

SWIFT

Rooftop Wind Energy System TM

Renewable
Devices



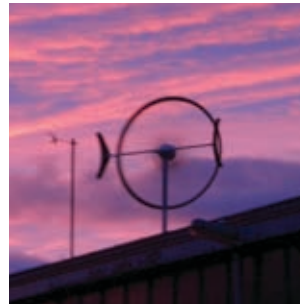
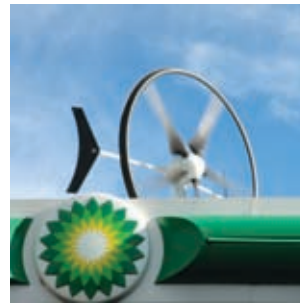
Clean renewable energy, accessible for all...

We are Renewable Devices Swift Turbines, a multi-disciplinary team of engineers and designers passionate about the development of clean, **green**, renewable energy.

Our flagship product is the SWIFT Rooftop Wind Energy System™, the world's first building mountable wind turbine with unique patented technologies for unprecedented safe, efficient and near-silent operation.

With installations worldwide, this award winning design icon has been quietly generating clean energy for homeowners, community groups and commercial customers for over five years.

When correctly sited, the SWIFT Rooftop Wind Energy System™ will drastically cut carbon emissions, reduce electricity bills and generally make the world a more **beautiful** place.



System Overview

The SWIFT Rooftop Wind Energy System™ is a unique patented system specifically designed to perform in all wind conditions especially those experienced within the built environment. The technology is a breakthrough for the micro-wind market and with excellent performance and silent operation, it really is a small wind wonder.

The SWIFT Rooftop Wind Energy System™ is installed as a complete working system, which includes the SWIFT™ Turbine, mounting structure and brackets, all electronic controls and wiring connections.

The system works by quietly and efficiently capturing energy from the wind and, by means of a unique rotor design and control system, converts this kinetic energy into usable electricity.

A SWIFT™ is installed in just a few hours, and the savings begin immediately.

Universal Application

The SWIFT™ is grid connected, drawing electricity preferentially from the turbine and topping up additional requirement from the grid supplier by means of a specially designed SWIFT Inverter. When the SWIFT™ generates more energy than is required by the property, excess units will be fed back into the grid. Payment for energy returned to the grid can be arranged with your local District Network Operator.

Alternatively, the SWIFT™ can be connected to a battery bank for on-site energy storage, or a hot water immersion system.

International Installations

Globally SWIFT Rooftop Wind Energy Systems™ power domestic, commercial and industrial properties in North America, Europe, Asia, and Australasia.



Performance

A patented twin-vane progressive mechanical furling mechanism, coupled with a sophisticated electronic control system ensures that the SWIFT™ offers incredible performance for a turbine of its size.

The optimum power can be taken from the turbine under all wind and loading conditions and a correctly sited turbine can typically provide up to one half of an average households electricity requirements.

Safety

The SWIFT™ meets and exceeds all UK and European safety standards for small scale wind generators. The system has been independently verified for structural, electrical and grid monitoring safety by the New and Renewable Energy Centre (NAREC) and the Energy Savings Trust. The SWIFT™ is CE marked, EMC Certified and has G83, UL and AS4777 certification.

Harm Neutral

The SWIFT™ system is environmentally sustainable and harm neutral in design. A study published by the Institute of Mechanical Engineers shows that in good wind conditions the SWIFT™ can become carbon and energy positive in as little as two years.

Acoustics

Critical for domestic installations, the SWIFT™ is near-silent, and by far the quietest wind system available.

The diffuser ring, which circles the blade tips, not only gives the SWIFT™ its trademark circular shape but is the key to its incredible acoustic performance. By shedding the turbulent air currents which flow from the blade tips, noise is removed.

These patented acoustic suppression dynamics ensure that the SWIFT™ operates below background noise, making it virtually inaudible in all wind conditions.

The SWIFT™ will generate less than 35 decibels of noise in all wind conditions - that's less than a whisper!

Vibrations

Specifically developed vibration damping systems in the mounting brackets prevent the transmission of oscillations from turbine to building by absorbing a wide range of vibration frequencies.

The SWIFT™ can be installed on a multitude of building types, or on a stand-alone wooden pole.



Award Winning Aesthetics

The SWIFT™ is an award winning design icon of the 21st Century. Our technical team work in close partnership with creative designers to ensure that the SWIFT™ remains not only the top performing turbine in its class, but also the most beautiful.

The SWIFT™ has won numerous sustainable building and design awards including the prestigious Ashden Award, presented by HRH Prince Charles, the International Design Award 2008, and was a finalist in the the Design Week Award 2008 for land-based product, beaten only by the Apple iPhone.

Bat & Bird Safe

The SWIFT™ is bat and bird safe, and supported by the Scottish Seabird Centre, where a five year trial has proven the system's wildlife friendly credentials.

Eligible for Grant Funding

The SWIFT™ is eligible for grant funding from the Low Carbon Buildings Programme, The Green Energy Trust, Scottish Community and Household Renewables Initiative (SCHRI) in Scotland, NIE Your Energy in Northern Ireland, and Sustainable Energy Ireland in the ROI. Funding for renewable energy installations within the Farming community is also available through DEFRA.

Planning Compliant

The SWIFT™ meets all current planning legislation criteria and will be included within permitted development rights due to come into force in 2008/2009.

What next?

To place an order for your SWIFT Rooftop Wind Energy System™ contact our Sales team on +44 (0) 131 535 3301 or email swift@renewabledevices.com

Renewable Devices SWIFT Turbines

Renewable Devices Swift Turbines Ltd provide accessible renewable energy technologies.

We are the manufacturers of the SWIFT Rooftop Wind Energy System™, the Sustainable Energy Module™ and the Sea Otter™ marine turbine (currently under development).

SWIFT Rooftop Wind Energy System™

The SWIFT Rooftop Wind Energy System™ is the World's first building mountable wind turbine with unique patented aerodynamic technologies for safe, silent, super-efficient operation.

Suitable for domestic, commercial and industrial application in urban and rural locations, the SWIFT™ provides an attractive sustainable solution in the unstable energy market with the added benefit of helping to safeguard the environment for future generations.

Not only will the SWIFT™ substantially reduce energy bills by offsetting grid electricity, but the system will pay for itself in as little as five years; providing free electricity thereafter.



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SWIFT™ Specification

Turbine	Upwind Horizontal Axis with Diffuser Ring
Rated Power Output	1.5kW*
Annual Power Supplied	Up to 2000kWh**
Annual CO ₂ Displacement	1.2tonnes***
Product Life	20 year maintenance free
Generator	Brushless PMG
Blades & Rotor	2m injection moulded glass fibre reinforced polymer
Mast	Aluminium or stand-alone steel or wooden pole
Mounting System	Custom designed aluminium brackets
Start-up Speed	2.3m/s****
Acoustic Emissions	<35dB [A] (across all wind speeds)
EMI (electro-magnetic emissions)	CE Certified BS EN 61000
Grid Connection	G83, UL & AS4777 Certified
Battery Charging	48v or designed to suit your requirements
Water Heating	Replaces existing immersion heating element
Safety, electrical & reliability standards	BS EN 61400-2, BE 7671 & BS 5760-7

* Rated Wind Speed 12m/s

** Dependent on siting of turbine

*** Substituting end-user electricity with a single 1.5kW rooftop turbine at 30% utilisation by CEDRL RETScreen International

**** Wind tunnel verified

