

# SARN Solar Solution Private Limited



## AN OVERVIEW

**Presented By**  
**Mr. Rakesh Naskar**

**Director**

**Presently involve in Research work**  
**School of Energy Studies**  
**Jadavpur University**  
**Ex Assistant professor (11+yrs Expérience)**



**7980181480**  
**7003792405**



# SARN SOLAR SOLUTION PRIVATE LIMITED

SARN SOLAR Registered under ...



GSTIN : 19ABBCS5489G1ZV



**7980181480 / 9432689034**

[www.sarnsolar.in](http://www.sarnsolar.in) | [sarnsolar@gmail.com](mailto:sarnsolar@gmail.com) / [contact@sarnsolar.in](mailto:contact@sarnsolar.in)

## Solar Appliances & Project Service Company

- আপনার সাথে বাড়িতে আধুনিক প্রযুক্তির সোলার সিস্টেম লাগান এবং অতিরিক্ত বিলের বোঝা থেকে মুক্ত হন ২৫ বছরের জন্য।
- পুরোপুরি ভাবে লোডশেডিং এর হাত থেকে মুক্ত হন। নিজের বিদ্যুৎ নিজেই তৈরী করুন সৌর শক্তির মাধ্যমে।
- EMI এর সুবিধা আছে।



**"SWAPNA NEER"**

Apartment (1st Floor) R.N.C Road,  
Subhasgram, Kol – 700147

ON-GRID SYSTEM | OFF-GRID SYSTEM | SOLAR STREET LIGHT | SOLAR DRINKING WATER SYSTEM



SARN Solar

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# **SARN Solar Solution Pvt. Ltd.**

SARN: Sensitive Awareness through  
Revolution Network

## **Solar Energy**

# **The Ultimate Renewable Resource**



# OUR MISSION



- To bring revolution on Green Energy utilization through awareness by proper campaigns.
- To become the leader in development design of large scale solar installations, solar plants and solar parks and to promote and commercialize the use of solar energy to reach remotest corner of West Bengal firstly then India.
- To become leader in exploring new technologies and their deployment to harness solar energy

# VISSION



- To bring revolution through harnessing abundant solar radiation and to achieve energy security by its proper utilisation for our state, for our country.
- Objective
- The focus of SARN activities is on its subsidiaries and competence in the high-growth regions in India by providing low cost high efficiency system.



# OUR GOAL



- ❑ To introduce renewable energy utilization for the future and highlighted more and more in front of unawareness public.
- ❑ To ensure Solar power remains the most secure source of energy for the future.
- ❑ To set global standards in achieving this goal firstly in India and then abroad.
- ❑ To involve on invention of suitable and economical design of solar charge controller, battery, solar inverter and also on up gradation of technology of different solar appliances through their continuous involvement by Our research Section.
- ❑ To involve in doing research & development in collaboration with State University.





# The Area of Competences of solar appliances



- ❑ Technology
- ❑ Engineering & Innovative Structure Design
- ❑ EPC & I&C Projects
- ❑ Research & Development
- ❑ Training on SPV Installation
- ❑ Consulting & Services on CAPEX & RESCO PROJECT
- ❑ Any kind of Solar Project Execution & AMC Services.

# The Area of Competences at other Sector except Solar

- ❑ EV Charging Station Installation
- ❑ CCTV Installation
- ❑ Fire & Safety Solution
- ❑ Electrical Control Panel solution
- ❑ Consulting & Services
- ❑ COMPLETE ONE STEP SOLUTION





# Why Choose SARN Solar



Committed to helping its clients

- ❑ To reach their goals
- ❑ To personalising their experiences with highly Experienced Professors.
- ❑ To providing an innovative environment
- ❑ In collaboration with Jadavpur University Renewable Energy Department.

Making a difference in regards to

- ❑ Safety & Security
- ❑ Quality Control
- ❑ Costing at it's best quality standards

# SARN Solar Solution Private Limited



## Introduction

### Our Management Team:

- ❖ Dr. (Prof.) Ratan Mondal (Honorable Advisor)
- ❖ Mrs. Sonia Naskar (Honorable Director)
- ❖ Mr. Rakesh Naskar (Director)
- ❖ Mr. Sushanta Auddy (Joint Director)
- ❖ Mr. Ayan Ghosh (Executive Engineer)
- ❖ Mr. Amit Roy (CA)
- ❖ Mr. Gopal Mistri (Accountant)
- ❖ Mr. Ashoke Mondal (Accounting Consultant)
- ❖ Ms. Priyanka Mondal (ADV.) (Legal Advisor)

### Our Business Development Team:

- Mr. Ansar Ali (Business Developer, Kolkata)
- Mr. Swarup Dey (Business Head, WB)
- Mr. Anirban Banerjee (Business Development Associate)
- \*\*Some Highly Renowned & Dedicated Persons also associate with us for SARN Solar Business Development\*\*

### Our Installers:

- ❖ Notun Bera with his Team
- ❖ Bibekananda Chakraborty with his Team
- ❖ Koutuk Mistri with his Team



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**7003792405**

# COMPANY DOCS



GOVERNMENT OF INDIA  
MINISTRY OF CORPORATE AFFAIRS  
Central Registration Centre

## Certificate of Incorporation

[Pursuant to sub-section (2) of section 7 of the Companies Act, 2013 (18 of 2013) and rule 18 of the Companies (Incorporation) Rules, 2014]  
I hereby certify that SARN SOLAR SOLUTION PRIVATE LIMITED is incorporated on this Sixth day of February Two thousand nineteen under the Companies Act, 2013 (18 of 2013) and that the company is limited by shares.

The Corporate Identity Number of the company is U09001WB2019PTC230256.

The Permanent Account Number (PAN) of the company is ABBCS5489G

The Tax Deduction and Collection Account Number (TAN) of the company is CALS45300D\*

Given under my hand at Manesar on this Sixth day of February Two thousand nineteen.

\_\_\_\_\_  
Digital Signature Certificate  
Mr Parvinder Singh

For and on behalf of the Jurisdictional Registrar of Companies  
Registrar of Companies  
Central Registration Centre

Disclaimer: This certificate only evidences incorporation of the company on the basis of documents and declarations of the applicant(s). This certificate is neither a license nor permission to conduct business or solicit deposits or funds from public. Permission of sector regulator is necessary wherever required. Registration status and other details of the company can be verified on www.mca.gov.in

Mailing Address as per record available in Registrar of Companies office:

SARN SOLAR SOLUTION PRIVATE LIMITED  
C/O KARTICK NASKAR, PLOT NO 138, M.N. BOSE ROAD PRAGATI  
PALLY, P.O. SUBHASGRAM, SUBHASGRAM, Kolkata, West Bengal,  
India, 700147

\* as issued by the Income Tax Department



**Form E**  
GOVERNMENT OF WEST BENGAL  
License to Electrical Contractors.  
(See Rule 36)

This license is to be renewed every five years and must be returned on demand by the Secretary

Registered No. : 202217601187  
**Mr Messrs SARN SOLAR SOLUTION PRIVATE LIMITED**  
is/are hereby authorized to carry out electrical installation work in the state of West Bengal. This license is issued subject to the compliance with the conditions set out on the reverse, and also to the continued compliance with the conditions set out in Regulations under Rule 38 of Rules under regulation 29(1) & 3(3) of the Central Electrical Authority (Measures relating to Safety and Electric supply) Regulations, 2010 as amended up to date. Power & NES Department, WEST BENGAL.

26/02/2022

\_\_\_\_\_  
President  
West Bengal Licensing Board

Date of Renewal: NA  
Date of expiry: 25/02/2027

Form of Register of Supervisors and workmen in the employ of holding Contractor's License No. : 202217601187 of M/s. SARN Solar Solution Private Limited

Serial Number	Name of the Employee	Supervisor's Certificate Number	Writing Staff		Employment	Discharge
			Electrical Workman's Permit Number	NA		
1	Rakesh Naskar	202417550297	NA	NA	18/01/2022	NA
2	Ayan Ghosh	202217660376	NA	NA	18/01/2022	NA

Conditions

- All electrical installation work coming within the purview of Regulation 29 (1) & 3(3) of the Central Electricity Authority (Measures relating to Safety and Electric supply) Regulations, 2010 (as amended) undertaken by the holder of this license shall be carried out under the direct supervision of a person holding a valid certificate of competency and at least 50 percent of the electrical workmen employed on any such work shall be in possession of valid permits issued under Rules 25 & 17 of these Rules.
- The holder of this license shall maintain a register of supervisors and workmen in the form below and shall produce the register for inspection on demand by an Electric Inspector or other person authorized in this behalf by the Licensing Board.

The authenticity of this document can be verified by accessing the URL: [www.westbengal.gov.in](http://www.westbengal.gov.in) and then clicking on the 'Verification of Digitally Signed Document' link and keying in the User Number: 01176022200019.



Registration Number: 25802019

1. Legal Name	SARN SOLAR SOLUTION PRIVATE LIMITED
2. Trade Name, if any	SARN SOLAR SOLUTION PRIVATE LIMITED
3. Constitution of Business	Private Limited Company
4. Location of Principal Place of Business	138, M.N. BOSE ROAD, BOSE ROAD, PRAGATI PALLY, P.O. SUBHASGRAM, SUBHASGRAM, South 24 Parganas, West Bengal, WEST
5. Date of Establishment	26/02/2019
6. Period of Validity	From 26/02/2019 To NA
7. Type of Registration	Regular
8. Particulars of Appointing Authority	

Signature: \_\_\_\_\_  
Date of Issue of Certificate: 25/02/2019

Note: This registration certificate is subject to be periodically updated at all places of business in the State.

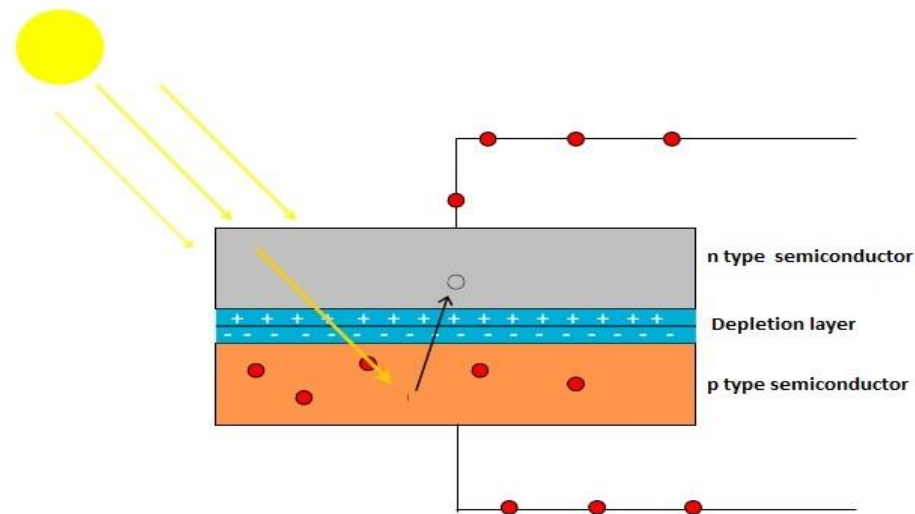
This is a system generated digitally signed Registration Certificate based based on the deemed approval of application on 25/02/2019.





