



WWF *for a living planet*

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Energy Bill – Second Reading briefing

EXECUTIVE SUMMARY

- WWF is urging MPs to support an amendment to the Energy Bill which would introduce an emissions performance standard (EPS) for power generation in the UK.
- The Energy Bill will introduce a levy on electricity suppliers to fund up to four coal carbon capture and storage (CCS) demonstration projects¹ and is a key part of the Government's coal strategy which was announced on 9 November.
- The Government is still considering allowing a new 1,600 MW post-combustion plant, such as the delayed proposal at Kingsnorth, if it captures around 20% of its emissions from the start. If the plant fails, however, for whatever reason to fit CCS to the remainder of the station then it would emit nearly 240 million tonnes of CO₂ over its lifetime. This would undermine the UK's chances of meeting its climate targets.
- The Government has recognised the need for a 'safety net' policy should CCS not work or prove too expensive but it proposes waiting until 2018 before deciding whether such a mechanism is actually needed and what this might look like. WWF believes that this is an extremely risky strategy which could be easily reversed and a number of circumstances could result in this proposed safety net being ignored in the future.
- In addition, the Government's approach does not meet the recommendation of the Committee on Climate Change that a firm signal is sent now on what will happen in the 2020's in order to give long-term certainty to investors and to prevent lock-in to unabated coal. It also seems unlikely that the Government of the day in 2018 would require the closure of any new capital intensive high carbon power stations which had been built in the interim, had a 40 plus year lifespan, and had only just begun operating, especially if the UK had allowed itself to become overly dependent on coal.
- **The far more sensible strategy remains for the Government to establish a clear limit on emissions (in the form of an Emissions Performance Standard – EPS) from fossil fuel power stations up front².** This would provide greater certainty for the environment and also greater certainty for technology developers and investors.

BACKGROUND

The environmental context for reducing emissions from coal plants

The Climate Change Act 2008 requires the UK to reduce its greenhouse gas emissions by at least 80% by 2050. In order to deliver this the Committee on Climate Change (CCC) has

¹ With a maximum of two 400 MW post-combustion projects (which includes oxyfuel). Pre-combustion projects will be full scale CCS from day one.

² The NGO position on a plant based Emissions Performance Standard approach is elaborated on here: http://assets.wwf.org.uk/downloads/joint_public_ccs_statement_june_09.pdf



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recommended that the power sector should be almost completely decarbonised by 2030 and that achieving this is absolutely "key" for the UK to be able to meet its long-term reduction targets. In line with this the Committee states that *"there is a very limited role for conventional coal-fired plant beyond the early 2020's"*³. This means that new and existing coal plants without full CCS would have to close down or run on a very minimal basis by 2025 if the UK is to comply with its own carbon budgets.

CCS could help the UK reduce emissions from the power sector. However, it is crucial that it is demonstrated in a sensible way which prevents the UK being locked into new largely unabated coal-fired plants should the technology not work or prove too costly⁴.

The Government's proposals

The Government announced on 23 April 2009 that *"the era of new unabated coal has come to an end"*⁵. It proposed that any new coal-fired power stations would have to capture a proportion of their emissions from the outset and that up to four coal plants would receive funding to demonstrate CCS technology. The Energy Bill now before Parliament will establish the funding mechanism for this which is expected to raise between £7.2-9.5 billion for the demonstration phase.

Of the four proposed demonstrations, two are likely to be 'pre-combustion' coal plants which by their very nature will have full CCS from the beginning. The Government, however, is still considering allowing new supercritical 'post-combustion' coal-fired power stations which might capture as little as 20% of their emissions from the outset, to be built. Over the lifetime of a new 1,600 MW post-combustion coal plant, such as the now delayed proposal for Kingsnorth, this would still lead to the release of nearly 240 million tonnes of CO₂, if CCS was never fully fitted to the whole capacity of the plant⁶. Failure to fully fit CCS to the whole plant would, therefore, undermine the UK's chances of meeting its climate commitments.

Having consulted over the summer, the Government announced on 9 November that it wanted to see all new coal-fired plants fitted with 100% CCS by 2025 and that the new consumer levy could be used to support this retrofit. The Government, though have accepted that if CCS should not work or prove to be too expensive that contingency measures will be needed. However, they do not plan to consider these until 2018.

WWF believes that waiting until 2018 to think about and then adopt a contingency policy has numerous flaws and instead an Emissions Performance Standard (EPS), which clearly sets limits on emissions now and which lays out what should happen in the 2020's, should be adopted now.

