*FlowFlux*

Is a sculptural adaptation of a windmill that harness the power of the winds and converts it to electrical energy. Inspired by Lee Seung-taek’s *Wind-Folk Amusement*, 1971 and the rising concerns about the land requirements and overall safety of windmills as a sustainable source of energy, the *FlowFlux* provide visual theatrics as a part of the energy production and seeks to represent a new age in sustainable energy. Throughout the day the wind varies in speed and intensity, the *FlowFlux* models utilizes this fluctuation to create energy by having a band of fabric stretch between two pillars; as the speed increase the wind pulls the fabric out the top of the pillars allowing the fabric to dance like a ribbon in the air. As the speed decreases the fabric will be pulled back into the pillars through the use of spiral springs. The pillars further the visuals by tilling towards the south, this allows for directional knowledge, of the wind and geographical location, to be perceived by those around it. Due to the scalability of the model, the *FlowFlux* can be placed in compact urban settings while produce the same percentage of energy as its larger counterparts. Overall, the Flow Flux address a more approachable artistic adaptation for energy creation, while mimicking a ribbon dancing freely in the air.

Environmental Statement

The *FlowFlux* model, when compared to a traditional windmill offers a more environmentally sustainable options for renewable energy production by means of wind. A traditional windmill stands over 90 meters tall with a foundation that is 50 meters deep, the *FlowFlux* stands at just over 30 meters ta;; with a 10 meters deep foundation. Additionally, the there are concerns surrounding the safety of windmills which are non-existent for the *FlowFlux* such as: visual and auditory pollution, maintenance and failures, and disruption of avian migration.

Mechanical Statement

The *FlowFlux* model produces electrical power by harnessing the force of the wind, similar to how a windmill generates its energy. Fabric is stretched between two pillars, with additional fabric wound around a spool located in the top of the pillar. As the speed of the wind increase the force applied to the fabric cause the spool to unwind, allowing for the length of fabric to expand. Attached to the bottom of the spool is a steel axle that transfers the rotational movement of the unwinding to a Dual Axial Flux Generator that converts the motion to electrical energy. Energy is created in the same way when the wind dies down the fabric is re-wound around the spool.