# Introduction of Solar System

- ▶ Visible wavelength of sunlight has capability to make electrons flow in certain directions in semiconductors.
- ▶ This phenomenon is called photoelectric effect and PV cells are used for electricity generation in Solar power plants.



## HOW SOLAR POWER GENERATION WORKS

- ▶ The electricity produced by PV modules is in the form of Direct Current (DC) and is converted to (AC) using specially designed Solar inverter.
- ▶ An electricity generating plant by sunlight is designed such that it produces uniform voltage at specific frequency in spite of varying sunlight in the day (In Sun Peak Hours)

# Solar Policy in West Bengal



- ▶ WBERC has allowed 1-5 Kw Solar On-Grid system with Net Metering facility for domestic consumer who has a sanctioned load below 5 Kw.
- ▶ WBSEDCL has introduced a subsidy scheme in collaboration with MNRE for successfully implementation of this policy.

Up to 3 kw 40%;

Above 3 kw to Upto 10 kw 20%

- ▶ Subsidy scheme is not applicable for the commercial consumers.
- ▶ The consumer(Domestic or Commercial), who has a sanctioned load for more than 5 Kw, they have to go for “Net Billing”.



# Advantages of Solar System



- ❖ Make a green environment at your industry premises.
- ❖ Reduce your factory carbon footprint.
- ❖ Take benefit, on applying for a loan due to implementation of green energy at your factory premises.
- ❖ Get Benefit of Tax Holiday and Tax return in terms of depreciation
- ❖ Assured (guaranteed) 20% annual return in terms of saving of electricity bill by single time investment for minimum 25yrs.

# Comparison with others

- Our Project State University Renewable Energy Department Certified After Physical Verification
- Best Optimization Technique By Using Software Like PVSYST(Simulation Report), AUTOCAD (Structural Design), SKETCH UP (Shadow Analysis), STAAD PRO (Wind Analysis of Structure) and Etc.
- Auto clean System ; Nozzle type for high pressure



# Comparison of Electricity bills



**West Bengal State Electricity Distribution Company Ltd.**  
(A Government of West Bengal Enterprise)

24-PANWALA, (NORTH) REGIONAL OFFICE  
OFFICE OF THE REGIONAL MANAGER, ADMINISTRATIVE BUILDING, B.T.ROAD, VIVEK NAGAR, MARIHAT, PIN- 700119  
Phone: 2592-0353/0351, Fax: 2592-1841, Email: CH.24NSDC@SAIL.COM, CORPORATE: TPA@SARN.COM



Consumer ID: 9000000244  
Installation No: 22063482  
R.R.V. STUDENT LIBRARY MISSION  
VILL-KATHOR P.O-WADD, 24-PANW (N)  
Pin - 700128  
Country: India

Invoice No.: 698000147512  
Billing Date: 04.11.2021  
Present Reading Date: 01.11.2021  
Previous Reading Date: 01.10.2021  
BILL No: 000900000244  
Account Reference No: 21744078  
Consumer No: 000900000244

Tariff Code: C-ID  
Supply Voltage (KV): 0.40  
Contract Demand (KW): 165.00  
EPF: 0.9856  
L.P.F: 1.0  
2026  
Nature of Industry: EDUCATIONAL  
INSTITUTE (P)  
Pan No: AAATR6521P

Meter No	SLSE0148	Type	W	NC	1	MF	1.000	00	Loss Factor	1	Net MF	1
Meter Readings												
Time	Normal	Peak	Off-peak	Normal	Peak	Off-peak	Normal	Peak	Off-peak	Normal	Peak	Off-peak
Present	155336.00			153153.00						25.600		
Previous	151101.00			148979.00								
Reading Advance & Met. MF												
Reading Advance	4235.000	0.000	0.000	4174.000	0.000	0.000	25.600	0.000	0.000			

Energy Charge				Energy/Min. Charge (Rs)			
Rate	Normal	Peak	Off-peak	Normal	Peak	Off-peak	Rate
Rate	623			26004.02			26004.02
P.P.Reb(-)/Bar(+)	-4.00			0.00			0.00
Chargable	4174.000	0.00	0.00	26004.02000	0.00	0.00	26004.02
Rate	255.00			14025.00			14025.00
Chargable	55.00			0.00			0.00
Rate	0.00			14025.00			14025.00
Chargable	0.00			0.00			0.00

Electricity Duty			
EDM Units	EDDM Units	EDSR Units	ED DM Units
0.00	4174.00	0.00	0.00
0.00	4174.00	0.00	0.00
0.00	4174.00	0.00	0.00
0.00	4174.00	0.00	0.00

Other Charges & Outstanding (Rs.)		Armt. For Current Month (Rs)	
Rental of Meter/Motors	1200.00	Armt. For Current Month (Rs)	47081.28
Transformer Rental + GST	0.00	Due Date :	16.11.2021
E.C adjustment		Outstanding Amount (Rs.) :	0.00
D.C adjustment		Adjustment Amount (Rs.) :	-0.99
Other adjustment		Adjustment Amount (Rs.) :-	0.00
EPSC Charges	0.00	Payable by DueDate (Rs) :	46681.00
Adjustment	-0.99	Payable After DueDate (Rs) :	47081.00
Timely Payment Rebate	-399.49	Payable by DueDate	
-Add'l LP Rebate for Timely Payment	0.00	Through NSPT/PTGS (RS) :	46286.00
Total Timely Payment Rebate	-399.49		
Amount Before Due Date (Rs)	Forty six thousand six hundred eighty one rupees		
Amount After Due Date (Rs)	Forty seven thousand eighty one rupees		

Message to consumer: [regulator.your.mobile.No.and.email.id@westsbceil.in](mailto:regulator.your.mobile.No.and.email.id@westsbceil.in) to get Billing and Payment info.  
Payment may be made using RTGS/NEFT in your exclusive a/c no: MB889000024422063482 with EPSC code ICIC0000104  
\*Demand Charge includes interruption benefit of 00:00:00 hours

Superintending Engineer/Divisional Engineer  
For and on behalf of West Bengal State Electricity Distribution Company Limited



**West Bengal State Electricity Distribution Company Ltd.**  
(A Government of West Bengal Enterprise)

24-PANWALA, (NORTH) REGIONAL OFFICE  
OFFICE OF THE REGIONAL MANAGER, ADMINISTRATIVE BUILDING, B.T.ROAD, VIVEK NAGAR, MARIHAT, PIN- 700119  
Phone: 2592-0353/0351, Fax: 2592-1841, Email: CH.24NSDC@SAIL.COM, CORPORATE: TPA@SARN.COM



Consumer ID: 9000000244  
Installation No: 22063482  
R.R.V. STUDENT LIBRARY MISSION  
VILL-KATHOR P.O-WADD, 24-PANW (N)  
Pin - 700128  
Country: India

Invoice No.: 10000113228  
Billing Date: 13.12.2021  
Present Reading Date: 01.12.2021  
Previous Reading Date: 01.11.2021  
BILL No: 000900000244  
Account Reference No: 21744078  
Consumer No: 000900000244

Tariff Code: C-ID  
Supply Voltage (KV): 0.40  
Contract Demand (KW): 65.00  
EPF: 0.9793  
L.P.F: 1.2117  
Nature of Industry: EDUCATIONAL  
INSTITUTE (P)  
Pan No: AAATR6521P

Meter No	SLSE0148	Type	W	NC	1	MF	1.000	00	Loss Factor	1	Net MF	1.00
Meter Readings												
Time	Normal	Peak	Off-peak	Normal	Peak	Off-peak	Normal	Peak	Off-peak	Normal	Peak	Off-peak
Present	614.000			556.000						14.900		
Previous	132.000			84.000								
Reading Advance & Met. MF												
Reading Advance	482.000	0.000	0.000	472.000	0.000	0.000	14.900	0.000	0.000			
Inj. RD. ADV. *	1060.000	0.000	0.000	1033.000	0.000	0.000	30.600	0.000	0.000			
Net MF												
S/P C.O. (KWH)	0.000			Inj. (KWH)	424.800		Doc. Inj. (KWH)	608.200		S/I C.O. (KWH)	508.200	

Energy Charge				Energy/Min. Charge (Rs)			
Rate	Normal	Peak	Off-peak	Normal	Peak	Off-peak	Rate
Rate	623			294.06			294.06
P.P.Reb(-)/Bar(+)	-3.00			0.00			0.00
Chargable	27.200	0.00	0.00	294.06000	0.00	0.00	294.06
Rate	294.06000			14025.00			14025.00
Chargable	0.9793			0.00			0.00
Rate	-8.82			14025.00			14025.00
Chargable	0.00			0.00			0.00

Electricity Duty			
EDM Units	EDDM Units	EDSR Units	ED DM Units
0.00	417.20	0.00	0.00
0.00	417.20	0.00	0.00
0.00	417.20	0.00	0.00
0.00	417.20	0.00	0.00

Other Charges & Outstanding (Rs.)		Armt. For Current Month (Rs)	
Rental of Meter/Motors	1200.00	Armt. For Current Month (Rs)	15521.10
Transformer Rental + GST	0.00	Due Date :	23.12.2021
E.C adjustment		Outstanding Amount (Rs.) :	0.00
D.C adjustment		Adjustment Amount (Rs.) :	-0.68
Other adjustment		Adjustment Amount (Rs.) :-	0.00
EPSC Charges	0.00	Payable by DueDate (Rs) :	15378.00
Adjustment	-0.68	Payable After DueDate (Rs) :	15521.00
Timely Payment Rebate	-143.21	Payable by DueDate	
-Add'l LP Rebate for Timely Payment	0.00	Through NSPT/PTGS (RS) :	15236.00
Total Timely Payment Rebate	-143.21		
Amount Before Due Date (Rs)	Fifteen thousand three hundred seventy eight rupees		
Amount After Due Date (Rs)	Fifteen thousand five hundred eighty one rupees		

Message to consumer: [regulator.your.mobile.No.and.email.id@westsbceil.in](mailto:regulator.your.mobile.No.and.email.id@westsbceil.in) to get Billing and Payment info.  
Payment may be made using RTGS/NEFT in your exclusive a/c no: MB889000024422063482 with EPSC code ICIC0000104  
\*Demand Charge includes interruption benefit of 00:00:00 hours

AVOID SIMULTANEOUS USE OF ELECTRICAL APPLIANCES SAVE ENERGY BY JUDICIOUS USE TO SAVE FUTURE GENERATION  
You may lodge the complaint for interruption for power supply through IVRS No. 1800-345-5211 mentioning the customer ID.

