31-20 SPECIFICATIONS

Output.....Grid Intertie 240 volt A.C. 60hz single phase power
Rating.....20 kw
Type.....Horizontal upwind design
Cut in wind speed.....8mph
Peak output wind speed.....26 mph
Rotor type.....3 blade Variable pitch
Rotor RPM @ rated output power.....175
Rotor diameter.....31 feet
Transmission.....Offset Hypoid gear drive
Ratio - Rotor to alternator.....6.1:1
Alternator type.....Brushless 3 phase with outboard exciter
  Rating.....25KVA, 3phase, 0-180 volts
Protection:
  Yaw control.....Dual fold tail vane
  Overspeed.....Blade actuated governor
  High wind/storm.....Offset rotor axis
Tower:
  Type.....Free standing, 3 leg design
  Construction.....Angle Iron
  Heights available.....80' - 100' - 120'
Brake Type.....Caliper-disc type

Wind Turbine Industries Corp. continually improves its products and therefore reserves the right to change the design, materials and/or specifications without notice.

In the energy conscious person of today we see a desire to reduce electrical usage or cut the cost paid for energy consumption.

A Jacobs® Wind System can provide you a means of offsetting the ever-rising costs of your electrical energy.

Wind Turbine Industries Corp.
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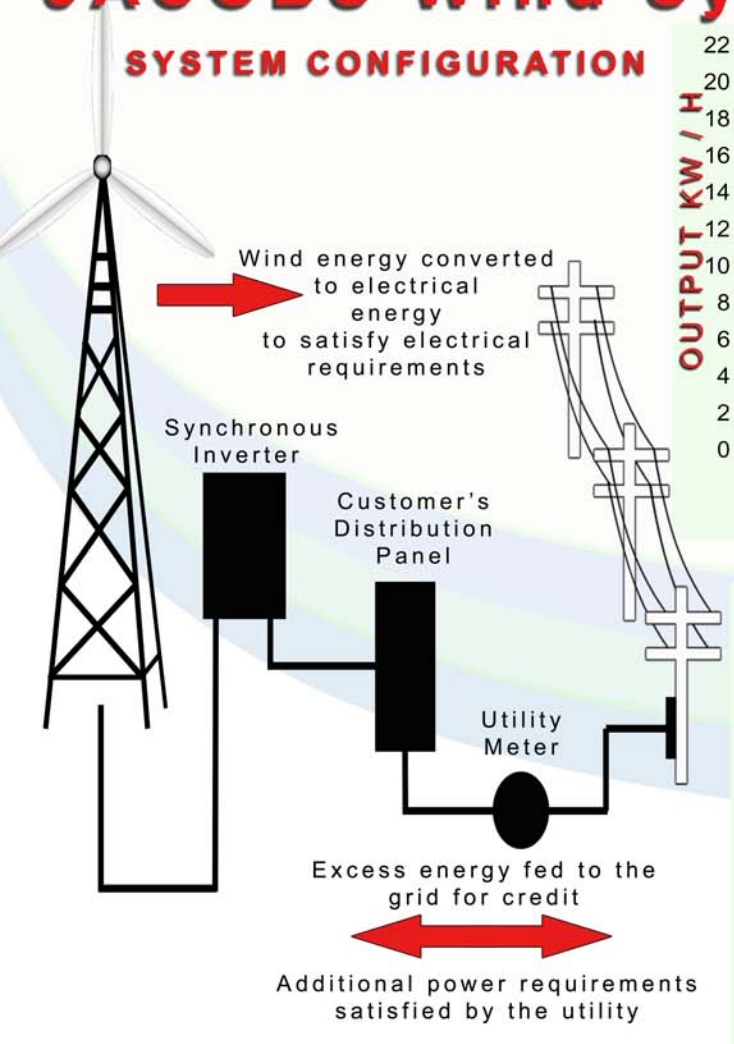
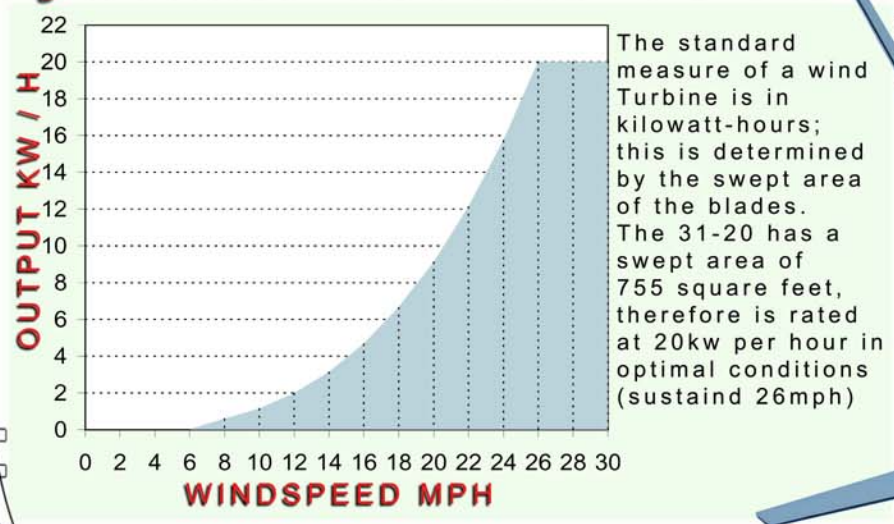
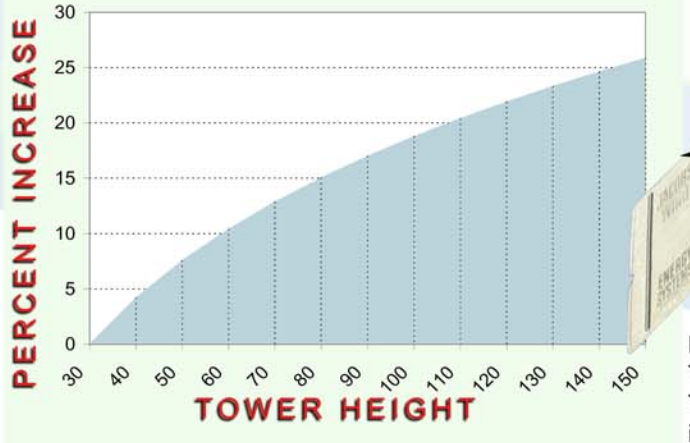
JACOBS Wind Systems Model 31-20

