**Bonus 450 Turbine Specifications**

**Rotor Diameter** – 37 meters  
**Tower Height** – 40 meters (two sections)  
**Configuration:** - Rotor blades, horizontal axis, upwind, stall-controlled

**Operating data:**
- Power-on wind speed: 4.5 m/s *  
- Power-off wind speed: 28 m/s  
- max. wind speed: 57 m/s

**Rotor:**
- No. of rotor blades: 3  
- Diameter: 37 m  
- Rotor area: 962 m²  
- Rotor speed: 35 min⁻¹  
- Power regulation: Constant pitch angle with stall-controls

**- Rotor blade:**  
- Design: Glass fiber-reinforced  
- Material: Polyester  
- Profile chord at the blade root: 1.35 m  
- Profile chord at the blade tip: 0.48 m
**Electrical System:**

- Power factor: 0.96
- Generator
  - Type: Induction generator
  - Rated output: 450 kW
  - Voltage- phases: 480 D - 3 phases

**Transmission:**

- Gear ratio: 1 : 43
- Design: Three stage
  1st stage: Planetary gear
  2nd and 3rd stage: spur gear, helical cut
- Generator coupling: Elastics coupling
- Shaft coupling: Elastics coupling

**Brake system:**

- Service brake: Aerodynamic braking,
  Hydraulic actuation through the control system
- Locking brake: Disc brake, hydraulically actuated, can only be actuated manually
- Emergency brake: Initiation of aerodynamic brakes by the overpressure valve

**Weight:**

- Rotor approx.: 6,500 kg
- Nacelle approx.: 16,000 kg
- Tubular tower approx.: 18,000 kg
- Total weight approx.: 40,500 kg