**Before Solar, Electricity Bill was Rs. 46,000/-**

**After Putting 30 Kw On-Grid Solar System, Electricity Bill became Rs. 15,000/-**



# Tax Credit of a 50 Kw Solar System costing analysis for ROI



<b>Project</b>	<b>50 Kw On-Grid Solar Project</b>
<b>Estimation</b>	<b>2500000.00</b>
<b>Depreciation</b>	<b>40%</b>

<u>Year</u>	<u>Cost After Depreciation</u>	<u>Tax savings (33% Tax Slab)</u>	<u>Depreciated Value After Tax savings</u>	<u>Unit Produced per year</u>	<u>Electricity Bill Savings</u>	<u>Total Savings</u>	<u>Cumulative Savings</u>
1	1000000.00	330000.00	2170000.00	73000	584000.00	914000.00	914000.00
2	868000.00	286440.00	1883560.00	72270.00	578160.00	864600.00	1778600.00
3	753424.00	248629.92	1634930.08	71547.30	572378.40	821008.32	2599608.32
4	653972.03	215810.77	1419119.31	70831.83	566654.62	782465.39	3382073.71
5	567647.72	187323.75	1231795.56	70123.51	560988.07	748311.82	4130385.53
6	492718.22	162597.01	1069198.55	69422.27	555378.19	717975.20	4848360.73
7	427679.42	141134.21	928064.34	68728.05	549824.41	690958.62	5539319.34
8	371225.74	122504.49	805559.85	68040.77	544326.16	666830.66	6206150.00
9	322223.94	106333.90	699225.95	67360.36	538882.90	645216.80	6851366.80
10	279690.38	92297.82	606928.12	66686.76	533494.07	625791.90	7477158.70
11	242771.25	80114.51	526813.61	66019.89	528159.13	608273.64	8085432.34
12	210725.44	69539.40	457274.21	65359.69	522877.54	592416.94	8677849.28
13	182909.69	60360.20	396914.02	64706.10	517648.77	578008.96	9255858.24
14	158765.61	52392.65	344521.37	64059.03	512472.28	564864.93	9820723.17
15	137808.55	45476.82	299044.55	63418.44	507347.55	552824.38	10373547.54
16	119617.82	39473.88	259570.67	62784.26	502274.08	541747.96	10915295.50
17	103828.27	34263.33	225307.34	62156.42	497251.34	531514.67	11446810.17
18	90122.94	29740.57	195566.77	61534.85	492278.82	522019.39	11968829.56
19	78226.71	25814.81	169751.96	60919.50	487356.04	513170.85	12482000.41
20	67900.78	22407.26	147344.70	60310.31	482482.48	504889.73	12986890.15
21	58937.88	19449.50	127895.20	59707.21	477657.65	497107.15	13483997.30
22	51158.08	16882.17	111013.03	59110.13	472881.08	489763.24	13973760.54
23	44405.21	14653.72	96359.31	58519.03	468152.26	482805.98	14456566.52
24	38543.72	12719.43	83639.88	57933.84	463470.74	476190.17	14932756.69
25	33455.95	11040.46	72599.42	57354.50	458836.03	469876.50	15402633.19



Consider 5 kw 3ph system minimum as per wbseb Rules

Price: 3.1 lac

Roughly 3 lacs

Invest fixed deposit at 8% rate gain 24000 /-

System will provide  $1200 \times 5 = 6000$  unit\* 7= 42000/- for 25 years as per system warranty

After upto 60 years also you will gain (panel degradation 80%  $\rightarrow$  30% )

Your ROI

invest ment	1 <sup>st</sup> yr	2 <sup>nd</sup> yr	3 <sup>rd</sup> yr	4 <sup>th</sup> yr	5 <sup>th</sup> yr	6 <sup>th</sup> yr	7 <sup>th</sup> yr	8 <sup>th</sup> yr	25 <sup>th</sup> yr As per Panel warranty and after 25 <sup>th</sup> yr generation going on...
3lac	-42000 = 258000	-42000 = 216000	-42000 = 174000	-42000 = 132000	-42000 = 90000	-42000 = 48000	-42000 = 6000	36000	Total $42000 \times 25 = 10,50,000/$ & going on....



*Sustainability determines the ways we think  
Renewability determines the ways never end.*

*So Determination of thinking never became end.....*





## One social contribution:

CO<sub>2</sub> emissions are about 1.12 (kg/kWh) as the Singrauli coal has 50.2 % carbon. Dadri, Chandrapur, and Dahanu plants emit about 0.82, 1.02, and 0.85 kg/kWh

So, approx

Think 1kg CO<sub>2</sub> per Unit generation we can save.....

Also estimated that emit about 33 g/kWh SO<sub>2</sub>, whereas Kahalgaon plant emits only 2.72 g/kWh SO<sub>2</sub> as the sulfur content in the coal used at this plant is only 0.17%. NO emissions per unit of electricity

Reference paper:

“Estimates of Emissions from Coal Fired Thermal Power Plants in India” Moti L. Mittal

# COMPLETED PROJECTS



## We have already Executed following Projects:

- 1) 80 kw at Jain college Cossipore
- 2) 10 kw at Jogomaya college, Bhawanipur
- 3) 10 kw hybrid at Asian export, Narendrapur
- 4) 6 kw On-Grid at Sri Avani Complex (26th Floor Rooftop), Ballygunj Phari
- 5) 5 kw on one complex common meter completed and one on-going.
- 6) 50kw at a school.
- 7) We are working on a few solar drinking Water projects and Solar Street lights under Government projects.

- Training Campus

[20 local youth]

GST Franchisee activity through online operation

## Under pipeline

Solar PV Installation training for micro enterprises

SME (small, medium enterprises) training

Capacity building & Project Consultancy

Village level Social Engineering Activity for income generation

(Plumbing, Electrician, Refrigeration etc.)

Base line survey on Solar PV installation in Schools of 24 pgs(s)

Consulting of woman Enterprises in West Bengal for Skill India initiatives.

Fund Syndication on case to case consulting basis



# Benefits from Higher to Lower Capacity Project



**Putting an On-Grid Solar system, you will get the following benefits:**

- 1. Make a green environment at your industry premises..**
- 2. Reduce your factory carbon footprint..**
- 3. Reduce Carbon Tax...**
- 4. Get benefit of tax holidays...**
- 5. Take benefit, on applying for a loan due to implementation of green energy at your factory premises.**
- 6. Assured (guaranteed) 20% annual return in terms of saving of electricity bill by single time investment for minimum 25yrs.**



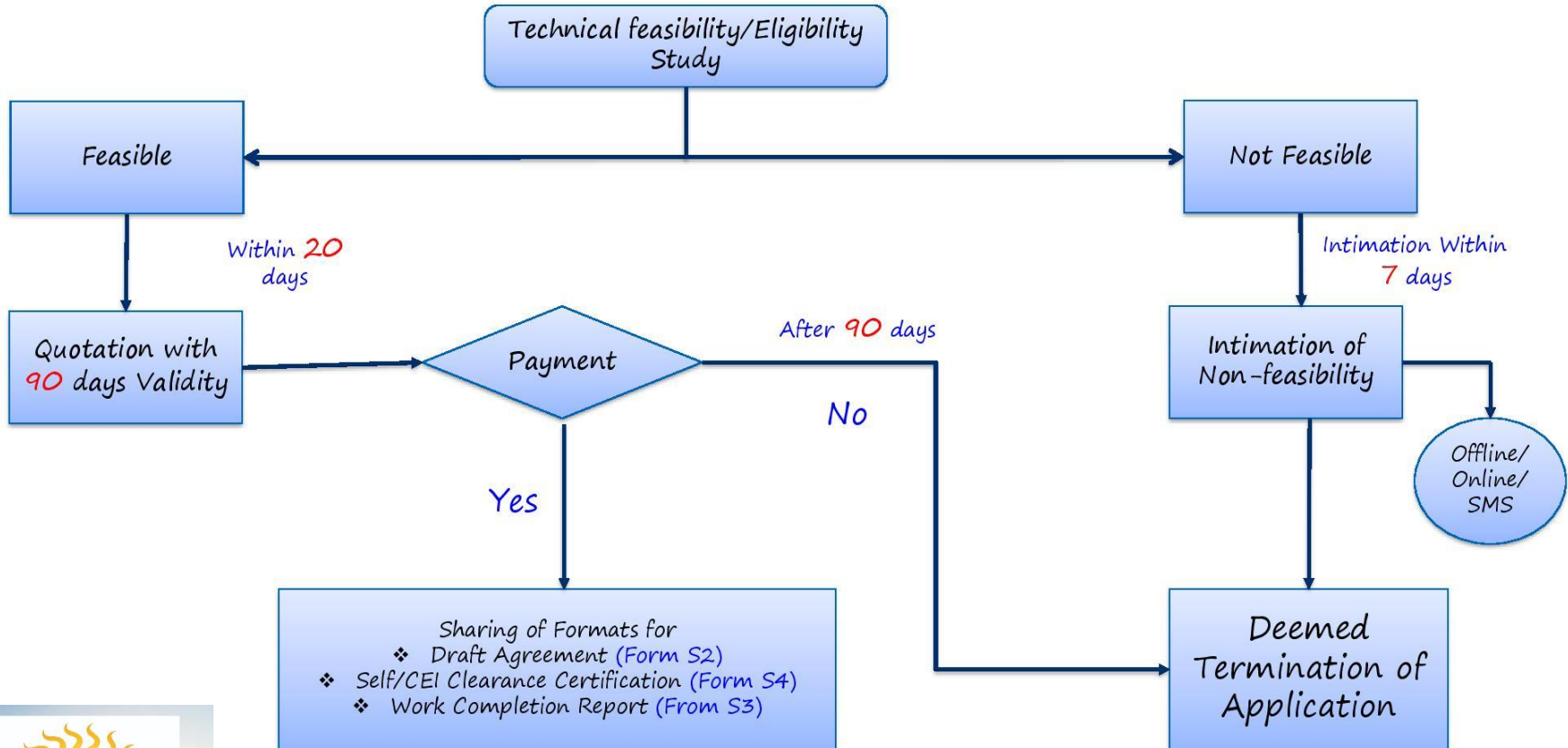
# Our All Projects



# Application Procedure & Our Responsibility



## APPLICATION REVIEW AND INSPECTION



# GOING SOLAR HAS NEVER BEEN EASIER



**SARN** Solar highest priority is customer satisfaction. We accomplish this by providing our customers with a personal solar concierge to help answer any of their questions. We also execute each and every step during solar installation progress. We use a simple 5 step process so that you can enjoy your new solar system.

