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Dated: 23-05-2024

LENDER'S INDEPENDENT ENGINEER'S REPORT

OF

410.30 ($\pm 7.5\%$) KWp GRID CONNECTED ROOF-TOP SOLAR POWER PLANT

PROPOSED TO BE SET-UP AT

**M/S SAMSON CONTROLS PRIVATE LIMITED IN D-281, RANJANGAON MIDC, TAL,
SHIRUR, DISTRICT-PUNE, MAHARASHTRA**

DEVELOPER:

M/S SAMARITAN SOLAR ENERGY PRIVATE LIMITED

- Corporate Valuers
- Business/ Enterprise/ Equity Valuations
- Lender's Independent Engineers (LIE)
- Techno Economic Viability Consultants (TEV)
- Agency for Special Audit Monitoring (SAM)
- Project Techno-Financial Advisors
- Chartered Engineers
- Industry/ Trade Rehabilitation Consultants
- NPA Management
- Panel Valuer & Techno Economic Consultants for PSU Banks

REPORT PREPARED FOR

**STATE BANK OF INDIA, SME UDYOG SADAN,
PATPARGANJ INDUSTRIAL AREA, NEW DELHI**

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

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CORPORATE OFFICE:

D-39, 2nd floor, Sector 2, Noida-201301

Ph - +91-0120-4110117, 4324647, +91 - 9958632707

E-mail - valuers@rkassociates.org | Website: www.rkassociates.org

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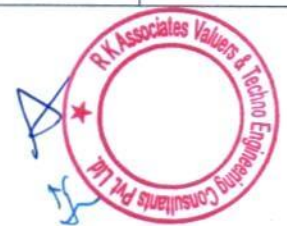


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PART A

REPORT SUMMARY

1.	Name of the Project	410.30 ($\pm 7.5\%$) KWp Grid Connected Solar Power Plant
2.	Project Location	M/s Samson Controls Private Limited In D-281, MIDC Ranjangaon, Tal. Shirur, District-Pune, Maharashtra
3.	Seller Company	M/s Samaritan Solar Energy Private Limited
4.	Prepared for Organization	State Bank Of India, SME Udyog Sadan, Patparganj Industrial Area, New Delhi
5.	LIE Consultant Firm	M/s. R.K. Associates Valuers & Techno Engineering Consultants (P) Ltd
6.	Work Oder Details	Via E-mail dated 11-01-2024
7.	Date of Survey	Not applicable
8.	Date of Report	23-05-2024
9.	Details & documents provided by	Bank
10.	Report Type	Lender's Independent Engineering Report
11.	Purpose of the Report	Review of Project cost, CUF and Irradiation Data, current status to facilitate bankers to take business decision on the Project
12.	Scope of the Report	To review Project cost and examine the current status of installation/ Commissioning of the Project
13.	Documents produced for Perusal	a. Copy of Power Purchase Agreements (PPAs) b. Copy of Plant Layout c. Copy of PV Syst reports
14.	Annexure with the Report	• Benchmark Cost by MNRE • Market Comparables • Global Solar Atlas by World Bank Group



PART B**INTRODUCTION**

- 1. NAME OF THE PROJECT:** 410.30 ($\pm 7.5\%$) KWp Grid Connected Solar Power Plant in RESCO Model to be installed at M/s Samson Controls Private Limited located at D-281, MIDC Ranjangaon, Tal. Shirur, District-Pune, Maharashtra by M/s Samaritan Solar Energy Private Limited.
- 2. PROJECT OVERVIEW:** M/s Samaritan Solar Energy Private Limited is into Manufacturing, supplying, installing and distribution of electric power generation using solar energy.

M/s Samson Controls Private Limited had signed Power Purchase Agreement (PPAs) with **M/s Kirloskar Solar Technologies Private Limited** for Design, Manufacture, Supply, Erection, Testing and Commissioning including Warranty, Operation & Maintenance of roof-top solar power plant having DC capacity of **410.30 ($\pm 7.5\%$) KWp for 15 years** of plant operation/ PPA tenure.

The agreement was further novated to MPRNP vide Novation and Assignment Agreement dated 27th December 2023.

Further, **M/s MPRNP Energy Udyog Private Limited** has transferred its duties, obligation & liabilities to **M/s Samaritan Solar Energy Private Limited** through Novation and Assignment Agreement dated **29th March 2024** which was signed between **M/s MPRNP Energy Udyog Private Limited** and **M/s Samson Controls Private Limited** and **M/s Samaritan Solar Energy Private Limited**, in which Samson has unconditionally agreed to release and discharge the MPRNP from MPRNP's obligations, duties, liabilities and assign and transfer MPRNP's rights and benefits as per the Original Agreement in favour of **Samaritan** (except Operation and Maintenance of the Solar Power Plants by Kirloskar Solar Technologies Private Limited for first two years subject to renewal by Samaritan).

As per details dated 21st March 2024 shared by the company, the total project cost is estimated at a price of Rs. 1.95 Cr. including duties and taxes. M/s Samaritan Solar Energy Private Limited has approached SBI 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 per information shared by the company, 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: -

MNRE had introduced the PPP/RESCO model policy setting tariff rates for solar to be arrived on transparent competitive bidding model through PPP route.

*The RESCO model is one of the methods of implementing rooftop solar installations. 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 rooftop 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 rooftop 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 Samaritan Solar Energy 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..

4. PURPOSE OF THE REPORT: To provide fair detailed analysis report to the Bank based on the "in-scope points" mentioned above for facilitating them to take appropriate business decision on the Project.

5. METHODOLOGY ADOPTED:

- a. To gather relevant data/ information/ documents related to Project planning, execution, current status.
- b. Study of copy of Project Planning documents/ Agreements to know the scope of work of the company.
- c. To procure, study and analysis of any additional information, data, and documents required/ provided by the company.
- d. Research about the Project/ sector from the sources in the public domain.
- e. Correlation of the provided information against Industry/ sector benchmarks/ trend.
- f. Information compilation, analysis and reporting.



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PART C

PROJECT DETAILS AND KEY TECHNICAL PARAMETERS

As per the information and copy of documents shared by the management of the company, details of the subject plants has been tabulated below:

S.No.	Offtaker	DC Power (kWp)	AC Power (kWp)
1	Samson Controls Private Limited	410.30	330.00
Total		410.30	330.00

Location Map: -



Location: Samson Controls Pvt. Ltd., Ranjangaon MIDC

GPS: 18°47'32.8"N 74°17'34.1"E

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

S. No.	Particulars	410.30 KW
1	No. of modules	753 Modules
2	Modules capacity	Kirloskar 545Wp (Mono-Perc)
3	Invertor make	Sungrow
4	Invertor AC Output	100kw x 3 nos & 30kw x 1 nos.
5	Invertor AC Voltage	400VAC
6	DC capacity	410.38 kWp
7	AC capacity	330 kW
8	Roof Tilt	10° Roof Slope



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):

S. No.	Plant	As per PVSyst (In kWh/kWp/Year)		Performance Ratio (%)	CUF (%)
		P50	P90		
1	Samson Control 410.38 KW	1,789	1,747	79.86%	21%

Estimated Annual production (kWh):

S. No.	Plant	As per PPA (kWh/Year)	As per PVSyst (kWh/Year)	As per DPR (kWh/Year)
1	Samson Control 410.38 KW	5,74,420	7,33,919	9,69,555

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	Samson Control 410.38 KW	1053.98	938.04	1789	1611.40

Observations and Remarks:

1. As per above inputs and analysis estimated annual production and specific production as per PvSyst report and as per Global Solar Atlas data found to be generating more as specified as guaranteed generation in PPA.

