

The LAGI House of Energy and Marou Gardens are an interconnected energ system designed to provide plentiful sola energy from a photovoltaic solar pa

system for the village; a system for harvesting rainwater, storing it and having i available for the village; a landscaped garde with selected plants that represent the culture and the heritage of the village; and a central construction, the "LAGI House of Energy," that provides a number of services and functional spaces for the people of Marou.

The Village of Marou is already nestled in paradise. The enormous ocean, the abunda ropical foliage, and the majestic skyline adorned by the Vatu Rua are only a few of the natural elements that compose this fantastic location. The LAGI House of Energy and Marou Gardens are designed to compleme the natural beauty of the landscape without obstructing it. The balance has been mostly inclined in favor of unspoiled surroundings, and against constructed spaces. The artistic interaction of all of the different land art elements is arranged to create smaller spaces with pleasing aesthetic qualities around the central construction.

All of the photographs in this proposal have been collected by our team in tropical locations, or from functioning land art prototypes of similar characteristics. Working in a tropical location that is in close contact with the sea requires experience with the particular qualities of this landscape Electronics require additional protection from the people of Marou for many years.



extreme heat and humidity. Metal and plastic corrode at higher rates, and have a high cost of maintenance. For the LAGI House of Fire, and the different structures that support the gardens we have picked technologies that will be useful for many decades.

The cost of sustainable development has to balance the high-value of quality structures that will be easy to maintain, making the most of the precious resources that are assigned, and creating the highest positive impact over time. This is one of the main reasons that we have picked a concrete structure with a concrete roof for the LAG House of Energy. The cost to bring masonry material to the island may seem high at first, but what other structure will serve as a reliable shelter for the people of Marou during a dangerous storm?

The true energy of Marou are its people and culture. Designing a space where technology and development combine requires nurturing a close relationship with this energy. We are looking forward to learning, collaborating and constructing the LAGI House of Energy and Marou Gardens with the people of Marou. We want to create a project where beautiful land art is built to fully serve

## LAGI HOUSE OF ENERGY and Marun Ha

## Solar Energy for the Whole Village

Energy to be used on demand 24 hours a day. • 80 kW Autonomous Solar Photovoltaic System • 176 Solar panels of 500 Watts each. • High quality roof-top installation in galvanized

directly to the metal in the concrete roof creating a structure that can withstand strong storms. A climatized and dehumidified Energy

ardware of the solar energy system • 4 Inverters (20 kW each) for a total of 80 kW to manage battery function and AC power output. 80 kWh of reserve in lithium iron phosphate batteries.

• Safety electrical equipment for the full solar energy installation. Storage space for additional solar panels for

eplacement, hardware, monitoring equipment, etc.

during peak production hours for additional applications in the village.

• Direct involvement by the people of Marou Village in the construction, management, and maintenance of the solar energy system. Training a/ solar energy management team will assure operation of the energy system in the future.





50 kW 45 kW 40 kW 35 kW 30 kW 25 kW 20 kW 15 kW 10 kW 5 kW

374 kWh solar electricity production 228 kWh electricity storage potentia 98 kWh stored electricity used to meet demand 244 kWh electricity demand

Watering of Marou Gardens olar potential Air conditioned spaces Community Freezer

storage potentia

electricity demand

Electric pumps for rainwater storage Desalination system for drinking water



176 panels X 500 Watts 80 kWh

24:00 01:00 02:00 05:00 05:00 07:00 07:00 11:00 12:00 12:00 12:00 17:00 17:00 17:00 17:00 17:00 17:00 22:00 22:00 22:00

The Solar Energy System for Marou Village has been designed to produce plentiful energy from the tropical sun for all the residents of Marou. Excess energy from peak times of production during the day is used in additional applications like pumping water from the rainwater harvesting system, or operating the water desalination plant. The photovoltaic solar panels are safely mounted on the roof, away from bystanders, and the energy is managed from within the LAGI House of

 Specialized steel hardware to fasten the 176 panels anagement Room to house the operating

Programed use of energy









Solar Energy for Marou Village More than 374 kWh per day