

BLÆSTHAVN

REFSHALEØEN, COPENHAGEN

This structure will become one of the highest in Denmark and northern Europe, is the centerpiece of Refshaleøen icon of Copenhagen and sustainability worldwide, this has small piezoelectric sheets which shall wave the wind and create itself a dynamic effect that will give life to the structure, this tower will capture so many winds from its base as the ambient temperature, the sensor has a thermophotovoltaic within which they perceive temperature changes inside as this structure functions as a large greenhouse, the temperature changes are transmitted from the sensors by lead wires, this is transformed into electrical energy and allows both supply itself as collecting energy to supply the population.

The proposal has a number of filaments located around the perimeter surrounding the large central tower, they are in progressive series ranging from filaments of twenty to fifty feet high, each of them have a like hair microfilaments which range and rub together, these activities produce energy by movement and this is translated to electrical energy. This whole series of events are pre-generated by air currents.

Thermophotovoltaic filament: With temperature changes inside, the sensors perceive such changes and increasing temperature transforms into electrical energy and is transmitted to the system through conducting wires to supply itself and collect energy to supply the population.

Oscillating filament: A lightweight rod with a diameter not exceeding thirty inches from his base, this will range by wind and this oscillation will produce a vibration that will be transmitted to the base and the filament is also conductor of energy, the filament is covered with a light insulation material to not interfere with the oscillation, this presents a larger movement with respect to the vibration. The filament to be descending relative to its diameter (higher, lower diameter) oscillations present in the highest part, the filament transmit these vibrations to the base

which has a larger diameter and there those oscillations are transformed into vibrations which the kinetic energy produced will become storable elastic potential energy converted into electrical energy.

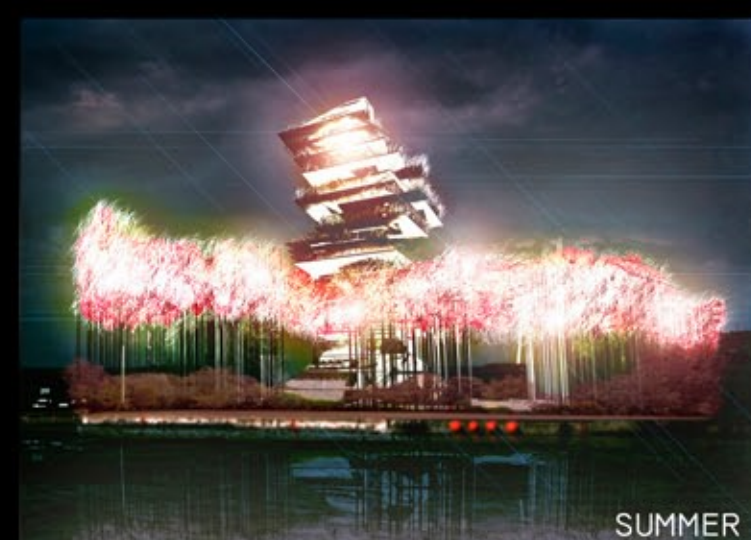
ENERGY STORAGE



Kinetic and potential energy (piezoelectric tile) driven loads passing over it (pedestrians, vehicles) weight loads consistently activate a generator that sends electrical impulses to LED lights so they self-served, and leftover electrical impulses are sent to liquid storage battery.



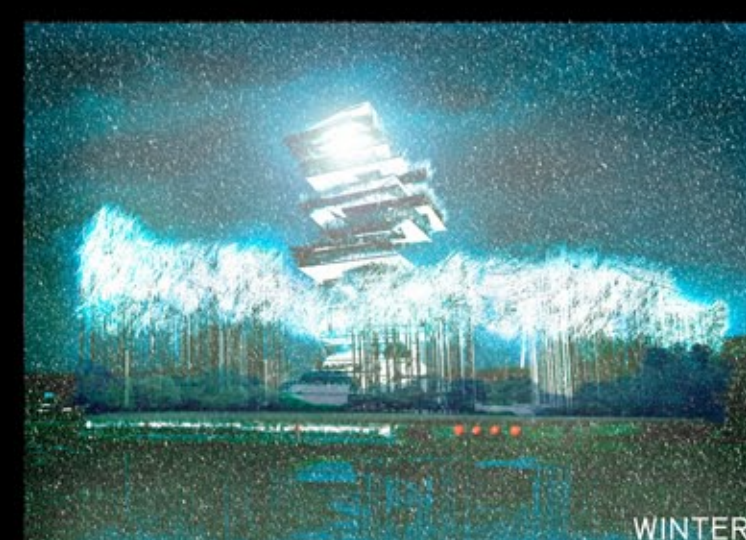
SPRING



SUMMER



AUTUMN



WINTER

SEASONS

All these networks to be supplied by themselves have the power to illuminate regulating energy use thanks to sensors present in each filament (thermo-photovoltaic sensors). These sensors will determine the light intensity as much as the activity and circulation around, also weather and meteorological condition (clouds, moonlight). Light irradiation depends on the seasons and state the day (rainy, warm, sunny, cloudy, etc...) and therefore will be warm or cold colors in its lighting.