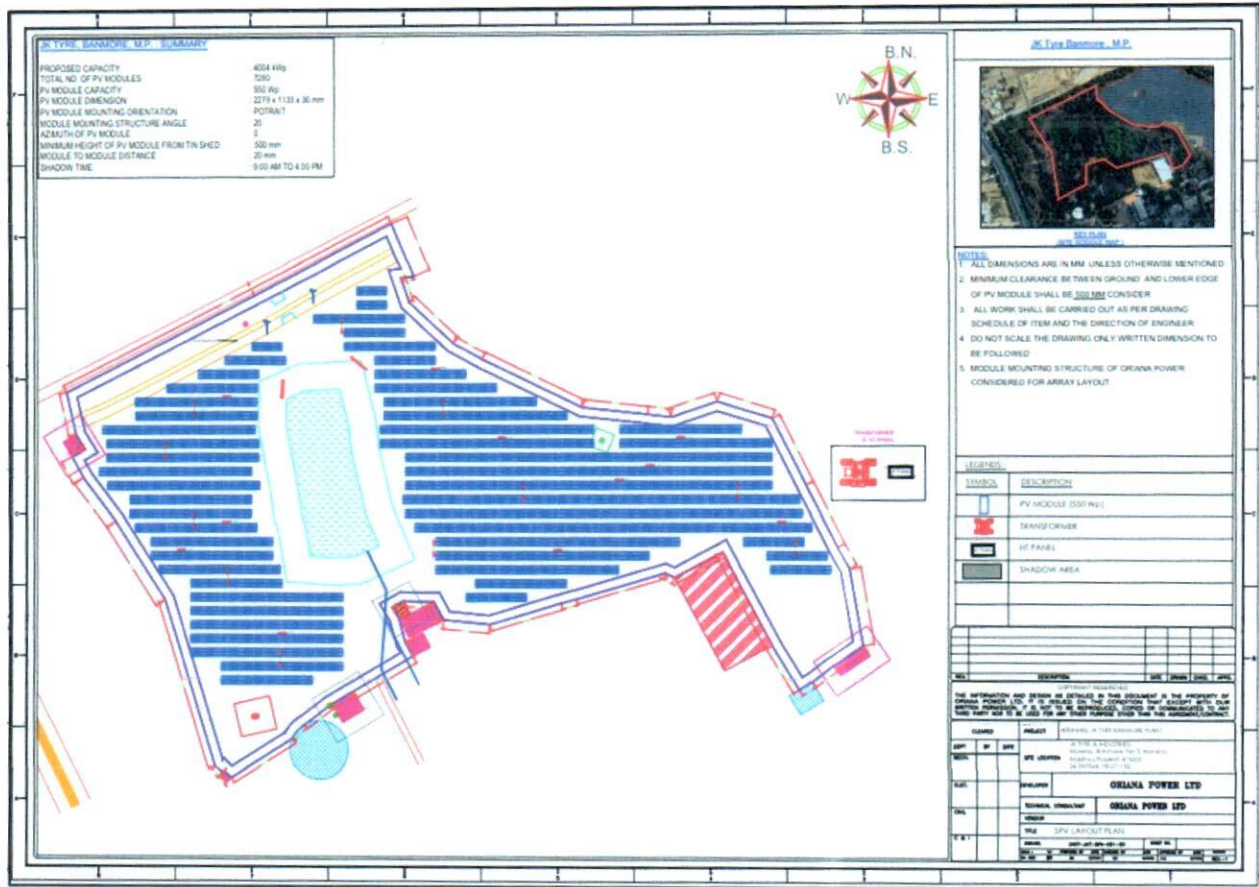
Direct normal irradiation [W/m²]



LIE REPORT

4.00 (± 5%) MWp GRID CONNECTED
GROUND MOUNTED SOLAR POWER PLANT

Layout



LIE REPORT

4.00 (± 5%) MWp GRID CONNECTED

GROUND MOUNTED SOLAR POWER PLANT

Copy of PPA

BY AND BETWEEN

JK Tyre & Industries Ltd., a company within the meaning of the Companies Act, 2013 having its Corporate Office at Patriot House, 3 Bahadur Shah Zafar Marg, New Delhi - 110002, India, and having one of its tyre manufacturing facilities at Banmore, Madhya Pradesh - 475005, India (hereinafter referred to as "**JKTIL**" which expression shall unless repugnant to the context or meaning thereof include its successors and permitted assigns) of the First Part;

AND

TRUERE Galaxy Private Limited, a company within the meaning of the Companies Act, 2013, having its registered office at 202-203, Udyog Kendra Extension-II, Greater Noida, Bsrakh, Gautam Buddha Nagar, Uttar Pradesh - 201306, India (hereinafter referred to as "**TGPL**" which expression shall unless repugnant to the context or meaning thereof include its successors and permitted assigns) of the Second Part.

