



**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 100kW SOLAR INSTALLATION AT MARBASELIOS COLLEGE OF ENGINEERING AND TECHNOLOGY, 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 Baselios College of Engineering and Technology (MBCET), located at Thiruvananthapuram, Kerala State, is a well-known institution, providing Engineering and Technological studies in various streams. MBCET emerged as a leading organization in Kerala from a small Engineering College within a short time frame.



The Challenges

MBCET was facing the following challenges:

- Continuously increasing Electricity Bills
- Frequent Power cuts
- Hostel Load
- Increasing Diesel Consumption

After seeing the magnificent Radiant Solar installation at MACFAST – India's first college to go solar: <http://www.youtube.com/watch?v=JW3K8JbdCII&feature=youtu.be>. MBCET decided to go green with Radiant Solar to provide uninterrupted power to the class rooms, laboratories and other facilities and also to meet the energy shortage.

Radiant's Solution

After multiple exhaustive site visits and meticulous study and research of the requirements put forward by MBCET, Radiant Solar's Engineering Team designed a unique and latest technology of Solar Power Plant especially for MBCET. The proposed power plant was not one size fits to all.

Considering the space limitation and load distribution on different buildings we have proposed a new concept of Smart Grid System which facilitated MBCET an effective load management and remote control of the load using modern gadget at the later stage to meet the current energy deficit and partial load requirements. The solar power plant uses imported Leonics make 100kW Grid Interactive inverter, supported by additional 3 numbers of Leonics make 30kW Grid Connected inverters. Each inverter is catering the load on different buildings. A Battery Bank of Tubular Gel batteries is also provided to provide backup for essential power requirements in the College during power failure.

MBCET found the proposal in line with their requirements and accepted this proposal to achieve its goal- 'Green & Clean Campus' and save Diesel consumption due to frequent power failure.

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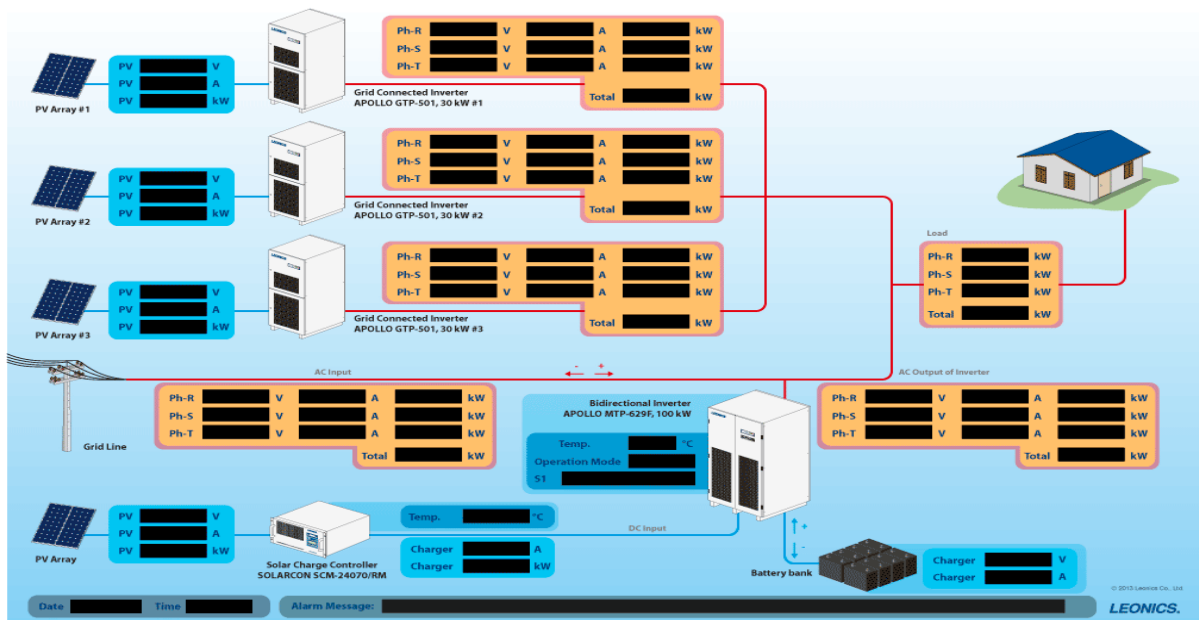
Project Details

Technical Details

Capacity of Power Plant	100kW
Type	Grid interactive with battery backup
Inverter	1.) Imported Leonics make 100kW Grid Interactive – 1 number 2.) Imported Leonics make 30kW Grid Connected -3 numbers
Charge Controller	Imported Leonics make 240V 70A
Modules	99.36 kWp Polycrystalline Modules
Battery Bank	240V 600Ah Tubular VRLA GEL

Remote Monitoring

Another important aspect of this installation is a very informative energy monitoring (remote monitoring) displayed at MBCET premises. The energy produced, the output power and other parameters of the power plant can also be monitored through internet by the MBCET and Radiant Solar. This remote monitoring enables us to monitor the system online daily and take an abrupt action, in case of any fault. We can easily calculate the daily units generated by the solar power plant and daily units consumed by the college with the help of this remote monitoring system.



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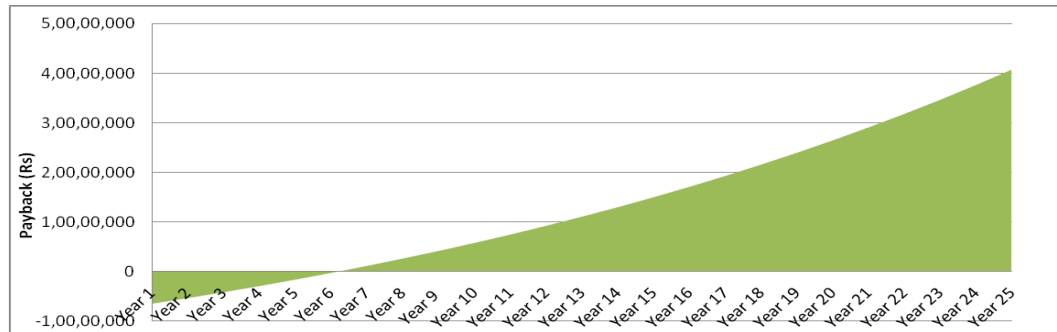


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Return On Investment

The Return on Investment for this power plant was one of the attractive and persuasive features. Based on an average of 392 Units of power generated per day for a 100kW system, and factoring in various other parameters the system has a rapid return on investment of 6 years.



Subsidy

- Under the Jawaharlal Nehru National Solar Mission (JNNSM), the Ministry of New and Renewable Energy (MNRE) MBCET was eligible for Rs. 72/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.
- A Maintenance Engineer is available at the location 24 x 7
- Any Service Call is handled within 24 hours

The unique design of MBCET solar installation created a buzz everywhere and even brought in the appreciation by MNRE and ANERT. The power plant was designed to produce 415 units per day; rather it crossed our expectations and generated 450 to 500 units per day.

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

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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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