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:



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Particulars	Samson Controls Private Limited	
	As per Global Solar Atlas	As per PVSyst
Global horizontal Irradiation (kWh/m ²)	1947.8	2088.0
Diffuse horizontal Irradiation (kWh/m ²)	932.8	771.47
Direct Normal Irradiation (kWh/m ²)	1451.6	-
Specific Photovoltaic Power Output per year (kWh/kWp/year)	1611.4	1789
Annual Global Insolation (ISRO Solar Calculator) (kWh/m ² /year)	1629	

Observations and Remarks:

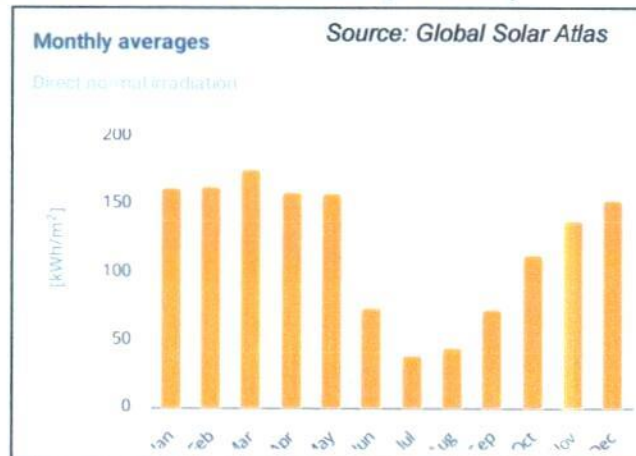
1. As per the PVSyst - Simulation reports dated 02th February 2024, the estimated energy that can be produced by the subject plants and their respective performance ratio is more than as agreed in the PPA.
2. As per comparative analysis, PVSyst Irradiation and PV Output data is approximately in line to our analysis from Global Solar Atlas of World Bank and ISRO Solar Calculator with minuscule difference.
3. The guaranteed energy production as per PPA for Plant is 938.04 kWh/kWp/year respectively which is within range of specific production as per Global Solar Atlas & PVSyst Report (*refer table above*).
4. As per the information provided by the management of the company, the estimated average Capacity Utilization Factor (CUF) is about **21.00%** for all locations.
5. As per details shared by the company for all projects, the expected Net Energy generation is about **729.83 MWh/year ($\pm 5\%$)**. However, actual generation would be effected by weather and maintenance of the plant.
6. As per PVSyst's set programme, plant location is showing as Karegaon, India which is adjacent village to Ranjangaon MIDC. However, GPS Cordinates mentioned in PVSyst report & actual Plant location are the same.



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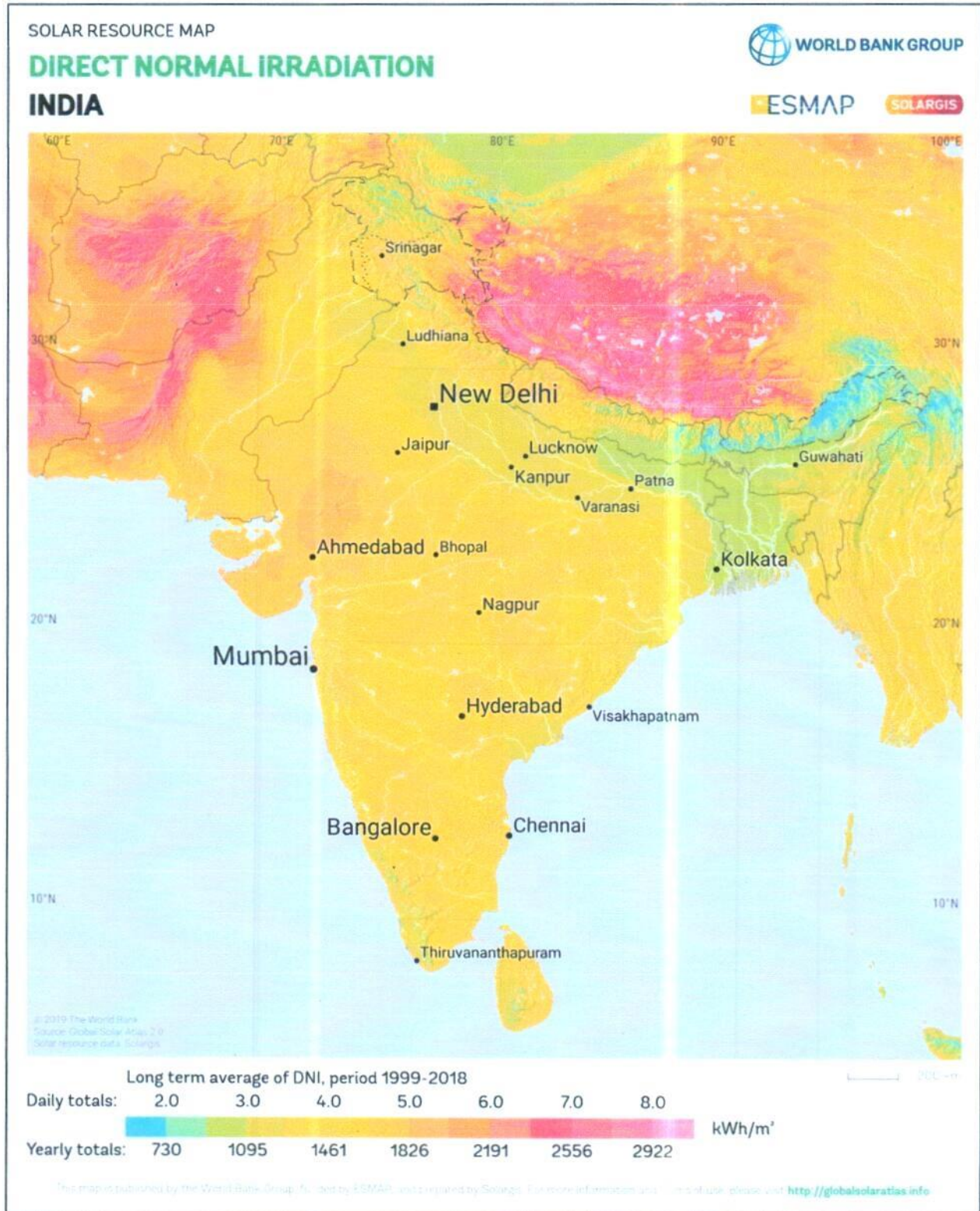
410.30 ($\pm 7.5\%$) KW_p GRID CONNECTED
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Monthly averages- Direct Normal Irradiation (kWh/m²)



