Harness the power of the wind

SWIFT *Highlights*

- Quiet, innovative design suitable for urban and suburban areas
- Flexible mounting options - rooftop, pole mount to side of building, or stand alone pole mount
- Sustainable design - carbon and energy positive within 4 years*
- Grid-connected unit offers safe, efficient, and autonomous operation without the use of battery storage
- Versatile system will generate over 1,500 watts of electricity at peak production

* 4 year time frame is based on an annual power production of approximately 1,900 kWh @ 6 m/s (13.4 mph) annual average wind speed

How well will SWIFT work for me?

Generate clean energy where it is consumed to reduce your environmental footprint.

ENERGY

The SWIFT Wind Turbine collects kinetic (motion) energy from the wind and converts it to usable electricity through an inverter at your home, business, or school.

WIND

Performance of the SWIFT Wind Turbine will be determined by the prevalence of obstructions near your building, as well as the wind regime at your specific location. Wind class is ranked on a scale of 1 to 7. With a wind regime of Class 3 or better, the SWIFT can supply an average home with approximately 20% of its annual electricity needs. To assess the wind potential at your location, consider these simple steps:

STEP 1

WIND CLASS RANKING

• Class 1 - Minimal	(0-8 mph)
• Class 2 - Average	(9-11 mph)
• Class 3 - Better than Average	(12-13 mph)
• Class 4 to 7 - Favorable	(14-21 mph)

ESTIMATE YOUR WIND CLASS RANKING AT: www.swiftwindturbine.com

STEP 2 For more certainty, collect your own wind data by installing an anemometer and purchasing a Detailed Wind Energy Study for your site.

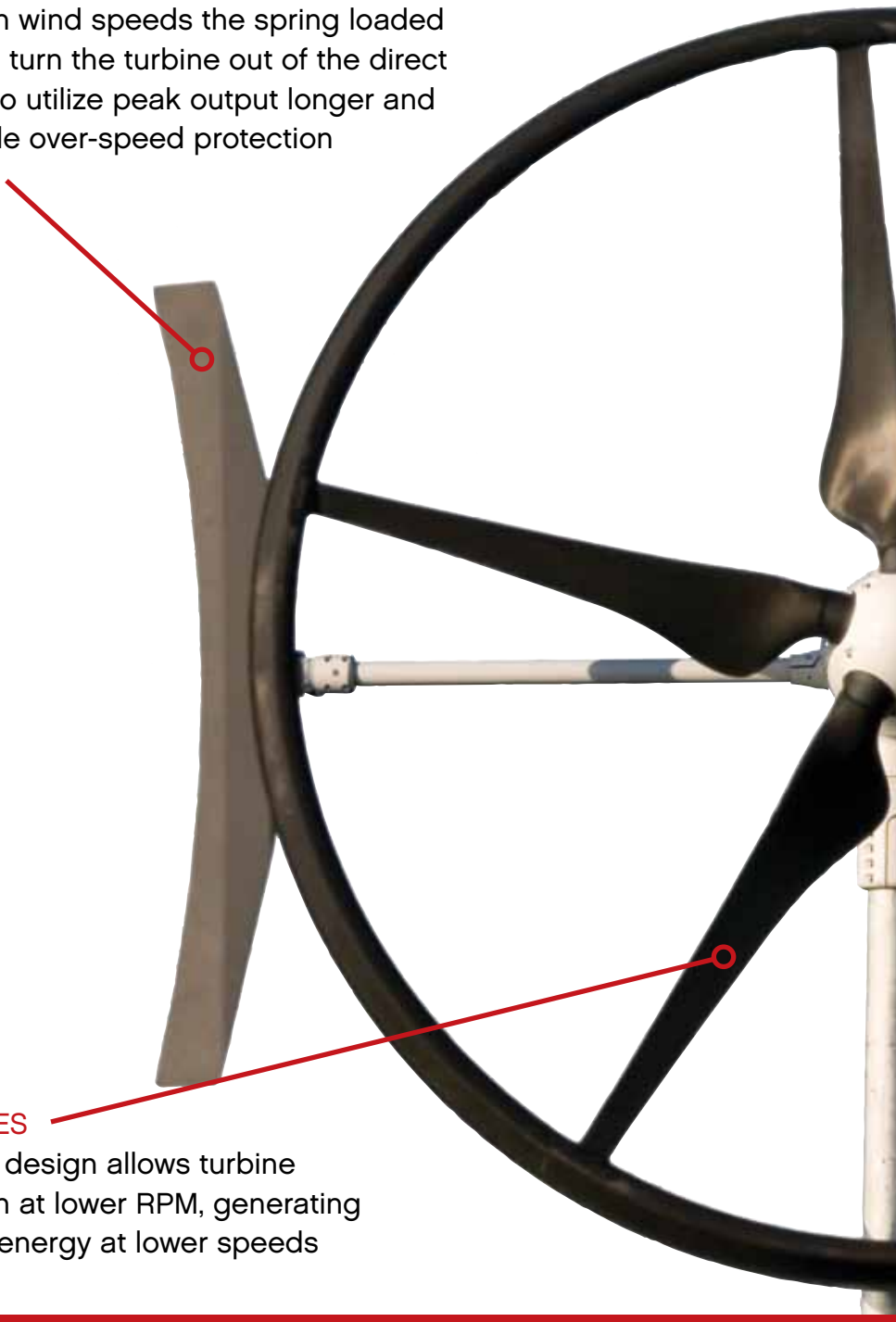
STEP 3 To purchase a SWIFT, visit your local dealer or contact Cascade Renewable Energy at 866.544.5520.

