

Energy Fiasco

By David Howell*

For politicians and the policy-making world, energy issues have a particular characteristic. They lie quiescent for long periods while society enjoys, indeed takes for granted, plentiful and uninterrupted supplies of fuel and power at reasonable cost. Then suddenly, like a sleeping snake uncoiling, they leap up and grab government by the throat, disrupting everyday life and economic activity, generating unforeseen collateral damage and threatening the very survival of governments. Such a time has recently arrived for a number of governments, especially in Europe and particularly in Britain.

The decision by the European Commission to propose new and less rigorous targets in the drive for a low carbon energy environment reflects the belated awareness that previous energy policies in Europe have now become unsustainable. The very high energy and electricity costs – far higher than originally anticipated – which resulted from Europe's earlier ambition to lead the world in a green transition have proved too damaging to the region's industry and too harsh on consumers. With Europe still struggling with flat growth and record high unemployment, the pace of energy transition has had to be slowed.

Nowhere have the costs, conflicts and flaws in European energy policy been more sharply reflected and amplified than in the UK – although severe problems in Germany have come a close second.

Britain is, or ought to be, superbly placed when it comes to energy, as well as highly attractive to new investors in energy generating plant, transmission systems and, on the demand side, in energy efficient machinery and consumer products.

It has vast resources of coal (much of it ready for gasification offshore), still plentiful North Sea gas and oil – declining but still substantial – and neighbours clamouring to sell it more piped gas – especially Norway but also Russia via its proposed branch line from Nordstream to East Anglia – as well as a very large on-shore shale gas potential. It has suppliers round the world eager to ship more frozen gas (LNG), excellent and growing facilities to receive LNG and transmit it into the high quality UK gas grid which is fully ready to receive it. It has plenty of wind and tide potential, long and deep civil nuclear experience (despite the setbacks of the last century), top quality skills and innovative power both in conventional oil and gas development, production and transmission, and in green and energy efficient technologies.

All this cornucopia ought to be the ideal recipe for utterly reliable low-cost sustainable energy supplies for powering the British economy for ages to come, and for well heated and comfortable homes for the British people indefinitely into the future at modest cost. Energy policy should be pushing Britain forward, not holding it back.

Yet something is badly wrong. Instead of energy plenty and cheap reliable power supplies, we have the opposite, an energy imbroglio with uncertainty, eye-watering price increases and real fear of power failures stalking the scene. British energy prices are said to be some of the highest in Europe and the world, and set to rise higher still. Britain's energy policy ought to be the least controversial and smoothest running part of government. Instead it is locked into out-of-date commitments and strategies, broadly labelled 'The Green Transition' and largely dictated and corralled by equally dated EU energy policy requirements.

The result is delusion on a grand scale, and chaos.

Investment in new power generation at the required level is not occurring; power shortages, interruptions and black-outs are in prospect; carbon reduction targets will not be reached; energy costs are internationally uncompetitive; energy prices are stupidly high and fuel poverty is at record levels; the attempt to reincarnate the nuclear power programme is once again faltering; the environment is being desecrated (a true irony when the main Green objective is supposed to be to protect our environment); more coal is being burnt than ever (another irony and direct result of Green policies); participation in the shale gas and oil revolution is hesitant; world-wide British involvement in the effects of this revolution, and in its transforming impact on the whole global energy ought to be much greater, given British North Sea experience and with two of the biggest energy companies in the world on British shores.

Despite being highly favourably placed to enjoy secure and cheap energy supplies for years to come current policy has set Britain in the opposite direction, towards insecurity, higher and higher costs, greater pollution and massive environmental damage – an astonishing counter-achievement.

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British energy policy-makers and commentators speak of an energy 'trilemma'. The need, they say, is to reconcile three key objectives in this field – affordability, reliability and security of supply and environmental objectives (namely decarbonisation targets).

Regrettably the record is one of failure on all three fronts. High and ever-rising prices are causing dismay amongst both domestic and industrial consumers; power shortages and possible cuts are being widely forecast and green, or low carbon, objectives are not being genuinely met.

How can Britain sort out its energy future as it struggles to find a way through all these dilemmas, or this so-called trilemma, of reconciling cost and security of supply with green and low carbon objectives? A confident nation, on the forward foot internationally, needs sound energy and power. Despite the present muddle there is a pathway out to a much safer, cheaper and altogether more reliable future.

Out of the Imbroglio

The gateway to a better route comes surely though acceptance of a new and different approach to the green economy goal. The real green transition will come not through higher energy prices but through lower ones. Once cleaner power sources become cheaper than coal, oil or gas, the market will work and the consumer will switch away from higher cost fuels to low carbon energy sources on a massive scale, but not before.

The driver for lower costs is, of course, technical innovation. It is new, cleverer and cheaper ways of harnessing wind power, solar power, wave power and nuclear power and bringing down the costs of providing power from these sources which will motivate change. Public resources should, therefore, be heavily focussed on promoting research and innovation and cost-saving technical advances in all the renewable areas, rather than on subsidising already installed high-cost renewables, such as wind farms.