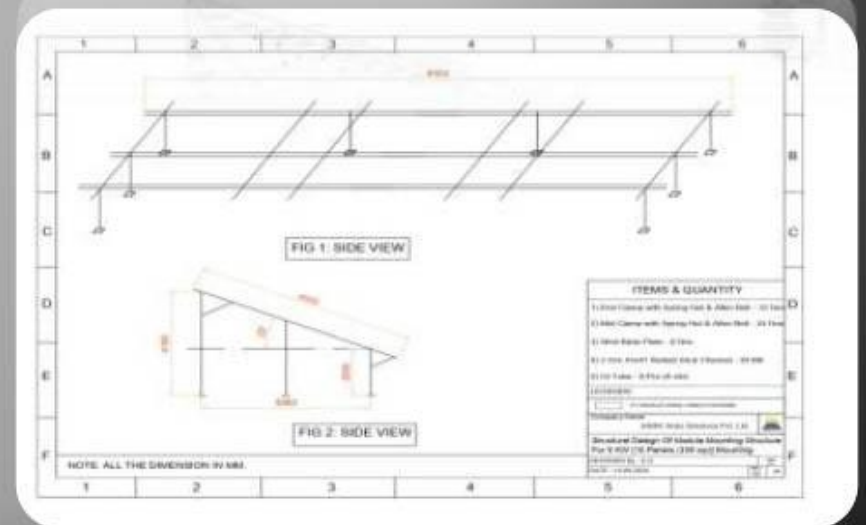
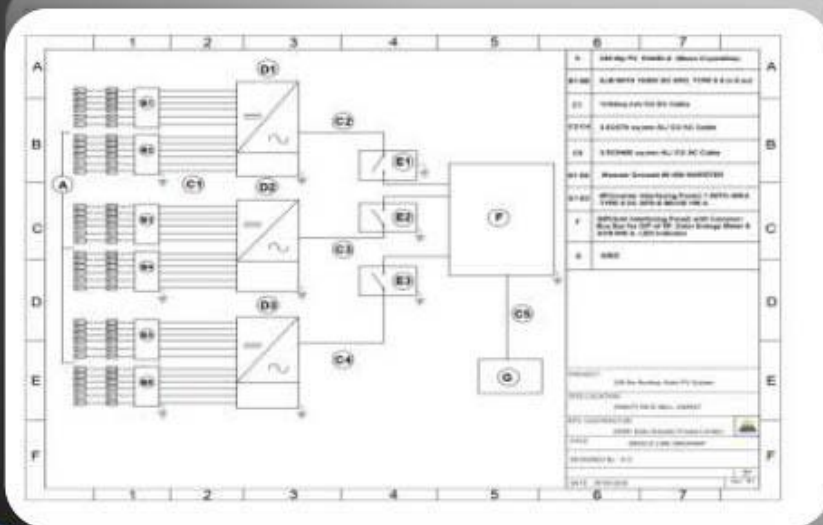
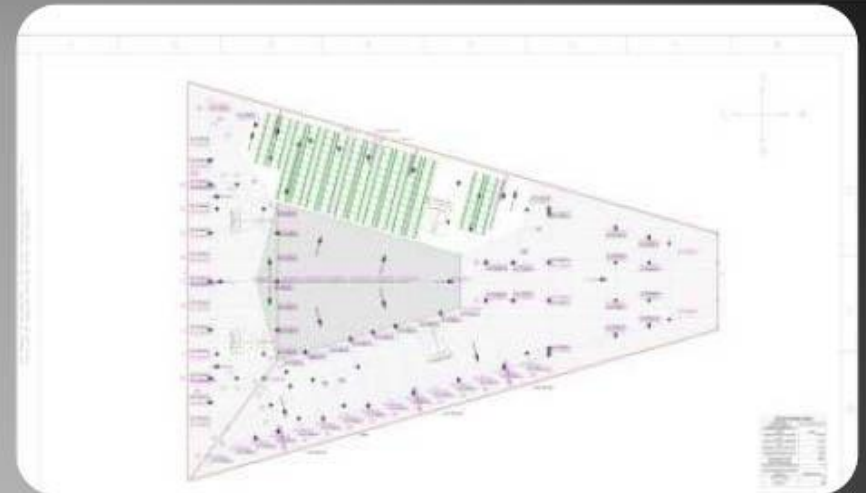
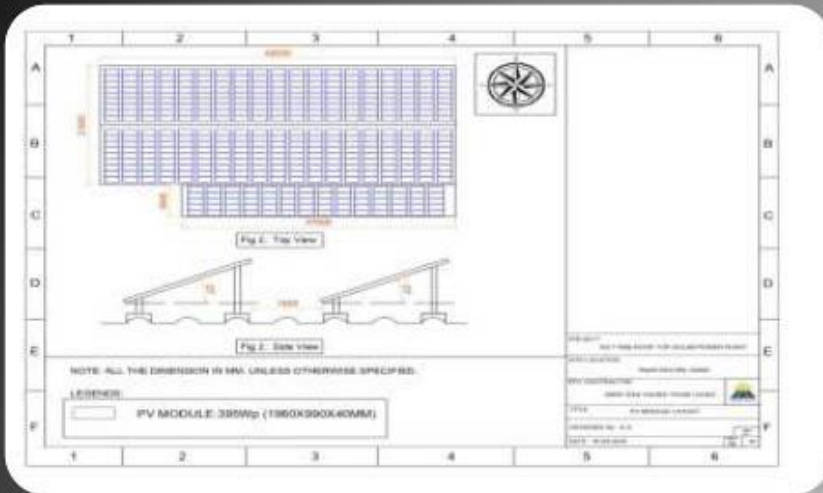
1. We ensure that you're eligible and qualify for solar.
2. We design a system to give you optimal solar output.
3. Our concierge team secures the necessary permits and permissions.
4. Our professional team installs your system.
5. You enjoy the benefits of owning your clean energy.



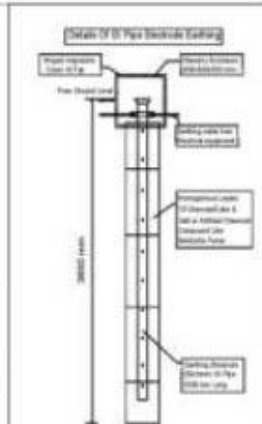
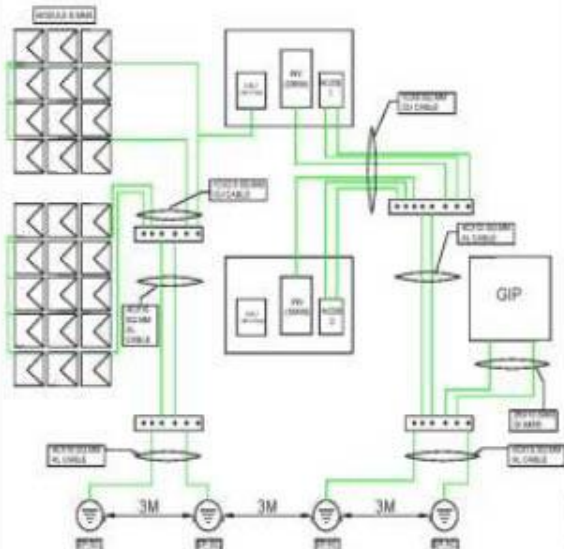
**7980181480**  
**7003792405**



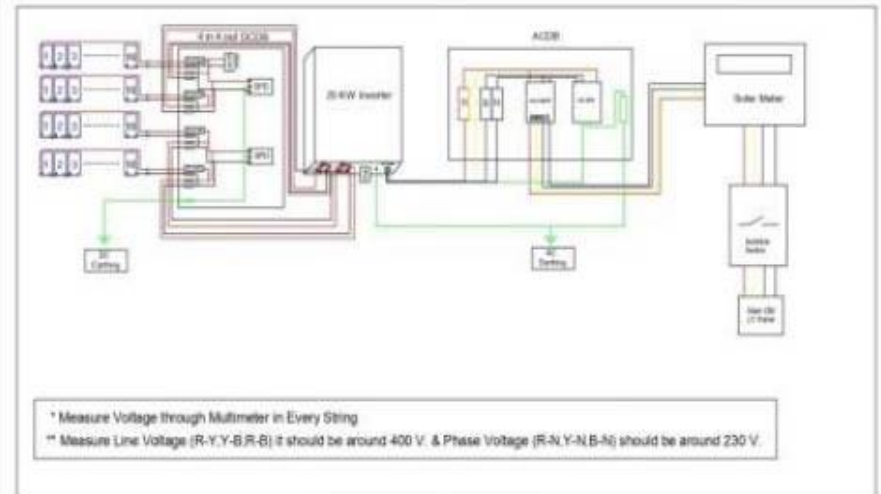
# PV Plant Layout & Single Line Diagram



# Structural Layout with Cabling Views



PROJECT	Schematic Diagram of Earthing Connections		
SITE LOCATION			
EPC CONTRACTOR	SARN Solar Solution Private Limited		
TITLE	EARTHING ROUTING LAYOUT		
DESIGNED By	A.G		
DATE	17-07-2020	DATE	17-07-2020

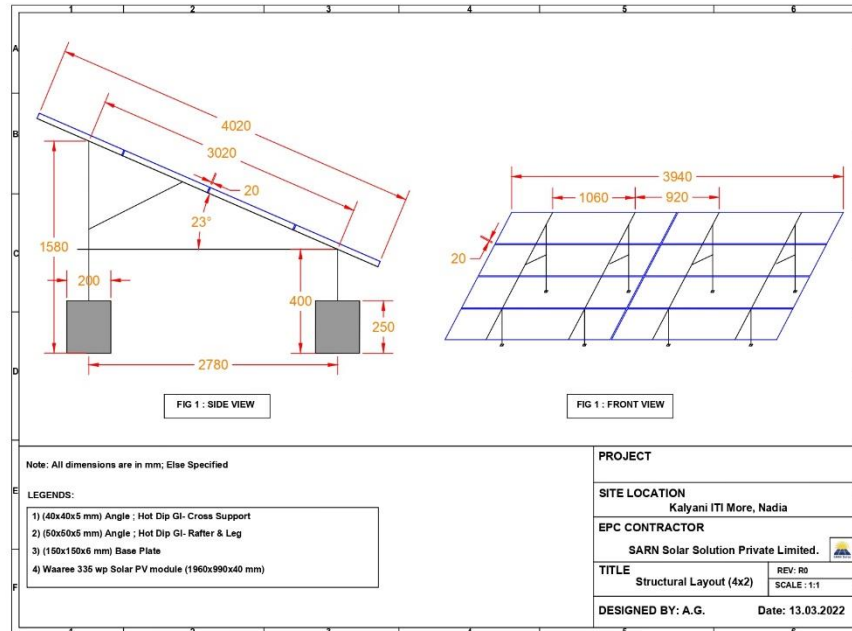


\* Measure Voltage through Multimeter in Every String  
 \*\* Measure Line Voltage (R-Y-Y-B-R-B) it should be around 400 V. & Phase Voltage (R-N, Y-N, B-N) should be around 230 V.