THE NEED FOR AN EPS NOW

An EPS would provide greater political certainty

As mentioned the Government has stated that should CCS technology not work it will implement a 'safety net' mechanism post 2018 to ensure that the emissions from new coal plants are addressed. One of the major concerns with this approach is that it is so far only a political statement which could be easily reversed by a future Government. Indeed the Government of the day might not feel bound at all by a statement made in 2009 especially if the

³ Meeting carbon budgets – the need for a step change, 12 October 2009, Page 21:

<http://hmccc.s3.amazonaws.com/21667%20CCC%20Report%20AW%20WEB.pdf>

⁴ See "Climate value for money – funding carbon capture and storage demonstrations in the UK power sector" WWF and RSPB, September 2009, http://assets.wwf.org.uk/downloads/value_for_money.pdf

⁵ Rt Hon Ed Miliband MP, Secretary of State for Energy and Climate Change, 23 April 2009

⁶ "Carbon choices – options for demonstrating carbon capture and storage in the UK power sector" WWF-UK, May 2009, http://assets.wwf.org.uk/downloads/carbon_choices_final.pdf

UK had, in the mean time, allowed itself to become overly dependent on unabated coal for its energy needs. An EPS mandated in law and implemented now would provide greater certainty to actors across the debate that the Government is genuinely committed to reducing fossil fuel emissions in line with the recommendations from the CCC. Of course future Governments can seek to reverse legislation, but an up-front EPS introduced now with clear cross-bench support would pose much less of a risk. It would inform investment decisions being made now, avert the high carbon lock-in that would be risked by waiting 10 years before introducing a safety net, and avoid the creation of unnecessary conflict between carbon mitigation and energy security objectives for future Governments.

An EPS would provide environmental certainty

The CCC has made it clear in both of its reports that the UK needs to effectively decarbonise its power sector by 2030 if it is to be on track to meet its 2050 climate change target. This recommendation was acknowledged by a broad spectrum of respondents to the recent coal consultation. In line with this the Committee has also stated that there is a very limited role for unabated coal beyond the early 2020s and that “*The Government should provide a strong signal to investors now that this is the case whether or not CCS is later proven – to prevent investments proceeding on the misconception (based on the lack of a clear carbon price signal) that conventional coal will continue to operate (even at low load factors) over the next decades*”⁷. The Government’s coal policy not only fails to accept the Committees’ 2030 decarbonisation recommendation – it also fails to adequately provide the necessary strong signal to investors now. Waiting until 2018 to set the details of the contingency policy does not give sufficient clarity (see below). Conversely the adoption of a robust emissions performance standard now that tightens over time would provide such clarity and would ensure that emissions from the power sector reduced in accordance with CCC recommendations.

An EPS would reduce the financial liability of CCS retrofits

The November announcement stated an expectation that the demonstration plants should retrofit CCS to their full generating capacity by 2025 and that the CCS levy would also be able to provide financial support for this (in addition to funding the initial demonstration programme). WWF considers it is inappropriate that the Government has offered this guarantee, particularly in the absence of a matching regulatory framework that would guarantee a limit on emissions. Under this arrangement, it is unclear what private sector risk is being undertaken by those wishing to build new coal plants. Without some level of private sector financial risk at stake, there is little incentive for those demonstrating CCS to make every effort to meet the Government timetable, particularly if they are under the impression they will be bailed out completely in the event of the CCS chain failing to be adequately demonstrated in the timetable envisaged.

An EPS established now on the other hand could act to limit the potential future financial liability for retrofitting CCS later. A robust EPS (WWF and other NGOs are advocating 300gCO₂/kWh⁸) that applies now would ensure that projects in the demonstration programme are designed and implemented in ways that would reduce the subsequent liability for full CCS retrofit. For example an EPS of 300gCO₂/kWh would mean a much greater proportion of the plant’s emissions would be covered from the outset than is currently proposed by the Government⁹, leaving a much smaller unabated proportion requiring retrofit in the future. In addition, an upfront regulatory framework would provide a clear set of ground-rules for a discussion to ensure that private sector developers bear an appropriate share of the costs for future full-scale retrofit.

⁷ Emphasis added. “Meeting carbon budgets – the need for a step change. Progress report to Parliament, Committee on Climate Change, October 2009” <http://hmccc.s3.amazonaws.com/21667%20CCC%20Report%20AW%20WEB.pdf>

⁸ An EPS set at such a level on fossil fuel plants would also ensure the most efficient use of gas.

⁹ For post-combustion projects.

projected it also means that the desire for new additional conventional coal generation is even less justified. Another highly relevant consideration is that the trajectory of future energy demand will have been significantly suppressed as a result of the economic recession. The overall conclusion must be that concerns over an energy gap in the middle of the next decade have been significantly over-played, and that they are best addressed by aggressive policies to promote energy demand reduction and renewable energy deployment.

Indeed, Government figures indicate that there will not be an energy gap. 20.5GW of new capacity (which is either already under construction or consented) will replace the 18-20GW of generation capacity that is due to close by 2018 and DECC's own figures show electricity capacity margins remaining above 10% during the middle of the next decade¹⁵.

Finally, an emissions performance standard which clearly set out now what would happen immediately and in the 2020's would also be a useful guidance tool for policy makers. It would strengthen the framework for decarbonising the power sector and it would ensure that the UK was not so overly dependent on unabated coal in 2025 that it could not close plants down if the technology failed.

CONCLUSION

The UK's coal and CCS policy has improved considerably over the last 12 months but it still does not guarantee that the UK will meet its climate change targets nor that the power sector will be almost decarbonised by 2030. An EPS is required now to give long-term certainty to investors, the market and the climate.

Please support an amendment to the Energy Bill which requires an EPS to be implemented now.

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¹⁵ "Building a low carbon economy: a framework for the development of clean coal" DECC, April 2009