



## GreenSolarPR.com brings clean, renewable energy to Turtle Bay Inn



A photovoltaic system of 17.16 KW accommodates nicely in the two floor hotel roof overseen the beautiful sundown experience of La Parguera. Known by its magical bioluminescent experience, now will soon to be known by the many ongoing renewable energy projects. The PV Direct Solar System provides benefits that go beyond utility savings, reliability and environmental consciousness and clearly demonstrates the synergy between environmentally sensitive hotels like Turtle Bay Inn and photovoltaic technology. In Puerto Rico with its reliable and abundant solar resource, there is no more natural combination than an environmentally conscious lifestyle and clean, renewable photovoltaic solar energy.

Zulma Rivera is the owner and visionary entrepreneur that foresee the growing impact of energy cost in any business industry. As a general manager of a major industrial facility in the region, she manages the growing pains of energy for many years and decided it's time to make a sound decision. She interviewed various contractors, consulted with professional in the field and finally chose GreenSolarPR.com to handle the project and the ARRA funds SEP Program application that reimburse 50% of the cost. This paid good dividends as the project milestones were completed effectively.

The initial concept for the project was developed by GreenSolarPR.com, leaded by Renewable Energy consultant Maximo Torres. The team included Eng. Michael Muñiz handling engineering drawings to meet the electrical, mechanical and environmental specifications and Julio Rosario whose renewable energy experienced has proven useful finding solutions to the challenges and reinforcing the modular structures. The PV direct system has no batteries and provides near 95% energy needs during the day, storing excess energy in the AEE distribution lines and using it at night. This is possible because of law 114 which allows interconnection and net metering contract with the power authority.

**Hurdles and Hazards** The Turtle Bay Inn Photovoltaic project had an extremely ambitious schedule, no projected impact to facility aesthetics and unobstructed solar exposure that does not impact the roof equipment locations and accessibility. Michael came up with a U-shape flat surface design with six strings of thirteen PV panels and three inverters accommodated among other utility equipments such as HVAC and water cisterns. SolarMax cabinets were used to place the inverters in one structurally integrated location near the center of the PV panels.

The installation progressed mostly in sunny, uncomfortable heat and occasional rain showers but the installers were delighted by the sparkling blue sea view, lazy clouds, and the gentle ocean breezes. GreenSolarPR.com procured all equipment and materials from local suppliers as a believer of supporting our local infrastructure.



## ***Turtle Bay Inn Photovoltaic Installations Specifications***

Hotel Location: 6<sup>th</sup> St #153 La Parguera in Lajas, Puerto Rico. [www.turtlebayinn.com](http://www.turtlebayinn.com) Tel. 787.899.6633

Conceptual Design: Maximo Torres

Engineering Design: Eng. Michael Muñiz

Installation Manager: Julio Rosario

Module Manufacturer: Pevafersa America. Inverter Manufacturer: SMA

Structure: Terra Smart with added local structures

Module Structures and Inverter Vendor: Caribbean Energy Distributor

**System Features** Description: 17160 Watts Roof Mounted PV Direct System consisting of 6 arrays of 13 panels (2 arrays per inverter) for a total of 78 solar panels of 220 Watts model IP-VAP-220 and a Solar Max tower with three SMA 6000US grid tie inverters. PV System is  $V_{oc}=410V_{dc}$ ,  $I_{sc}=16.4A$ ,  $V_{mp}=321.2V_{dc}$ ,  $I_{mp}=15.36A$ . Inverter output is 220 Vac.