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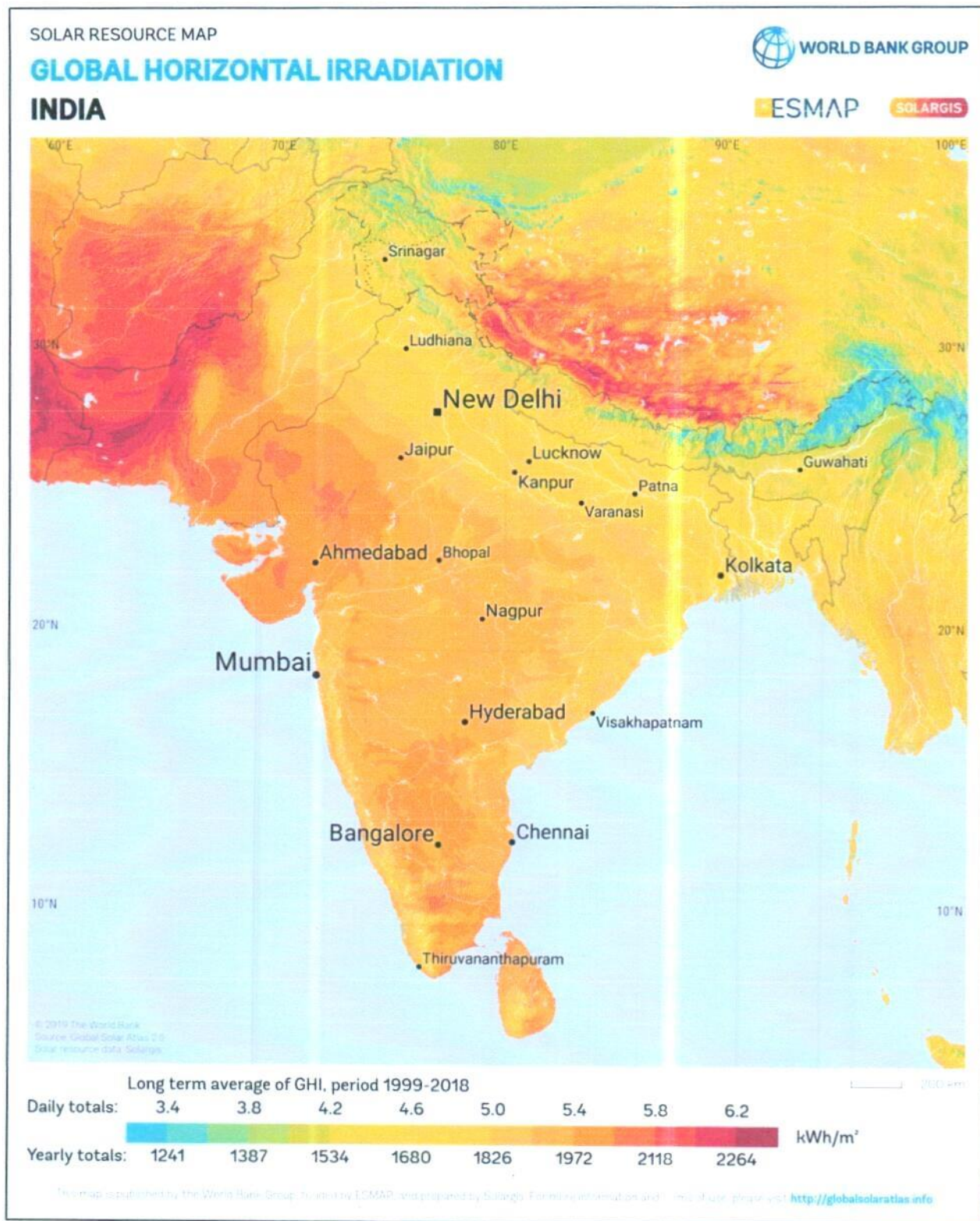


Samson Controls Private Limited Plant lies above 5.0 daily (1826 annually) Kwh/m².



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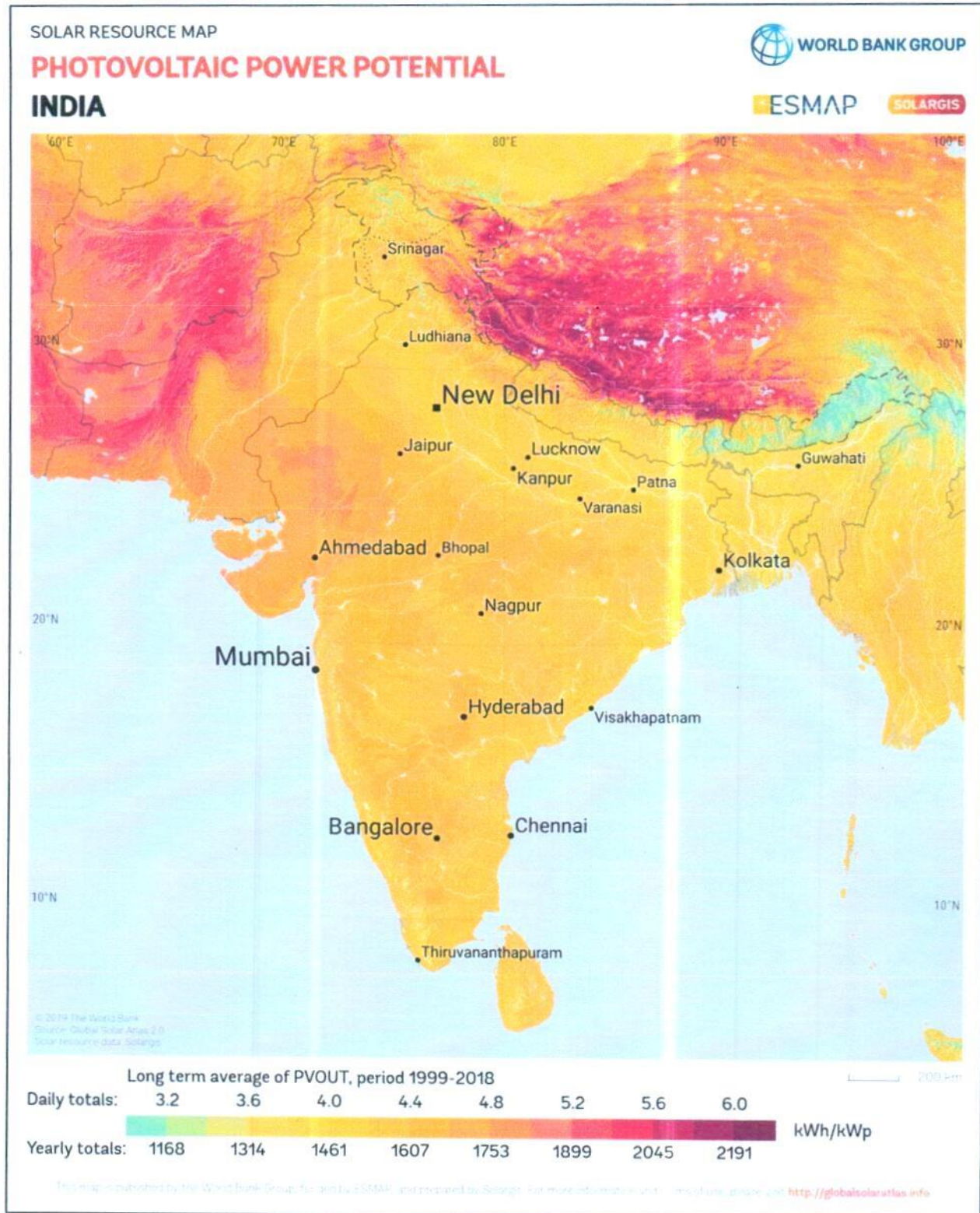


