



**RADIANT
SOLAR**



Green energy for life

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Accreditation by Ministry of New and Renewable Energy of Government of India (MNRE) as authorized Channel Partner for Off grid, decentralized solar applications and Grid Connected Rooftop Solar Power Plants

A CASE STUDY OF 80KW SOLAR INSTALLATION AT MES COLLEGE OF ENGINEERING – KUTTIPPURAM, KERALA



- Approved Empanelment Agency under ANERT 10,000 Home Projects in Kerala
- Second largest installer for ANERT 10,000 Home Projects in Kerala
- Radiant Solar – A company consisting of 90% Engineers
- We know it, we understand it
- Radiant Solar allows you to be free from all procedural whirlpools after placing the order
- From installation to subsidy Radiant does it all



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Introduction

MES College of Engineering is an ISO 9001-2000 certified, AICTE approved and NBA Accredited Engineering College, established in the year 1994. The college is situated on the beautiful and serene banks of Nila. Widely acknowledged as one of the top institutions for imparting technical education in the state. Today over 2750 students undertake their undergraduate and post graduate courses here, under the expertise of over 400 qualified faculty members and research guides.

The Challenge:

MES College of Engineering was facing the following major challenges:

- Continuously increasing Electricity Consumption
- Continuously increasing Electricity Bills
- Frequent Power cuts
- Increasing Diesel Consumption
- Increasing rates of Diesel
- Number of working hours lost due to power breakdown
- Hostel Load

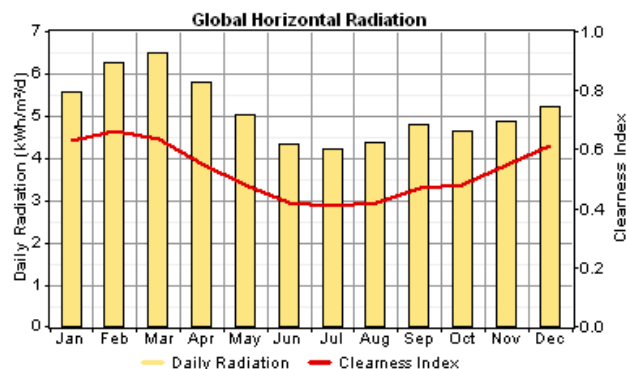
To overcome the above challenges MES college of Engineering decided to become a proud sponsor of Green Energy Generation with largest solar installer- **Radiant Solar**.

Radiant's Solution

After an exhaustive site visit, Radiant Solar collected all the required details from MES College of Engineering.

Taking into the consideration the challenges faced by them and a thorough study of the requirements put forward by them, Radiant Solar's Engineering team has designed a 80.96kWp Grid Connected Solar Power Plant using SMA inverters for them. As the average monthly electricity consumption of MES College of Engineering is around 45,000 units, so we have designed a system to produce 10,200 units in a month, covering 23% of their monthly electricity consumption.

The average annual solar insolation for the location of the site is 5.12kWh/m²/day with the monthly distribution as shown in the graph below. The system was designed to produce 340 Units of electricity per day and 1,24,082 units of electricity per year as per the average annual solar insolation.



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Project Details

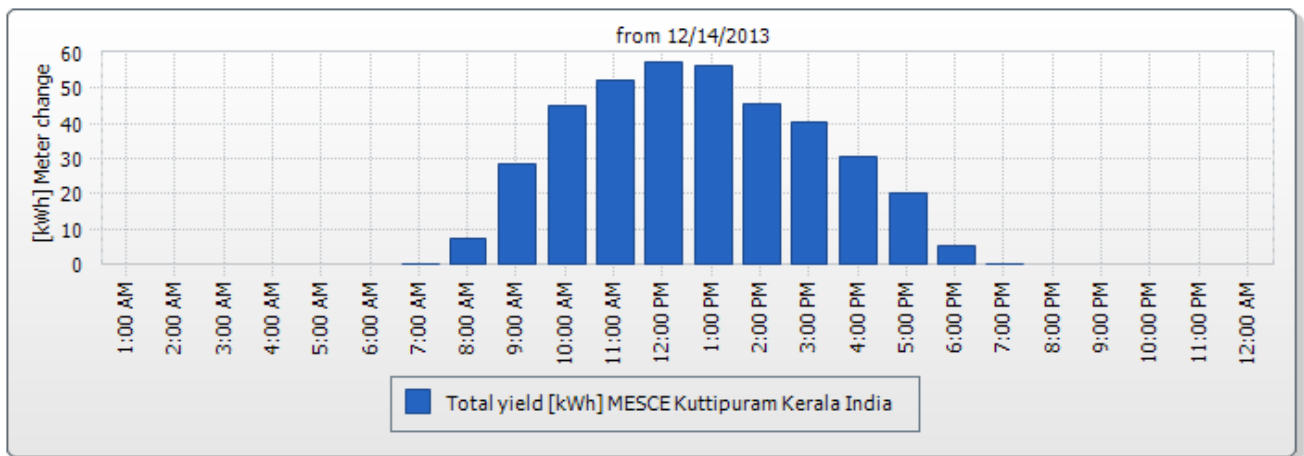
Technical Details	
Capacity of Power Plant	80kW
Type	Grid Connected
Inverter	Imported SMA make 20kW Grid Connected inverter with built in MPP Tracker – 4 numbers
Modules	80.96 kWp Polycrystalline Modules
Annual Energy Generation	1,24,082 kWh/annum

Remote Monitoring

We have also installed a live monitoring system to monitor the Solar Power Plant continuously. This monitoring system provides the data regarding Plant Overview, Energy and Power, Specific Yield, Inverter Generation, Monthly and Daily Report and Overview of 4 SMA inverters.