SYSTEM CONFIGURATION





The standard measure of a wind Turbine is in kilowatt-hours; this is determined by the swept area of the blades. The 31-20 has a swept area of 755 square feet, therefore is rated at 20kw per hour in optimal conditions (sustaind 26mph)



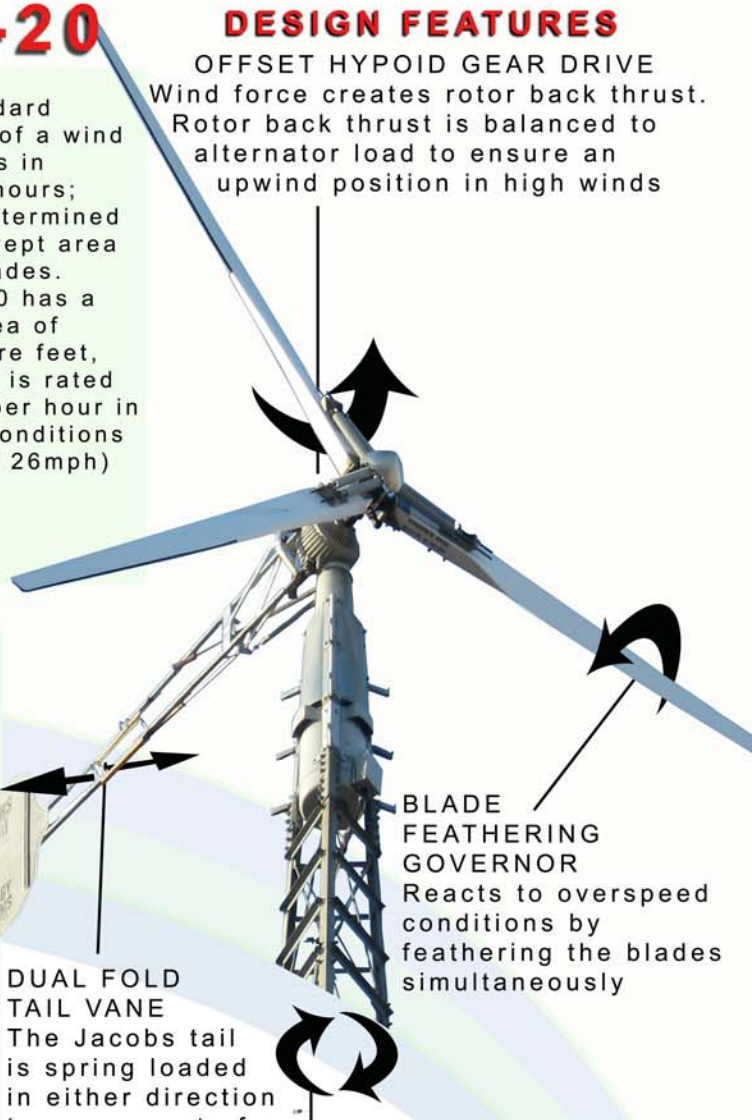
As the tower increases in height, so does the wind speed. A general rule of thumb is to have your hub height a minimun of 30' above any obstructions located within a 500 foot radius.

Net Metering - The power company is required to buy back the excess power generated by Grid Connected systems. This buy back rate varies, please check with your certified dealer or local utility for more information.

For more detailed information on wind energy please visit our site:
www.windturbine.net

DESIGN FEATURES

OFFSET HYPOID GEAR DRIVE
Wind force creates rotor back thrust. Rotor back thrust is balanced to alternator load to ensure an upwind position in high winds



BLADE FEATHERING GOVERNOR
Reacts to overspeed conditions by feathering the blades simultaneously

DUAL FOLD TAIL VANE
The Jacobs tail is spring loaded in either direction to compensate for side gusts and is used to orient the systems in light winds.

Alternator load is overcome and rotor turns around to the side of the tower with the blades feathered and running parallel to the wind

*Estimated Annual Output 31-20 in Kilowatt hours

Wind Speed Mph-	10	11	12	13	14	15
Kwh- Output	19,727	25,704	32,297	39,289	46,468	53,646

*These figures are based on assumptions using the Ralyeigh distribution figures. It is always recommended to have an expert survey your site to more accurately predict windspeed and output for your machine.

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WIND TURBINE INDUSTRIES