Samson Controls Private Limited Plant lies above 5.4 daily (1972 annually) Kwh/m².



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Samson Controls Private Limited Plant lies above 4.4 daily (1607 annually) Kwh/m².



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PART E

POWER PURCHASE AGREEMENT TERMS

As per the information provided by the company, the total proposed capacity of the solar power plant is 410.38 KWp ($\pm 10\%$). As on date, company has signed PPA to install the power plant and supply power. The PPA had been signed between **M/s Kirloskar Solar Technologies Private Limited (Power Producer)** and **M/s Samson Controls Private Limited (Offtaker)**. Details as mentioned in PPA are tabulated below:

S. No.	Offtaker	AC Capacity (kWp)	Tariff (Rs./kWh)	PPA Date	PPA Tenure
1	Samson Control 410.38 KW	330.00	4.55 with 1% escalation in every two years	26-11-2023	15 Years
Total		330.00			

Buy out Value for 15 Years as per PPA		Estimated Generation and Guaranteed Generation as per PPA		
Year	(End-of-The-year) In Rs.	Year	Estimated Generation (kWh/Year)	Guaranteed Units (kWh/Year)
1	1,37,66,667	1	574420	511234
2	1,28,33,333	2	562932	501009
3	1,19,00,000	3	558991	497502
4	1,09,66,667	4	555078	494020
5	1,00,33,333	5	551193	490561
6	91,00,000	6	547334	487127
7	81,66,667	7	543503	483718
8	72,33,333	8	539698	480332
9	63,00,000	9	535920	476969
10	53,66,667	10	532169	473630
11	44,33,333	11	528444	470315
12	35,00,000	12	524745	467023
13	25,66,667	13	521072	463754
14	16,33,333	14	517424	460507
15	7,00,000	15	513802	457284
16	1			

Novation and Assignment Agreement dated 29th March 2024 was signed between **M/s Samaritan Solar Energy Private Limited (SEPL)** and **M/s Samson Controls Private Limited** and **MPRNP Energy Udyog Private Limited** in which Samson has unconditionally agreed to release and discharge the MPRNP from MPRNP's obligations, duties, liabilities and assign and transfer MPRNP's rights and benefits as per the Original Agreement in favour of Samaritan (except Operation and Maintenance of the Solar Power Plants by Kirloskar Solar Technologies Private Limited for first two years subject to renewal by Samaritan).



PART F**CURRENT STATUS OF WORK**

As per information shared by the company officials, Solar Plant installation work is not begun yet. Therefore, physical inspection of the plant was not conducted from our end. Hence, we have analyzed the plant location area via Google Map for its whereabouts and shading.

Please refer to the image attached below:-



From google imagery tool, no major shadow or obstruction is found on roof which may block the Direct Sunlight.



PART G**PROJECT COST & EXPENDITURE**

1. **PROJECT COST:** As per details shared by the company, the total project cost for installation of 410.30 KW solar project is Rs. 1.95 Cr. including GST. Component-wise cost break-up shared by the company is as follows:-

S.No.	Item	Cost/KW (In Rs.)	Total EPC Value (In Rs.)
1	Solar Panel	24.50	1,00,52,350
2	Solar Inverter	3.37	13,82,711
3	Structure	3.00	12,30,900
4	Cables	2.00	8,20,600
5	LT Panel/ACDB	2.10	8,61,630
6	BOS / Misc.	2.50	10,25,750
	I&C	2.00	8,20,600
8	Govt Approval & Liasoning	2.20	9,02,660
			1,70,97,201
		*GST (13.8%)	23,59,414
Total Cost of the project (In Rs.)			1,94,56,615

- On Solar poanels 12% GST is charged. On others 18% will be charged according present GST Policy.
- Total invoicing will be as per project billing of 410.30 Kw and bifurcated in 70/30 ratio of materials & services & service as per Govt. regulation & GST norms.

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*	410.30	1,47,24,026	1,67,55,941
					~Rs. 1.67 Cr.

*Benchmark cost for 2021-22 Excludes GST



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

S. No.	Particulars	Excluding GST	Including GST	Remark
		Per KW Cost (In Rs.)	Per KW Cost (In Rs.)	
1	Subject project installation cost	41,670	47,420	As per Compnay
Market Research Details				
Market Research				
3	Quotation-1 (6,221 KW)	---	39,994	Refer Annexure-2
4	Quotation-2 (3,240 KW)	---	44,564	
5	Quotation-3 (1,190 KW)	---	46,088	

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. 39,994/- per KW to Rs. 46,088/- per KW**. For the smaller setups the price is higher and for large set-up, price is less.

e. 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.



