ALGAE ENERGY

Output:
Electric energy 2.8 kW/m²/year
Biofuel 3707 kg/year
Biofuel 2307 kg/year

This year’s LAGI competition moved the venue to the city’s living coast. This is why we have to consider the impact of urban living space on this device design. Using our device as a medium to explore the relationship between energy and humans. In people’s previous concepts, energy is usually given to people, and the relationship between people and energy is one-way, and this design attempts to turn this relationship into a cycle. We hope these devices will become part of people’s lives. For this reason, we have envisaged using microalgae as a basic energy source. The device is the carrier of microalgae and people’s growth and activity. In this design, piezoelectricity is generated by people’s activities in the landscape site, and piezoelectricity provides the basic energy for growth of microalgae cultivation devices. The high efficiency and versatility of green algae give the basic energy supply to the landscape. At the same time, it also proposes new ideas for the functional design of the venue. In the future, the park may be one of the breeding grounds for conventional new energy sources. And considering that as an element of urban life, we have designed a series of life-giving functions for the device.

We examined and calculated the amount of solar radiation in Melbourne throughout the year and analyzed it. We think that there is sufficient solar radiation in Melbourne. The annual solar radiation reaches 13300kWh/m², which is very suitable for solar power generation.

We think about how to establish the relationship between people and microalgae energy. Microalgae are plants that store energy as a characteristic of their growth. Humans are animals and their consumption of energy is a characteristic of their growth. Microalgae and people themselves have a complementary relationship. If we want to establish a more solid relationship, we need to polarize these two features. The microalgae accelerates energy storage and accelerates energy consumption.