



TURBINES

These turbines create an experiential forest of technology with a path to guide visitors.

BLADE-LESS TURBINE

- 36 units at 3 meters tall, each producing 100 watts
 - 68 units at 6 meters tall, each producing 500 watts
 - 12 units at 9 meters tall, each producing 1 kilowatt
- Together, these turbines provide a total wind energy output of 49.6 kilowatts.

PHOTOVOLTAIC

These panels are installed across the rooftops of the shelter structures and are estimated to operate at 20% efficiency, with each square meter producing 200 watts at peak ($W(p)$) under full sun exposure. The site includes three primary solar collection zones:

- Pathway shelter: 50 square meters = 10.125 kilowatts
 - Main gathering shelter: 40 square meters = 12.15 kilowatts
 - Farming shelter: 22.5 square meters = 5.4 kilowatts
- Combined, these PV panels contribute an estimated 27.675 kilowatts of solar energy.

RAINWATER CATCHMENT

Rainwater catchment systems are also integrated into the shelter structures to provide an accessible source of clean water for drinking, agriculture, and daily use. These systems support self-sufficiency by reducing dependence on external water sources and enhancing climate resilience for the community.



SHELTER

The shelter is the largest structure to provide the community with a gathering space.



CANOPY

CANOPY

located near existing farming to provide shade for the farmers during breaks.

PATHWAY



PATHWAY

This shelter is closest to the village, drawing the community to follow the path and enjoy the shade that is created by this photo-voltaic structure.