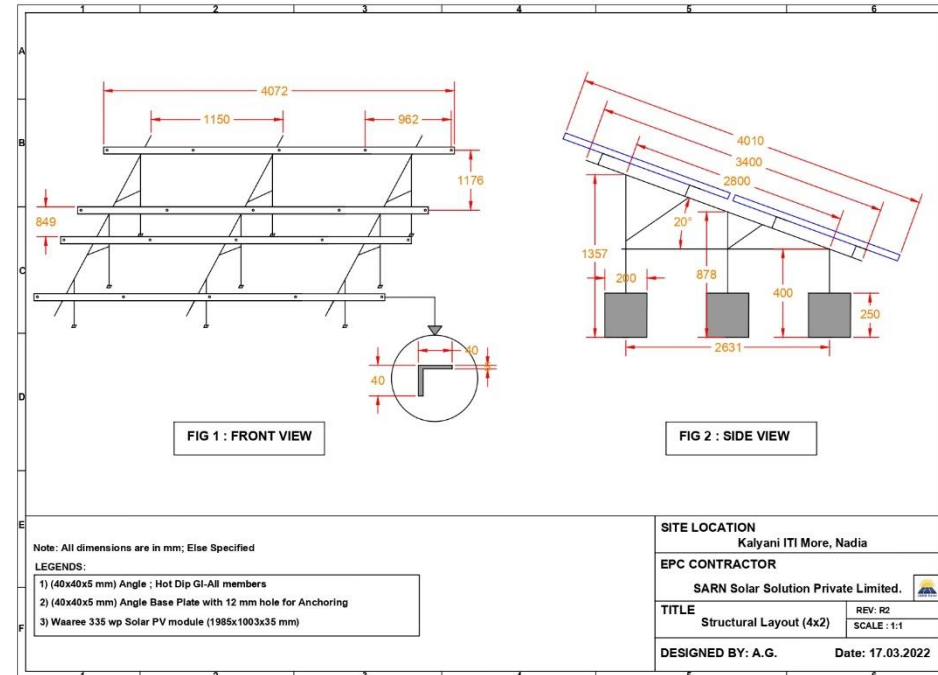
	PROJECT	Full Wiring Diagram of a Typical 20kW SPV System
	SARN SOLAR SOLUTION PRIVATE LIMITED	
	Designed By : A.G	
	Date : 11-07-2020	REV : R1



# Structural Upgradation due to Wind Analysis Report:



## 200 KM/HR WIND SPEED STRENGTH

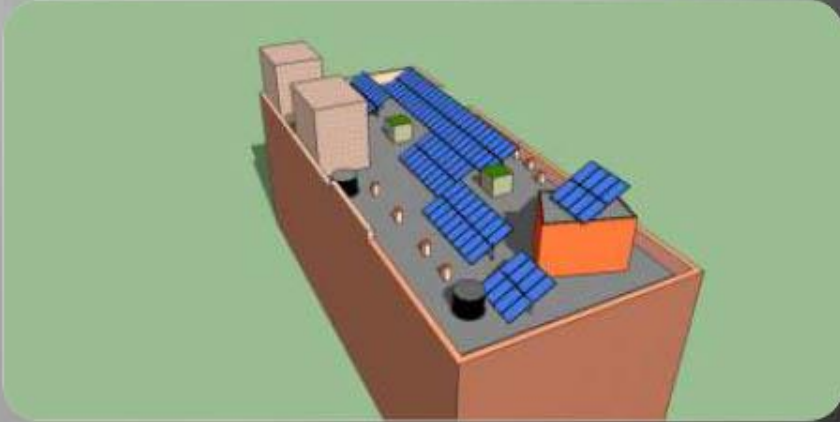
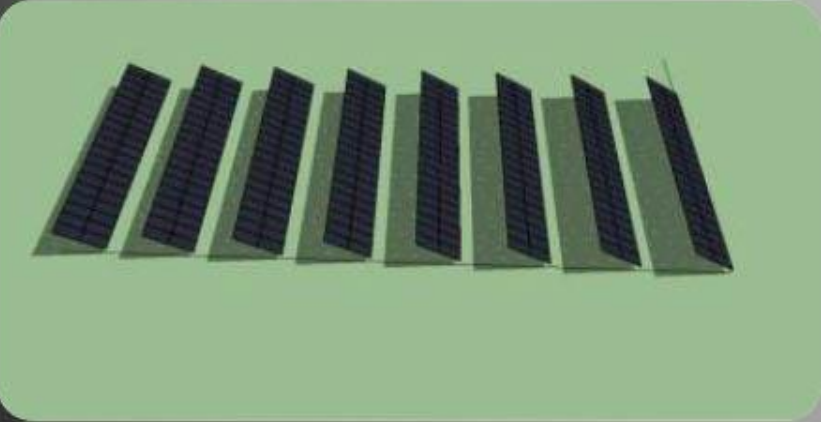
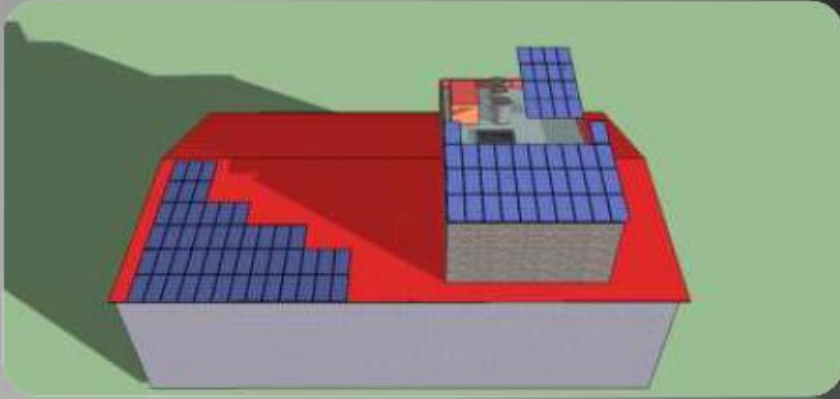


## 150 KM/HR WIND SPEED STRENGTH





# 3D Shadow Analysis View in Sketch up





## **“WHAT WE OFFER ”**

- ❖ We Offer **‘Concept to Completion’** Services for Grid Connected, Off Grid with batteries & other Electrical solutions.
- ❖ We are doing project in collaboration with **MSME**, They will visit the site several times, do the final inspection and Certified on their Letter Head. That is Our main **USP**.
- ❖ We will provide **Auto Clean & Remote monitoring** system at free of cost



## **“STEPS INVOLVED ”**

### **STEP 1 : SITE & PROJECT ANALYSIS**

Our Team Will Conduct A Thorough Feasibility Survey Of Your Site And Assessment Of Your Energy Needs.

### **STEP 2: SYSTEM DESIGN**

We Do a Detailed Engineering Analysis That Enables Us To Define And Design The Location Of All Equipment Like Solar Modules, Mounting Structure, Inverter, Cabling And Related Civil Work Applicable To Your Specific Location Topography.

### **STEP 3: INSTALLATION AND COMMISSIONING**

Our Certified Field Staff Manages The Entire Installation & Commissioning Process Including Civil Work Related With Above System.

### **STEP 4: LIAISONING**

We Will Do Entire Documentation work From Solar Application To Net Metering Connection By Communicate With Electricity Dept. And Other Govt. Agencies.

# Estimation of an Individual System



## On-Grid Domestic System with Net Metering Facility:

### 1 KW ON GRID SYSTEM (With Complete Installation)

MRP: ~~Rs. 75,000/-~~ + GST

Our Price : Rs. 65,000/- + GST + Transport\*\*

### 2 KW ON GRID SYSTEM (With Complete Installation)

MRP: ~~Rs. 1,35,000/-~~ + GST

Our Price : Rs. 1,20,000/- + GST + Transport\*\*

### 3 KW ON GRID SYSTEM (With Complete Installation)

MRP: ~~Rs. 1,90,000/-~~ + GST

Our Price : Rs. 1,74,000/- + GST + Transport\*\*

### 5 KW ON GRID SYSTEM (With Complete Installation)

MRP: ~~Rs. 3,00,000/-~~ + GST

Our Price : Rs. 2,85,000/- + GST + Transport\*\*



BEST  
OPTIMIZATION



QUALITY  
ASSURANCE



LOW PRICE  
LOW PRICE



READY  
STOCK

## On-Grid Commercial System with Net Billing Facility:

### 10 KW ON GRID SOLAR SYSTEM (With Complete Installation)

MRP: ~~Rs. 5,20,000/-~~ + GST

Our Price : Rs. 4,80,000/- + GST + Transport\*\*

### 30 KW ON GRID SOLAR SYSTEM (With Complete Installation)

MRP: ~~Rs. 14,00,000/-~~ + GST

Our Price : Rs. 12,50,000/- + GST + Transport\*\*

### 50 KW ON GRID SOLAR SYSTEM (With Complete Installation)

MRP: ~~Rs. 23,50,000/-~~ + GST

Our Price : Rs. 20,50,000/- + GST + Transport\*\*

### 100 KW ON GRID SOLAR SYSTEM (With Complete Installation)

MRP: ~~Rs. 45,00,000/-~~ + GST

Our Price : Rs. 40,00,000/- + GST + Transport\*\*



## SARN Solar Solution Pvt.Ltd

One Stop Solar solution For Domestic & Commercial



### 320 watt OFF GRID SOLAR SYSTEM FOR HOME

675 VA 12 V SHAMSI Off grid inverter, 160 wp x 2 Solar Panel , 1Nos.  
150 Ah Battery (5 Years Warranty) & Balance of System including  
Design & Installation at Site.

MRP: **Rs. 45,000/- + GST**

**Our Price : Rs. 38,000/- + GST**



9831289698/9432689034  
sarnsolar@gmail.com  
www.sarnsolar.in



# Off-Grid Domestic System

## SARN Solar Solution Pvt.Ltd

One Stop Solar solution For Domestic & Commercial



### 500 watt OFF GRID SOLAR SYSTEM FOR HOME

675 VA 12 V SHAMSI Off grid inverter, 160 wp x 3 Solar Panel , 1Nos.  
150 Ah Battery (5 Years Warranty) & Balance of System including  
Design & Installation at Site.

MRP: **Rs. 60,000/- + GST**

**Our Price : Rs. 50,000/- + GST**



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sarnsolar@gmail.com  
www.sarnsolar.in



**SARN Solar Solution Pvt.Ltd**  
MSME REGISTERED & ISO 14001:2015 CERTIFIED COMPANY

Free Electricity For Lifetime

SARN Solar Solution Pvt. Ltd has been established in 2019 as a complete one stop Solar Solution provider in Kolkata, West Bengal. The mission of the company is to promote a green revolution with a passion to Conserve natural resources where in one can generate electricity through the infinite & free Resources "The Sun Light"

## SARN Solar Solution Pvt.Ltd

One Stop Solar solution For Domestic & Commercial



### 1 KW OFF GRID SOLAR SYSTEM FOR HOME

1 KVA 12 V Gamma+ Off grid inverter, 330wp x 3 Solar Panel , 1Nos.  
150 Ah Battery (5 Years Warranty) & Balance of System including  
Design & Installation at Site.

MRP: **Rs. 95,000/- + GST**

**Our Price : Rs. 80,000/- + GST**

# Off-Grid Domestic System

## SARN Solar Solution Pvt.Ltd

One Stop Solar solution For Domestic & Commercial



### 2 KW OFF GRID SOLAR SYSTEM FOR HOME

2.2 KVA 24 V HELIAC Off grid inverter, 330wp x 5 Solar Panel , 2 Nos.  
150 Ah Battery (5 Years Warranty) & Balance of System including  
Design & Installation at Site.

