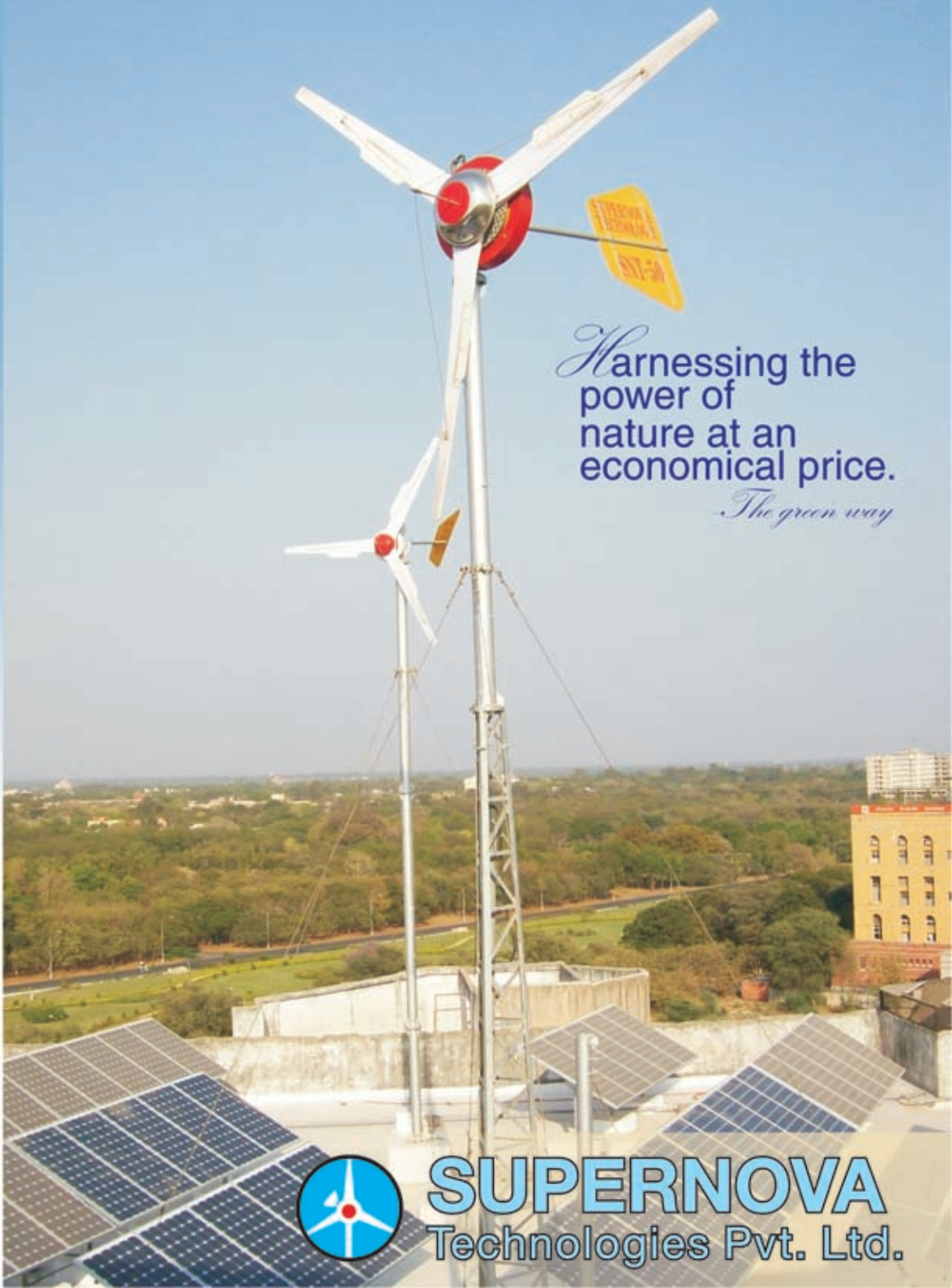


SUPERNOVA



Harnessing the
power of
nature at an
economical price.
The green way



SUPERNOVA
Technologies Pvt. Ltd.

Supernova technologies are pioneers in the manufacture of off -grid Wind energy System.

Supernova Technologies Manufactures stand alone Wind generators with indigenous standard materials to generate power at low wind speed which is commonly and freely available in coastal, hilly, desert and open land areas the harnessed power can be used directly or by storing it in the battery bank and consuming it directly or indirectly through an inverter.

Wind as the primary source, costs nothing and can be utilized economically. There is no need for an extensive infrastructure as required for a grid supply network. Supernova wind generators also function where no grid connections are available or where grid staggering is a regular problem.

Utilization of Wind Power system is growing fast because it is cheap, abundant, inexhaustible and clean. No other energy source has all of these attributes.

Product features

1. Noise less Wind Generator, so it can be installed in residential area and even on roof top up to 5 Kw Wind Turbine.
2. harnesses highest power, between intervals of 2.2 m/s to 6 m/s as compared with the other manufacturer's models.
3. Low RPM high torque generator and safety protects from high wind speed.
4. Dual safety protection on blade (S.S. Tensioner and flaps on blades)
5. Indigenous Designed to provide maximum services with minimum maintenance.
6. Very economical compared to Solar PV cell, Fuel and commercial Electricity.
7. Tailor Made Solution as per the user's needs.
8. Design available from 6 V to 440 Volts.
9. Most Eco-friendly source of energy.
10. A.C. / D.C. auto charge controller with over-charge and under charge protection and auto GRID change over.
11. Specifically designed to suit prevalent wind and Lowest rated wind speed.
12. No scheduled maintenance required and Design for 20+ years life
13. Benefit in taxation for commercial establishments.

