



RADIANT
SOLAR



Green energy for life

RADIANT SOLAR

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 30kW SOLAR INSTALLATION AT MAR ATHANASIOS COLLEGE FOR ADVANCED STUDIES TIRUVALLA (MACFAST), 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

Mar Athanasios College for Advanced Studies Tiruvalla (MACFAST), Kerala, India, a post graduate and research institution, was started in 2001, with the objective of offering specially designed courses in Business Management & Information Technology. MACFAST is owned and managed by the Corporate Educational Agency of the Catholic Archdiocese of Tiruvalla, with His Grace Dr. Thomas Mar Koorilos as the President and Patron. MACFAST is located in the commercially active town of Tiruvalla, Kerala. As part of its mission to prepare students to meet the demands of the corporate and scientific world, the institute has established the MACFAST Centre for Research and Development (MCRD), offering PhD programmes in the biosciences.

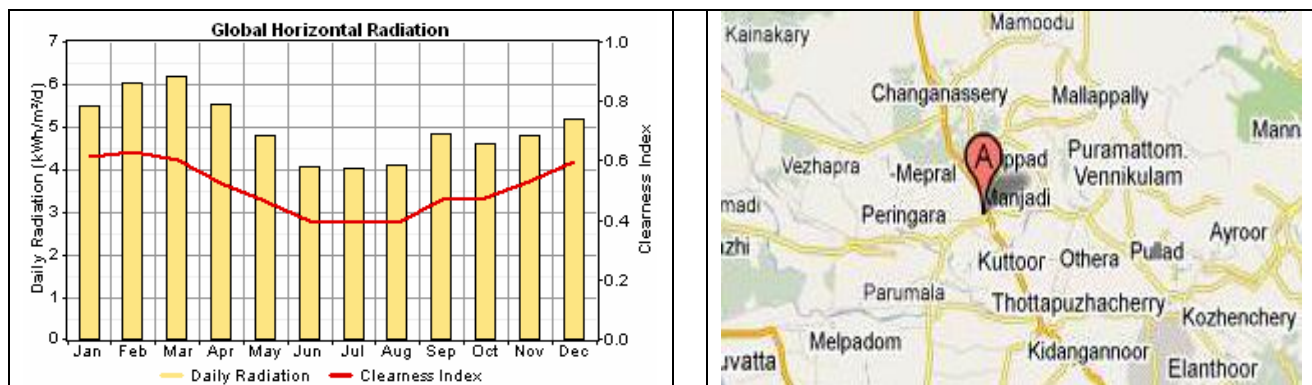
The Challenges

With growing reputation, the student & staff strengths increased in no time. MACFAST grew from a batch of handful of students to an education giant in next ten years. With that came the infrastructure hurdle, more so for the energy. Kerala being a energy deprive state, it was a big financial as well as environmental burden to support the existing infrastructure with fossil fuel based Gensets. To find alternatives, the institution management realized the need of initiating eco friendly projects to meet these additional demands. Thus came this pioneering idea of harnessing energy from Sun and Radiant Solar was roped in.

Radiant's Solution

Radiant Solar stated its task by analyzing the electricity consumption pattern of the facility and the load requirements in the campus with an energy and financial model. After calculating the load requirements and several site visits to study the tech as well as on site feasibility, Radiant Solar recommended a 30kW solar power project to meet the current energy deficit and partial load requirements.

The average annual solar insolation at Thangam location is 4.969kWh/m²/day and the MACFAST installation designed to generate around 112 units of electricity per day and 40,758 units of electricity per year as per the average annual solar insolation.