Why is SWIFT unique?

FINS

Dual fins direct the turbine 360 degrees, keeping the turbine positioned into the wind until approximately 45 mph

In high wind speeds the spring loaded fin will turn the turbine out of the direct wind to utilize peak output longer and provide over-speed protection

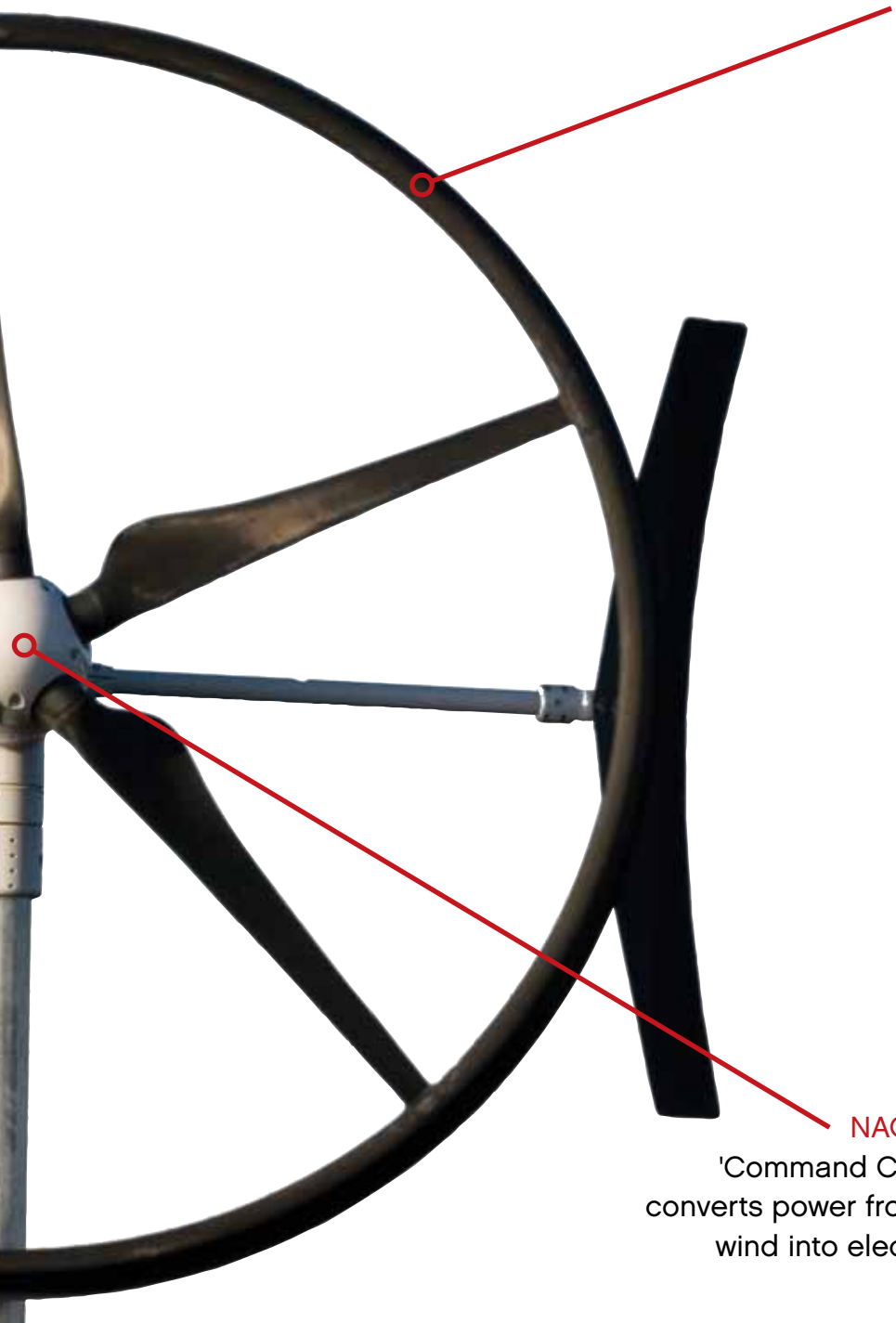


BLADES

Blade design allows turbine to spin at lower RPM, generating more energy at lower speeds

OUTER DIFFUSER RING

Reduces noise created from the wind traveling along the blades, increases efficiency, and reduces vibration



NACELLE

'Command Central' converts power from the wind into electricity