MRP: **Rs. 1,80,000/- + GST**

**Our Price : Rs. 1,30,000/- + GST**



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sarnsolar@gmail.com  
www.sarnsolar.in



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sarnsolar@gmail.com  
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## ON GRID SOLAR PV SYSTEM

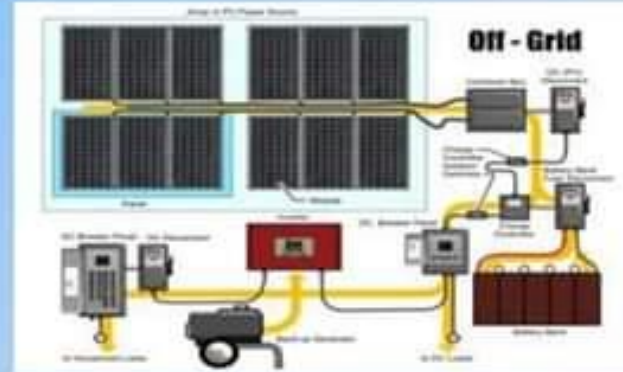


1. Also called Grid Tied system
2. No batteries.
3. Power generated is partially used and rest supplied to grid
4. **Minimization in Electricity Bill**

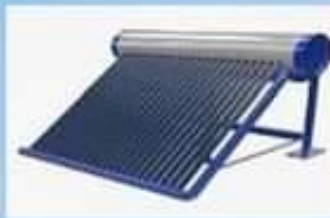


## OFF GRID/HYBRID SOLAR PV SYSTEM

1. Power generated is used during the day time for all appliances
2. Excess power gets stored in the batteries for usage
3. **ZERO electricity bill**
4. It can operate as a backup power supply during blackout for a long at a time of Natural disasters.



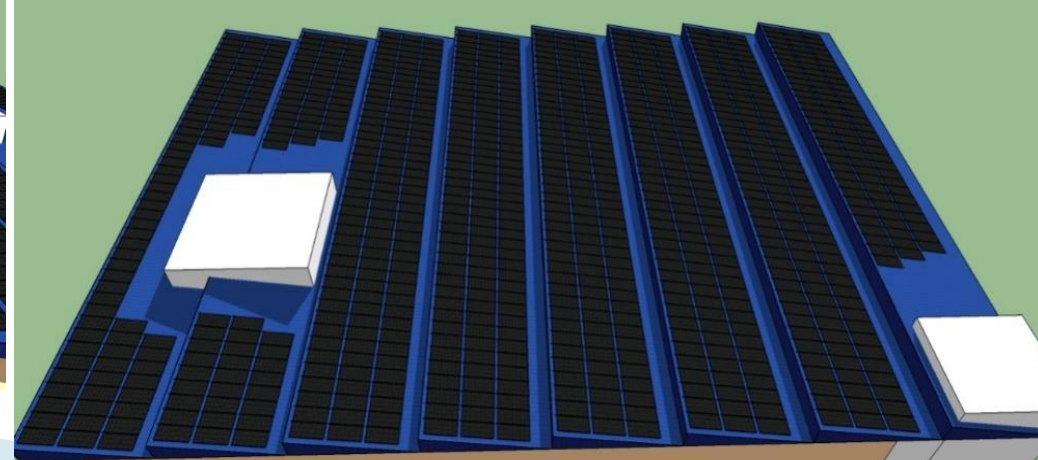
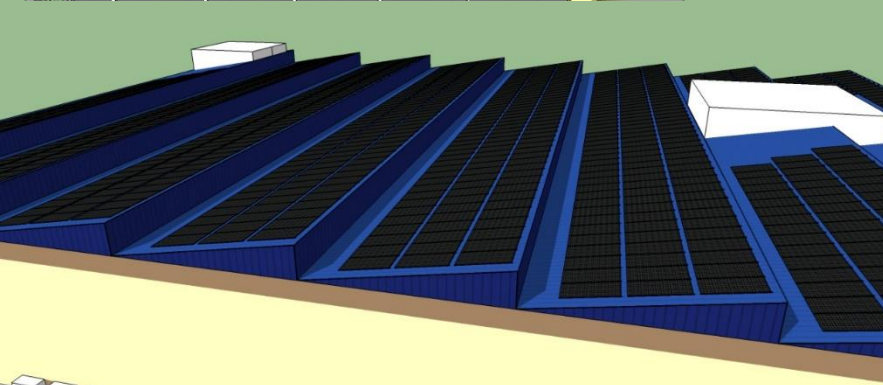
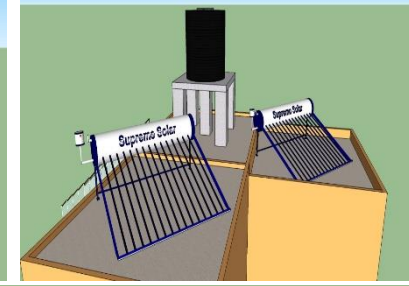
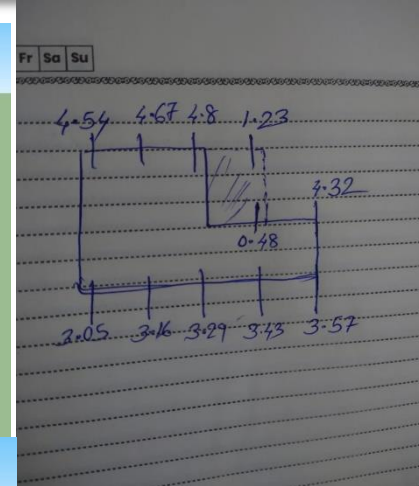
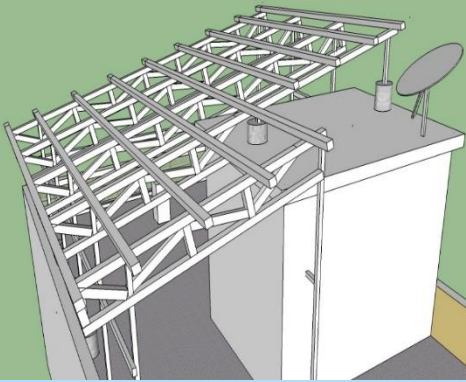
## SOLAR LED STREET LIGHT & SOLAR WATER HEATER



We also deal in Multi branded (ISO 9001 & ISO 14001) Certified Solar Street Light ,Solar home appliances and Solar Water Heater.

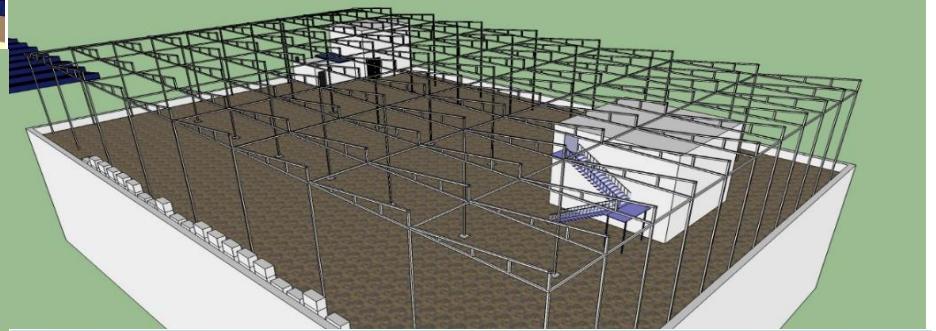
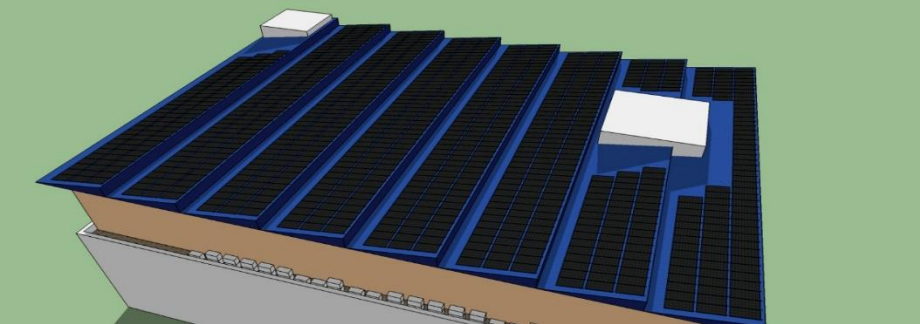
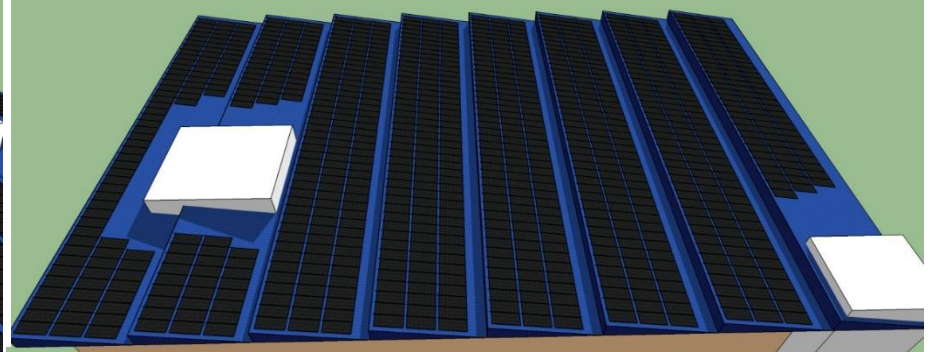
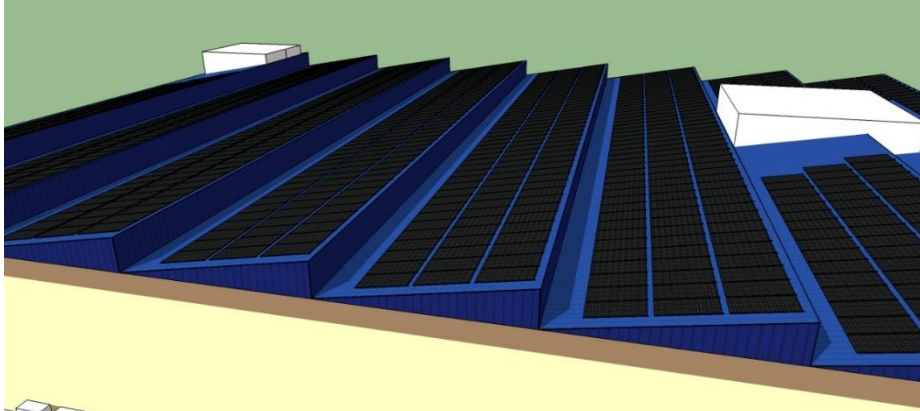
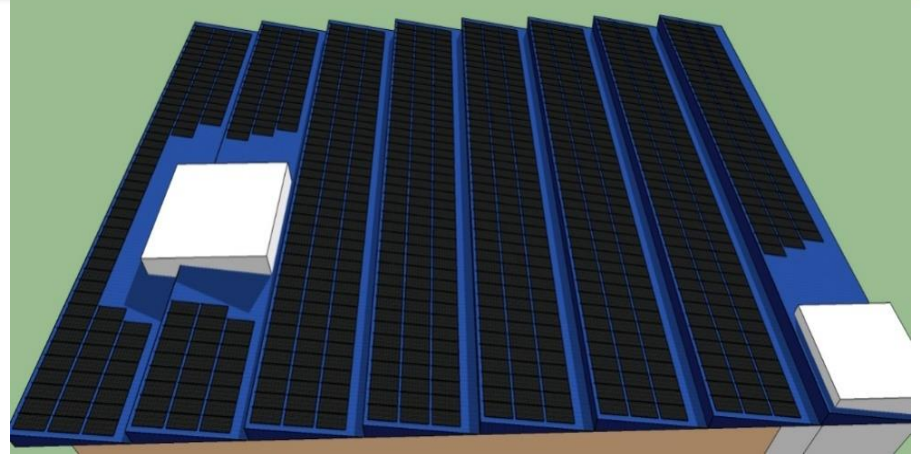
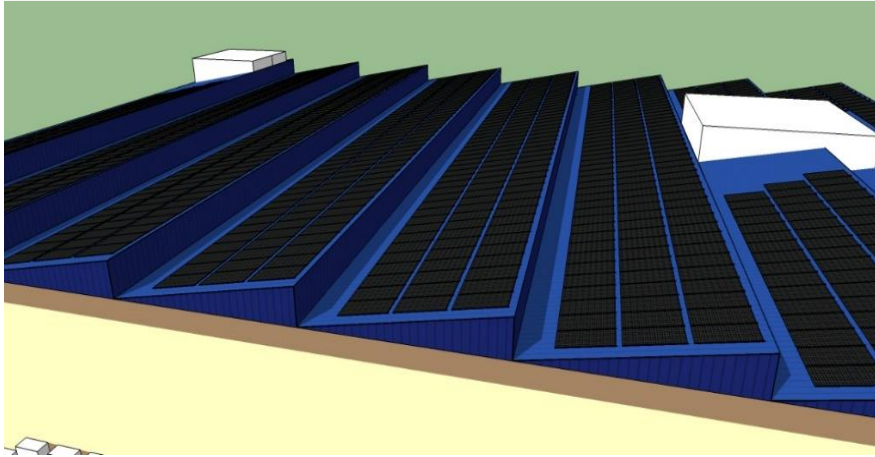