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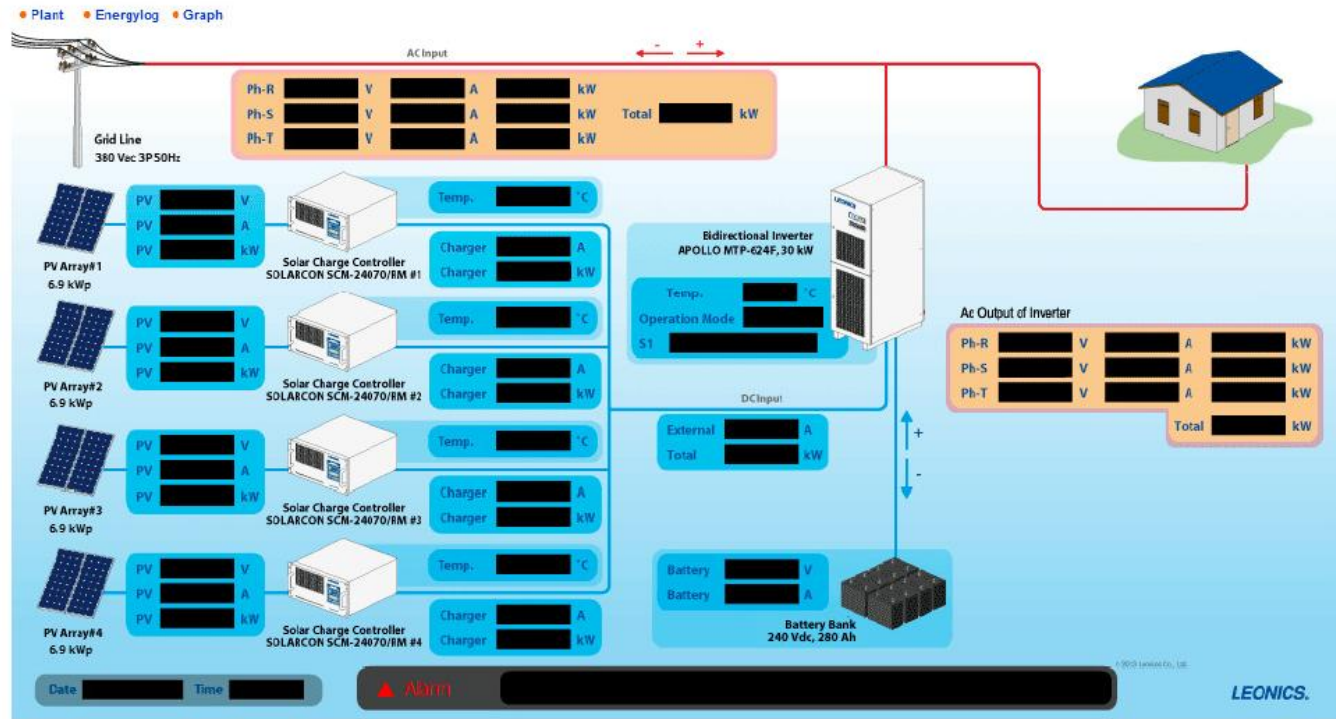
Project Details

Technical Details

| | |
|--------------------------|---|
| Capacity of Power Plant | 30kW |
| Type | Grid interactive with battery backup |
| Inverter | Imported Leonics make 30kW Grid Interactive |
| Charge Controller | Imported Leonics make 240V 70A- 4 numbers |
| Modules | 27.6 kWp Polycrystalline Modules |
| Battery Bank | 240V 280Ah Tubular VRLA GEL |
| Annual Energy Generation | 40,758 /annum |

Remote Monitoring

The solar power plant is supported with a remote monitoring facility 24 x 7. This remote monitoring enables us to monitor the system 24 x 7 and rectify the issues at the earliest.

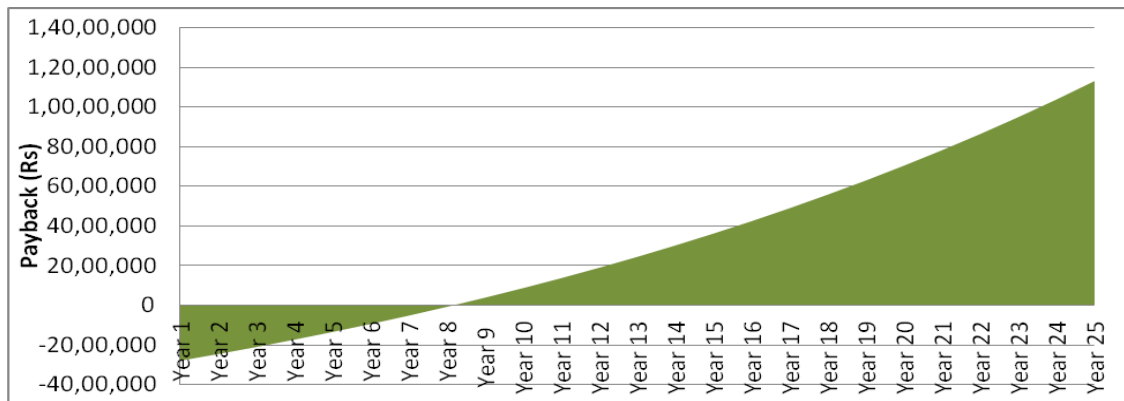


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Return On Investment

The Return on Investment for this power plant was one of the attractive and persuasive features. Based on an average of 112 Units of power generated per day for a 30kW system, and factoring in various other parameters the system has a rapid return on investment of 8 years.



Subsidy

- Under the Jawaharlal Nehru National Solar Mission (JNNSM), the Ministry of New and Renewable Energy (MNRE) MACFAST was eligible for Rs. 81/Wp.
- Radiant has done all the documentation and approached ANERT 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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Radiant Solar were commissioned to install solar panels that generate a substantial proportion of the college's electricity needs - the first such installation in the education sector in Kerala. From concept to power generation, the project was accomplished to the highest standards of quality and efficiency. Their handling of the regulatory authorities was also impressive - Mr. Judith Hollows

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

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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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