

PRESS RELEASE

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Time to take personal action

– *stop exporting your carbon footprint and join the ‘micro generation’*

The days of paying someone else to ‘put a wind turbine on a hillside’ or out at sea are over. Even if every green grid energy solution anyone's ever thought about was applied nationally, renewable energy could never meet more than 30% of current demand. Fortunately, a careful mixture of energy efficiency and building integrated renewable energy micro generation technologies can achieve the required 70 % reduction in national demand – avoiding the need for dangerous and expensive investments in nuclear or fighting for fossil fuel outside our national boundaries.

A typical response is to blame everybody else [especially the government] for not solving this problem for you. However it is no longer possible to export your personal carbon footprints some where else. The only sensible way forward is reducing personal demand without sacrificing quality of life or convenience. The most important commodity to save is electricity – with each unit having three to four times the carbon footprint of gas. Gas prices increased 25 % last year, and as international stocks deplete will rise steadily for the foreseeable future. With electricity pegged to approximately four times the price of gas and a future shortage of national generating capacity ZEDfactory recommend avoiding home technologies that use large amounts of electricity – particularly heat pumps, ventilation fans and resistance heaters.

How to join the ‘micro generation’

Step 1 – If you install 2 watt LED or micro compact fluorescents in existing low voltage down lighters you can have every light on in a typical 3 bed home, and still only burn less than 100 watts. If you are able to turn lights off in unused rooms - this could drop to 20 watts, without stumbling around in darkness. It is straightforward to draught strip windows, insulate under floorboards, and this represents the usual DIY activity carried out by many households over an intensive week - the material cost should be under £1,000.

Step 2 - If you run a class A++ dish washer, fridge, induction hob and turn off TV and computers rather than leaving them on standby, it is possible to limit annual electrical consumption to 750 kwh/per year / person. Don't use a tumble dryer, use drying racks and clotheslines instead.

Step 3 - With 3 people living in this house, It is easily possible to live on 2250 kwh/year. If £5,000 (a 1.6 kW installation at ZEDfabric prices) worth of solar electric panels are installed, this will produce 1,350 kwh of renewable electricity, dropping the overall consumption from the grid to 900 kwh/year. Fitting a convenient electrical consumption display can also help you weed CO2 intensive devices from your home.

Step 4 - If a small 1.7m diameter micro-wind turbine is installed as a further upgrade, powering a small battery bank providing half a days worth of storage, running both lights and computers - this will contribute 450 kwh/year within most parts of the South East, mostly on dark rainy winter nights. This storage system greatly reduces the peak demand on the national grid. If the turbine is not obstructed by surrounding buildings and trees, and the post mounted within the roof space – penetrating the roof tiles at the highest point or ridge, then the wind could be locally accelerated – possibly doubling output to somewhere between 450 and 900 kwhr / year. The micro wind turbine is able to generate small amounts of electricity on cold, rainy winter nights or blustery winter days – providing a useful top up when solar energy is scarce.



Step 5 – Is to replace the gas boiler with a wood pellet boiler, in conjunction with solar thermal collectors (so that it doesn't have to run in the summer). Providing that thermostats are not set too high, and insulation upgrades are installed – it is possible to just about stay within each UK citizens fair share of the UK national biomass reserves of around half a dry tonne/person/year.

Result – If the above steps are taken, an average three bedroom homes' carbon emissions should be around 70 % lighter. ZEDfactory propose meeting the capital cost of these measures by taking out an energy mortgage for £13,000:

£5,000 PV package (1.6kW + grid tie inverter)
£5,000 Zero Carbon Heating Package (2 solar thermal panels, wood pellet boiler & twin coil tank)
£2,000 Wind turbine & batteries
£1,000 Loft insulation, draught proofing, low energy light bulbs/LED`s,

This would enable a typical household to more or less meet the annual repayments to service a £13,000 loan within the £1,000 per year that the same household would have spent on fossil fuel at this year's fossil fuel prices. There would still be a requirement to purchase wood pellets, but as fossil fuel price continue to rise, a households expenditure on fuel would be far less than than it would be sticking with fossil fuel.

This strategy empowers ordinary people with the tools to decelerate climate change. Real step change reductions in carbon footprints will have to emerge from the grass roots and be funded by micro credit, not the top down high investment strategy proposed by the power generation industry.

When enough of us small people join the 'micro generation' – then there will be a large enough political mandate to redirect the massive central finance reserves towards funding a social infrastructure no longer reliant on nuclear or fossil fuel.

Bill Dunster - December 2006

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Notes to Editors

1. BDa ZEDfactory Ltd. ('The ZEDfactory') was previous known as Bill Dunster architects.
2. BedZED – Beddington Zero (fossil) Energy Development was completed in 2002 for The Peabody Trust. It is a development of 100 homes, live-work units and workspaces in Sutton, South London.
3. A "Zero Carbon" development generates as much electricity on site as it uses over the course of a year, and has a heat requirement that can be met without burning more biomass than is available in the UK per person per year.

For further information and images, please contact Bill Dunster or Steve Harris at ZEDfactory on 020 8404 1380 or by email on firstname@zedfactory.com. For further information on our Zero Carbon philosophy please see our website www.zedfactory.com and www.zedstandards.com.