Solar Petals

Solar Petals is a viewer responsive installation that collects solar energy at middle fly ranch and provides shelter for the visitors. The shape of the petals are inspired by the popular native plant “Woods Rose” which is also known as Rosa woodsii. It is known for its wide shaped petals for providing shelters to insects and small mammals. To native Americans, wild roses were a symbol of life. The basic form of this installation is inspired by the petal shape of Wood’s Rose which is then manipulated based on the site’s solar angle. The angle of the petals are based on the solar path of middle fly ranch to collect the maximum sunlight during the summer and winter season from 9:00 am to 3:00pm.

The panels on the steel based mesh structure are made of thin photovoltaic panels that is covered by polycarbonate protective cover case. Each installation can produce roughly 1974.30 kWh/m2 yearly, giving the opportunity to produce approximately 39,486 kWh/m2 from the 20 installations on the site which is enough energy to provide electricity at fly ranch. The distribution of these 20 installations are placed with the idea of having petals on the ground. Based on the scale and location of the installation, each installation provides shelter to individual visitor or to groups of people.

Inside of each individual panels, there are motion sensor and LED light strips placed that makes the installation interactive by changing the color based on the viewer’s movement and helps to connect with the visitors. At night, these petals come to life by illuminating a soft light-pink LED light that represents the color of the Woods Rose and symbolizes the ornamental aspect of this native plant. The viewer responsive LED color changing strips are based on 3 different wild rose colors; Red, yellow, and light pink. The petals will remain lighted up in pink until it detects the viewer’s movements.