The key is new technology. Public support ought to focus on research and development on every part of the power supply chain from power generation, to power transmission, to power distribution and to efficiency in power consumption. Make all these things cheaper, and they will be adopted. Make and deliver more electricity out of a tonne of coal, a barrel of oil, a therm of gas, make better transmission lines which lose less power along the way, and the investment will be forthcoming. Make energy saving equipment in the factory or office, and energy saving items in the home, cheaper and more efficient and they will be installed and used.

Exactly the opposite approach now prevails in British energy policy. It is to make energy supplies more expensive, based on the theory that high energy costs will lead to more energy saving expenditure and one day lower bills. It is to support and subsidise not research and innovation but actual operation of lower efficiency and very costly renewable energy installations, especially wind farms. Subsidising high cost wind farm operations is, of course, a direct disincentive to look for cheaper methods and better technologies. If the returns are flowing in, what is the point of shifting to new machinery? If wind farms can be built and operated in ways which pull in large subsidies, whether paid for by the taxpayer or the already burdened consumer, where is the case for tiresome efforts to find new technologies and installing new systems?

But if high subsidies to inherently non-commercial renewable energy systems discourage innovation they also have a further, other killer feature. This is that subsidising renewable energy undermines investment in new fossil fuel power plants, however efficient, however effective in reducing carbon emissions, however necessary in replacing old and dirtier generating equipment and power stations.

The new investment in gas turbines will not take place. The green cards are stacked against energy investors. At the time of writing only one gas-fired plant is under construction out of at least thirty promised and needed to replace old coal burning stations. These old plants will have to be repaired and their life stretched. Coal-fired plants will be kept burning away, and new ones may even be built (as is happening in Germany), especially if coal supplies are plentiful and cheap and especially if even cheaper coal is on offer from the United States, where the switch to cheap gas on a vast scale has left coal suppliers eager to find new markets.

Thus, perversity of perversity, heavily subsidised renewables deter new gas-fired turbines, however much carbon they save, leaving more coal-burning to fill the gap.

But if that is not bad enough – and, of course, dangerous enough, since it imperils future energy security, as well as climate security – there is a further strong negative factor at work. High 'green' subsidies (in fact barely green at all) have to be paid for. Consumers and taxpayers have to foot the bill. In an era when taxes are already high, when living standards are being squeezed and when energy costs are already far above historical levels anyway, policies to raise them further are guaranteed to produce very strong reaction and resistance. Hardest hit are the poorest families in their millions.¹ Ever bigger sums

have to be carved out of weekly household budgets to pay the subsidies which well-endowed wind farm operators enjoy. The transfer is from the poor to the rich on a substantial scale. It is an un-saleable political message, running counter to the best ideals in all political parties. The green cause, at first so broadly supported and popular, has become discredited and unpopular. Incompetent handling and messaging is betraying the good green case.

The Green Transition was originally a scenario drawn up in 2009 by the UK's gas and electricity regulator, Ofgem. A price was put on it of £240 billions. One estimate is that the effect on average household energy bills will be to rise them from 2012's £1243 to 2020's £4733 – in real terms.² In practice the Green Transition will prove impossible to deliver. Consumers are not going to pay these sums and will vote against the Government that tries to impose them. The investing companies, the Big Six and the National Grid, will not be able to afford the investment involved. The problems of balancing electricity supply with the enormous wind power element involved (some 30 percent supply capacity) will be unmanageable. A massive countryside reaction against the cat's cradle of new grid pylons, wind pylons, switching stations and supporting road infrastructure, led by environmentalists from both left and right politically, will make progress impossible. Above all, the widening availability of gas, driven by the shale phenomenon, will make the very high cost of renewable supplies and technology, un-financeable.

A little further ahead lies the need for Britain to renew its outworn nuclear power fleet of generating stations. But the timing of new nuclear investment needs to be carefully dovetailed with the now prolonged age of gas which seems likely to fill at least the next decade or more. With the major expansion of gas availability through shale gas the 'stepping stone' nature of the gas era becomes greatly extended as part of the pathway to low carbon.

The deal agreed between EDF (Areva) and the British Government to build two new reactors of 1300 megawatts each at Hinkley Point, and possibly two more at Sizewell in Suffolk, does not seem to fit into this necessary sequencing. Unless and until the shale gas revolution collapses – which appears extremely unlikely for decades ahead – and the natural gas price then soars in all regions, the subsidy element for new nuclear, expressed through agreeing a strike price for the electricity generated from the new plant for thirty-five years ahead at a level roughly twice the present average generating cost (£92.50 per megawatt hour as opposed to a current £50 per megawatt hour) remains exorbitant.