PART H**EHSS (ENVIRONMENT, HEALTH, SAFETY, AND SUSTAINABILITY)
IMPACT**

The impact of an industrial rooftop solar plant on EHSS (Environment, Health, Safety, and Sustainability) can be significant and positive if implemented and managed responsibly. Here are some key considerations:

PARAMETERS	POSITIVE	NEGATIVE	REMARKS
Environmental Impact	Solar Power comes under renewable energy Project. Solar Power Projects generates clean energy and thus contributes in reducing carbon footprints, as otherwise production of the same amount of energy through conventional methods would have required burning of coal which would have led to emission of greenhouse gases in our environment.	None directly from this Project implementation.	Positive
Health and Safety	Non polluting Project and doesn't involve any industrial hazardous process.	No health and safety impact as such. Since it is a roof top solar Project, therefore at times workers may require to work at high elevation or slanted rooftop.	It is advised that whenever any worker or technician is working at high elevation or slanted rooftop, they should be extra careful and use proper safety gears.
Social Impact	Implementation of Solar Rooftop Project under RESCO model will help reducing power bills of the Project owner which will have positive economic benefit. Increases local employment. Use of diesel generators may be avoided due to uninterrupted power supply through owned power system and thus further helps in keeping pollution and noise free environment. Renewable energy ultimately reduces carbon footprint and thereby provides better health & environment.	None	Positive
Sustainability	Solar energy is a natural resources providing limitless renewable energy.	The only issue with Solar Power Project is its availability during peak power demand where its limitation	More positive towards



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	Moreover, since Solar Projects helps in lowering carbon footprints and thus good for our environment. Therefore it is sustainable for human health and mother earth.	comes for which battery storage can be the only solution but again mass use of battery storage again give rise to pollution due to its manufacturing and its disposal.	
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Note: It is crucial to note that the EHSS impact can be influenced by factors such as the design, construction, and ongoing operation and maintenance of the solar plant. Adhering to industry best practices, complying with regulations, and implementing robust EHSS management systems are essential to maximizing the positive impact and minimizing potential risks.



PART I**TRACK RECORD OF EPC CONTRACTOR**

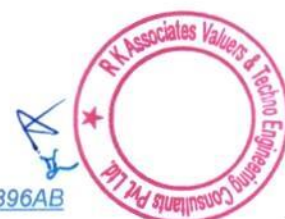
According to the information provided by the company, Jinko Solar, Sungrow, and Boond Solar serve as significant material suppliers for the construction of solar power plant. However, it is important to note that the company has not formalized any agreements with these suppliers; rather, they have only received quotations from them. The supplier companies have a track record of implementing projects in the past, and the details of these projects are as follows:-

Supplier	About Supplier	Past Projects
Kirloskar Solar	Kirloskar Solar Technologies Incorporated in year 2017. Kirloskar Solar has an extensive portfolio of customers in all segments like Residential, Commercial, Industries, SMEs across sectors like Healthcare, Hospitality, Automotive, Commercial, Education, Agriculture, and Manufacturing. Company provides sustainable energy efficient solutions to serve the entire spectrum of electricity consumers from those who have zero power cuts to those who have frequent power cuts.	<ul style="list-style-type: none"> 70kW Rooftop + Ground Mounted 60kW Ground Mounted 60kW Hospital Rooftop Mounted 80kW GI Industrial Rooftop 140kW GI Industrial Rooftop 150kW GI Industrial Rooftop 110kW GI Industrial Rooftop 154kW IT Company RCC Rooftop 80kW Educational Institute RCC Rooftop 105kW Tin Shed Rooftop 125kW RCC Rooftop
Sungrow	Sungrow Power Supply Co., Ltd. is a leading global supplier of inverter solutions for renewable energy projects, specializing in solar and wind power. Established in 1997, this Chinese company has become one of the world's largest manufacturers of inverters.	<ul style="list-style-type: none"> 1MW PV Plant in Vietnam 168 MW PV Plant in Algeria 166.5 MW PV Plant in Egypt 19.2 MW PV Plant in Americas 6.5 MW PV Plant in Spain 5 MW PV Plant in Dubai
Boond Solar	Boond Solar is a rapidly expanding developer of renewable energy power in India. Established in 2010 as a leader in technology and innovation, it offers affordable custom solutions that provide economic benefits to its customers. With a strategic approach to continuous growth of the nation.	<ul style="list-style-type: none"> 3.85 MW at Sangam India Ltd., Bhilwara 2 MW at Panasonic India Ltd., Jhajjar 900 kW at XLRI, Jhajjar 800 kW at BSL Limited, Bhilwara 100 MW at Sonagazi Solar Plant, Bangladesh 750 kW at South Eastern Central Railways, Bilaspur 35 MW at Maharashtra
Samaritan Solar	Samaritan Solar is a USA based company was incorporated with ROC on 18 November 2020 having its registered office in Delhi. It had implemented multiple projects.	<ul style="list-style-type: none"> 9.6 KW system 5.42 KW system 12.54 KW system 5.7 KW system 3.71 KW system 4.27 KW system 11.4 KW system 6.3 KW system 7.4 KW system

Note:- The above mentioned are considered from information/details available on public domain.

Reference-

- <https://solex.in/solar-power-plant/#>
- <https://en.sungrowpower.com/solutionsDetail/4/commercial-system>
- <https://boond.net/projects/>
- <https://www.kirloskarsolar.com/projects.jsessionid=030D4EC914F6DD748009891A6F9396AB>
- <https://samaritansolar.com/projects/>



PART J

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



PART K

OTHER DOCUMENTS & REFERENCES

Market Comparables:Annexure-1Commercials

<u>Sl. No</u>	<u>Description</u>	<u>Qty</u>	<u>Amount</u>
1.	6221KWp Rooftop Capacity Solar Power Plant <u>With Monocrystalline Solar PV Modules</u> <u>String Inverter – Goodwe make</u> <u>O&M Charges subject to renewal and escalation each year @2%</u>	6221 kWp	Project Cost: INR 24,88,00,000.00 @Rs. 40.00/Watt (including GST)

Note:

1. Ceig and Net metering(if Applicable) shall be extra as actual.
2. GST is inclusive of this cost.

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

<u>SN</u>	<u>Description</u>	<u>Qty.</u>	<u>Price</u>
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

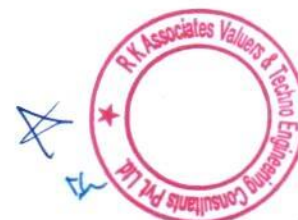
- Freight & Transit Insurance: Inclusive
- Taxes: GST – as per government norms.
- Net-metering fee will be paid by consumer
- Any change in Tax/ Duties shall be borne by the Purchaser
- Excludes-
 - Any approval
 - Anything out of given BOQ

