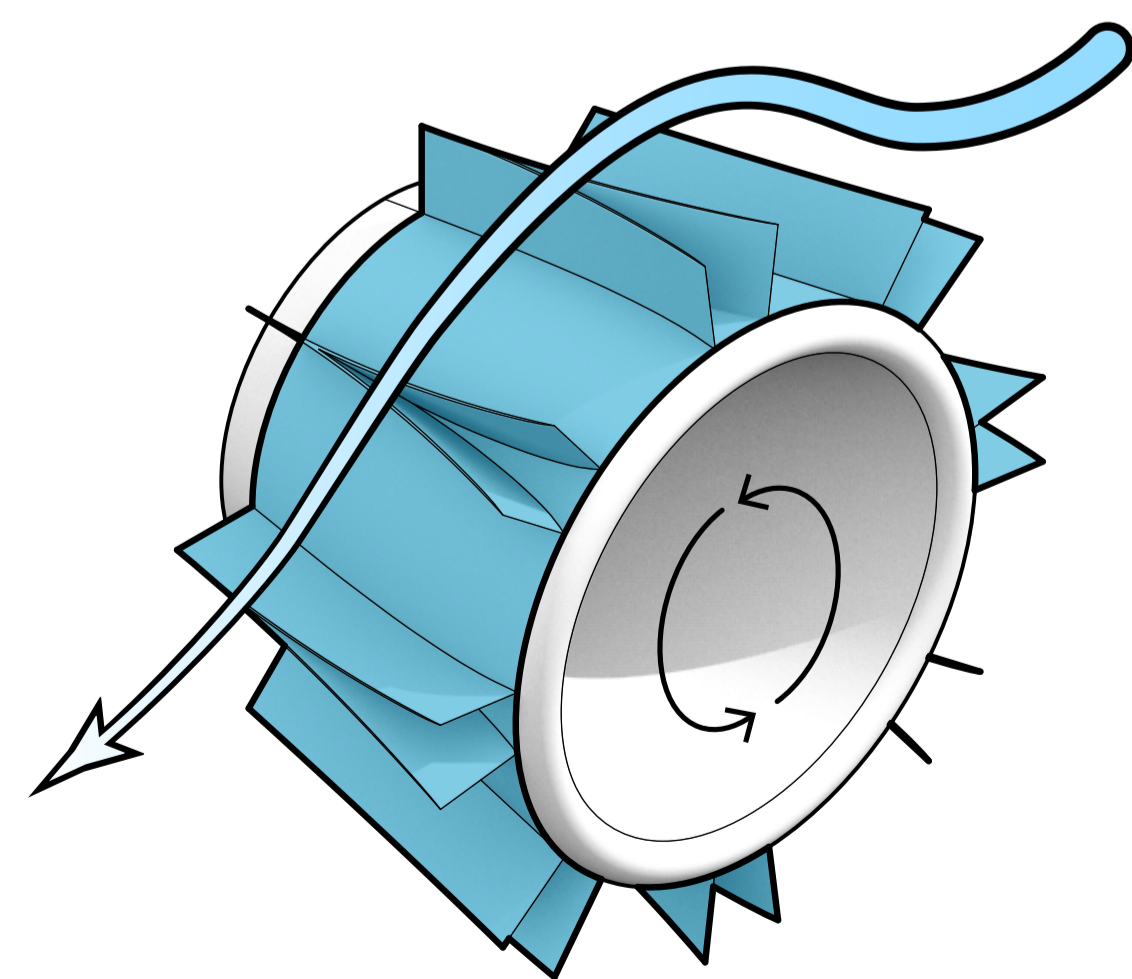


BIRD HIVE

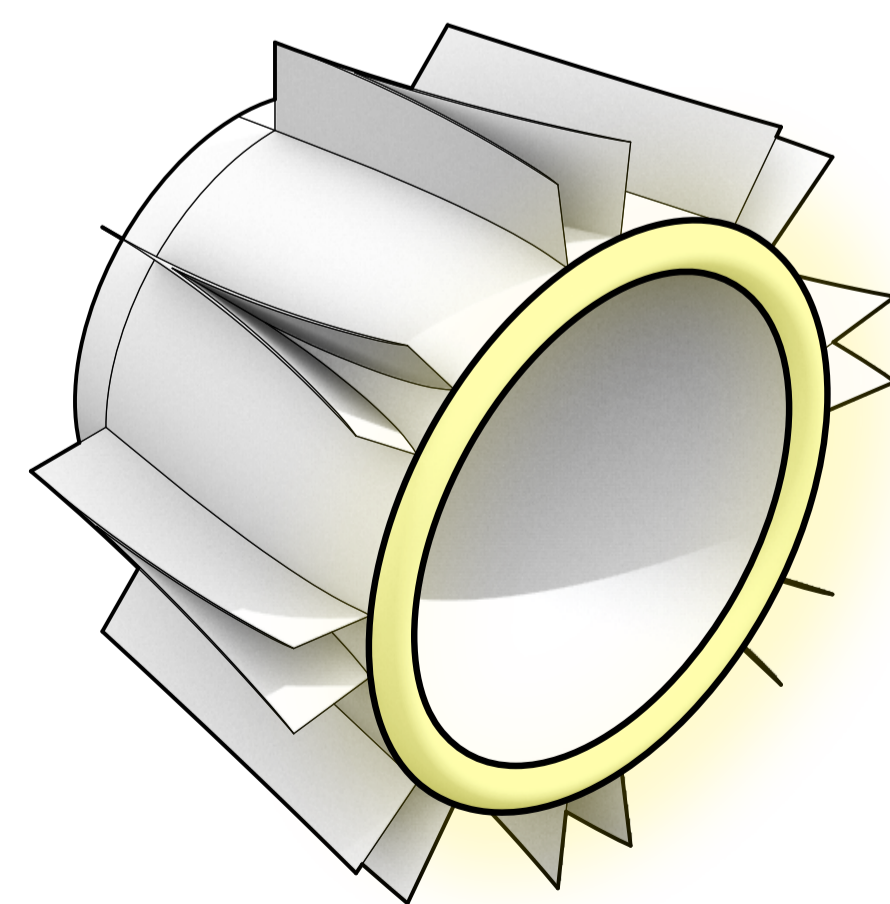
How can our means of energy generation mimic nature in a way that invites its interaction?

