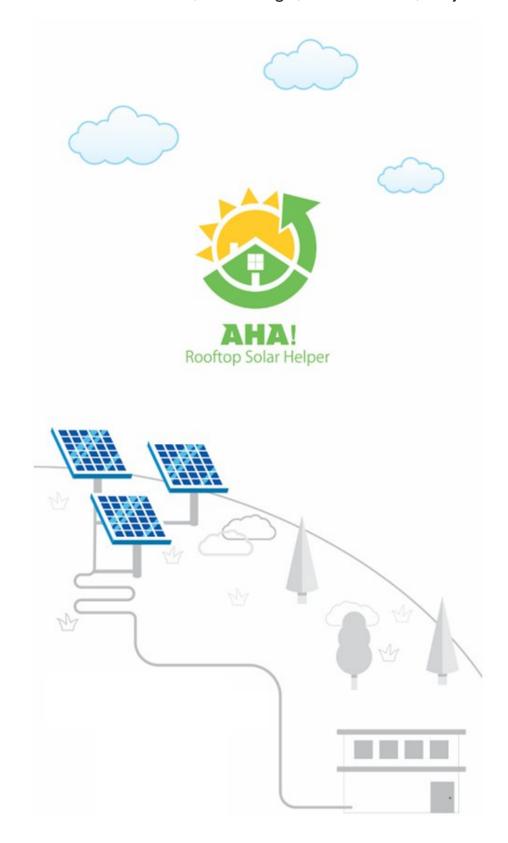
# Project Summary Report for 3 KW Rooftop Solar PV System at Swami Vivekananda Road, Ellisbridge, Ahmedabad, Gujarat



#### Introduction of AHA! App

AHA Solar Rooftop Helper App (AHA!) and the Website offers solar power estimation with approximate cost, applicable government incentives, finances, and information about your nearby Solar PV Rooftop Installers (the "Installer"). The app is available on various platforms like Android, iOS and Windows across several cities in India and also provides project management tool for Installers to carry out feasibility studies, site surveys, design and preparation of techno-commercial proposals for their customers. We offer a common platform for end consumers and Solar PV Installers to become a part of the solar revolution.

### **About Company & Team**

At AHA! we are a team of dedicated professionals passionate about bringing a revolution in the solar energy sector of India. With entrepreneurial talent from diverse technical and management backgrounds, we bring diverse expertise encompassing all aspects of Solar PV industry. Our salient skills are tech know how, market analysis and understanding along with suggestions for financing projects in the Indian scenario.

AHA! tracks the Solar PV market on real-time basis with its extensive and active network thus connecting you to industry experts, government officials and policy makers. AHA! is knowledge-driven, analytical in approach and believes in output-oriented approach in all processes. This reflects in the tools we use for calculating solar capacity on rooftop, building bridges between installers and end customers.

Lastly, along with providing project management and strategic planning services we also strive to provide a transparent and reliable service.

Further, we intend to provide complete solar solutions platform to residential, commercial and industrial establishments. We emphasize on customized solutions in the Indian solar rooftop space as the solution for reducing power costs alongwith the benefit of promoting clean energy.

#### Input by the User



**Input by Jakes Sparow** 

Type of Customer

Residental

Average Energy Consumption

1500 kWh

Average Monthly Bill

Rs.10500 per month

Type of Back-up power used

No

Back-up Usage (if applicable)

N/A

#### **Assumptions**

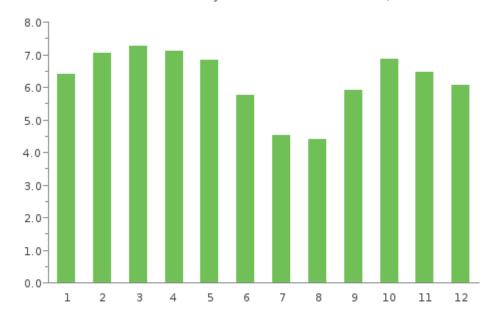
Performance Parameter	Financial Parameter
Operation and Maintenance Cost	Debt
0.75% of Asset Value	70%
Operation and Maintenance Cost	Insurance Cost
5.72% annually	0.35% of Project Cost
Annual Performance Deration	Depreciation
1% per year	First 10 years- 6%
	Next 15 years – 2%
	Accelerated Depreciation* (if applicable)
	40%
	Corporate Tax (if applicable)
	34.64%

#### \* Note:

- 1. Accelerated Depreciation is applicable for the solar PV systems for Industrial and Commercial segments.
- 2. 30% Capital Subsidy is applicable for the Solar PV System for Residential, Social Sector and non-profit making institution.

# Average Yearly Radiation For Ahmedabad, Gujarat <sup>1</sup>

Monthly Solar Radiation GHI (kW h/m2)



QUARTER 1
20.68 kWh/m<sup>2</sup>
QUARTER 2
19.69 kWh/m<sup>2</sup>
QUARTER 3
14.84 kWh/m<sup>2</sup>
QUARTER 4
19.39 kWh/m<sup>2</sup>

# Results

Sr.	Particulars	Units	Recommended by AHA!
A.	Recommended Capacity	kW	3
B.	Estimated Cost	Rs. in Lacs	2.10
C.	Subsidy	Rs. in Lacs	2.10
E.	Payback	Years	3.29
F.	Savings	Rs./month	3,550.71
G.	Savings	Rs./Yr	42,608.58