"**JKTIL**" and "**TGPL**" are individually referred to as the "**Party**" and collectively, referred to as the "**Parties**".

WHEREAS

- A. JKTIL has an existing connection from the local distribution licensee, **MPMKVVCL**, from which it sources electricity for its tyre manufacturing facility at Banmore, Morena, and Uttarakhand (hereinafter referred to as "**Facility**"). JKTIL now wishes to procure a certain portion of its electricity requirement by setting up a solar power plant within the Facility;
- B. TGPL has represented to JKTIL that it shall design, finance, build and operate a **4 MWp** (mega-watt peak) solar power plant mounted on the **ground in the open area** at the Facility (hereinafter referred to as "**Power Plant**"), and shall deliver the entire electricity generated from the Power Plant to JKTIL for consumption at the Facility;
- C. TGPL has further represented to JKTIL that the Power Plant shall qualify as a 'Captive Power Plant' as envisaged under the Electricity Rules 2005 promulgated under the Electricity Act 2003, subject to compliance by both the Parties with the terms of the Transaction Documents. However, it shall be a continuous responsibility of both the Parties to keep the Power Plant always qualified as 'Captive



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LIE REPORT

4.00 (± 5%) MWp GRID CONNECTED
GROUND MOUNTED SOLAR POWER PLANT

PVSyst Report



PVsyst V7.4.5

VC0, Simulation date:
09/25/24 20:43
with v7.4.5

Project: 4004 kWp JK TYRE BANMORE PLANT

Variant: New simulation variant

Oriana power private limited (India)

Project summary

Geographical Site

Nürabād

India

Situation

Latitude 26.40 °N

Longitude 78.07 °E

Altitude 169 m

Time zone UTC+5.5

Project settings

Albedo 0.20

Meteo data

Nürabād

Meteonorm 8.1 (1996-2015), Sat=100% - Synthetic

System summary

Grid-Connected System

PV Field Orientation

Sheds

Tilt 20 °

Azimuth 0 °

Unlimited sheds

Near Shadings

Mutual shadings of sheds

User's needs

Unlimited load (grid)

System information

PV Array

Nb. of modules

7280 units

Pnom total

4004 kWp

Inverters

Nb. of units

1 unit

Pnom total

3300 kWac

Pnom ratio

1.213

Results summary

Produced Energy 6168077 kWh/year Specific production 1540 kWh/kWp/year Perf. Ratio PR 85.53 %

Table of contents

Project and results summary	2
General parameters, PV Array Characteristics, System losses	3
Main results	5
Loss diagram	6
Predef. graphs	7
P50 - P90 evaluation	8
Single-line diagram	9



LIE REPORT

4.00 (± 5%) MWp GRID CONNECTED

GROUND MOUNTED SOLAR POWER PLANT

Cost Details

Sl. No.	Particulars		Estimated Cost (Rs. in Crores)
1	EPC Cost (with GST)	4.000	14.00
2	Decommissioning Charges		0.70
3	Interest During Construction		1.10
	Project Cost		15.80
	MEANS OF FINANCE		
1	Equity		4.74
2	Term Loan		11.06
	TOTAL		15.80
	DSRA		0.92
	Debt Equity Ratio		2.33
	Expected DCCO		30-09-2025



EPC Contract**CONTRACT AGREEMENT FOR ENGINEERING, PROCUREMENT, INSTALLATION & COMMISSIONING OF 4000 KWp DC GROUND MOUNTED SOLAR PV PLANT**

This Contract Agreement for design, manufacture, supply, erection, testing and commissioning including warranty, operation and maintenance of Solar Photovoltaic Plant ("**Agreement**") is made and entered into as of 23rd Aug 2024 at Noida, Uttar Pradesh;

BY AND BETWEEN

TRUERE GALAXY PRIVATE LIMITED, a company incorporated under Companies Act, 1956, and existing under Companies Act, 2013, bearing CIN No. **U35105UP2024PTC201406** and having its registered office at 202-203, Udyog Kendra, Extn-II, Greater Noida, BISRakh, Gautam Buddha Nagar-201306, Uttar Pradesh (hereinafter referred to individually, as the "**Owner / TGPL**", which expression shall, unless repugnant to the context or meaning thereof, include its attorneys, successors and assigns) of the FIRST PART;