# Project Preview



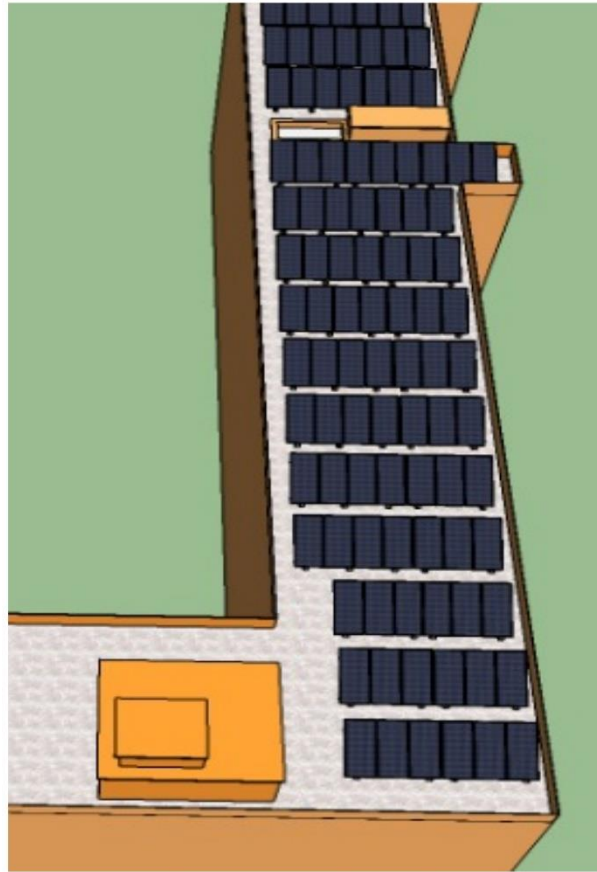


# Clint's Site Preview



Sample changeable slide on Clint's Site aspect

# Project Preview (Animated & Actual)



**Designed View**

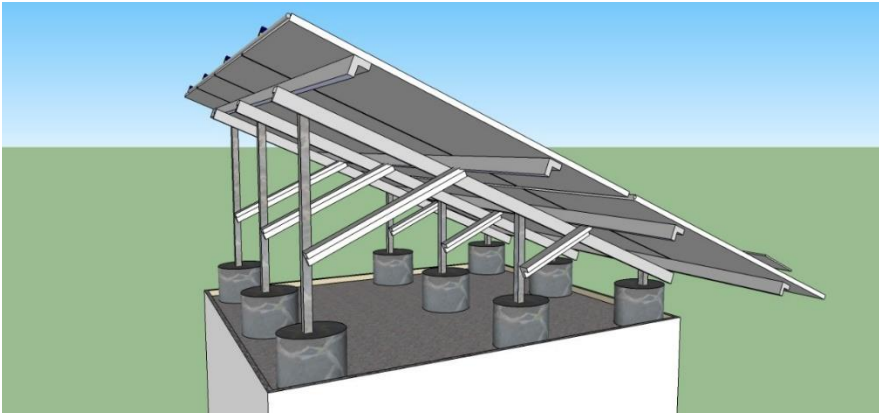


**Actual View**





# Project Preview (Animated & Actual)





# USE OF SOFTWARE'S:

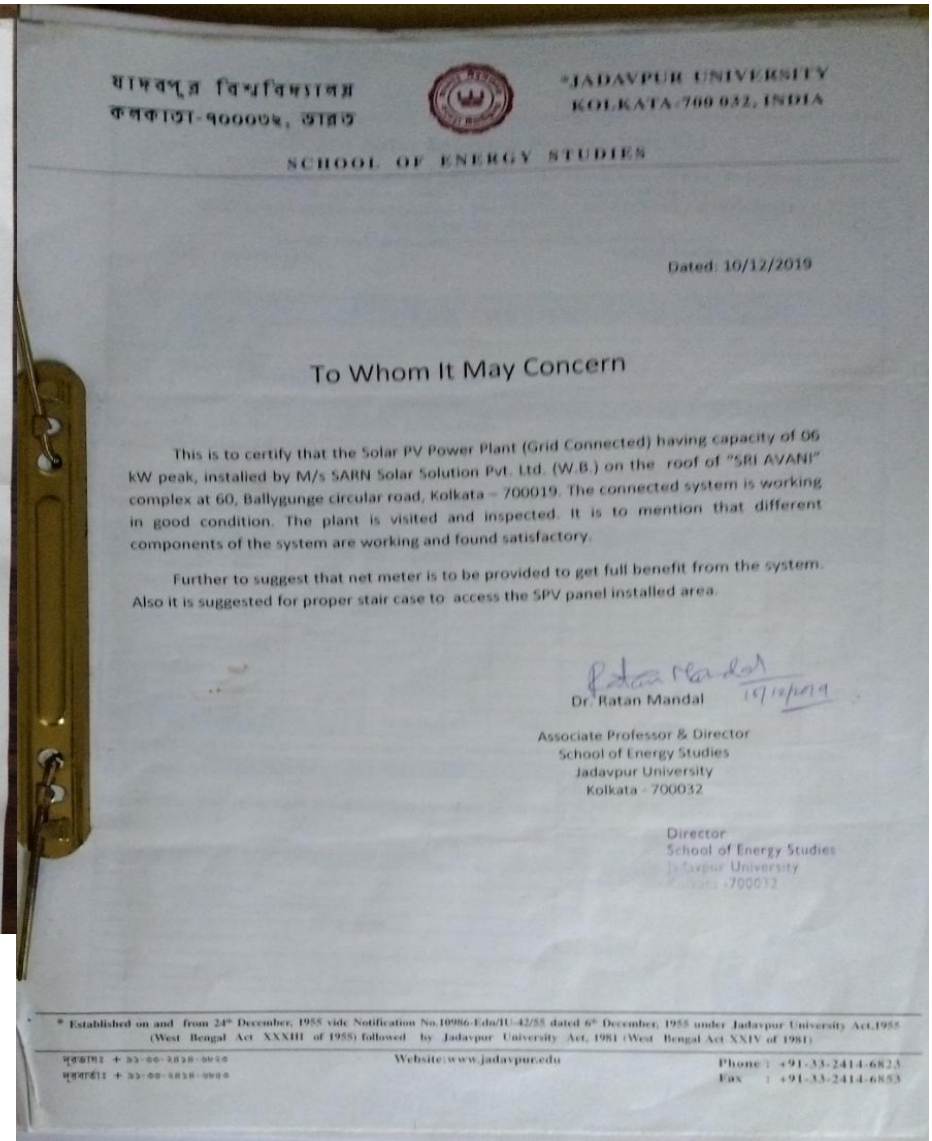
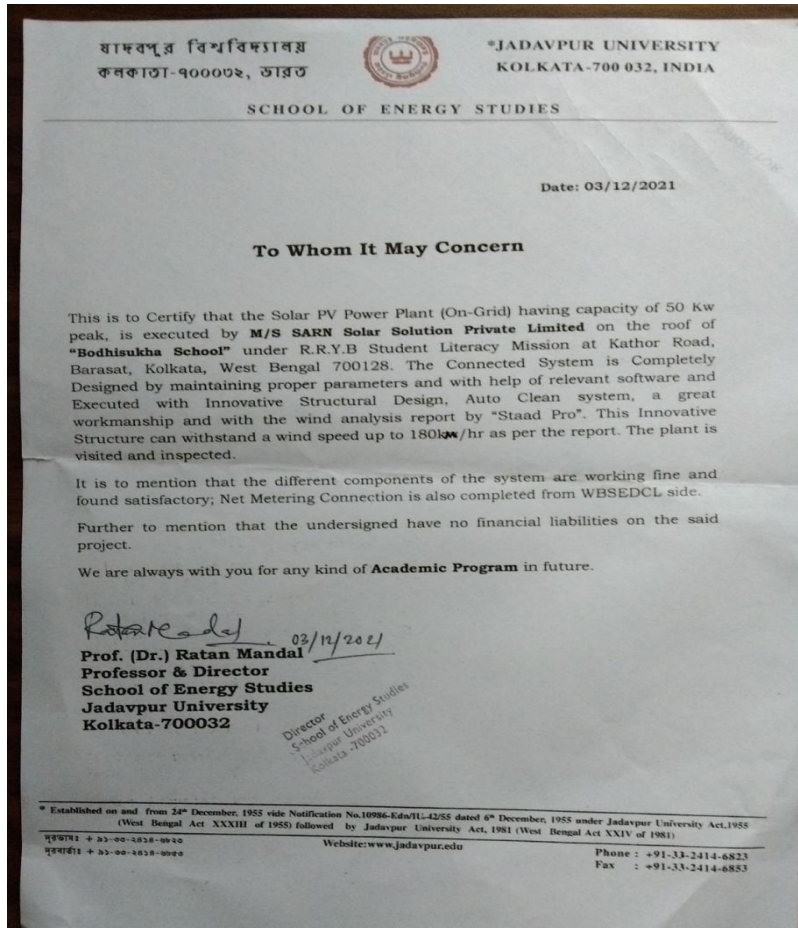


- AUTOCAD
- STAAD PRO
- SKETCH UP
- PV SYST
- HELIOSCOPE

**\*\*\*\*\*After Work Order and Advance Payment We are Providing  
SLD, Financial Report, Structure Design, Wind Analysis  
Report, Delivery Challan, And Project Commissioning Report &  
All necessary Documents.**



# Our On-Grid Project Certified by State University Renewable Energy Department :



## Sample Certificate



# Level of Authentication :



WEST BENGAL ELECTRICITY REGULATORY COMMISSION



Ref No. WBERC/B-108(Part)/54

Dated, Kolkata, the 01<sup>st</sup> April, 2021

From :  
Smt. M Guha Roy, IAS  
Secretary, WBERC

To,  
Mr. Ayan Ghosh  
Executive Engineer  
SARN SOLAR SOLUTION PRIVATE LIMITED  
sarn.solar@gmail.com

Sub : Implementation of 1 kw to 5 kw Net metering in domestic Sector as per Regulation REGU-71- regarding

Ref : Your e-mail dated 24.03.2021

Sir,

In inviting a reference to the above, I am directed to inform that in terms of the amended regulations net metering for the domestic consumers having sanctioned load of 1 kw to 5 kw is effective from the date of publication of the regulations i.e. from 22.12.2020.

