



2007 WINNERS & COMMENDED ENTRIES

Alpheco for their combined heat and composting solution to food and other biodegradable waste, including sewage sludge cake. The process takes the biowaste and the temperature reaches more than 60C through heat pump technology in the Aergestors which are then loaded as roll on roll off truck bodies for direct compost delivery. The Aergestors can be easily scaled up and are suitable for any location to meet local heating and waste needs. (Commended)

Axon Automotive for their carbon fibre chassis technology which reduces the weight of cars significantly and creates a low aerodynamic drag, thereby improving fuel efficiency. Unlike previous carbon fibre in sheets, Axon can produce beams with the added strength and usefulness in an automotive environment, including a 60% weight reduction. (Winner)

The Bobber Company for the Manchester Bobber, a wave device designed to operate in depths of water from 20m to 60m and consisting of an array of floats sensitive to wave motion and connected to a 500KW autonomous power take-off drive train housed on the top of either a fixed bed or floating platform. (Winner)

Bracknell Forest Borough Council for their arrangement with Bohringer Ingelheim where industrial grey water is being used for irrigation in Bracknell Town Centre. (Winner)

Connaught Engineering for their HYBRID+ system, comprising an electric motor which is retrofitted to the vehicle drive line via a constantly variable transmission. During deceleration or braking, this motor performs like a dynamo and generates electricity which is then stored in supercapacitors which in turn can assist the vehicle engine when required, creating a fuel/ electric hybrid vehicle. (Winner)

Ceres Power and Centrica for their wall-mountable integrated fuel cell microCHP unit which can provide heating, hot water and electricity in a domestic setting. Using the same water, electricity and gas connections as normal boilers, these new systems can replace conventional boilers and offer 20% reduction on running costs, significant carbon emission reductions and a 5 year payback at current prices. (Winner)

C-Tech Innovation for their WEEE management analytical tool that allows an economic assessment via the waste hierarchy approach of end of life options for electrical and electronic items (from a cost perspective) to be made. (Winner)

Dulas for their solar-powered fridges for children vaccines and blood in the third world. (Specially commended)

Environmental Power International for their biomass system that converts organic matter into high energy gas, a carbon rich char and a distillate oil through a heated, pressured, anaerobic process. (Winner)

Enviro-treat Ltd for their stabilization technology E-Clay, which can be used in the remediation of land and marine environments. (Winner)

G24 Innovations for their commercial grade Dye Sensitised Thin Film solar cells, which contain no silicon and are capable of producing electricity in low light. When combined with the proprietary roll-to-roll manufacturing process that they have developed which can accommodate large volume production, this translates into a viable and affordable technology worldwide. (Winner)

Geothermal International for their ground source heat pump solutions in a variety of bespoke locations and situations. (Winner)

Greenbank Group UK for their pulverized fuel diffuser, the H-VARB. This is a fluidic mixer in a geometric shape which breaks particle ropes and so enables there to be an even mix of material and air, thereby minimizing both carbon-in-ash and nitrous oxide emissions. (Winner)

Intelligent Energy for their Emissions Neutral Vehicle (ENV) Fuel Cell motorbike, the world's first hydrogen fuel cell motorbike which is based around their advanced fuel cell systems and produces only pure water at the tail pipe. (Commended)

KIV (Energia Ltd) for their incorporation of a flue gas scrubbing system on to an energy from waste plant. Finely ground sodium bicarbonate powder is blown into the flue gases upstream of the filter where the acid gases, furans and dioxins are absorbed by mixing in some activated carbon powder. The back pressure is computer monitored for automatic clean down with compressed air. (Winner)

Lysanda for their Eco-Log on-board device that gathers performance and emission data from a moving vehicle and then transmits that data back to a fleet management centre. (Commended)

Naturalwatt for their Microgrid system, a microgeneration and storage system which optimizes the performance of conventional microgeneration equipment to produce a "domestic power station" of renewable energy. The system allows both import and export of energy, together with generation and usage data. (Commended)

Norfolk Solar for their Broadsol scheme which provides professionally designed solar hot water systems at lower than current market prices to consumers for self-installation, together with the necessary training. (Commended)

Northern Gas Networks/ United Utilities for their reliable means of recycling spoil from road works into a consistent and commercially-viable material called cement-bound excavated material version 3 (CBEM3) which is used to backfill road works trenches and is being tested with the aim of becoming the first recycled product to be approved for use under the New Roads and Street Works Act. (Winner)

Ocean Energy for their OE Buoy Intermediate Scale Device which is currently being tested at the Galway Bay Test Site, near Spiddal. It is a wave device with a Wells turbine and generator and incorporating an oscillating water column duct which responds to subsurface pressure due to wave motion. The wave energy capture is high in normal conditions and is limited in storm conditions which ensures safe operation. The whole power take-off system has one moving part and sits above the waterline. (Winner)

Quietrevolution for their high-performance, triple helix vertical axis wind turbine, capable of effective operation in a turbulent urban setting with a 30% improved efficiency over "propeller style" turbines and with significant noise reduction. (Winner)

Solarcentury for their C21e solar electric roof tile which replaces four conventional roof tiles and is fixed directly to the roof battens. Installation is undertaken by a roofer with the leads passed into the roof space for an electrician to complete the wiring. The integrated thru-flow ventilation enhances the PV performance which achieves a 22% efficiency. (Winner)

SoundDeadSteel.Com for Sonphonon, their steel or aluminium sheets which absorb noise and vibration. The process involves constrained layer damping and enables a 2mm aluminium plate to reduce vibration by 20db compared with standard products. (Winner)

Synchropulse for their innovative electric motor which uses a quarter of the electricity of a conventional motor, can be manufactured more cheaply and offers variable speed control with the ensuing further energy savings, resulting in a one year payback on investment. (Winner)

TEG Environmental Ltd for their silo cage composting process which copes with all organic waste. It involves a single pass through of waste, a modular design allowing for easy expansion, low odour, no forced aeration or agitation and the ability to process multiple waste streams. (Winner)

Tellisford Mill for their run-of-river micro-hydro electric turbine and 55kW generator at a watermill in Somerset on the River Frome. (Winner)

Thermomax for their Vacuum Tube Solar Thermal Collector which uses vacuum technology to ensure the most effective transfer of solar energy into heat. A row of evacuated glass tubes and a highly insulated water manifold provide perfect insulation from weather vagaries. The design is a simple click together or plug and play fixing and the configuration can deliver up to 30% more energy than a standard solar arrangement. (Commended)