



LIGHTS OUT!

HOW POWER STATION CLOSURES ARE SET TO PLUNGE BRITAIN INTO DARKNESS NEXT WINTER

Heading for a crisis

For more than thirty years, a dozen or so very large coal-fired power stations have been the backbone of Britain's electricity generation system. These power stations have given superb service to the nation.

We entered the present winter (2015-16) with ten of these stations still on the grid and delivering power. However, over the last few months five of them have now been announced for full or partial closure this spring:

- **Longannet** in Fife in Scotland, owned by Scottish Power, has a generating capacity of 2,300 MW. Full closure.
- **Ferrybridge** in West Yorkshire, owned by SSE. The remaining half has a generating capacity of 1,000 MW. Full closure.
- **Eggborough**, also in Yorkshire, owned by EPH, has a generating capacity of 2,000 MW. Full closure was planned, but 775 MW will now stay open.
- **Fiddlers Ferry** on the Mersey in Cheshire, owned by SSE, has a generating capacity of 2,000 MW. Only 500 MW is planned to stay open.
- **Rugeley** in Staffordshire, owned by Engie, has a generating capacity of 1,000 MW. Full closure.

The closure in whole or in part of these power stations threatens to remove around 7,000 MW of capacity from the grid – rather more than 10 per cent of the UK's entire electricity generating capacity.

Three of the proposed closures were announced last year. The closures of Fiddlers Ferry and Rugeley were only announced in February 2016.

Why all the closures?

Britain doesn't have a big surplus of generating capacity. Indeed, for a number of years electricity has been imported more or less round the clock via two interconnectors with the continent.

Nor are the five power stations unserviceable. They are all relatively old but could remain on the grid for years to come. To varying extents, they've all been retro-fitted with anti-pollution equipment as well.

And just at the moment coal is relatively cheap, so that's not the problem either.

All five closures are being proposed because the economics of running coal-fired power stations no longer stack up. Carbon taxes make coal-fired generation more expensive than gas-fired generation and, under present market arrangements, it's simply not worthwhile for the operators keep the plants open to run them at times of peak demand.

So what's the problem?

The problem – and it's a problem for every electricity consumer in the country – is that if all these closures go ahead there won't be enough generating capacity to keep the lights on next winter.

It wouldn't matter if the power stations that are closing were being replaced by new generating capacity. But that's not happening. It takes a long time to build new power stations, and there is not enough coming forward to plug the gap next winter (2016-17).

It also wouldn't matter if there was sufficient mothballed gas-fired capacity in reserve, waiting to be brought back onto the grid. But most of that was already planned to come back into service next winter before the final two coal-fired closures – Fiddlers Ferry and Rugeley – were announced.

With negligible if any spare capacity next winter, the UK's power generation system is perilously exposed:

- To plant breakdowns
- To planned outages that overrun
- To cold spells that add to peak electricity demand
- To reduced flows over the interconnectors when the continent needs more power
- To calm weather that cuts output from wind turbines

First up for cuts in the event of a shortfall in electricity supply would be a number of big industrial users. Then the voltage on the grid would be reduced. And then there would have to be controlled disconnections of households and other businesses.

National Grid's pre-Christmas fix

In the autumn of last year, National Grid finally woke up to the fact that it faces a problem next winter.

Faced then with the closure of Longannet, Ferrybridge and Eggborough, it identified a requirement for 3,800 MW of additional capacity for the winter of 2016-17. This was in addition to extra capacity that it had already contracted for to overcome anticipated shortages in 2017-18 and 2018-19, and in addition to the measures it had already put in place to reduce electricity demand at peak times from big consumers.

Just before Christmas, National Grid offered contracts for 3,580 MW of additional generating capacity next winter. Much of this was gas-fired plant brought out of mothballs, but 775 MW was coal-fired plant at Eggborough and 500 MW at Fiddlers Ferry that had originally been slated for closure.

The general assessment was that National Grid had got itself – and the electricity consumer – off the hook, at least for next winter.

How it has all unravelled

What National Grid and most commentators did not foresee was that:

- On 3 February 2016, the three remaining units at Fiddlers Ferry, totalling 1,500 MW, were announced for closure. These had previously been contracted to stay on the grid until the spring of 2019.
- On 8 February 2016, the full closure of Rugeley (1,000 MW) was announced

These proposed closures throw all National Grid's careful calculations back into the melting pot.

A new gap of 2,500 MW in generating capacity has opened up for next winter – and in truth probably for the following two or three winters as well. We are back where we started last autumn.

Who's to blame for this mess?

The modern electricity industry in the UK spreads responsibility widely. The major players are the Department for Energy and Climate Change, National Grid, OFGEM and the power companies.

But if there is no doubt that in imposing well-meaning carbon taxes, the Treasury has made things far worse by making the continued operation of coal-fired power stations so uneconomic.

What's the solution?

If the lights are to be kept on next winter, National Grid must now invite tenders for at least 2,500 MW of additional generating capacity.

In practice, it is difficult to see how this volume of additional capacity can be supplied without turning to one, or probably two, of the five big coal-fired power stations that are currently down to close in the spring. There simply isn't enough alternative capacity available.

Which raises a further issue: a call for tenders must be issued as a matter of urgency. Otherwise, the closure of the five big coal-fired stations could become irrevocable, leaving no realistic way out.

The UK government has a responsibility to see that these contracts are issued. The government – or more specifically the Treasury – also needs to look again at the level of carbon tax that it is imposing on power generation, which is now forcing so many operators to call it a day.

Beyond the five power stations under threat, there are five more coal-fired stations left on the grid – Aberthaw, Cottam, Drax, Ratcliffe and West Burton. How long before they too are proposed for closure?

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Industrial Communities Alliance

The Industrial Communities Alliance is the all-party association representing some 60 local authorities in the industrial areas of England, Scotland and Wales.

The aim of the Alliance is to promote the economic, social and environmental renewal of the areas covered by its member authorities.

All the threatened power stations are located in or near member authorities and the Alliance first became concerned because of the job losses and the knock-on consequences of the closures, notably for the Scottish opencast coal industry. However, it quickly became apparent that there are much bigger issues of UK electricity supply at stake.

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