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## **Climate means energy means infrastructure**

**By Walt Patterson**

*On the bridge of the Titanic, they spot an iceberg. Quickly the captain barks the order: 'Rearrange the deckchairs!'*

It won't do. When you see disaster looming you don't fiddle with incidentals. You change course. Climate change and 'supply security' are energy disasters in the making. But governments are still rearranging deckchairs.

In 2003 the energy White Paper gave Tony Blair's government an authoritative chart of the coming decades. It spelled out how serious the energy issues are, what ought to be done, and how to do it, in more persuasive detail than any previous official pronouncement. In response the Blair government has frittered away three years, in trifling policy adjustments either ineffectual or actively counterproductive.

Now, bizarrely, it has reopened the whole process from the beginning, with yet another 'Energy Review'. Commentators generally assume that the government wants a different answer, that includes a new programme of nuclear power stations. Why they should is unfathomable to anyone who knows the history of nuclear power - the arrogant incompetence, the dashed hopes, the failures and futility.

The UK has never once built a nuclear power station on schedule or within budget, or that worked according to its original specifications - not once. In 1989, when the Thatcher government proposed to sell the electricity system to private investors, the City of London refused to play, fearing the appalling nuclear track record and open-ended liabilities. The government had to withdraw all the nuclear plants from the sale, and charge electricity users an extra billion pounds a year to subsidize them until the European Commission banned the subsidy. The government eventually managed to sell what it called 'British Energy'. But the company has required repeated bailouts from taxpayers. By normal accounting criteria it has been bankrupt for years.

Only by abandoning any pretence of a 'competitive electricity market', and indemnifying potential investors against every kind of risk in nine-figure sums for decades to come, can the UK government lure private capital into the nuclear morass. As a way to address climate change or supply security, nuclear power is the slowest, most expensive, most inflexible and riskiest possible option. For all the evidence you need see Walt Patterson On Energy, <[www.waltpatterson.org](http://www.waltpatterson.org)>. However, if the government response to this latest review is as feeble as its response to the White Paper, a great deal more of nothing at all will happen, as we blunder onward toward the abyss.

As energy disaster looms, we have to stop rearranging deckchairs and do something effective, something that will actually alter our course dramatically, in time to make the crucial difference. Fortunately, what we have to do to is staring us in the face. We have to forget about oil and gas. Our obsessive concern about the next barrel of oil, the next cubic metre of gas, is blinding us to the real issue and the real opportunity right in front of us.

Suppose, despite all appearances to the contrary, that the UK government, faced with impending disaster, actually decides to change course - to do something effective about energy. What should it

do? It should start by cleaning up its language. Stop calling oil, gas and electricity all indiscriminately 'energy', as if they were all interchangeable. They're not - not without changing the technology that uses them. You can't run your ministerial Jaguar on electricity, or your ID card readers on gas. If dodgy supplies of fuel or electricity mean you have to change the technology, why not try to get it right this time?

Forget fossil fuel. Forget fuel in general. Fuel is not the problem - not for 'energy security', nor for climate change, nor even for 'fuel poverty'. The problem is not fuel. It is how we use it, and what we use it in. The problem is buildings, lighting, motors, heaters, chillers, electronics; the problem is physical assets. These physical assets deliver the services we want. No one wants 'energy'. We want comfort, illumination, cooked food, motive power, mobility, refrigeration, information, entertainment and so on. We get them from buildings and other technologies, the vast energy service infrastructure of modern industrial society. This energy service infrastructure may in turn require fuel or electricity to function. The better the infrastructure the less fuel or electricity it needs to deliver the service we want; but we keep getting this wrong. So do governments, including Tony Blair's.

Take an example. In the southeast of England the Office of the Deputy Prime Minister wants to build a lot more 'affordable housing'. By 'affordable' they mean 'cheap to build, and cheap to buy'. They do not - repeat not - mean 'cheap to operate, cheap to live in'. On the contrary, it means that these houses, like far too many of those built in previous decades, will be flimsy and leaky, impossible to keep habitable, never mind comfortable, without continuous injections of costly gas and electricity. Our miserable buildings are the single biggest drain on fuel supplies, and the single biggest source of carbon dioxide emissions. The UK's building standards are a disgrace, and have been a disgrace for decades.

Anyone who wants to know how we could do better need only read the superb report by the Environmental Change Institute at the University of Oxford, entitled *40% House*, published last year and available to download at <http://www.eci.ox.ac.uk/lowercf/40house.html> . It demonstrates comprehensively how 'The UK residential sector can deliver a 60% reduction in carbon dioxide emissions by 2050, in line with the targets outlined in UK Government's 2003 Energy White Paper'. The policies proposed also address fuel poverty, supply security and competitive markets. No brief summary can do the report justice. But it requires no heroic measures and no startling innovations, merely coherent and committed application of what we know already.

Brenda Boardman, director of the ECI and lead author of *40% House*, came to the issue through long efforts to remedy 'fuel poverty'. But she and her co-authors demonstrate that the best way to tackle fuel poverty, by improving the housing infrastructure, also proves to be the best way to reduce greenhouse gas emissions and enhance 'energy security'. Energy security means reliable services, not just fuel and electricity. The best way to minimize vulnerability to price rises or power cuts is to minimize dependence on fuel and electricity, by upgrading the infrastructure.

What if a government, say the Blair government, took its lead from the *40% House*? The government has tens of thousands of buildings all over the country that are its responsibility - everything from offices to prisons. Suppose it decided to upgrade all these buildings - to ensure they were solidly built and adequately insulated, with high-performance lighting, heating, ventilation, and electronics, and indeed with on-site generation and cogeneration of their own heat and power. Such an undertaking would entail major pump-priming contracts to energy-service companies. It would boost skilled employment all over the country. It would cut the unit costs of the necessary technologies, by tooling up for expanded use. It would reduce the vulnerability and improve the reliability of all the energy services provided. It would demonstrate dramatically the vast potential for improvement. It would be a spectacular international public-relations coup. What's more, it

would save taxpayers money.

The example of Woking in Surrey is already world-famous, showing what imaginative leadership can do. Its decentralized local energy system, with cogeneration and microgeneration, solar panels, fuel cells, private electric wires, high-performance homes and other buildings, has long since paid for itself, financing yet further innovation. Just google 'woking surrey sustainable energy'. You'll find all the inspiration you need to get you started. The Mayor of London, Ken Livingston, has recruited Allan Jones from Woking to head the new London Climate Change Agency. Livingston and his deputy Nicky Gavron are seizing every opportunity to proclaim London's plans to become the first sustainable megacity. But other megacities are also in the hunt, all over the world. Their focus is not on oil and gas. It is on infrastructure; and so it should be.

Nearly four decades ago, companies discovered natural gas in the North Sea. At the time, all the gas used in the UK was 'town gas', made by roasting coal. The UK government decided that the new North Sea gas would be a dramatic improvement. But upgrading the UK gas system to use North Sea gas would require drastic measures. The government decided to convert the entire infrastructure of the UK to use the new 'high speed gas'. To do so meant having gas technicians go door to door into every premises in the country, replacing every single burner, every single unsuitable appliance, with a new one able to use natural gas. If you wanted to refuse, your supply was cut off. At the time the programme was fiercely controversial. In retrospect, it was one of the few indisputably sensible energy policy measures ever taken in the UK. Why not show similar dynamism now, to upgrade, decentralize and reinforce our energy service infrastructure?

All together now - repeat after me:

*Climate is about energy.*

*Energy is about infrastructure - not commodities, infrastructure.*

*Therefore climate is about infrastructure. QED.*

Grab the helm and let's change course. Now.

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