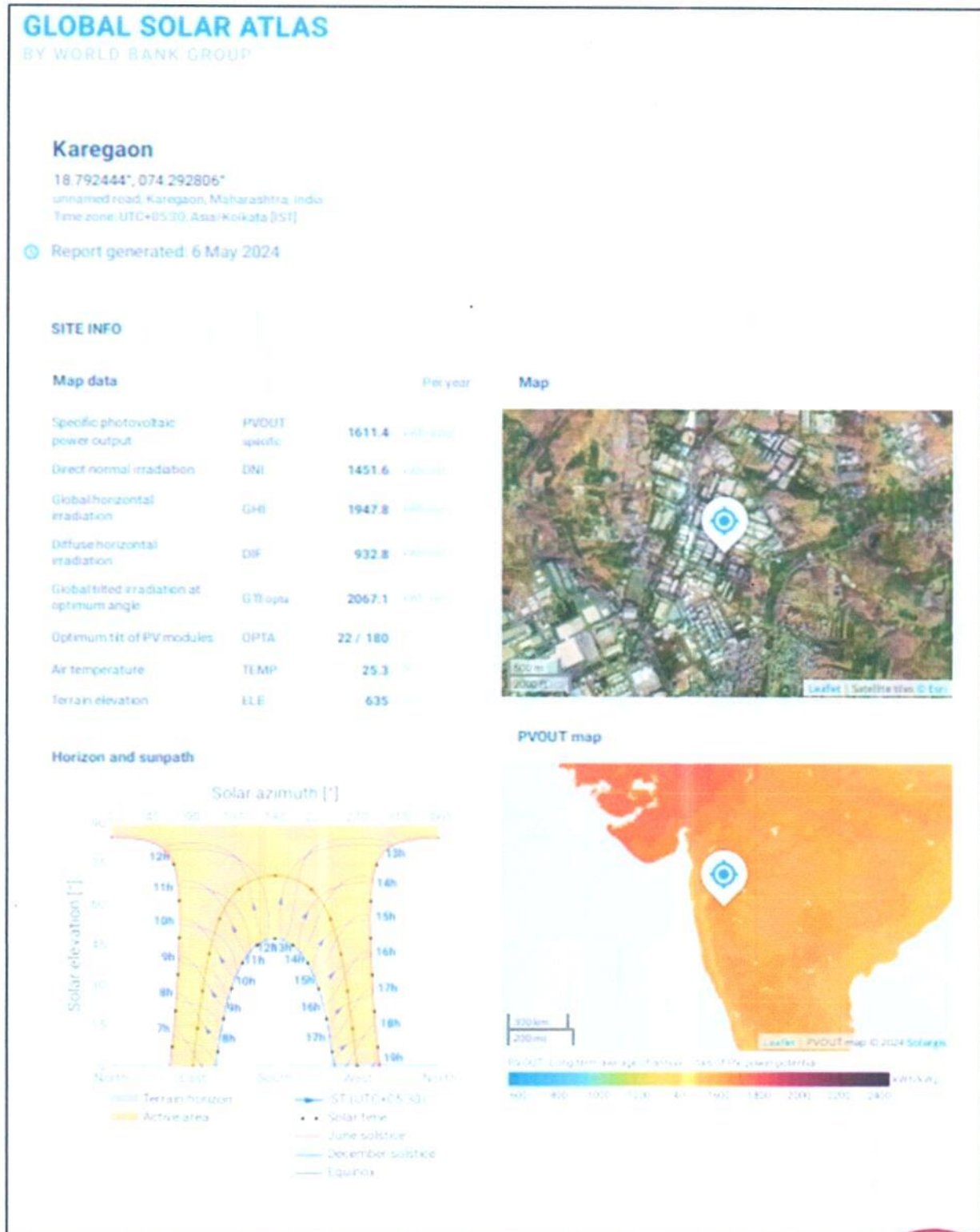


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410.30 ($\pm 7.5\%$) KWp GRID CONNECTED
SOLAR POWER PLANT

<u>SN</u>	<u>Description</u>	<u>Qty.</u>	<u>Price</u>
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			



Data by Global Solar Atlas by World Bank Group

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GLOBAL SOLAR ATLAS BY WORLD BANK GROUP

PV ELECTRICITY AND SOLAR RADIATION

Annual averages

[kWh/m²/day]

1455.4

[kWh/m²/year]

Monthly averages

[kWh/m²/day]



Average hourly profiles

[kWh/m²/day]



Average hourly profiles

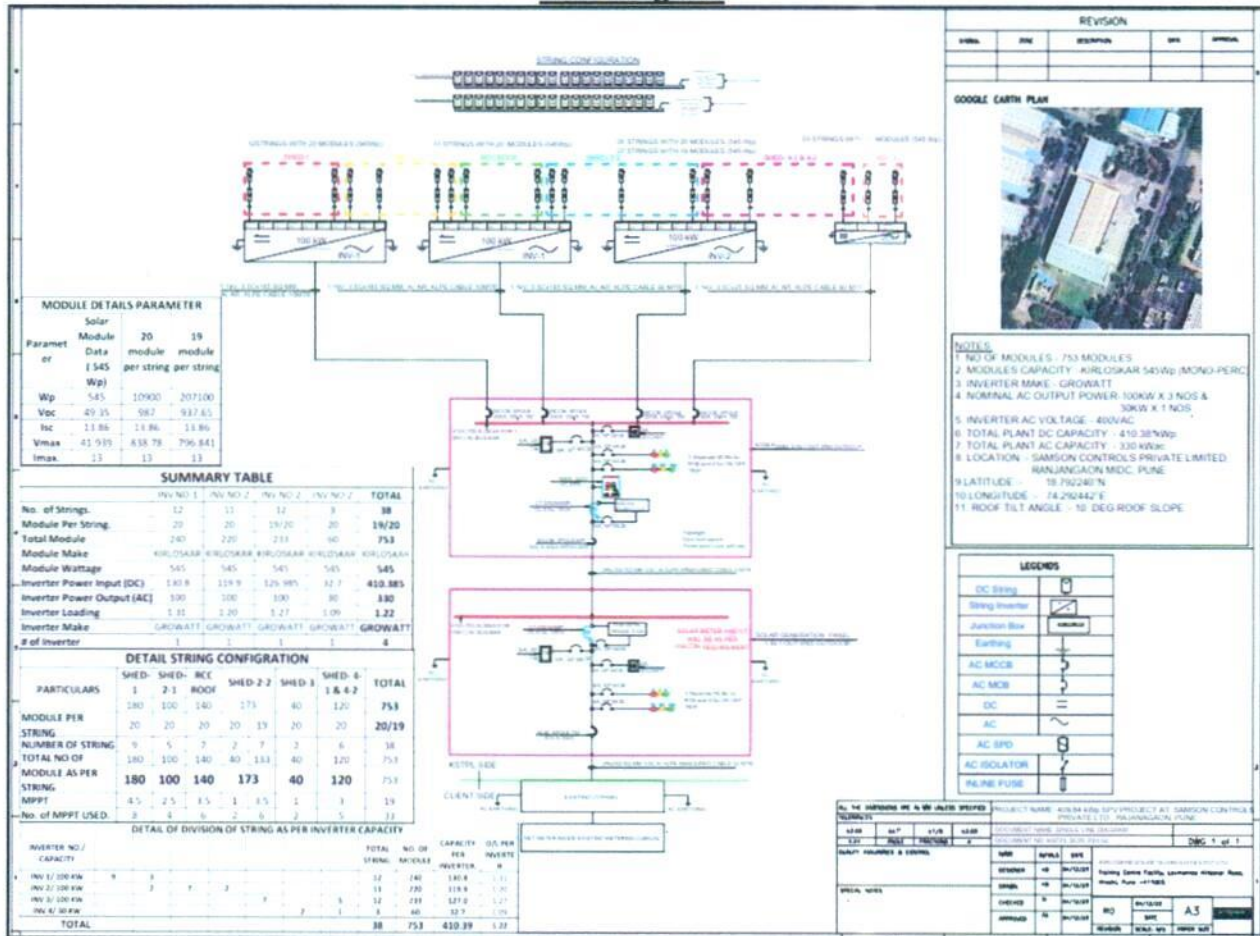
[kWh/m²/hour]