By implication it appears that those who have struck the Hinkley deal want to by-pass the gas age completely, keep gas prices high, discourage gas turbine building and leap frog prematurely into the first available nuclear deal at hand. Other, cheaper and more reliable technologies, such as the Advanced Boiling Water Reactor, (already in a number of places up and running reliably) are coming along. They will take longer to licence but a wait might anyway have been prudent.

Such is the price, and behaviour pattern, of zealous policy-makers who, having opposed and delayed new nuclear power stations for too long, suddenly realise that low carbon objectives cannot possibly be replaced without nuclear power and have rushed with the zealotry of converts, to the first available nuclear project on offer – a European one with Chinese financial support (which may lead to direct managerial involvement later).

Confusion is added still further by the policy schizophrenia of the main British Opposition Party, the Labour Party, which could conceivably gain power a year hence – when it argues both for the high-price green regime, with its heavy taxes and levies on all fuel, and at the same time for a freeze on all energy company charges – leaving would-be investors in new plant utterly confused.

The Wider Energy Scene

The wider European energy scene provides the context for all that is happening, and going wrong, on the domestic British energy front. The British imbroglio is part and parcel of an even greater confusion at the European level. It should not be so, but it is.

The measures and legislation enacted to 'deliver' the EU energy targets, although now modified, will still achieve none of their objectives. They are based on delusion. Greenhouse gases will not be curbed globally; in net terms, jobs are being lost on a major scale, not increased, as European industrial energy costs soar and investment goes elsewhere; renewable energy targets will not be met. Indeed, the 'dirtiest' of all fossil fuels, coal, is gaining a dominant role in European power generation.

All this is turning out to be a stupendous error, and a costly and hurtful error at that. Had the famous American historian Barbara Tuchman, author of *The March of Folly*, lived on into the present age this could well have been one of the milestones in her historical record of grand scale establishment folly. At root, Europe's well-intentioned policy makers have been fed with bad guidance leading them to believe that greenhouse gases can be controlled, and global warming curbed, relatively cheaply, straightforward-

ly and quite swiftly. It turns out that the costs of transforming energy systems to more sustainable patterns are proving far higher than predicted by experts and the gains far more ambiguous and indefinite.

As I argued in a book co-authored with Dr. Carole Nakhle in 2007³ the appeal to consumers to pay painful extra costs to save the planet at some distant future date would not be sufficient. The message was wrong. A far more compelling theme would have been that it was future energy security that necessitated a shift to low carbon power and that green technologies could, in due course, and including nuclear power, produce cheaper instead of painfully more expensive energy supplies, as well as safer and more reliable power sources. The Al Gore appeal – that saving the planet required sacrifice now, and that the science of imminent doom was settled beyond dispute, was never going to carry enough people with it. Vague, weak and implausible messages were always going to produce bad results, and this has proved to be the case. Intense hostility has now built up against the green cause.

A Government in Britain which wanted to be ‘the greenest government ever’ has found itself on the defensive and on the retreat over its energy pricing policies. Two further problems are undermining the green case.

Britain should be campaigning vigorously to change the direction of the EU Commission’s ineffective and catastrophic policies. The focus of European energy policy needs to be on energy market liberalisation and on a much expanded infrastructure of gas and electricity pipelines and connectors to ensure reliability and avoid power breakdowns. This approach should be folded into the broader case for EU reforms which the British Prime Minister has been pressing and which millions of European citizens now long for.

The twin hearts of the problem are two EU directives, both now badly out of date. One, the EU Large Combustion Plants directive, requires the rapid closure of many older power stations, regardless of the risks to supply security. The other is the EU Renewables directive compelling Britain to generate at least 15 percent of its total energy from renewables (defined not to include nuclear power) – a requirement which effectively means that the electricity generating sector will have to find 30 percent from renewable sources. Hence the enormous drive to promote and subsidise high-cost wind farms to meet growing energy needs.

It does not add up. Renewables cannot conceivably meet basic energy needs in advanced industrial societies, as everyone knows. The targets are pure wishful thinking. Those who entrusted their political leaders in Europe with the task of supervising a great transformation to an age of cleaner, safer, greener and more affordable energy have been betrayed and are entitled to be angry. Instead of ‘stumbling towards crisis’, in the words of Dieter Helm, Oxford Professor of Energy, a confident British nation should be leading Europe away from crisis and towards green policies which are viable, affordable and assist economic recovery.

High cost energy, mishandled energy transition and misguided EU policies are holding Britain back and preventing it from making full use of its immense network advantages. They tie a boulder to the foot of the runner in the global race. They damage the green cause, weaken industrial success and undermine competitiveness. In the new phase, as Britain struggles to compete harder than ever before, the boulder must be lifted off the runner and left behind.

Footnotes

¹ The most recent estimate at the time of writing is that seven million UK families face fuel poverty, and over half all households owe money to their energy suppliers.

² Figures from the Price Comparison website Uswitch.com My latest electricity bill shows that Government obligations and taxes, including green levies, now add 20 percent to my monthly bill.

³ *Out of the Energy Labyrinth*, I.B.Tauris 2007.