



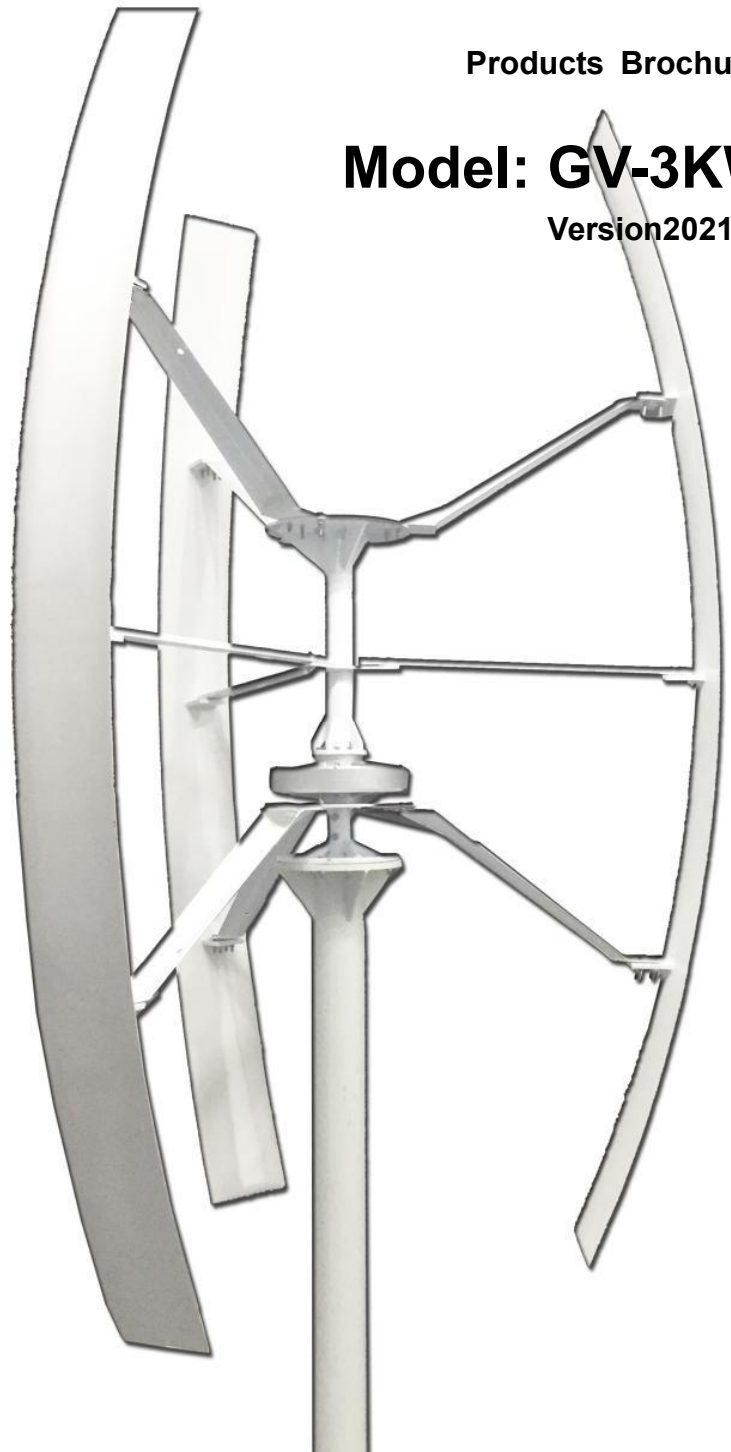
Power the World with Green Energy

# VERTICAL AXIS WIND TURBINE

Products Brochure

**Model: GV-3KW**

Version2021.01



**160**  
rpm

Low rated speed

**2.8**  
m/s

Low start wind speed

**< 30db**

Low noise

**CE**

IEC61400-2  
IEC61400-12

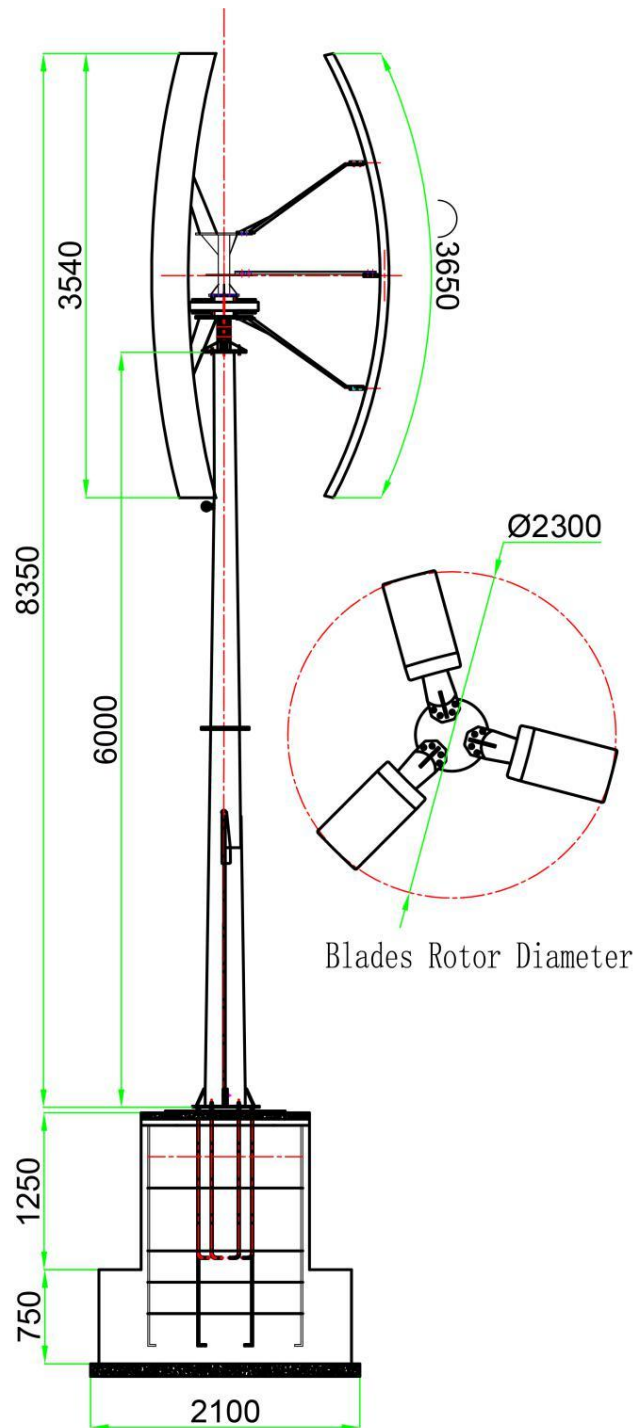
**3**  
years

Products warranty

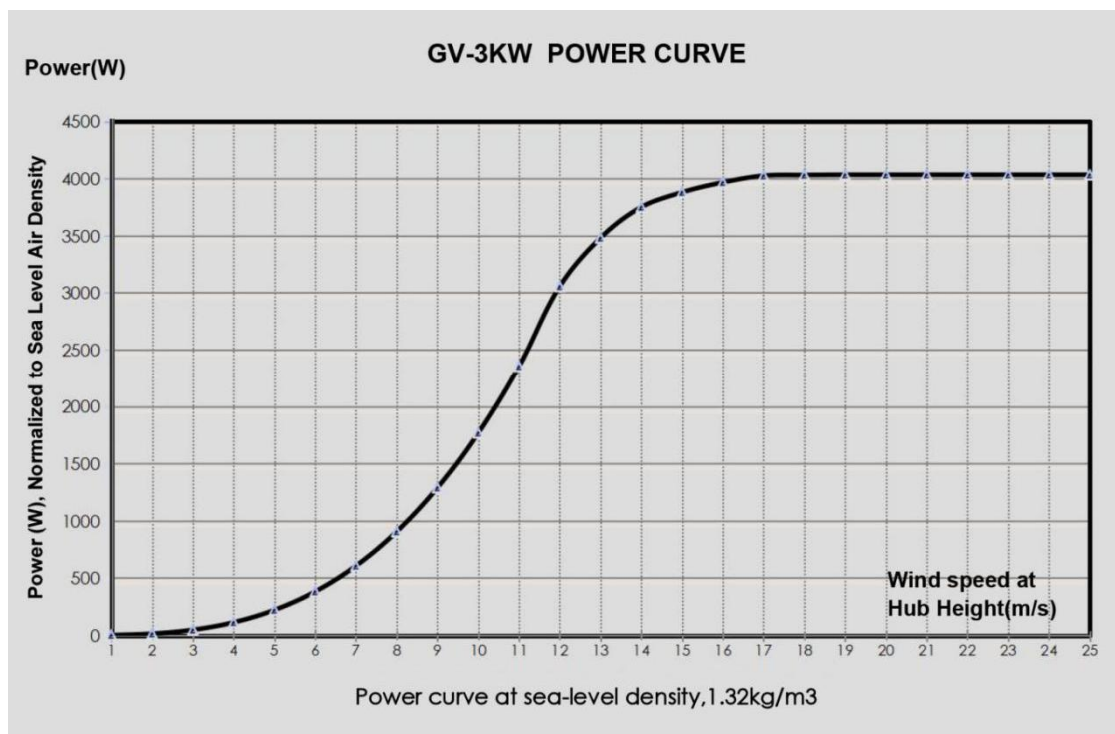


# Technical specification

Model	GV-3KW
<b>Performance</b>	
Rated Power	3kW
Max Power	4kW
Start Wind Speed	2.8m/s (6.27mph)
Rated Wind Speed	12m/s(26.88mph)
Working Wind Speed	3-25m/s (6.72-56 mph)
Safety Wind Speed	50m/s(112mph)
<b>Physical Parameters</b>	
Blades Length	3.65M(11.97ft)
Blades Rotor Diameter	2.3M(7.5ft)