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0-1												
1-2												
2-3												
3-4												
4-5												
5-6												
6-7	1	2	28	81	134	59	20	18	35	39	22	2
7-8	209	241	270	310	311	345	67	87	160	228	259	221
8-9	427	374	370	464	448	271	105	126	251	265	442	442
9-10	565	409	356	516	431	272	126	161	310	475	544	557
10-11	646	497	438	642	527	330	131	170	322	475	600	630
11-12	686	543	475	669	528	332	164	182	309	467	629	660
12-13	646	546	478	652	523	290	163	178	298	475	582	592
13-14	543	422	386	556	415	270	156	169	267	410	538	527
14-15	473	324	300	507	416	234	124	129	205	323	417	313
15-16	473	329	409	402	375	185	96	108	152	245	385	425
16-17	289	391	362	288	270	135	58	77	111	122	170	214
17-18	20	34	25	112	152	67	30	33	28	2	1	2
18-19					2		5					
19-20												
20-21												
21-22												
22-23												
23-24												
Sum	5,223	5,830	5,678	5,001	5,061	2,473	1,212	1,492	2,443	3,690	4,917	4,245

LIE REPORT

410.30 (± 7.5%) KWp GRID CONNECTED
SOLAR POWER PLANT

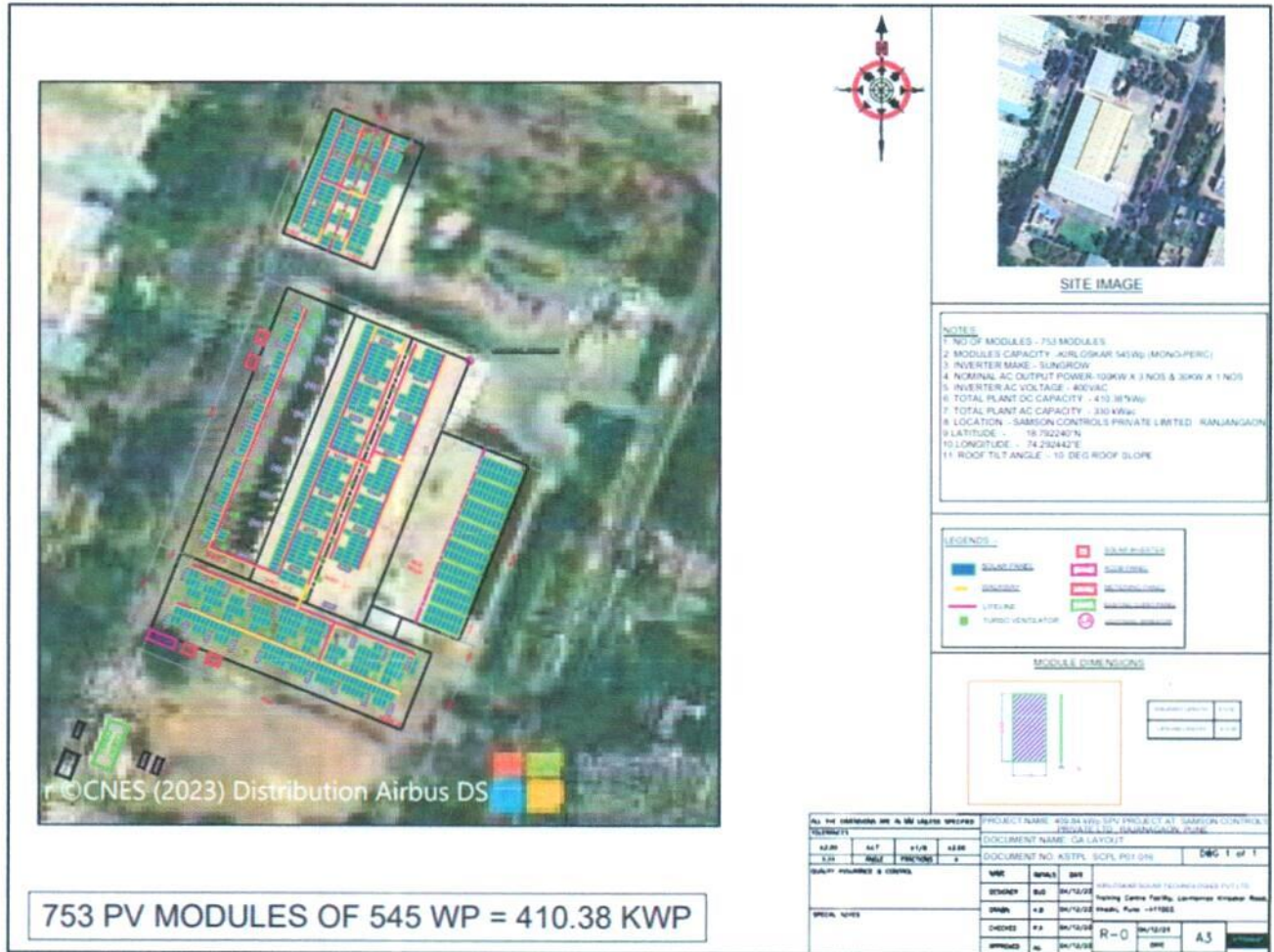
SLD Diagram



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SOLAR POWER PLANT

Layout



Copy of PPA

AND

SAMSON CONTROLS PRIVATE LIMITED (CIN: U74999PN1964PTC134656), a company registered under the companies Act, 1956 and having its registered office at **D-281 MIDC Ranjangaon Tal.Shirur Dist Pune-412220** represented by **Mr. Atul Raje & Mr. Lokesh Lulla** (hereinafter collectively referred to as "**Offtaker**"), which expression shall, unless repugnant to the context or meaning thereof, include its successors and permitted assigns) of the **SECOND PART**;

The **Power Producer** and the **Offtaker** are hereinafter individually referred to as a "**Party**" and collectively referred to as the "**Parties**".

