

Project includes 4 wind turbines that obtains clean air inside of this structure whereas it also generates wind energy.

As it is known that Fiji in some periods has storms that makes us a chance to use wind energy. We are using 4 wind turbines that makes energy. each turbine has a rated power of 1 kW, operating at an average wind speed of 4.5 m/s or higher.

Annual energy production formula:

$$E = P \times CF \times 8760$$

Where:

P = Rated power (1 kW)

CF = Capacity Factor (efficiency depending on wind speed)

→ For 4.5–5 m/s, this is about 15–20%

8760 = Number of hours in a year

For One Turbine:

$$E = 1 \times 0.18 \times 8760 \approx 1577 \text{ kWh/year}$$

For 4 Turbines:

$$1577 \times 4 = 6308 \text{ kWh/year}$$