Blades Material &Quantity	FRP /3PCS
Mill Weight	300kg
Swept Area	8.1 m <sup>2</sup>
Tower Height	8m(26.24ft.)
<b>Generator Parameters</b>	
Generator Type	Axial Flux Coreless outer rotor disc permanent magnet direct drive generator
Rated Speed	160RPM
Start Torque	<1N.M
Option Voltage	48-380V
Protection Method	Electromagnetic Brake +PWM
Protection Grade	IP54
Working Temperature	-40-50°C
Life time	20 Years



## Power Curve



## Annual Energy Production

<b>Annual Wind Speed(m/s)</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>
<b>Production (kWH)</b>	<b>418</b>	<b>991</b>	<b>1936</b>	<b>3345</b>	<b>5312</b>	<b>7930</b>	<b>11290</b>
<b>Annual Wind Speed(m/s)</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>
<b>Production(kWH)</b>	<b>15488</b>	<b>20615</b>	<b>26764</b>	<b>30485</b>	<b>32850</b>	<b>33990</b>	<b>34750</b>

This data will have  $\pm 10\%$  difference according to local condition.

## Sound Data

Test position: At 15m away from generator (average value of 3 point-rears, left, right)

<b>Wind Speed (m/s)</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>
<b>Sound( dB )</b>	<b>1.33</b>	<b>3.09</b>	<b>6.22</b>	<b>9.45</b>	<b>13.24</b>	<b>22.39</b>	<b>31.55</b>	<b>36.45</b>	<b>37.22</b>
<b>Wind Speed (m/s)</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>
<b>Sound( dB )</b>	<b>45.38</b>	<b>45.29</b>	<b>45.38</b>	<b>45.43</b>	<b>45.59</b>	<b>45.68</b>	<b>45.79</b>	<b>45.87</b>	<b>46.09</b>

