

Airborne wind turbine

A U.S. technology company is developing a wind power generator in the shape of a giant balloon which they say can offer cheap renewable energy to remote communities and disaster relief areas

► AEROSTAT

Turbine: Can generate 30-100 megawatts of energy – enough to power small community

Height advantage

300m

200m

100m

0m

Power: Wind moves faster at higher altitude, generating three times as much electricity as ground-based windmill

Shroud: Filled with helium, making it lighter than air

Aerodynamics: Design keeps balloon pointing into wind, like weather vane

Conductive tether: Carries electrical current to base station

Mobility: Can be transported by truck

Can also be used at ground level

► BASE STATION

Winch

Substation

Power grid

Transformer