This is for your information and necessary action.

Yours faithfully,

Secretary

Letter not metering

Tel : (033) 2962 3756  
Fax : (033) 2962 3757

Plot No : AUS (2<sup>nd</sup> and 4<sup>th</sup> Floor), Premises No : MAR 16-1111  
Action Area-1A, New Town, Kolkata - 700163

Email: wbere99@gamil.com/cp-wbere@gov.in  
Website: www.wbere.gov.in



West Bengal State Electricity Distribution Company Limited

(A Government of West Bengal Enterprise)  
Solar Power Generation Department

3<sup>rd</sup> Floor, Data Center Complex, Street No. 41, Action Area-I, New Town, Kolkata - 700 163  
Mob: 8900793309, 8900793310, 8900793329  
Website: www.wbsecltd.in, e-mail: www.solarwbsecltd.com.  
CIN : U40109WB900766C113473

Memo No: WBSEDCL/SPGD/RTS/404

Dated: 29-12-2021

To,  
SARN Solar Solution Pvt Ltd,  
SWAPANA NEER Apartment,  
1<sup>st</sup> Floor, R.N.C Road,  
Subhashgram,  
Kolkata 700147  
Email-ID sarn.solar@gmail.com

Sub: Letter of Intent (LOI) for the work of "Empanelment of Agencies for Design, Supply, Installation, Testing & Commissioning of Grid connected Rooftop Solar Photovoltaic Systems in Residential premises, aggregating to 50 MWp, including five years comprehensive maintenance in the State of West Bengal during the Year (2021-22)"

Ref: NleT No: WBSEDCLSPGD/RTS Phase-2/2020-21/NIT-28/dated 25/08/2021

Dear Sir,

West Bengal State Electricity Distribution Company Ltd. is pleased to place this Letter of Intent (LOI) regarding your proposal submitted in conjunction with all the specifications, terms & conditions of the Bidding Documents, Prebid reply and your bid with subsequent consent for the scope of work covering "Design & Engineering, Manufacture / Procurement, Testing, Supply, Installation and Commissioning of 50 kWp or Applied capacity whichever is more for Grid Connected Rooftop Solar PV Power Plants including five (5) years Comprehensive Maintenance on turnkey Basis at various location of West Bengal under MNRE, Rooftop Phase-II scheme for residential sector".

1. **Contract Price and Quantity Variation:** WBSEDCL reserves the right to alter, amend, omit, quantity of allotment of PV capacity up to the NIT guideline.
2. **Scope of Work:** Details scope of work and terms of work will be guided by the terms of the NIT
3. **Controlling Officer of the Work:** The Chief Engineer SPGD, will be the Controlling Officer of the work.
4. **Supervising Officer of the Work:** The Station Manager of the concern customer care center, WBSEDCL will be the Supervising Officer of the work.

Page 1 of 2



West Bengal State Electricity Distribution Company Limited

(A Government of West Bengal Enterprise)  
Solar Power Generation Department

3<sup>rd</sup> Floor, Data Center Complex, Street No. 41, Action Area-I, New Town, Kolkata - 700 163  
Mob: 8900793309, 8900793310, 8900793329  
Website: www.wbsecltd.in, e-mail: www.solarwbsecltd.com.  
CIN : U40109WB900766C113473

5. **Financing Authority of the work:** The Ministry of Power, Government of India, New Delhi, is the Financing Authority of subsidy approved and released by MNRE. Govt. Other than subsidy amount will be paid by individual beneficiary to the vendor.
6. **Correspondence:**  
All the correspondence related to the contract are to be made at the following address:  
The Chief Engineer, SPGD  
WBSEDCL, 3<sup>rd</sup> Floor Data Center Complex  
Street No. 41, Action Area-I, New Town  
Kolkata - 700 163
7. **Security Deposit:**  
Security deposit of Rs. 5 Lakh (Five Lakh) as per the NIT within fifteen (15) days from the date of issuance of this Letter of Intent.
8. **Contract Agreement:**  
You are also requested to execute the contract agreement as per NIT.  
Please acknowledge the receipt of LoI.

Yours faithfully,  
  
P.K. Kundu  
Chief Engineer  
Solar Power Generation  
Department

Page 2 of 2

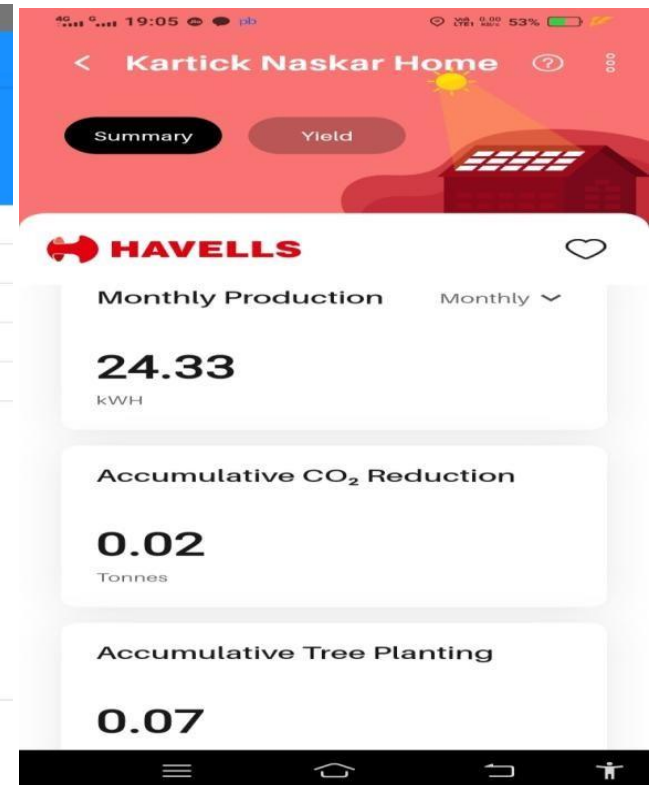
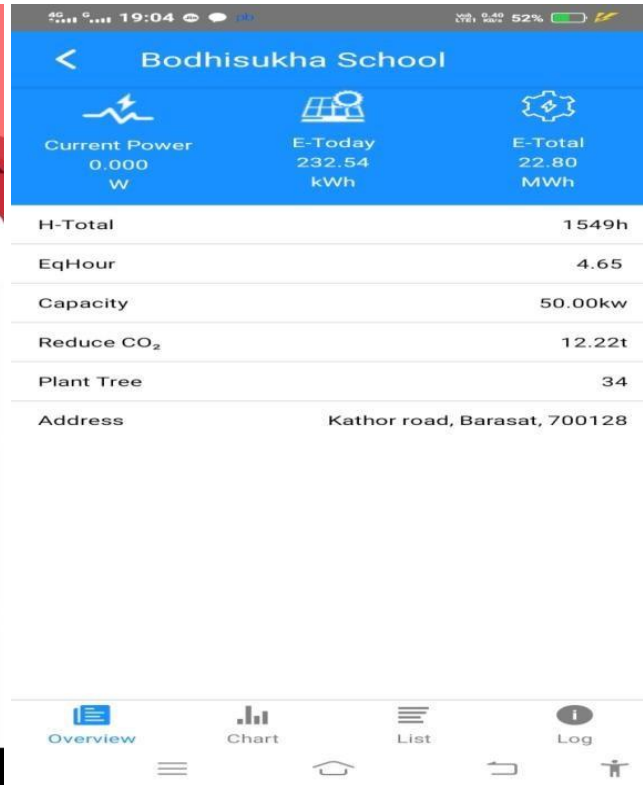
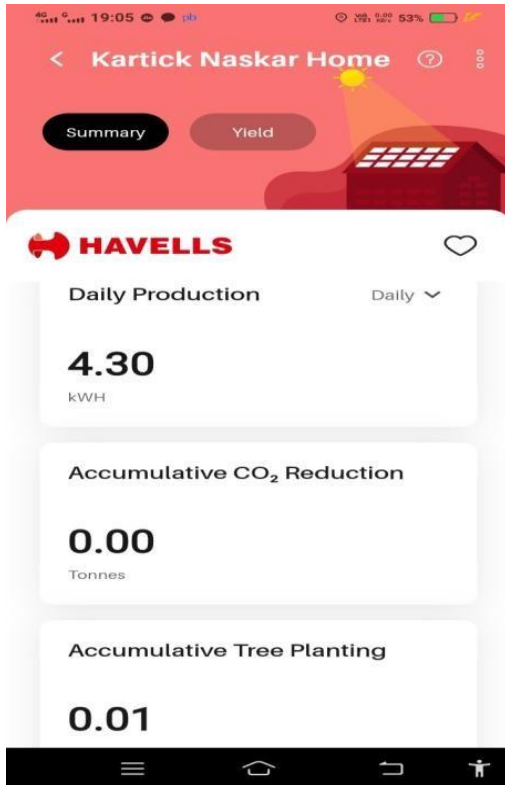


# Project Analysis / Review



**Polycrystalline panels have lower efficiency rates typically in the 15-17% range. Where Monocrystalline panels have higher efficiencies in the range of 17-20%.** Because of the lower efficiency rate they are not as space-efficient since they produce less power per square feet Space which required around 20% higher space comparatively.

Here clearly mention on dated (07/04/2022) generation at our system 1kw with polycrystalline 4.30 units where as today's Mono PERC 1kw generate 4.65 units at our 50kw Bodhisukha school project. Both systems are with auto clean system.





# INSTALLING HAPPINESS:



At SARN Solar we love our customers and we are dedicated to helping you to the best of our abilities. Here are a few ways that you can get in touch with us to get help.

## SEND US AN EMAIL

Sends us an email with any questions you might have and we will be happy to respond to them.

[sarnsolar@gmail.com](mailto:sarnsolar@gmail.com) /  
[contact@sarnsolar.in](mailto:contact@sarnsolar.in)

## GIVE US A CALL/ WHATSAPP

Give us a call with any questions you might have and we will be happy to help.

9432689034/ 7980181480/ 9432689035



**7980181480**  
**7003792405**



CONTACT US: EMAIL

[sarnsolar@gmail.com](mailto:sarnsolar@gmail.com) / [contact@sarnsolar.in](mailto:contact@sarnsolar.in)

# THANK YOU

Trust us.....

Then

.....Gain, Better than Your Expectations.

FOLLOW US:

- **GOOGLE SEARCH (SARN SOLAR)**
- **FACEBOOK PAGE**
- **INSTAGRAM PROFILE**
- **YouTube**
- **[www.sarnsolar.in](http://www.sarnsolar.in)**

GIVE US A CALL/ WHATSAPP

**9432689034/ 7980181480/ 9432689035**