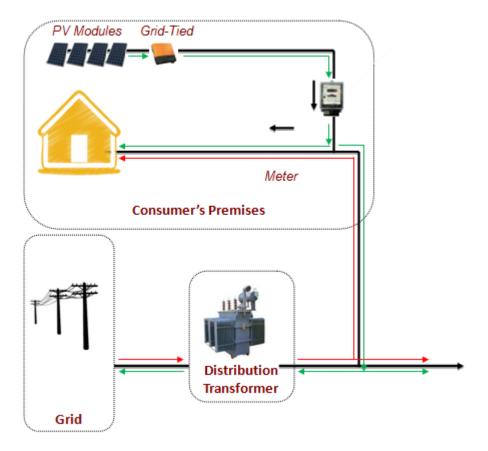
# System specification

a. Solar PV Module Capacity: 3000 watt

b. Inverter Capacity: 3 kW

c. Default Angle: 23

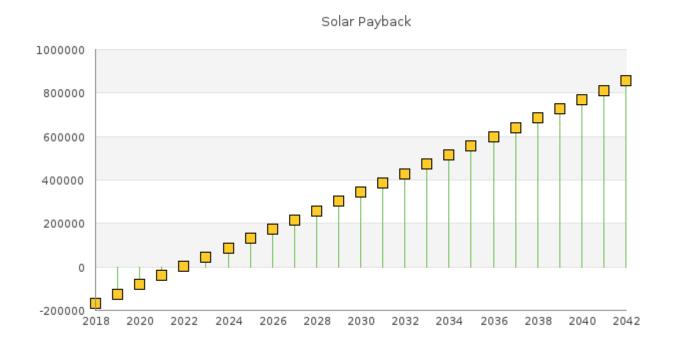
# Typical Grid-Connected I Solar PV System



Sr.	Month	Energy Generated (kWh)	Saving (Rs)
1.	January	458.49	3,634.03
2.	February	454.98	3,918.59
3.	March	519.01	4,014.76
4.	April	493.20	3,955.81
5.	May	489.50	3,829.14
6.	June	397.75	3,335.39
7.	July	323.99	2,787.97
8.	August	315.64	2,735.49
9.	September	409.39	3,411.02
10.	October	491.47	3,841.48
11.	November	447.81	3,660.78
12.	December	434.66	3,484.13
	Annual	5,235.88	42,608.58

The recommended size of the rooftop solar PV system will cover 29% of your electricity usage.

# Solar Payback Graph for Recommended Value



# **Environment Benefits**

Co <sub>2</sub> Avoided equals	3.02	Tons of Carbon Annually
Nos. of trees	5	Trees Planted for Life of Tree
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Cars off the Road	1	Cars Taken off the Road For One Year
•		
Energy Oil Equivalent Saved	1184	Litres of Oil per year
Î		
Average Home Powered	1	Homes Powered for One Year

# **Installers Contacted**

Installer 1	Equinox Solar Pvt. Ltd.	
	Suraj Mahavir Society, Street No. 4, Nirmala Road	
	Rajkot, Gujarat.	
	0281-3066673	
Installer 2	: Etain Renewables Pvt. Ltd.	
	201, Neelkanth Bunglows, B/H DPS School, Near Railway Line	es, Bopal
	Ahmedabad, Gujarat.	
	02717-660753	
Installer 3	: Euro Solar System	
	Block No. 835/P3, Nr. Premier Synthetics, Opp. Ruby Coach,	Rakanpur, Kalol

Gandhinagar, Gujarat.

Installer 4 : Gensol Consultants Pvt. Ltd.

205-206, 2nd Floor, Sarthik II, S.G.Highway

Ahmedabad, Gujarat.

078-78025010; 079-40068238/239

Installer 5 : Goldi Green Technologies

Shop No. 2, Suraj Darshan Appartment, PajwaFaila, Katargam Road

Surat, Gujarat.

Installer 6 : YTPL - DEMO - INSTALLER

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#### **Summary**

The recommended rooftop solar PV system (RSPVS) as per your requirement is 3 kW. The capacity is determined considering your electricity usage, relevant policy and regulations of your State Government, Government of India and the inputs given by you.

An approximate cost of the RSPVS will be around Rs. 210,000.00 /- with a payback of 3.29 years considering subsidy.

If you are a profit making Company then you can also avail tax benefit of 40% Accelerated Depreciation for your RSPVS. This is applicable only for Industrial or Commercial User.



#### Finally, Important

As you are seriously considering owning a rooftop solar PV system, please keep these facts in mind:

- A PV system should last you at least 25 years! Hence, quality is very important. Cheapest is not always the best!
- Warranties you should have on your rooftop PV system:
  - 25 year performance warranty on PV modules, which states that the performance of the PV module will not be less than 90% of its rated value for the first 10 years, and not less than 80 % for the next 15 years.
  - o 5 year workmanship warranty on PV modules.
  - 5 year warranty on inverters.
  - o 5 year warranty on overall rooftop PV system.
- You should take an undertaking from your PV system Installer that all components as well as the entire PV system itself adheres to all relevant IEC and Indian Standards.
- Your PV system Installer should help you obtain the necessary clearances (from the Distribution Company, Electrical Inspector, etc.) as well as subsidies, if applicable.
- We highly recommend you to give an at least 5-year comprehensive maintenance contract (CMC) to your PV system installer.
- And finally remember...

# You are not alone!

If you have any questions, please feel free to contact us.

Knowledge Partner



AHA Rooftop Solar Helper

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