AND

ORIANA POWER PRIVATE LIMITED, (Formerly known as **Oriana Power Private Limited**) a company incorporated under the Companies Act, 2013, bearing CIN No. **L35990DL2013PLC248685** and having its registered office at Flat No. 412A, Building No. 43, Chiranjiv Tower, Nehru Place, South Delhi, New Delhi, Delhi, India, 110019 and its corporate office at First Floor C-103 Sector-2 Noida, Gautam buddha Nagar, Noida, Ghaziabad, Noida, Uttar Pradesh, India, 201301 acting through its authorised representative, (hereinafter referred to as "**Developer**", which expression shall, unless repugnant to the context or meaning thereof, include its attorneys, successors and permitted assigns) of the OTHER PART

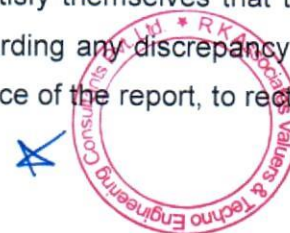
The Owner and the Developer shall be jointly referred to as "**Parties**" and individually as "**Party**", as the context may require.

- A. The Owner is *inter alia* engaged in the business of power distribution ("**Business**") and has established a unit at 202-203, udyog kendra, Extn-II, Greater Noida, BISRakh, Gautam Buddha Nagar-201306, Uttar Pradesh ("**Distribution Unit**").
- B. Owner desires to construct a Solar PV-based power plant having installed capacity of around 4.00 MWp ("**Facility**") for supply of Power to the Manufacturing Unit and requires a Developer for design, engineering, procurement, supply, erection, construction, testing and commissioning and post successful commissioning and operation and maintenance of the said Facility for 15 years.



PART J**DISCLAIMER**

1. No employee or member of R.K Associates has any direct/ indirect interest in the Project.
2. This report is prepared based on the standard checklist of documents sought from them and further based on our assumptions and limiting conditions. All such information provided to us has been relied upon in good faith and we have assumed that it is true and correct in all respect.
3. Although we have taken adequate care as much as professionally possible but shall not be liable in future for the incomplete, fabricated, false or distorted information / data provided for the purpose of this assignment.
4. This report offers a General analysis of the project within the specified scope, focusing on total project cost, CUF, and irradiation data. For the sake of clarity it does not encompass any other analysis such as audit, design, DPR, TEV study which is not in scope of work.
5. Structural stability certificate and load stress analysis in respect to the building on which solar panels are required to be installed is not taken separately considering that the implementing agency will take care of all such curcial points during Project implementation.
6. Project implementation, execution, operation is the sole responsibility of the project proponent and for the non-functioning, defaults, defraud of the company & its promoters, R.K Associates shall not be held responsible.
7. This report reflects our opinion based on our knowledge and technical expertise. However, other expert opinions may vary. Therefore, it should not be regarded as the sole opinion.
8. All Pages of the report including annexures are signed and stamped from our office. In case any paper in the report is without stamp & signature then this should not be considered a valid paper issued from this office.
9. Though adequate care has been taken while preparing this report as per its scope, but still we can't rule out typing, human errors, over sightedness of any information or any other mistakes. Therefore, the concerned organization is advised to satisfy themselves that the report is complete & satisfactory in all respect and intimation regarding any discrepancy in the report within 15 (Fifteen) days in writing from the date of issuance of the report, to rectify these timely.



LIE REPORT

4.00 (± 5%) MWp GRID CONNECTED
GROUND MOUNTED SOLAR POWER PLANT

10. R.K Associates encourages its customers to give feedback or inform concerns over its services through proper channel at le@rkassociates.org in writing within 30 days of report delivery. After this period no concern/ complaint/ proceedings in connection with the Lender's Independent Engineering Services will be entertained due to possible change in situation and condition of the subject Project.
11. Our Data retention policy is of THREE YEAR. After this period, we remove all the concerned records related to the assignment from our repository. No clarification or query can be answered after this period due to unavailability of the data.
12. This Lender's Independent Engineering report is governed by our (1) Internal Policies, Processes & Standard Operating Procedures, (2) Information/ Data/ Inputs given to us by the client and (3) Information/ Data/ Facts given to us by our field/ office technical team. Management of R.K Associates never gives acceptance to any unethical or unprofessional practice which may affect fair, correct & impartial assessment and which is against any prevailing law. In case of any indication of any negligence, default, incorrect, misleading, misrepresentation or distortion of facts in the report then please bring all such act into notice of R.K Associates management so that corrective measures can be taken instantly.
13. R.K Associates never releases any report doing alterations or modifications from pen. In case any information/ figure of this report is found altered with pen then this report will automatically become null & void.

FOR INTERNAL USE

SURVEY ANALYST	VALUATION ENGINEER	L1/ L2 REVIEWER
NA	Abhinav Chaturvedi	Sr. V.P. Projects
