

bda zedfactory 2005

zed upgrade

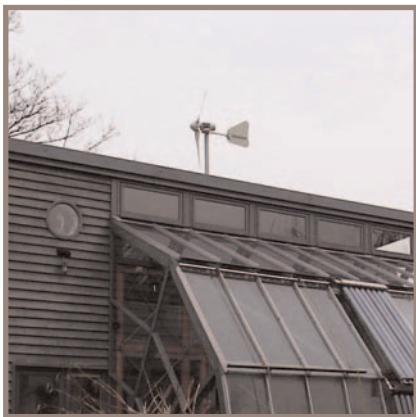
a guide to **zed** refurbishment systems for existing homes
issued in conjunction with the release of **guardian article 19 mar 05**

zedupgrade an introduction to refurbishment systems for existing homes

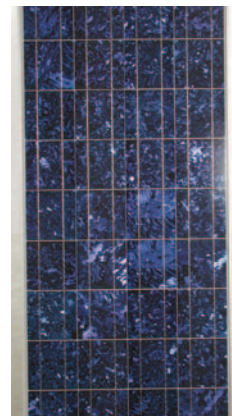
This brochure introduces the idea of a **ZED**standard upgrade of existing houses to future proof them against global climate change, rising fuel prices and the increasing cost of moving home. This is to be known as **zedup** and is aimed at everyone from private households to landlords such as housing associations and local authorities.

It addresses 2 main issues affecting people today - The cost of running a home and car on fossil fuels; and the unsustainable ecological footprint of the average British resident. Rising fuel prices can be overcome by reducing a home's demand on the utilities - Water, gas and electricity. The ecological footprint can be reduced by lifestyle changes.

The cost of new homes and of moving house makes it more viable to stay put and extend or upgrade ones existing home making it healthy and more flexible in the process. ZEDfactory Ltd proposes an upgrade path enabling most households to plan the transition to a **ZERO CARBON ZED** home as finances allow.



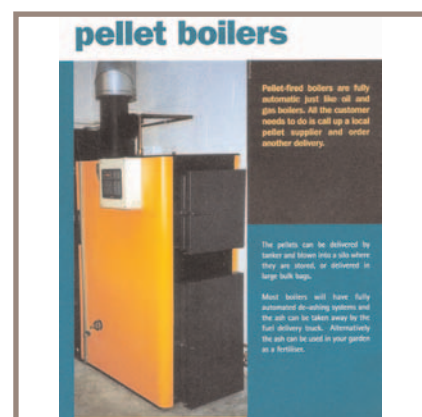
“ up to half of your annual electric needs can be met by a near silent micro wind turbine”



“ up to half of your annual electric needs can be met by roof mounted solar electric panels”



“ up to half of your annual hot water needs can be met by the latest roof mounted solar thermal panels”



“ disconnect from mains gas and use a wood pellet boiler for heating and hot water back up”

zedupgrade what kit is available?

Loft conversion or extension combined with some or all of the following...

ZEDservices - Carbon Neutral Energy Pack:

- * Super insulated hot water thermal store;
- * Solar hot water panels & pumps;
- * Wood pellet boiler & sacks of pellets (or remote silo and feed);
(Or, to replace all of the above)
- * A wood stove & back boiler;
- * Photovoltaic panels & inverters;
- * Micro wind turbines & inverters;

ZEDfabric load reduction:

- * 'A' Rated white goods (washing machine, dish washer, induction hob and fridge freezer);
- * Heat recovery ventilation system (either passive stack with wind cowls or fan driven alternative);
- * Low energy light bulbs and electrical appliances;
- * Insulating dry lining to habitable rooms;
- * External insulation system - Brick cladding, timber boarding or cement render over insulation;
- * Super efficient double glazed doors and windows;
- * Draught proofing of existing envelope;
- * Dual flush WC's and low water use sinks and baths;
- * Spray taps & shower fittings;
- * Rain water harvesting pack;

ZED Lifestyle options:

- * Healthy homes advice - Finishes including eco paints, PVCu free fittings etc;
- * Interiors and soft furnishings;
- * Car pool or biodiesel kit;
- * Electric scooters & powered bicycles;

ZED ethical finance options:

- * Conversion of existing 2 floor maisonette to first / loft level maisonette with studio flat at ground floor (to be sold or rented to cover costs of upgrade);
- * Estate or terrace renovation by landlord or other to claim bulk discounts;
- * Single private dwelling - remortgage to finance upgrade and extension as opposed to moving home;
- * 10 year ZERO CARBON upgrade plan - future proof strategy.

zedupgrade renewable energy in the home

Here is more or less what the average home will need to produce its annual total energy needs:

1 Electricity Windsave Wind Turbine

1kw peak, with mounting kit

£1,044 inc. vat (ex. delivery & installation)

The most important thing to remember is the position: it must be sited to pick up the prevailing wind, and fixed to robust masonry at a gable end if possible. Combined with.....



20no. Polycrystalline LC Solar Electric Panels (1200x600mm each)

1.6 kw peak

£4,791 (Allow £750 for connection and wiring budget unless you are good at diy.)

This should produce the electric needs of an average sensible three bed household providing low energy lighting and energy rated class 'A' household white goods are used, and the power shower is mothballed.





... Feel good about the future ...

... Create a legacy to be proud of ...



2no. Solar Hot Water Panels

£4,200 inc. vat & installation

(Allow extra for any new plumbing and fittings that you require.)

Solar hot water panels are basically water-filled tubes installed on your roof. System consists of good quality panels and a special Solus stainless steel hot water tank. Price includes installation and vat. This will work really well in spring, summer and autumn, but you need top up hot water in winter.



‘Wamsler Inga’ manual feed pellet stove with back boiler

£5,264 ex vat, including flue, pump & installation

(Allow extra £5,000 for automatic feed boiler with remote storage.)

If you use a boiler fired by sustainably grown wood that is then turned into pellets, you substantially reduce your overall carbon emissions. Wood burning systems, unlike other renewables, do emit carbon dioxide. However, as the wood fuel is cultivated, it absorbs the exact same amount of carbon dioxide as is released when burnt.



zedupgrade

Here are examples of how to reduce emissions associated with an average families private car use without adversely affecting ones lifestyle:

G-wiz Purpose Built Electric Car

Renewable energy on the road from Going Green - 0208 574 3232 / goinggreen.co.uk

£7,599

There are big brand versions such as those produced by Citroen and Peugeot, but these are more suited to a city because you can only drive for around 60 miles before they need a recharge.

An alternative is to run a car on biodiesel, which is basically vegetable oil or old chip fat that has been filtered. One problem is finding a filling station in your area (try biodieselfillingstations.co.uk), but you can always use regular diesel if you run out.



Conversion Kit for Existing Car

Standard Diesel Volkswagen Lupo 1.7 SDI E

£7,599

The Dunsters company car [78 mpg] was converted for around £1350



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a chart of the costs associated with a zedupgrade

Costs for ZED kit - suitable for both rural ZED units and most three to four bed existing homes

1.6 kw peak solar electric PV panels 20 No 80 Wpeak aluminium framed glass/ tedlar panels 1198 x 534 mm panel dimensions , 2.5 kw Kaco inverter included kit supply only diy installation - mounting kit not included as highly variable	4211
1 kw peak Wind save turbine assumes diy fitting supply only diy installation - mounting kit provided	1000
Manual feed pellet stove with back boiler, including flue and pump Wamsler Inga black pellet stove, soapstone top installation included	5264
3m2 Solar hot water panels and CONUS stainless thermal store including installation	4675
total cost of kit mix of diy and professional installation	15150
Plumbing, hot and cool water and sanitary fittings includes hot and cold water and spray taps and showers	3900
Electric installation connection to consumer unit and wiring budget	750
note each existing home will have different costs - survey essential	
approx cost of zed kit	Total
	19800

allow extra £5000-00 for automatic pellet boiler with remote storage

the zed wheel, carbon neutral guide to where your energy is spent





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