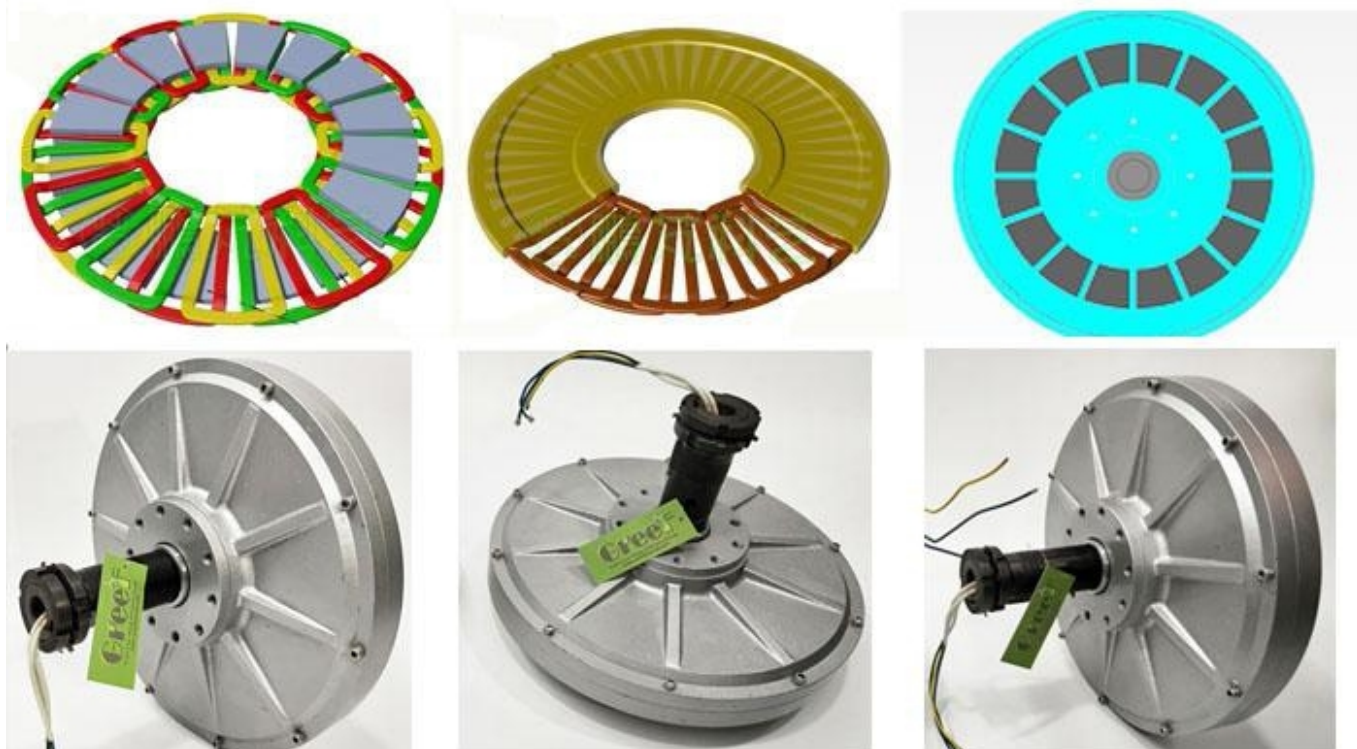
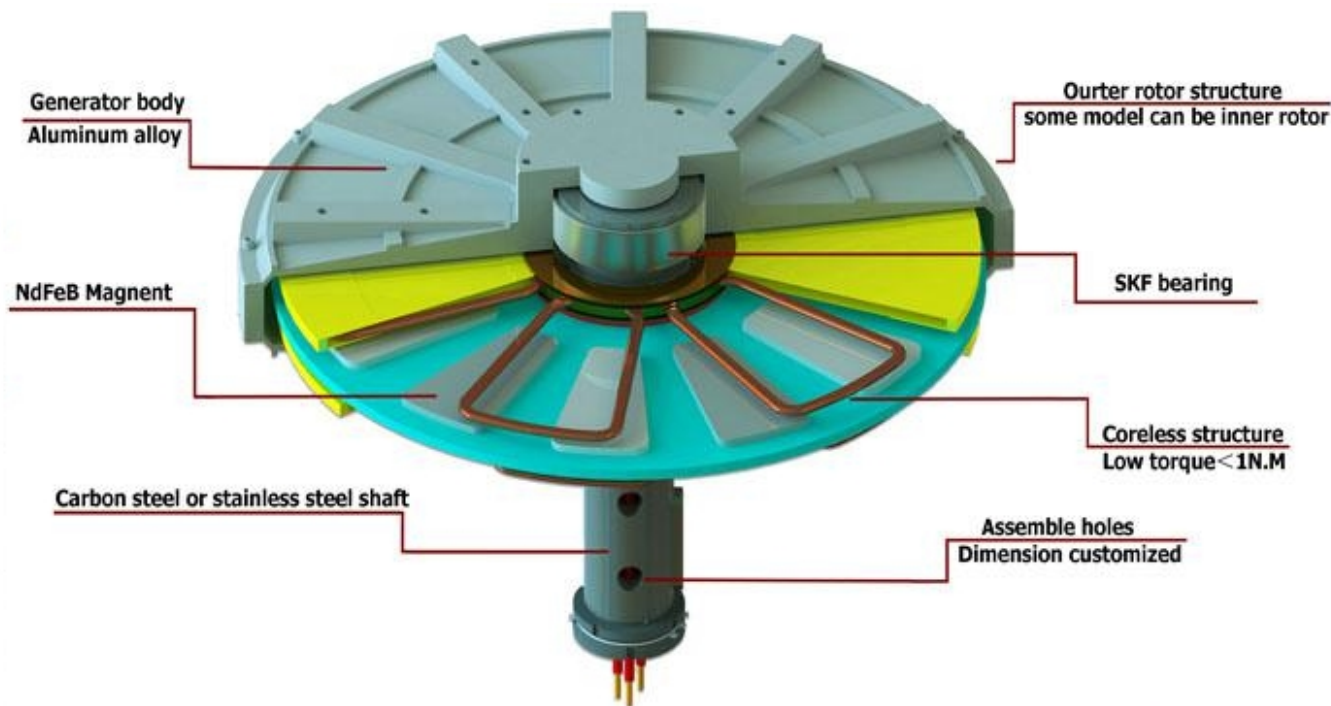
Note: The sound value includes wind noise.

