

## **Case study – Ford Retail, Dagenham, London**

Technologies covered:

- Entegriety 50kW wind turbine
- Rainwater harvesting
- Waste to Energy boiler

**June 2008**



## Ford Retail – Renewable Energy Solutions for Flagship Dealership

Perpetual Energy, one of the UK's fastest growing developer and operators of Sustainable Heat and Power Systems, has been working closely with Ford Retail, the retail division of Ford Motor Company, in the development of their new £5.3m car dealership in East London.

Perpetual Energy (PE) was appointed early in the conceptual design stage and this ensured a full package of renewable energy solutions were fully utilised and integrated into the overall design. The new state of the art site will be Ford's greenest dealership in the UK and will act as a model for future developments.



Artist impression of the new Dagenham Motors dealership in Barking, East London

### Integrated Approach

Perpetual Energy's specialist knowledge in renewable technologies complimented the client's team of architect, Mechanical & Electrical designers and the main building contractor. This approach meant that Ford Retail was able to utilise PE's consultancy skills from the outset and this followed through to the successful completion of a fully integrated project.

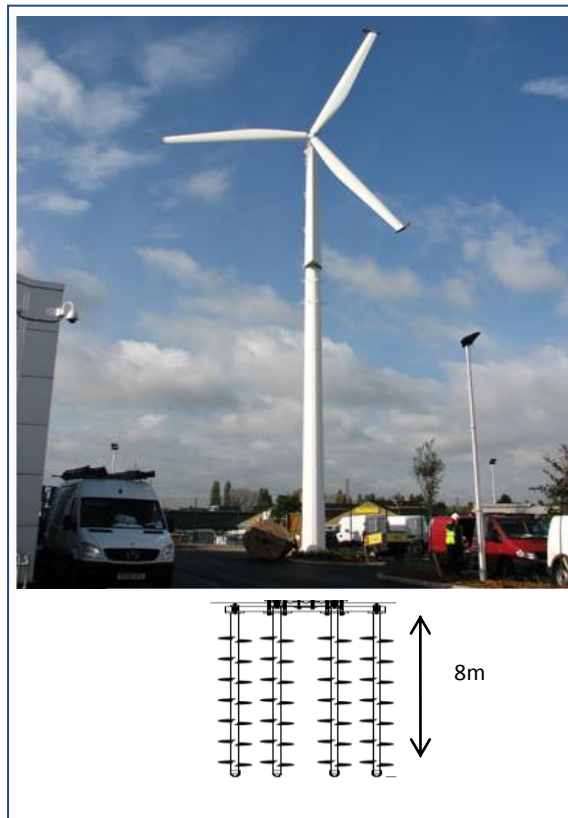
### Benefits

- Fully co-coordinated solution
- Turnkey package including design, installation and maintenance
- Management of planning process
- Management of grant application
- Management of community consultation exercise



## The Renewables Solutions – Wind Turbine

- EW/15/50 50Kw wind turbine – Detailed design, supply and installation by Perpetual Energy
- Electricity production approx 80,000KWh per annum
- Carbon Dioxide reduction approx 35 Tonnes per annum
- Successful grant award
- Successful community consultation exercise
- Successful planning application
- Pioneering foundation design – a reusable steel screw was used rather than the traditional concrete foundation



## Rain Water Harvesting System

- 18,000ltr Rainwater Harvesting System
- Filtered rainwater used for car washing, 15 WC's & 7 Urinals,
- Reduced demand on local authority supply
- Reduced cost of mains water metered supply



## Waste Oil Heating

- Waste Oil Heating System - Supplied installed and designed by Perpetual Energy
- 145Kw Warm air heating to workshop
- Fuelled by waste oil produced on site
- 10,000lts waste oil storage facility
- Has eliminated usual cost of oil disposal from site
- Has eliminated embodied energy associated with usual transport of fuel
- Has reduced cost of buying in fuel for heating workshop area
- Leading design in furnace up to 200% more efficient the other types



## Summary

This project demonstrates the opportunity to reduce carbon dioxide emissions, reduce capital and running costs and provide fully integrated package of 'real world' solutions. Perpetual Energy and Ford Retail have worked together to construct a viable turnkey package of renewable and sustainable solutions.

## For further information about how Perpetual Energy can help your business:

- please complete our online enquiry form - [contact us](#)
- or call on 01565 757829
- or call/email Dominic Clarke, Sales and Marketing Director on 07969 135434 or [dominic.clarke@perpetualenergy.co.uk](mailto:dominic.clarke@perpetualenergy.co.uk)

## About Perpetual Energy

Perpetual Energy develops and operates Renewable Heat and Power systems for Industrial, Commercial and public authorities across the U.K., Europe and North America.



Perpetual Energy Ltd was formed in 2003 just as the world was really beginning to wake up to the stark challenges of energy security, energy cost and climate change. At the time when 'sustainability' was widely perceived as a 'cottage industry', Perpetual Energy was recognized as a partner capable of delivering complete solutions to large and complex organisations.

Perpetual Energy is in the business of implementing and managing total energy solutions along with the best sustainable heating, cooling and power sources possible. We help clients tackle the challenge of reducing dependency on fossil fuels and lowering overall energy consumption - forming a crucial part of carbon management.

To make sense of it all, Perpetual Energy comprises some of the most experienced resources in the renewable energy industry. Our Technical Directors have up to 25 years' experience in the sector, and are widely recognized for their specialist expertise.