How is SWIFT connected?

CONNECTION

Your home or building is served simultaneously by SWIFT and a local electrical utility. As wind speeds increase, the turbine output increases and the amount of power purchased from the utility is proportionately decreased. All of this takes place automatically once the SWIFT is mounted by your dealer and connected to your electric meter during installation.

When the turbine produces more power than the house needs, many utility companies institute a policy called 'net-metering' whereby the surplus electricity is sold back to the utility.

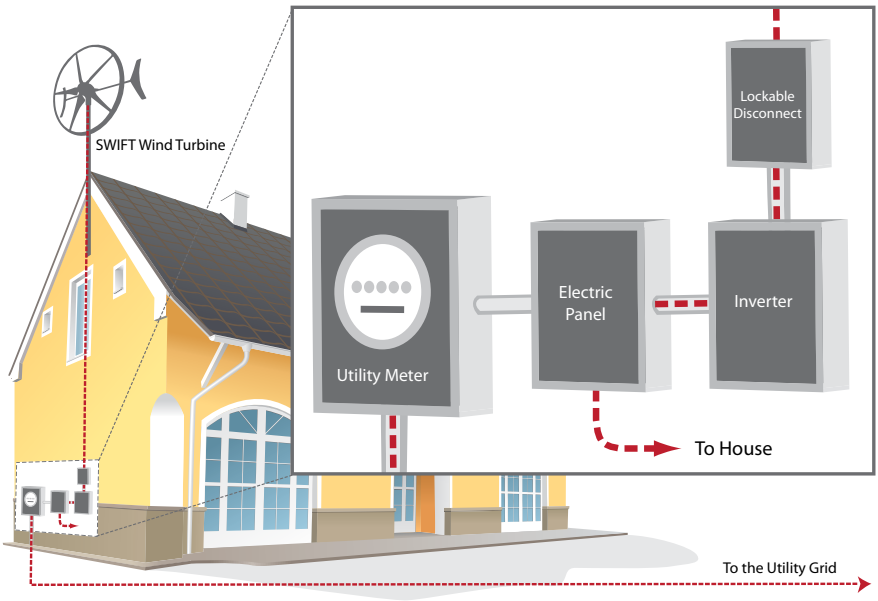
SWIFT for your business!

