

Is there a future role for coal?

Coal is a major, but increasingly controversial, source of energy. *James Poyner* puts forward his argument for its place as part of a diverse, secure UK energy portfolio

Successive governments have been guilty of burying their heads in the sand by not making the difficult decisions necessary to reform our electricity generation industry. They have also not planned far enough ahead to prevent a catastrophic breakdown of the UK's electricity generating system with all the consequences that would inevitably follow. There is nothing new in the decisions that have still to be made by government to keep the lights on, but time is running out.

I am pro-coal, but I am not against other fuel types used in electricity generation. In fact I am, and always have been, a staunch advocate of a diverse energy portfolio. Diversity is a proven and essential strategy.

I am also a UK citizen and a grandparent. As such I am as concerned as the next person about ensuring responsible methods of generating electricity are used now and in the future. The world at large cannot, and will not, stop burning fossil fuels for electricity but it can, and must, burn them differently.

Coal is the world's fastest growing fuel, reflecting its affordability and its abundant supply across all continents. Coal accounted for almost half the increase in global energy use over the past decade and in 2012 had the largest share of primary energy demand since 1970. It is the cheapest fuel generally available worldwide.

It is therefore not surprising that more coal is mined and consumed in the world today than at any other time in history. The most respected analysts and commentators agree that coal burn is rising and could be almost double today's volumes by 2030.

To put things in perspective, global coal production and burn in 2012 was about eight billion tonnes. In 2012 the UK burned about 64 million tonnes, of which about 55Mt was used to generate electricity. Only 30% of the coal burned in the UK is mined here.

Climate change

Climate change is a global issue and for any significant change to be made to the contribution that human-kind makes to climate change, the entire world must sign up to it, which is not currently the case.

At the International Coal and Climate Summit held in November 2013 it was acknowledged that there are still 1.3 billion

people who have no access to electricity and three billion that rely on wood and dung for cooking and heating.

Recent research has revealed that more than 1,200 coal-fired power plants are planned for development across 59 countries worldwide. So coal is not in decline – apparently only in the UK if the current government's proposals are adopted.

With no market for coal in electricity generation the UK Coal Industry is under threat, together with the 6,000 direct jobs and 21,000 indirect jobs that it supports.

On average in 2012 coal generated 38% of the UK's electricity and up to 50% during the winter months. Without coal the lights would have gone out early last year when gas stocks fell to only two days' supply.

DECC has advised that in the first quarter of 2013 coal generated 41.2% of the UK's electricity, gas 26.3% (its lowest first-quarter share in the past 15 years, due mainly to high gas prices) and nuclear 18.1%. The remaining 14.4% was picked up by renewables, oil and others. It is interesting that the largest contribution to renewables is bioenergy. In a publication written by Friends of the Earth, Greenpeace and RSPB, it is claimed that burning biomass is more polluting than coal and therefore cannot truly be considered a low carbon technology.

There simply cannot be a workable UK strategy in the short to medium term that does not include coal. The alternatives are not yet in place. It is crucial that a 'clear bridge' is provided from today, when coal is still generating about 40% of the UK's electricity, through to the use of new super-critical and carbon capture and storage-equipped coal

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plants of the future, to maintain and support the electricity supply. Coal has been and still remains the backbone of the UK's generation portfolio.

The key objectives of the emerging UK energy policy are described in terms of the so-called 'trilemma' of sustainability, security and affordability. The trilemma accurately addresses the fundamental parameters that must be tackled and balanced to re-establish a genuine UK electricity generation industry that will set the generation strategy for the next 50 years.

Each fuel type used to generate electricity has its own unique economics which are, in my view, completely fudged by the uneven playing field on which the generation game is controlled. Different energy sources have variable strengths and weaknesses when measured against the three criteria of the trilemma, and energy solutions meeting all three are elusive.

