

We need nuclear power and a new generation of boffins

Nicely written by a British Member of Parliament – I do agree that we need, also in the US, better original research at the major universities. Government research is not original ... it is directed by bureaucrats.

Telegraph
March 2, 2006

It's enough to make you weep. Here we are, a nation that once led the world in scientific discovery. Who proposed the theory of gravity? A Briton. Who discovered the circulation of the blood? We did. Where did Faraday hang out, when he came up with the theory of electromagnetism? Right here in Britain.

We are responsible for just about every ground-breaking scientific advance, from the television to the computer to the hovercraft and the trouser press. We worked out DNA and we came up with antibiotics. There was a time when the upper reaches of the British Establishment were populated by scientists: J B S Haldane, C P Snow, you name it.

Before she became a politician, it was Mrs Thatcher's proudest claim that she had revolutionised the composition of Mr Whippy ice cream, so that it contained more cold air bubbles per quart of vegetable fats. Above all, we were the nation that ushered in the dawn of the atomic age.

That was the subject of the first major essay I ever wrote, and I am happy to confess now, at a safe distance, that I plagiarised it entirely from a Ladybird book. It was called "Atomic Power", I produced it at the age of nine, and in a spirit of unabashed and exuberant technological optimism I hymned the wonderful things that followed the fission of an atom of uranium-235.

I expect that there were thousands of children like me, who were amazed and enthralled by the pictures of Cockroft and Walton in their Cambridge labs, and the eerie radioactive glow from their tubes and alembics, their hair slicked back, their faces rapt with the concentration of genius.

And who can forget the great Rutherford himself – I can see the illustration even now – and how he worked out that heavier isotopes must be more unstable by looking at a pile of falling books? This is the nation that split the atom and yet now, my friends, how fallen, how changed we are from that position of global eminence.

There is now a growing agreement that for the first time in a quarter of a century we must build nuclear reactors; there can be argument about how many, but they must be a part of the solution to our increasing energy problems.

But here is an awful truth, confided in me the other day by a deputation of engineers and scientists. "If the Government decided to build a nuclear reactor today, there are only half a dozen people who have the experience to do it in this country, and they have all retired." That's it, my friends: the birthplace of Newton, and Boyle, and J J Thomson – and we can't even build our own nukes any more!

The Government is desperately trying to remedy the problem with a £6.3 million nuclear science programme, aimed at keeping nuclear studies going for the next four years in seven universities, but in the short term it will make little difference. If we want a clean,

green, nuclear source of energy, we will have to get the French, or the Japanese, or even the South Africans to equip us with the necessary technology.

Unless, of course, students and potential students see what a huge opportunity there is in this field, and start turning back to the subjects – in physics and engineering – that they have been spurning over the past 20 years. I hope I will not be seen as a boss-eyed, propeller-headed nukophile when I say that I hope they do, for all sorts of reasons. As I said on this page recently, I am far too terrified to dissent from the growing world creed of global warming.

But even if it turns out that the worry has been overdone (by the way, jolly nippy today, eh?), then there still seem to be overwhelming arguments for going nuclear. Look at the size of your gas bill; look at the extraordinary growth in the proportion of our energy needs that are now satisfied by gas. It was about five per cent in 1970, and it is about 45 per cent now.

It is terrifying to think that Mr Putin, or any less amenable successor, could have his thumbs on our gas feed-pipe; and it is terrifying to think that we could be perpetually vulnerable to the vagaries of some European gas cartel. We need an alternative, and one that doesn't just involve crucifying our landscape with wind farms which, even when they are in motion, would barely pull the skin off a rice pudding.

That is why I am reverting to my nine-year-old self's evangelism for nuclear power: because if there is an answer to global warming, then nukes must be part of the mix, and because we cannot afford to be dependent on foreign gas, and also, finally, because it would help to reinforce the crumbling science base of this country.

We are good at pharmaceuticals, and there are some of the spookier areas – such as the human genome and animal experimentation – where we are world leaders. But we have long since lost our lead in physics and engineering, and if what the engineers tell me is true, the problem begins at school.

We have too few physics graduates teaching physics; we have too few mathematicians teaching maths. The result is that far too much of the first year of university is spent on remedial mathematics, and the result is that it is quite hard to find people who want to be lecturers or tutors in the physical sciences – especially when they can earn double in the private sector.

That's why science departments have been closing – 30 per cent of physics departments gone in the past 15 years – and without science graduates you can't get good teachers, and the vicious circle continues. That is why the nuclear power programme – if and when it arrives – seems to offer hope.

It is not just that nuclear energy is environmentally friendly in itself: it offers a cheap way of producing the energy necessary to produce hydrogen, and therefore to produce hydrogen fuel cells, and heaven knows what else. It also offers the hope that we can restore British activity and prestige in the physical sciences, not just as an end in itself, but because if we have to rely endlessly on the Russians for our gas, and on the Arabs for our oil, then no nukes will be bad nukes.