Battery Bank and Charge Controller

SPV Power Plant

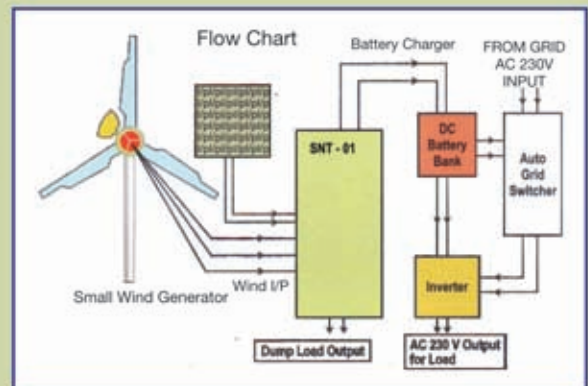




Evaluation of Small Wind Solar Hybrid system

Models	Small Wind Hybrid system	Electricity Board	Solar Photovoltaic System	Diesel Generator
Investment	Moderate Investment	Investment is Variable	High Investment (2 times to Wind Generator)	Low Investment
Recurring Cost	Low	Low	High	Too High
Estimated Pay Back Period	7 Years at the average annual wind speed of 20 kmph.	Not - applicable As price and installation are subsidiary	Never comes in its Life because its efficiency reduces with time & cost is twice	Dose not arise, Because consumption Cost is very high.
Recurring consumption cost	Low recurring cost for battery - bank only being 50% less compared to electricity board ranging between Rs. 2.00 to Rs. 3.00 per kw	Rs. 4 to Rs. 7 per kw	High level recurring cost of battery-bank ranging between Rs. 6.00 to Rs. 8.00 per kw. As solar energy is available for maximum average 5.5 hours	Running cost of diesel is Rs. 10 per Kw & Maintenance cost is Rs 8 per. Kw so the total cost is very high of Rs. 18 per Kw

- 1) Compared to Electricity board, use of Small Wind Solar Hybrid System is not a Luxury with economy in recurring cost with pay back period, Which depends upon speed of wind and installation site.
- 2) Compared with Solar Energy System, it is economical in every aspect.
- 3) Compared to Diesel Generator, it is most economical in recurring cost.



Wind Solar Hybrid System Configurations

Models	SNT-1	SNT-10	SNT -25	SNT-50	SNT-75
Equivalent rated output of Wind Generator	700 W	1400 W	2800 W	5000 W	7500 W
Generation capacity per day @average wind speed 5.5 m/s	2.5 Kw	5 Kw	10 Kw	20 Kw	30 Kw
Suggested Solar PV Modules	150 W	300 W	600 W	1200 W	1800 W
Rated capacity of Hybrid System	0.85 Kw	1.7 Kw	3.4 Kw	6.2 Kw	9.3 Kw
Suggested battery bank for Hybrid System	3.6 Kw	7.2 Kw	14.4 Kw	28.8 Kw	43.2 Kw
No. of Blades	Three	Three	Three	Three	Three
Rotor Diameter	6 Feet	10 Feet	14 Feet	14 Feet	20 Feet
Equivalent rated wind speed	11 m/s	11 m/s	11 m/s	11 m/s	11 m/s
Start up Wind speed	2.0 m/s	2.2 m/s	2.5 m/s	2.5 m/s	2.8 m/s
Type of Load	AC/DC	AC	AC	AC	AC/Three Phase
Inverter	800 VA	1400 VA	3500 VA	3500 VA	5000 VA
Tower Erection	Tilting Pipe	Tilting Pipe	Tripod Tower Structure	Tripod Tower Structure	Tripod Tower Structure

NOTE: Our generators are restricted to Maximum 300 rpm at 6m/s wind speed; this restriction is controlled by YAW movement, blade angle and external flap (ear on the blade). Due to this restricted RPM the generators do not produce any noise pollution and this also gives a better controlled charging voltage for battery bank, and provides a longer life to enclosed bearings. This restriction of RPM make wind mill feasible for installing on terrace due to negligible vibration of the tower and the tensioner provided on blade protects the pieces of the blade damage by external flying partials during a cyclone. This technology is patented.

Hotel Fatehgarh, Udai pur, Rajasthan

Unmanned Platform, ONGC Bombay High





A message from our strength

Supernova Technologies Private Limited is a manufacturer of stand-alone wind generators, from totally indigenous-raw materials and technology switch to nature for harnessing maximum energy. We, at Supernova also designed the hybrid system configuration of harnessing the power through Solar and Wind together. In an age of increasing fuel prices, this is a unique and innovative method of harnessing power from Solar Photovoltaic Panels and Wind Generator along with interfacing of GRID power and Diesel Generator power which will provide you most economical way of storing and utilization of power without interruption.



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Supernova Wind Generators can be used for:

- Residential Colonies
- Town & Street lights
- Hospitals • Temples
- Hotels • Farms • Dockyards
- Micro Windfarm
- Remote areas and any Other Utilities.

Besides the standard models available, we have the necessary expertise to provide custom based solutions. Tailor made solution for remote locations, mines, hilly, desert areas and regions below 0°C can be implemented. The Generator, which is the heart of any wind power system, can be made for any non-standard voltage rating not available as a standard product in our brochure. We can also integrate our wind power systems into existing solar PV, diesel genaset or grid based systems.

We are enlisted in Ministry of New and Renewable Energy (MNRE) at New Delhi.