1. RECITALS**WHEREAS:**

- A. The **Power Producer** is engaged in the business of electricity generation through renewable resources.
- B. The **Offtaker**, is inter alia, engaged in the business of **Control Valves Manufactures**;
- C. The **Power Producer** has recently approached the **Offtaker** and offered it proposal to provide solar power energy through **Solar Power Plant under Net Metering Scheme** to be setup by it in the **Offtaker's** premises.
- D. The **Offtaker** has one of its factories situated at **D-281 MIDC Ranjangaon Tal.Shirur Dist Pune-412220** (here-in-after referred to as "**Said Property**") and it has the absolute ownership of the **Said Property**.
- E. Based on the terms and conditions of this Agreement, the **Offtaker** shall make available to the **Power Producer**, the mutually agreed suitable shadow free space within the **Said Property** for construction, operation and maintenance of a **410.30- kWp ($\pm 7.5\%$) solar power generating plant** (hereinafter referred to as "**the Plant**" or "**Solar Power Plant**") and the **Offtaker** has agreed to purchase from the **Power Producer** the solar power/ electricity produced/ generated by it from the said **Solar Power Plant**.
- F. The **Power Producer** has represented to the **Offtaker** that the construction of the **Solar Power Plant** shall be financed either by the **Power Producer** or by a financing party identified and appointed at the sole discretion of the **Power Producer** under intimation to the **Offtaker**. Further, the Parties understand that the **Power Producer** may create a charge on the **Solar Power Plant** only and not on the **Said Property**.
- G. The Parties by way of this Agreement wish to record the terms and conditions on the basis of which the **Power Producer** would set up the **Solar Power Plant** and supply electricity to the **Offtaker**.

NOW, THEREFORE IN VIEW OF THE FOREGOING PREMISES AND IN CONSIDERATION OF THE MUTUAL COVENANTS AND CONDITIONS SET OUT BELOW, THE PARTIES HEREBY AGREE AS FOLLOWS:

2. DEFINITIONS AND INTERPRETATIONS**2.1. Definitions**

In this Agreement, unless the context otherwise requires, Capitalized terms otherwise used shall have the respective meanings assigned to them in Annexure - 1: Definitions.




Copy of Novation Agreement**Novation and Assignment Agreement**

This Novation and Assignment Agreement (for short 'this Agreement') is entered into as on this 29th March, 2024 by and between:

1. **MPRNP ENERGY UDYOG PRIVATE LIMITED**, a company registered under the Companies Act, 2013 and having its registered office at I-63B, near Jal Vihar Terminal, Lajpat Nagar 1, New Delhi – 110024 (hereinafter referred to as "MPRNP") which expression shall mean and include its successors and assigns.
and
2. **SAMSON CONTROLS PRIVATE LIMITED**, a company registered under the companies Act, 1956 and having its registered office at D – 281, MIDC Ranjangaon, Tal. Shirur, Dist. – Pune, Maharashtra, India, Pin – 412220 (hereinafter referred to as "SAMSON") which expression shall mean and include its successors and assigns.
and
3. **SAMARITAN SOLAR ENERGY PRIVATE LIMITED**, a company registered under the Companies Act, 2013 and having its registered office at I-63B, near Jal Vihar Terminal, Lajpat Nagar 1, New Delhi – 110024 (hereinafter referred to as "Samaritan") which expression shall mean and include its successors and assigns.

Recitals:

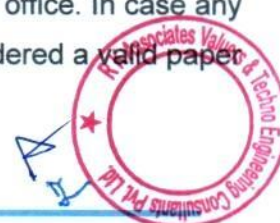
- A. SAMSON and KSTPL had signed Power Purchase Agreement dated 28.11.23 (for short the "Original Agreement") for setting up Solar Power Plant as per terms and conditions as more particularly mentioned in the Original Agreement.
- B. The agreement was further novated to MPRNP vide Novation and Assignment Agreement dated 27th December, 2023.
- C. As per Clause No. 16 of Original Agreement, all rights, duties and obligations in connection with and arising out of Original Agreement can be assigned by a party intending to do so with the prior consent of the other Party.

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PART L**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 copies of the documents/ information which the Bank/ Company has provided to us out of 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. Verification or cross checking of the documents provided to us has not been done at our end from the originals. If at any time in future, it is found or came to our knowledge that misrepresentation of facts or incomplete or distorted information has been provided to us then this report shall automatically become null & void.
3. This report is a general analysis of the project based on the scope mentioned in the report. This is not an Audit report, Design document, DPR or Techno-financial feasibility study. All the information gathered is based on the facts seen on the site during survey, verbal discussion & documentary evidence provided by the client and is believed that information given by the company is true best of their knowledge.
4. All observations mentioned in the report is only based on the visual observation and the documents/ data/ information provided by the client. No mechanical/ technical tests, measurements or any design review have been performed or carried out from our side during Project assessment.
5. Bank/FII should ONLY take this report as an Advisory document from the Financial/ Chartered Engineering firm and it's specifically advised to the creditor to cross verify the original documents for the facts mentioned in the report which can be availed from the borrowing company directly.
6. In case of any default in loans or the credit facility extended to the borrowing company, R.K Associates shall not be held responsible for whatsoever reason may be and any request for seeking any explanation from the employee/s of R.K Associates will not be entertained at any instance or situation.
7. This Report is prepared by our competent technical team which includes Engineers and financial experts & analysts.
8. This is just an opinion report and doesn't hold any binding on anyone. It is requested from the concerned Financial Institution which is using this report for taking financial decision on the project that they should consider all the different associated relevant & related factors also before taking any business decision based on the content of this report.
9. 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.






10. 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. Intimation regarding any discrepancy shall be brought into our notice immediately. If no intimation is received within 15 (Fifteen) days in writing from the date of issuance of the report, to rectify these timely, then it shall be considered that the report is complete in all respect and has been accepted by the client upto their satisfaction & use and further to which R.K Associates shall not be held responsible in any manner.
11. Defect Liability Period is **15 DAYS**. We request the concerned authorized reader of this report to check the contents, data and calculations in the report within this period and intimate us in writing if any corrections are required or in case of any other concern with the contents or opinion mentioned in the report. Corrections only related to typographical, calculation, spelling mistakes, incorrect data/ figures/ statement will be entertained within the defect liability period. Any new changes for any additional information in already approved report will be regarded as additional work for which additional fees may be charged. No request for any illegitimate change in regard to any facts & figures will be entertained.
12. 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.
13. Our Data retention policy is of **ONE 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.
14. 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 it is the responsibility of the user of this report to immediately or at least within the defect liability period bring all such act into notice of R.K Associates management so that corrective measures can be taken instantly.
15. 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.



LIE REPORT

410.30 ($\pm 7.5\%$) KWp GRID CONNECTED
SOLAR POWER PLANT

FOR INTERNAL USE

FOR R.K ASSOCIATES VALUERS & TECHNO ENGINEERING CONSULTANTS (P) LTD.		
SURVEYED BY	PREPARED BY	REVIEWED BY
NA	Abhinav Chaturvedi	Sr. V.P. Projects
		

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