Bird Hive is a series of energy generating "flowers" designed to invite interaction with local fauna, i.e. birds. Like the honeycombed home of a bee, these "flowers" create a nesting hive for local bird species to occupy. An invitation to nature through designed form, calling it back to a zone of human interaction and occupation for the betterment of all which occupy it. A retracement back to once was, just as Mannheim's green corridor is inviting nature back within its cityscape.



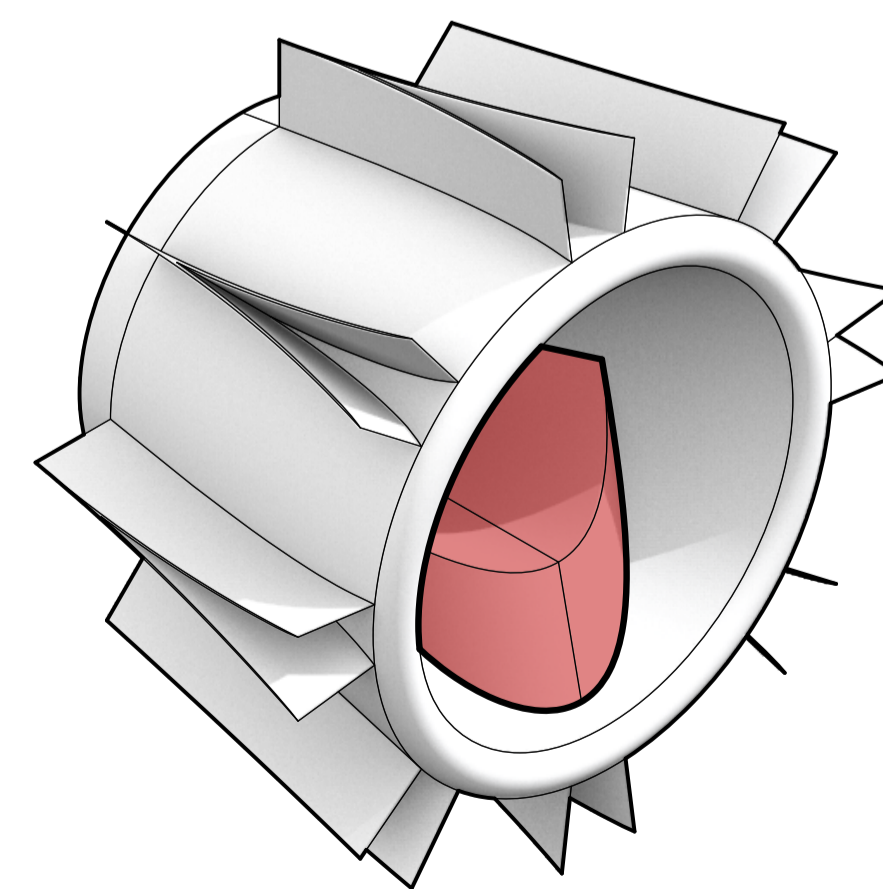
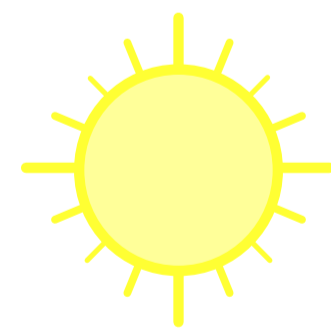
WIND

605 kWh/yr



SOLAR

98.55 kWh/yr



PIEZOELECTRIC

5.54 kWh/yr

Each "flower" generates energy through three methods; wind, solar, and piezoelectric disks. While all three work together, the primary generation method is wind. The turbine that forms the outer shell mimics flower petals in its form. Made of lightweight aluminum, it kicks into motion with the slightest breeze, mimicking the adjacent flowers as they flow with the wind. The solar ring, consisting of thin-film CIGS solar cells provides additional opportunity to harness energy. If winds are not present, energy generation is still viable through solar exposure. Finally, the piezoelectric nesting platform allows the occupants of each "flower" to contribute to its total energy generation value through their movements in the nest. At the same time, vibrations associated with the spinning of the turbine contribute to the energy generation of the piezoelectric nesting platform. Combined, a single "flower" will generate roughly 709 kWh/yr. In its configured series as Bird Hive, an estimated 28 MWh/yr will be generated.

SINGLE UNIT GENERATION

709 kWh/yr

TOTAL BIRD HIVE GENERATION

28 MWh/yr