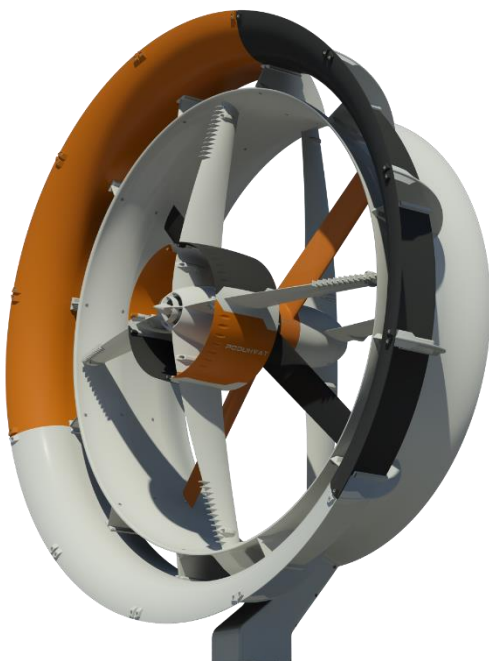




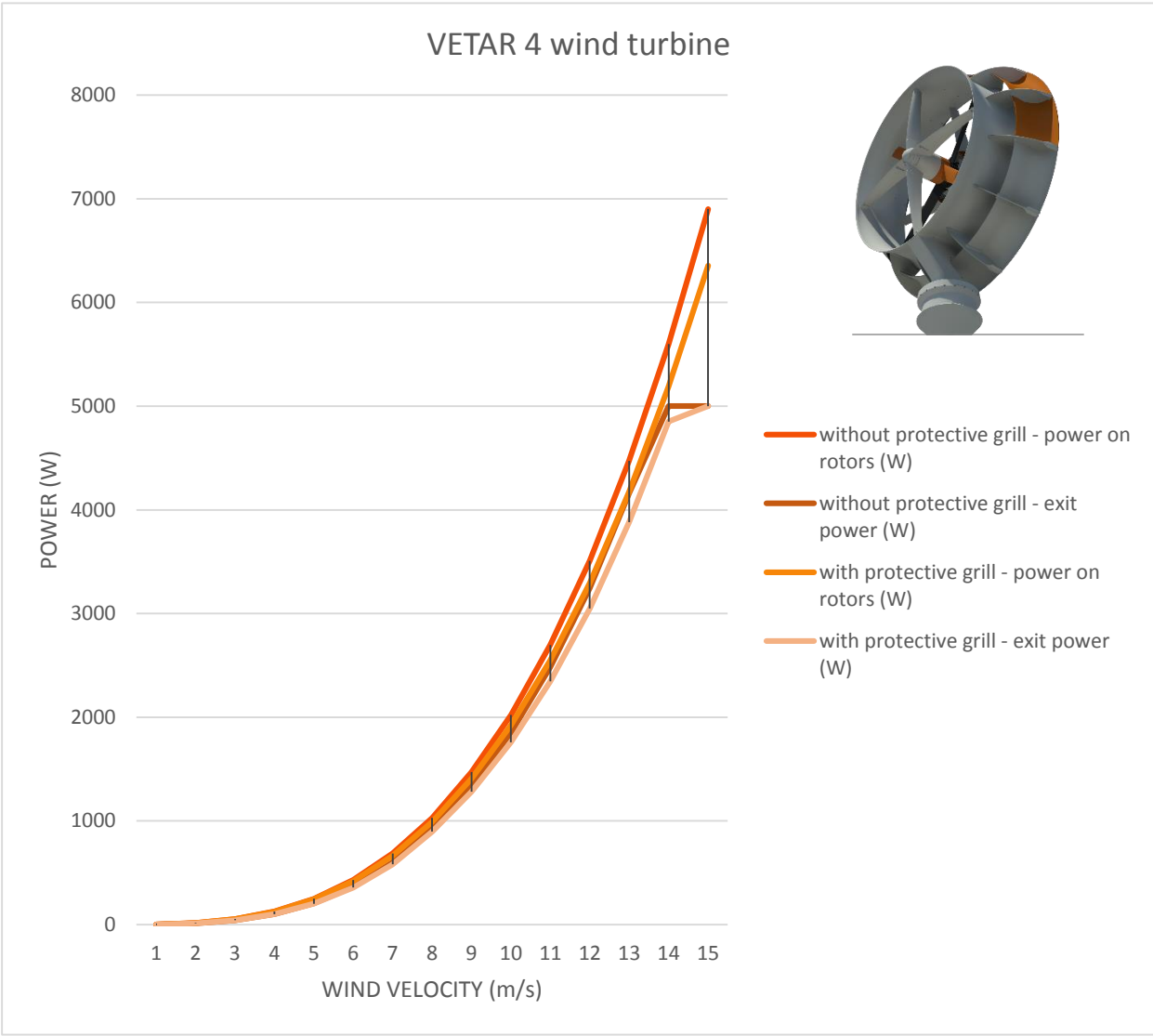
VETAR 4 is one of VETAR family wind turbines with same features and characteristics as other VETAR wind turbines:

- High power per size ratio.
- Reliability (two separated electro generators).
- Low noise and low vibrations (counter rotating rotors).
- Birds and baths protection.

Differently from other wind turbines with protective grille, and some reduction in wind turbine performances, VETAR 4 wind turbine can provide 100% percent protection of bids and bats.



Technical Data	
Rated Power	4 kW at 13 m/s wind velocity
Maximum Power	5 kW at 14 m/s wind velocity
Cut in wind velocity	3.5 m/s
Cut out wind velocity	40 m/s
Survival wind velocity	50 m/s
Rotors Diameter	1.34 m
Highest diameter	1.94 m
Grid feeding	400V, 50Hz, 3 phase 3W or 4W + PE
Turbine controller	VETAR 4 wind 5kW interface
Inverter	VETAR 4 5kW inverter
Yaw controller	active or passive
Breaking system	resistors braking
Remote monitoring	LAN/GPRS/4G
Interface	graphic display
Designed life span	≥ 20 years
Tower	free standing
Turbine mass	100 kg
Acoustic emission	≤ 35 dB
Warranty	5 years



VETAR 4 power projections in graph

wind velocity (m/s)	air density at 19.85 degrees C (kg/m3)	VETAR 4				VETAR 4 grill loses (%)
		wind flow area sq. meters				
		1,38				
		without protective grill		with protective grill		
		power on rotors (W)	exit power (W)	power on rotors (W)	exit power (W)	
1	1,2	2	1	2	1	0,05%
2		16	12	16	12	0,10%
3		53	41	53	41	0,70%
4		126	101	125	100	1,30%
5		248	205	243	201	1,90%
6		430	366	419	357	2,50%
7		686	600	665	582	3,10%
8		1028	930	990	896	3,70%
9		1470	1338	1407	1281	4,30%
10		2022	1850	1923	1759	4,90%
11		2697	2481	2549	2345	5,50%
12		3509	3246	3295	3048	6,10%
13		4472	4159	4172	3880	6,70%
14		5598	5000	5189	4852	7,30%
15		6901	5000	6356	5000	7,90%

VETAR 4 power projections in table