# Why choose GV-3KW wind turbine?

## ● Especial Generator ---- coreless disc generator

### Advantage:

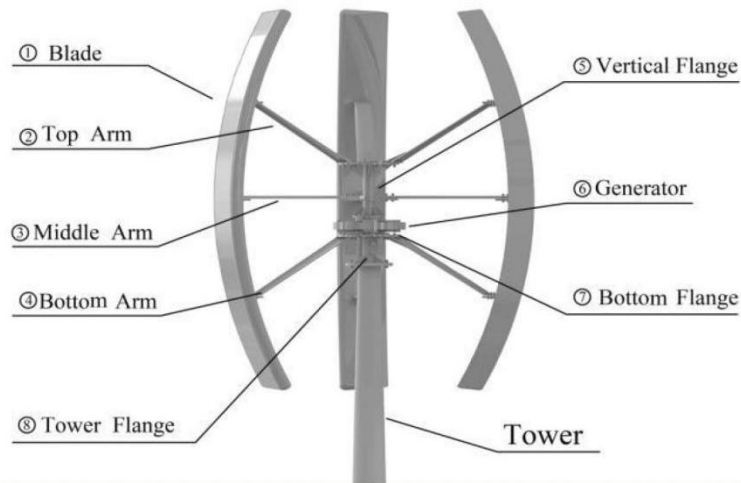
1. Torque Patent Technology: use newest "Precise Coil" technology.
2. No hysteresis and gear notches effect make the start torque very low  $<1\text{N.M}$  ,it can make the wind turbine have **low start wind speed**.
3. Original Structure: use disc coreless motor to take place traditional motor makes it less drag
4. Higher Reliability: special structure make it bigger ratio of power to volume, power to weight and have long life of 8 times longer than traditional motor.



