

# THE CASE FOR NEW COAL-FIRED POWER STATIONS

**CoalPro** accepts unequivocally that the long-term future for coal-fired electricity generation has to be low carbon. It is clear that if UK and European objectives for a 60% or more reduction in carbon emissions by 2050 are to be achieved, then electricity production has to be effectively de-carbonised. This means that electricity generation by all fossil fuels, including gas and oil, has to be low carbon.

Much the most promising technology for substantially de-carbonising emissions from the use of fossil fuels is carbon capture and storage. CoalPro therefore fully supports the European Commission's programme for a minimum of twelve demonstration plants to be in operation by 2014.

CoalPro also supports the UK Government's project for a CCS demonstration project at a coal-fired plant but is disappointed that the Government feels unable to support more than one such project. This would have enabled a range of CCS technologies to be explored and more effectively demonstrated UK leadership.

Against this background, many people say that new coal-fired plants should not be built until CCS has been demonstrated as being technically viable. To be consistent, they should also say the same for gas, which is also relatively high carbon. The problem is essentially one of timing.

Under the Large Combustion Plant Directive, 8GW of coal and 3GW of oil-fired plant have to close by the end of 2015. Over the same period 5GW of nuclear plant will close as it reaches the end of its life. The LCPD also requires further measures to reduce emissions of nitrogen oxides if coal-fired plant is to continue after that date. This plant is ageing and will have to operate at lower load factors as renewable generation builds up. It will be difficult to get a return on investment in such circumstances and it is probable that there will be further closures.

**In total, therefore, some 20-25GW of plant may close by the end of 2015, i.e. up to 30% of the UK's total generating capacity. This is less than eight years away.**

Increased renewable generation and energy saving measures will have some impact at the margin but they cannot possibly meet a gap of this size in the time available. In any event, renewable generation requires an almost equivalent amount of fossil fuel back-up capacity to guarantee base loads can be met and to provide power on demand at peak periods. Nor can nuclear meet the gap. The earliest a new nuclear power station can be in operation is the end of 2017, and probably somewhat later.

**In other words, only coal or gas can meet the gap. If there is no new coal, it will be gas. The UK will then be dependent for over 50% of its electricity supply on gas, a figure which will rise to 75% on a cold, still winter's day.**

This level of dependency on gas represents huge security of supply risks. The market may find a solution but only at the expense of very high and volatile prices. Security of supply and price are two sides of the same coin. At very high prices, energy may simply be unaffordable for many people. For them, unaffordability and a lack of supply is the same thing.

Nor will such a scenario do anything for long-term carbon emissions. Gas is also a relatively high carbon fuel and if carbon reduction ambitions are to be met, CCS will have to be applied to gas as well as to coal.

Some people argue that it might be acceptable to allow new coal-fired plants provided they are required to retrofit CCS later. This is naïve. Investors will not take the risk in case CCS proves not to be viable, unlikely though that might be. In any event, such a condition should also be applied to gas. In that case, no-one will build anything and the lights will certainly go out.

It is clear from this analysis that if the UK is to ensure that its supplies of energy are secure at reasonable prices, then some new coal-fired capacity is urgently needed to meet the large generation gap that is rapidly approaching.

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September 2008