## **Solar Mountain**

The Solar Mountain has been designed to be an interactive installation on the land of Flyranch which is home to dozens of hot and cold springs, three geysers, hundreds of acres of wetlands, dozens of animal species, and more than 100 types of plants. The mountain blends into the landscape seamlessly resonating the idea of a unified community and a space for people to connect. The narrative has been divided into three parts of Energy, Connect and Play. The mountain becomes a source for harvesting clean energy, lets people connect to themselves, nature and to others and it becomes a playscape where people of all age groups can enjoy either rock climbing or sliding down by climbing the steps.

It aims at providing a modular pre-fab renewable energy infrastructure. Each unit being 30M in length, 37M in width for the widest opening and a maximum height of 15M contains 182 Solar Panels of 300 Watt capacity which generates 1.2kWh/Day. The total clean energy that can be harvested from the 4 units containing 728 Solar Panels per day is around 873kWh which can be used to meet the site requirements and other activities. Fabricated by hand using recycled plywood, the entire pavilion can be repetitively dismantled and packed.

## **Technology Used**

The Solar Mountain is an organic form of recycled plywood Structure with 728 Solar Panels.

Each of the Solar panels are tucked within lightweight frames made of aluminum, and further reinforced by 3.2mm thick antireflection coated glass which allow the panels to perform at optimum rates while improving durability.

The panels are a great pick for off-grid applications – thus, are relatively compact and are easy to mount or dismantle. Panels are easy to set up with pre-drilled holes and the pre-installed by-pass diodes minimize power drop caused by shade and provide output even in minimal light.

The Daily Energy Production for the whole system is 873.6kWh and monthly is 26,572kWh.

## **Environmental Impact**

Solar Mountain has been developed to spread about the awareness on the use of sustainable materials and having a very low carbon footprint. The structure essentially uses recycled plywood and all the components are modular and prefabricated for the ease of assembly.

* It has a source of harvesting clean energy and doesn't impact the environment in any negative way.
* It is modular in construction with prefabricated parts. It makes it easy for the installation and requires less work to be done on the site.
* It is pragmatic and has the scope of scalability.
* It uses Recycled Plywood for the construction which has positive environmental effects, including conservation of old growth forests, increased carbon storage and lower greenhouse gas emissions.