# Why choose GV-3KW wind turbine ?

## ● Simple structure ,1hour installation

### 1.Parts Name:







### 2.Product packing list:

No.	Name	Components pictures	Quantity	Packing method
1	Blades	①	3	Packed in one box
2	Support Arms (Top/Bottom)	②	6	Packed in one box
	Middle Arm	③	3	
3	Vertical Flange	⑤	1	Packed in one box
	Tower Flange	⑧	1	
	Carton(Bolt,Screw etc)		1	
4	AC Generator	⑥	1	Packed in one box
	Bottom Flange	⑦ Delivery as a whole		

# Why choose GV-3KW wind turbine?

## ● Power Curve Tracking Function

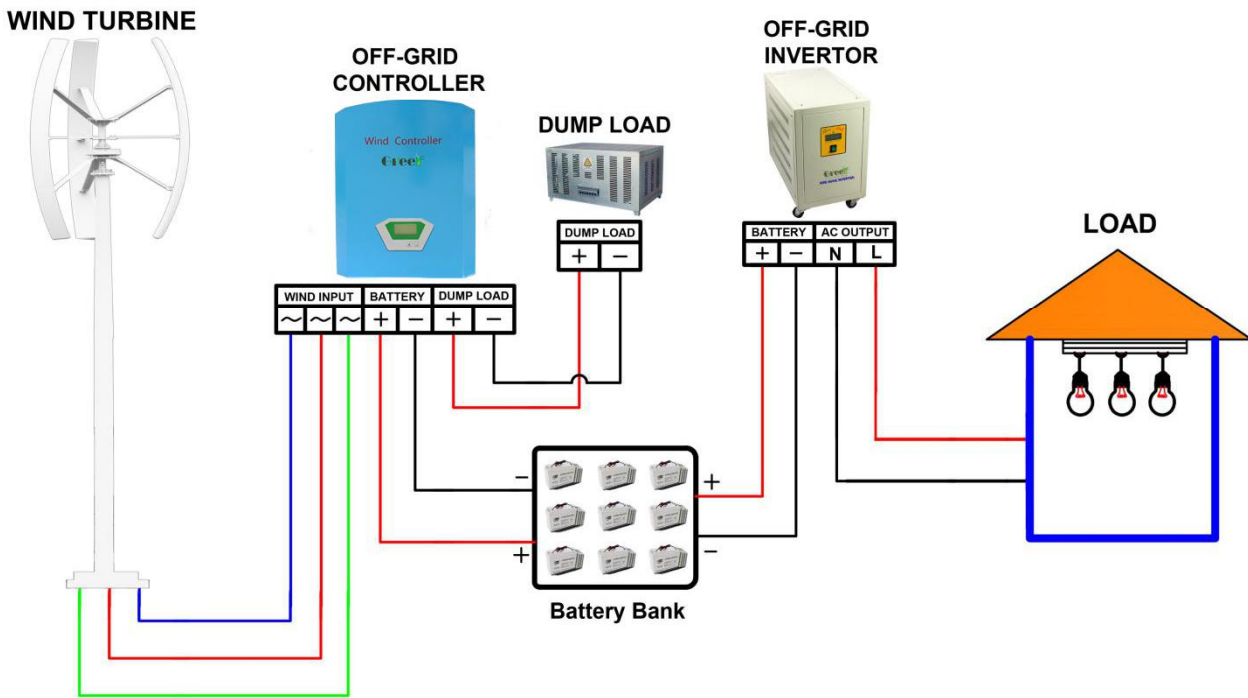
- For off-grid system –Marching MPPT Charge controller
- For on-grid system –Marching MPPT Wind Invertor
- Wind turbine MPPT track point adjustable by yourself
- Off-grid system wind turbine low cut in wind speed charge
- Complete protection function
- Several functions are optional, such as PV control function, wind speed measure function, rotational speed control function and temperature compensation function.
- RS232/RS485/RJ45/GPRS/WIFI/Bluetooth/Zigbee optional. ( It can be monitored by app for those with GPRS/WIFI/Bluetooth/RJ45 connection)

