# **RURAL ELECTRIFICATION**

KERALA, INDIA





"THE HIBISCUS VILLA INSTALLATION HELPED ILLUSTRATE TO THE COUNTRY, AND THE PUBLIC IN GENERAL, THAT A PROPERLY ENGINEERED AND EXECUTED SOLAR PV SYSTEM CAN WORK SUCCESSFULLY IN THE AREA AND CAN BE EASILY REPLICATED IN VARIOUS INSTALLATIONS."

**GEORGE MATHEW** > TEAMSUSTAIN

> LOCATION	> CHALLENGE	> SOLUTION	> OUTCOME
Hibiscus Villa — Kerala, India	To provide power for remote resorts in a region without a reliable grid-tied power supply.	A state-of-the-art, off-grid solar system with Trojan Batteries for energy storage.	The resort now enjoys energy independence as well as energy security.





# LOCATION

Thanneermukkom is a village in the Kerala District of India. It is located on the banks of Lake Vembanad with an expanse of backwater that makes this remote area a popular tourist destination.

# CHALLENGE

This remote region lacks a reliable grid-tied power supply, which poses a challenge to resorts who want to provide all the "comforts of home." Some resorts in the area rely on diesel generators; however, as a "green resort" Hibiscus Village has opted not to use this noisy, costly, and environmentally unfriendly method.

# SOLUTION

Thomas Dominic, owner of Hibiscus Villa, wanted energy independence as well as energy security. He chose to install an off-grid solar photovoltaic system, which has been very successful in harnessing the power of the sun to support the resort's electricity needs.

As a result of the demanding nature of this off-grid project, Trojan Battery's Premium Line of flooded deep-cycle batteries were selected for energy storage. Specifically engineered to withstand the rigorous conditions of renewable energy applications, Trojan's Premium Line batteries play a critical role in providing uninterrupted power for Hibiscus Villa in the evenings and on cloudy days.

### SYSTEM SPECIFICATIONS

- Batteries: (32) L16RE-A\*, Trojan Battery's Premium Line of flooded deep-cycle batteries
- Inverter-Chargers: (2) Outback Power, 3048E
- PV Charge Controllers: (2) Outback FM80

\*The L16RE-A is no longer available, please refer to the Renewable Energy Brochure for comparable battery.



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Trojan batteries are available worldwide and backed by outstanding technical support provided by full-time application engineers.

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### OUTCOME

With the successful implementation of its uniquely engineered solar system, Hibiscus Villa is the perfect example of a 'Net Zero' energy independent resort, and proves that energy independence can be achieved with solar technology, robust and reliable energy storage, and engineering innovation.

#### **BATTERY SOLUTION**



- nuyyeu Durability
- Exceptionally Long Life







