EAGLE POWER

TECHNICAL REPORT ON THE PROVEN PRODUCT RANGE FOR USE AS BACKGROUND MATERIAL TO ACCOMPANY PLANNING APPLICATION

FOR

A PROVEN WIND TURBINE

2009

Greave Head Farm Ripponden West Yorkshire HX6 4NU
[redacted] Web www.eaglepower.co.uk

BWEA REA MCS 1263

EAGLE POWER

PROVEN WIND TURBINES

INTRODUCTION

Proven Energy is the world's leading supplier of small wind turbines. The high performance of its turbines is the result of almost thirty years of inspiration, innovation and development.

With over 2,000 units installed worldwide, Proven Energy have unrivalled experience and have built up a global reputation for their robust and reliable performance producing energy under the harshest of conditions.

The main attributes of the Proven Wind Turbine are that they are considered to be: robust, well designed, have low noise emission and a low maintenance regime.

Robust

Proven Energy provides the world's only robust, low maintenance turbine. Their internationally patented turbine has undergone extensive testing under the most rigorous of climate conditions. Proven Energy's installations operate successfully throughout the world, from Antarctica to Saudi Arabia.
Unlike upwind turbines, the system works with nature and not against it by getting the most out of any wind speed, helping to maximise your investment.

Design

The patented Proven Flexible Blade System enables the turbine to generate power in light or strong winds. This unique system, a combination of innovative design and the latest techniques in advanced composite technology, allows the blades to bend and flex.

As the wind gets stronger, the blades twist to reduce their aerodynamic efficiency. This allows the wind turbine to maintain a high output even in the fiercest storms, unlike many other turbines, which need to stop generating power to protect themselves at high wind speeds. The blades also regulate their speed, preventing damage if the load from the turbine is disconnected through a power cut or electrical fault.

Low Noise

A Proven Energy turbine is designed to minimise noise and maintenance. It has a direct drive generator, which operates without a gearbox. The generator load is continuously monitored to keep the blades rotating at a low speed, whilst optimising power output.

Compared with other modern small turbines, the blade tip speed of a Proven Energy turbine is low. This means that noise is reduced substantially.

Low Maintenance

Proven turbines are designed to run with the minimum of maintenance.

Greave Head Farm Ripponden West Yorkshire HX6 4NU
[redacted]eb www.eaglepower.co.uk

BWEA REA MCS 1263

EAGLE POWER

Applications

Eagle Power consider the Proven wind turbine represents the right system to meet the applicant's needs. They also support the intended location for the turbine based on wind speed survey assessment work undertaken in the locality.

The Proven Energy product ensures it can help achieve renewable energy aspirations by reducing domestic energy bills. It is also confident that the wind turbine selected will work productively and deliver all round environmental benefits.

If a property is not connected to the grid, energy from a wind turbine can be used to supply electricity via a battery storage system. This reduces the reliance on diesel generators, which are expensive to run and damaging to the environment.

Where a property is already connected to mains, renewable energy can be used directly and surplus exported back to the grid.

MODELS OF PROVEN WIND TURBINES

Proven manufacture and supply models with different outputs, mast heights and blade diameters.

The Proven 2.5kW

Proven wind turbines are manufactured to marine build quality using galvanized steel, stainless steel and plastic components with blades in polypropylene material.

The Proven 2.5, although the smallest of the turbines, given the right wind conditions can provide enough energy for a standard 3 bedroom house.
The Proven 2.5EX is widely used on off-shore oil platforms, as it is the only turbine in the world that is totally explosion proof.

Outline Specification

- Rated Output: - 2500W (2.5kW)
- Voltages available: - 12V / 24V / 48V / 120V / 240V / 300V
- Annual Output - up to 8,000 kWh (depending on location and average wind speed at the site)
- Rotor Diameter - 3.5m
- Mast Height: - 6.5m or 11m

Greave Head Farm Ripponden West Yorkshire HX6 4NU
[redacted] Web www.eaglepower.co.uk
Eagle Power is a trading name of Gumbley & Company Limited, a limited company number [illegible]4240 at the above registered office

BWEA REA MCS 1263