The SWIFT Wind Turbine is ideal for commercial property, as several turbines can be installed to reduce the location's energy needs. Each SWIFT can generate over 1,500 watts, with an output of 1.0 kW at 11 m/s (24.6 mph). Whether your structure is small or large, the SWIFT system can help supplement your energy requirements.

Generating energy at your location with the SWIFT Wind Turbine has multiple benefits:

- Electricity savings
- Environmental benefits from on-site clean energy
- LEED certification points
- Federal and state tax value in tax credits and accelerated depreciation*
- Branding value by demonstrating sustainability

* As applicable



SWIFT for your home!

Each SWIFT can provide approximately 2,000 kilowatt hours per year in areas with above average or favorable wind regimes (class 3 or higher), which equates to approximately 20% of the annual energy usage of a typical household.

The SWIFT Wind Turbine has the ability to be mounted to a single pole or attached directly to the house. In addition, the SWIFT fits well into urban and suburban areas with its near silent operation, which has been measured to be less than 35 decibels.

- Generate your own clean energy
- Lower your electricity bills
- Help the environment
- Offset the cost of the turbine with federal and state tax incentives*

* As applicable

TECHNICAL SPECIFICATIONS

Type	Upwind, horizontal axis, structure or pole-mountable wind turbine
Power Output	Over 1.5 kW @ peak production 1.0 kW @ 11 m/s (24.6 mph)
Annual Energy Production	Approximately - 1,200 kWh @ 5 m/s (11.2 mph) annual average wind speed 1,900 kWh @ 6 m/s (13.4 mph) annual average wind speed
Electrical Power	240VAC, 60Hz output voltage
Electrical Connection	Grid-tied system
Inverter	7 amp AC, custom designed brushless PMG
Rotor (Blade/Ring) Diameter	7 ft
Braking System	Dynamic & mechanical over-speed protection
Mast for Structure Mount	16 ft, aluminum (to BS1387, ISO65 specifications)
Mounting Brackets	Specifically designed mounting system with damping to reduce vibration
Lateral Loading	600 lbs @ 40.2 m/s (90 mph) 400 RPM maximum in a 20.1 m/s (45 mph) wind
Minimum Clearance Above Roof Line	2 ft above highest peak
Standard Pole Heights	30, 45, & 60 ft
Distance Between Multiple Units	Recommended 25 ft
Unit Weight	Approximately 250 lbs
Cut-In Speed	3.58 m/s (8 mph)
Maximum Designed Wind Speed	64.8 m/s (145 mph)
Product Design Life	20 yrs*
Acoustic Emissions	Less than 35 dB (A) for all wind speeds
EMI (Electromagnetic Emissions)	CE certified, BS EN 6100
Safety, Electrical & Reliability Standards	Certified to - UL 1741 IEEE 1547 & 1547.1 CSA C22.2 NO 107.1-01
Maintenance	Sealed component system, recommended annual visual inspection
Warranty	Parts - 5 yrs**

* 'Design Life' is not a guarantee of a specific unit's performance
** See full warranty for details and limitations

The SWIFT Wind Turbine has been designed to be environmentally sustainable. The product produces more energy in its lifetime than is incorporated in the material and processes used to manufacture it, therefore making the turbine 'harm neutral.'

cascade
RENEWABLE ENERGY

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