	
<p>MPPT Charge Controller with dump load (off-grid)</p>	<p>Pure sine wave Invertor (off-grid)</p>
	
<p>On-grid Controller (On-grid)</p>	<p>On-grid Invertor+PCTC (On-grid)</p>

# SYSTEM SOLUTION



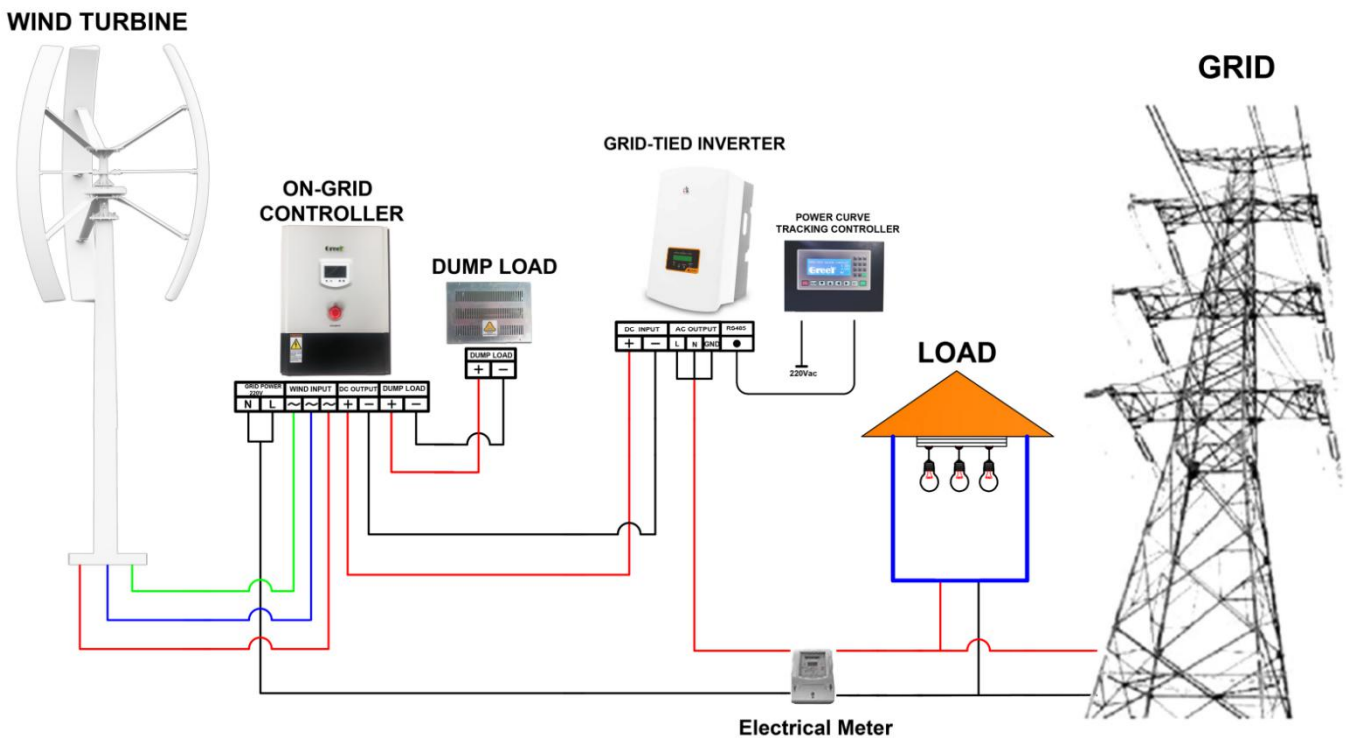
## OFF-GRID WIND POWER GENERATOR SYSTEM



On-grid system also available



## ON-GRID WIND POWER GENERATOR SYSTEM



Remote wireless monitoring diagram







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