

Tidalite

Art Generator

Tidalite makes art using the beauty of water tidal movement. The water movement is coming to life with an array of multi-colored lights which, in turn, is capturing energy from the tide shift.

The art and energy fuse into one through this vessel, paired with the movement of water. The generators are floating devices which are divided into portion. Each portion is connected to the next by hinges and hydraulic rams. As the tides pushing the components farther and closer away from each other, the rams are being pulled and pushed constantly. This motion transfer to the and engine and motor for the production of the energy. The devices are anchored to the sea bed in both the front and the back to avoid complete turns. The anchor cables work as insulators for an electric wire. As the anchor meet the ground, the electric cable is submerged in the seabed to allow the transportation of the energy to the boardwalk.

The Wave Light generators are placed in three zones. The zones are made with respect to the public. The first zone is placed 5 meters away from the shore. This zone is made by the shortest devices to allow safer interaction with people. These devices can be used as a relaxing spot to stop or Curved bars which are incased by inflatable allow the interaction with people. One can lean on the bars in order to catch a breath while swimming. The second zone is made by devices which are up to 8 meters. The zone is made for those who can swim farther from the shore. The third zone is located the farthest from the beach and creates the most energy. This zone is surrounded by lighted poles which create a separation barrier to prevent boat accidents. The three zones provide energy to the boardwalk light tubes.

The location of the snakes was decided according to its visibility. Tidalite is located where they can be easily seen, near and far. The art would be visible not only for those who visit Saint Kilda's beach and/or divers, but those who stay in the surrounding hotels.

The snake art generator is replacing the old fashion flag system with a smart light system. The water condition is presented by the light color presented on the devices. The colored lights indicate whether the water is swimmable. Each color tells the observers and beach visitors a different condition. For instance, a blue light indicates perfect swimming

condition while orange light indicates risky high waves. This system creates a marriage between instillation art and energy generators, highly increasing beach safety. It gives new bounds to what a sculpture garden or generators can interact and provide when using effective design and the natural environment. In the boardwalk, the intensity of the lights are linked to the wave movement.

Lights Moving like waves is an astonishing sight. As people enjoy the nature of the waves movement, adding another dimension to it will result with art that combines human made and nature. Walking along the boardwalk will feel like walking along waves.

Energy harvesting per 12 hours at average water conditions

zone	Units	Kwh	Total
1	12	50 X 12	600kwh
2	15	100 X 15	1500kwh
3	14	200 X 14	2800kwh

Approximated annually energy production:

$$((600+1500+2800) \times 2) \times 365 = 3,577,000\text{kwh}$$