Sustainability, especially with respect to climate change mitigation, has become the current government's dominant policy objective. But if security and affordability are ignored, the policy cannot ultimately succeed, especially when viewed in a global context.

Global problem, global solution

Climate change is a global problem which can only have a global solution. The UK is responsible for 2% of global emissions.

Government commitment and enthusiasm seem to exist only for the first of the elements of the trilemma – sustainability, or decarbonisation as it is also called.

I am not arguing against decarbonisation per se. However, there are challenges associated with a decarbonisation target that has already been set for 2030 when the government does not yet know how it can be met, or indeed, if it can be met.

Our European neighbours such as Germany are heavily investing in state-of-the-art coal-fired generation to support their economic status and to secure growth. They are building ultra-efficient coal plants that emit less CO₂ per megawatt hour than older plants. They correctly label this a "bridge" to a low-carbon economy.

Why then is the UK closing down significant coal-fired generating capacity



The UK burned 55 million tonnes of coal for electricity in 2012

before new alternatives are in place? This is no more a policy than Russian roulette.

The chancellor, George Osborne, is quoted as saying: "We're not going to save the planet by putting our country out of business."

A further focus of the current government's attack on coal is the introduction of the carbon price support (CPS) mechanism, which was introduced on 1 April 2013. This is not a European directive but an entirely UK initiative.

It is a tax to kill coal, and that is exactly what it will do within the space of a few years. Coal-fired power stations in the UK will be taxed out of existence, to the ultimate cost of consumers and UK business. No doubt the spin will be that coal is no longer competitive.

CPS will do nothing to reduce CO₂ emissions. It will have the unintended consequence of the UK not taking up its European carbon allowance under the EU emission trading scheme, enabling our European neighbours to pick them up at low prices. They in turn may sell electricity, partly generated by coal, back to the UK via the interconnectors at inflated prices.

CPS is not necessary, as low-carbon energy will in any event, under the current legislation, receive a guaranteed electricity price through contracts for difference (Cfd).

Believe me, the carbon price will begin to attract far more attention when consumers make the connection between it and rising electricity prices, job losses and fuel poverty.

Security of supply

Now let's turn to the second element of the trilemma: security of supply. The risks to the UK's well-being associated with interruptions to electricity supplies are widely acknowledged. The consequences are truly frightening.

Ofgem, the market regulator, stated recently that the risk of future blackouts has trebled in the past year as Britain faces an energy crunch that will push up bills.

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It has also warned that factories and large businesses may be asked to switch off their power during energy emergencies in return for compensation from bill-payers.

To actually have a strategy in place to disconnect customers when generating margins are tight appears to me to be admitting that the government has got its thinking wrong. This simply cannot be a sustainable policy for growth.

Security of supply embraces all fuel types and supply chains. There is energy security in energy diversity. Imported fuels must be affordable otherwise they are not secure.

And last: affordability. It is a complete distortion to manipulate the market by artificially making one fuel source apparently more affordable than another by introducing unequal taxation and preferential trading contracts.

Electricity bills have risen: more UK citizens are in fuel poverty today than there were a few years ago and the cost of electricity is continuing to rise. Present day prices are likely to more than double by 2030. The alternatives to coal are not yet in place and until they are, it is crazy to not use existing coal facilities to bridge that energy gap sensibly and economically. We simply cannot afford to turn our backs on the cheapest and safest means of generating electricity with a secure and indigenous fuel supply – coal. The rest of the world is not doing this.

Without an immediate reversal of some of the present policies, particularly CPS, the British people will be forced to choose whether to heat or whether eat. And British businesses will simply be unable to compete.

My conclusion is this: there is a vital role for coal in a competitive UK economy. Decision-makers need to reconsider their positions and come up with a strategy that shows true world leadership, uses coal to 'bridge' the gap to a new and exciting future of electricity generation, ensuring, and without prejudicing, the future well-being and prosperity of hard-working UK businesses and citizens. ■

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