

## Let renewables compete

Dan Lewis on the problems caused by government interference in the energy market

TODAY'S UK Renewable Energy market is anything but free. Riven with distortion and non-market aligned subsidy, powerful green lobbies have severely curtailed Britain's renewable potential. Lacking faith in competition they look to the European model of massive government subsidies and central planning, at the expense of local choice and price-lowering competition. It matters because all Britain's political parties are committed to producing 10% of our electricity from renewable resources - wind, solar, small hydro, biomass wave and tidal, by 2010. But can it be done?

It is a huge increase from just under 3%. Today, to put this in context, annually, the United Kingdom consumes on average some 35,000 Megawatts (MW) an hour equal to some 580 watts a person. Allowing for increasing consumption of 1% a year, the ability to meet peak demand in winter of up to 53,000 MW without blackouts, the target is approximately an always available 6,000 MW. So how do the different renewables compare?

Wind is the cheapest. Its true cost is hidden by subsidy, which in a level playing field it would not need. Although there have been many plausible aesthetic objections to windfarms, much can be done to change the framework of profit, ownership and planning to win local support. 10% of Britain's electricity from wind would cost £13 Billion (18,000 MW capacity due to 30-35% load factor) and would require 36,000 acres of land. At sea, though, much less space is required due to higher windspeeds.

Energy crops - coppiced willow or miscanthus - grow quickly and are burnt to create heat and thus power turbines. But they are really the farmers' last refuge. To generate 10% of electricity would require between 3 and 10 million acres out of Britain's 60 million. This seems highly unlikely. However, existing poultry manure and landfill gas plants work well as the fuel is distributed over a small area, saving transport costs.

Hydroelectric dams work well, but almost all the best sites are now taken, mostly in Scotland. Refurbishment will be their best chance to increase output, usually by 10%. Wave systems are still at



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the Research and Development stage, and will make no difference to 2010. A Severn tidal barrage would add huge capacity (8,600 MW) quite cheaply at £15 billion, but initially run at a high cost to

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shorten the payback period. Yet while it has been on the drawing board since 1923, environmental objections have waxed and its prospects have waned. Probably the best chance for expanding water power is with offshore tidal tur-

bines - 300 MW will be installed by 2010.

Solar is the clear loser. It costs 6 times more than wind and produces most of its electricity in summer when demand is low. It has the lowest availability at 17%, the costs of photovoltaic panels have stopped falling for 3 years and they are not made here. Solar power is a typical example of how the technologically feasible is assumed to be economically viable.

If the different renewables are allowed to compete, the losers will be solar and biomass. Let the numbers determine the energy debate. Government must drop costly bureaucratic grants to home and community generation plants. A system neutral tax credit is the least interventionist pro-market solution. For Britain, cutting rather than raising taxes is the way to increase renewable capacity. Britain should also set a target date to end all energy subsidies. The future for Britain is more energy, not less. The right competitive framework will ensure it is clean as well.