Devices/Plants	Gesamtertrag Meter Change [kWh] 12/14/2013	Gesamtertrag Meter Change [kWh] December 2013	Gesamtertrag Meter Change [kWh] 2013
MESCE Kuttipuram Kerala India	388.80	4902.88	4902.88
	388.80	4902.88	4902.88
	[Total]	[Total]	[Total]

< Year < Month < Day 12/14/2013 Day > Month > Year >



12/14/2013

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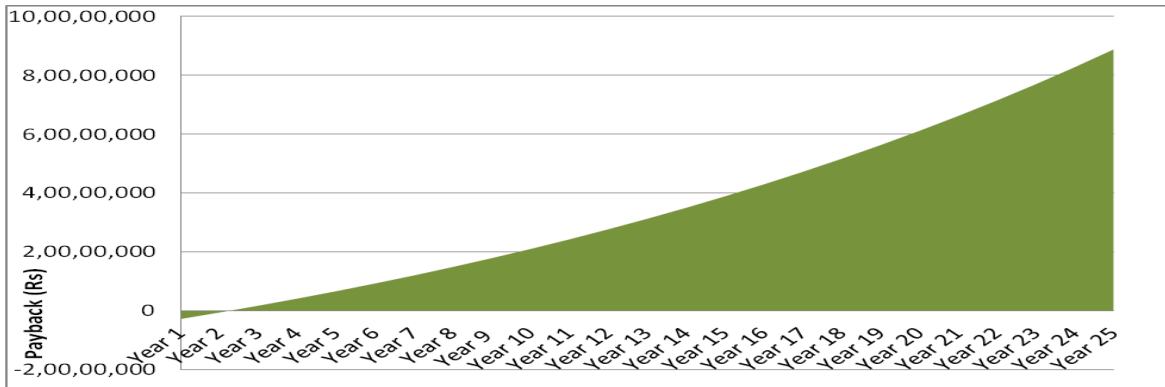
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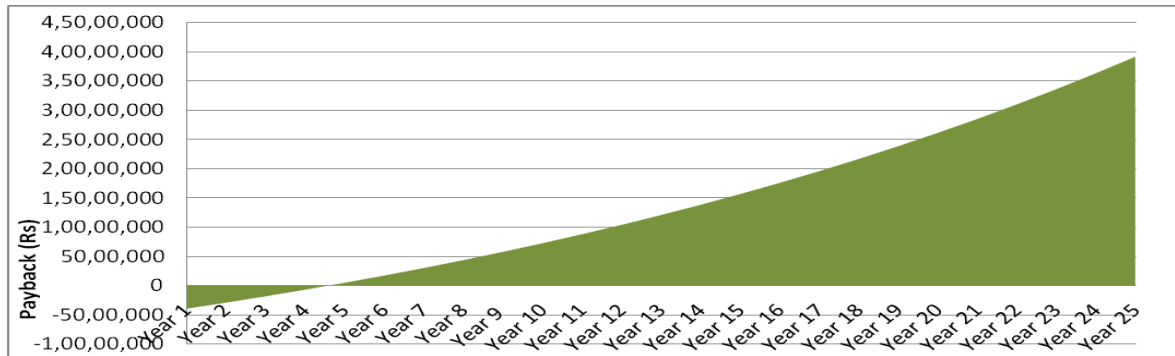
Return On Investment

The Return on Investment for this power plant is one of the attractive and persuasive features. Based on an average of 340 Units of power generated per day for a 80kW system, and factoring in various other parameters the system has a rapid return on investment of 2 Years with Diesel and 4 Years with Utility Grid.

Return on Investment with Diesel:



Return on Investment with Utility Grid:



Subsidy

- Under the Jawaharlal Nehru National Solar Mission (JNNSM), the Ministry of New and Renewable Energy (MNRE) MES Engineering College is eligible for Rs. 30/Wp.
- Radiant has done all the documentation and approached MNRE for subsidy

Service & Maintenance

- Radiant Solar warranted the solar power system to be free from manufacturing defects for Five year from the date of commissioning as per MNRE guide lines.
- Any Service Call is handled within 24 hours
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The power plant was designed to produce 340 units per day; rather it crossed our expectations and generated 400 units to 450 units per day.



Call us now for more information +91-8414-392602/603/604

Radiant Solar Pvt. Ltd.
Plot No. 15, Fabcity SEZ, Maheshwaram (M),
R.R District, Hyderabad-501510. India
Web: <http://www.radiantsolar.us>
Email: info@radiantsolar.us Maheshwaram(M)
R.R dist, Hyderabad – 501510. A.P

To know more about Radiant Solar, visit us at www.radiantsolar.us

Catch us live at: <http://www.youtube.com/watch?v=JW3K8JbdCII&feature=youtube>

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