



## Vestas V27-225kW



V27/29 refurbished machine installed



Refinished Blades



Vestas V27/29 Nacelle refinished



Rebuilding of V27/29



## Turbine Complete: Nacelle, Blades, Controllers & Tower

**Delivery: From Green Energy Wind to Client site**

### System Specification:

#### Tower

- Height: 30m or 40m
- Hub Height: 31m or 41m
- Material: Hot dip-galvanized steel, painted.
- Safety: Nacelle reached by inside tower ladder; lockable door

#### Generator

- Rate generator power; 225 kW at 14 m/s
- RPM's: 760 to 1008
- Type: Double wound Asynchronous 415 V; 3-phase; 50Hz

#### Component Weight

- Nacelle: 8,000 kg
- Blades: 2,900 kg
- Tower: 11,000 kg

#### Operational Data

- Cut-in wind speed: 3.6 m/s
- Cut-off wind speed: 25 m/s, variable pitch, disc brake back up
- Max operating Wind Speed: 54 m/s

#### Rotor

- 3 Variable pitch blades
- 27m diameter
- Upwind Orientation, Clockwise

#### Blades

- Fiberglass reinforced polyester
- 573 m<sup>2</sup> swept area

#### Miscellaneous

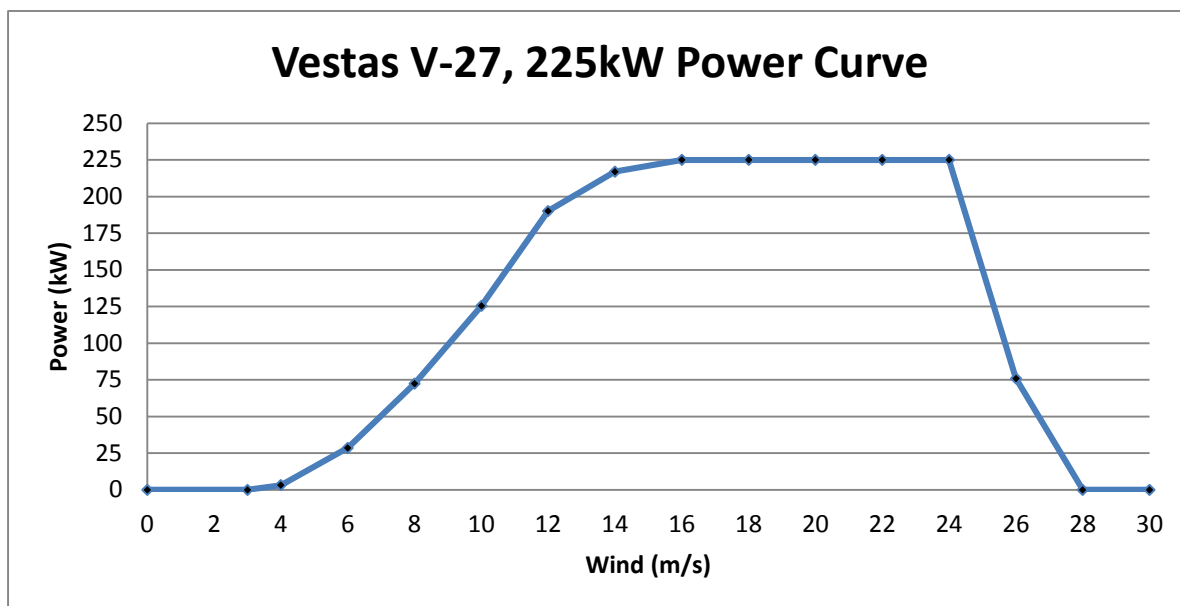
- Control panel mounted safely inside tower.
- Remote system monitoring and controls via internet connection. (Available)
- For more information on this turbine, contact us. E: [info@greenenergywind.co.uk](mailto:info@greenenergywind.co.uk)

#### Safety

- All turbines purchased include the following approved safety equipment, which is packed within the turbine load at the time of shipment.
  - Safety climbing harness with shock absorber strap
  - Climbing lanyards
  - Slip grips
  - Safety instructions manual

**NOTE: All personnel working in, on or around a turbine installation should wear a hard hat at all times.**

# Output and Production



Wind Speed (m/s)	Power Output (kW)
0	0
3	0
4	3.2
6	28.6
8	72.4
10	125.4
12	190.1
14	217.0
16	225.0
18	225.0
20	225.0
22	225.0
24	225.0
26	76.0
28	0.0
30	0.0



Estimated annual production, based on hub height of 31m and wind speed averages:  
 6 m/s = 473,000 kWh, 7 m/s = 542,000 kWh, 8 m/s = 600,000 kWh

## Estimated Return on Investment over a 1 year period

### High Estimate

Turbine	7.0m/s	NIROC Income	100 % Export	Total
Vestas V27 225kW	591,300	£106,434	£32,521.50	£138,955.50

### Expected

Turbine	6.5m/s	NIROC Income	100 % Export	Total
Vestas V27 225kW	569,400	£102,492	£31,317	£133,809

### Low Estimate

Turbine	6.0m/s	NIROC Income	100 % Export	Total
Vestas V27 225kW	443,475	£79,825.50	£22,173.75	£101,999.25

## Reconditioning Process

- **Turbine Nacelle:** stripped down to main chassis. Refinished
- **Gearbox:** Inspect gearbox, check endplay, replace all seals, Bearings & gear oil.
- **Brake unit:** Test magnetic brake unit & Meg electric motor.
- **Yaw System:** Meg yaw motor. Inspect yaw bearing & adjust yaw pinion gear to yaw ring.
- **Generator:** Meg Large generator. Replace bearings and seals. Varnish and bake
- **Main Shaft:** Replace main shaft bearing & seals
- **Anemometer:** Test RPM sensor, anemometer & wind vane.
- **Controller:** Check & test controller & set parameters by manufacturer guidelines.
- **Blades:** Refinish blades, balance & match set.

## Cost

Dependent on availability, order date location and purchase price of second hand machine

## Shipping

- All our prices include shipping from Europe and delivery to Green Energy Wind Workshop. Delivery to client site and all lifting and handling

## Warranty

- Turbines are warranted for a period of two years.
- Replacement parts are available.
- O & M Package available

## Installation

- Manuals and blueprints provided.
- Foundation drawings available.
- 2 yr. dial up tech support included.

## Design Advantages

- Low visual impact tubular towers.
- Easy access to controller and nacelle via internal tower ladder with dual lockable doors.
- Ease of service and maintenance during inclement conditions.

## Notes

1. Prices and delivery dates are subject to availability and change. We do offer price discounts for multiple system purchases. Contact us for additional information and a price quote.
2. Please confirm with us: email: [info@greenenergywind.co.uk](mailto:info@greenenergywind.co.uk)
3. Annual electrical production in kilowatt-hours will vary dependent upon your wind speed averages. We would be glad to assist you in calculating your annual production upon request.

