



# **Coal and climate change**

**September 2009**

## **1. Introduction**

Proposals for a new generation of coal-fired power stations in Scotland and across the UK are a cause for great concern. New coal plants will operate for 40-50 years and pose a serious risk of locking us in to a pathway of high emissions – threatening to fatally undermine efforts to show leadership on climate change.

This is a crucial time to examine this issue. New coal plants are currently included in the National Planning Framework (NPF2) and while a government consultation<sup>1</sup> on the planning process for thermal power power stations closed in late January 2009, the Scottish Government have not yet published Guidance, stating they are awaiting the UK Government's Guidance.

## **2. Coal power and carbon capture**

A new generation of coal-fired power stations are currently being considered for approval in the UK, including the potential upgrading of Longannet here in Scotland. Coal is the most polluting of all fossil fuels, and approving new, unabated coal power could seriously threaten Scotland's plans to make a fair contribution to tackling dangerous climate change.

Carbon capture and storage (CCS) has the potential to significantly lower carbon dioxide emissions from coal power if it is shown to be commercially viable and technically feasible on a large scale. CCS is technology which involves capturing the carbon dioxide emitted from burning fossil fuels, transporting it and storing it in secure spaces such as geological formations, including old oil and gas fields and aquifers under the seabed. This technology could be particularly important for rapidly developing countries such as China and India.

## **2. 'Carbon Capture Readiness' is not a solution**

A recent consultation by the Scottish Government suggested that there should be a requirement for any new coal fired power station to be 'carbon capture ready' (CCR). But what does this mean? 'Capture readiness' generally specifies that there should be enough space around a power station so that CCS could be fitted at some future point, and that transportation and storage of CO<sub>2</sub> should be considered. However, CCR has no agreed definition and lacks a clear enforcement mechanism to ensure subsequent installation of CCS.

There are both technical and economic shortcomings to an approach predicated on capture readiness:

- Even if capture readiness subsequently leads to the installation of CCS, there will be substantial unnecessary emissions resulting in the interim. At a crucial junction in the fight against climate change<sup>2</sup>, this is not a credible policy stance.
- Given the range of emerging carbon capture technologies, those which reach commercial viability may not be the same as those currently forecast as preferred options. Indeed, the most economic technologies, storage sites and pipeline routes may change in the interim, leaving no guarantee that the technology will be installed.<sup>3</sup>

In our view, and that of esteemed NASA scientist James Hansen,<sup>4</sup> CCR is a meaningless concept – little more than a fig leaf – which would lock Scotland into high greenhouse gas emissions for the next 40-50 years.

### **3. Credible solutions: an Emissions Performance Standard (EPS)**

FoES and WDM strongly support the introduction of a greenhouse gas emissions performance standard (EPS) to place a limit on the allowed level of GHG emissions from new fossil fired power generating capacity. California has already established an EPS, which has acted to improve energy security in the States. In October 2008, MEPs sitting on the European Parliament's environment committee voted for a similar EPS in an amendment to the draft Directive on Geological Storage of Carbon Dioxide.

A study carried out by Ecofys<sup>5</sup> (commissioned by the European Climate Foundation and reviewed by an expert steering group including Bellona, E3G, Client Earth, and WWF) demonstrated that an EPS in Europe would prevent emissions lock-in from new capacity, and deliver substantial GHG emissions reductions in the power sector.

### **4. Conclusion**

An EPS would deliver emissions reductions that are critical in tackling dangerous climate change and will contribute to Scotland's path to a "low carbon economy". An EPS should be implemented through Section 36 Guidance under the Electricity Act 1989, still being considered by the Scottish Government, and also apply to new power stations referenced in the National Planning Framework.

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1 Consultation on a draft of guidance note for applications made under section 36 of the Electricity Act 1989 to develop or extend a thermal power station. See <http://www.scotland.gov.uk/Topics/Business-Industry/Energy/Energy-Consents/Whatsnew/Consultation-Thermal-Gu>

2 See for example IPCC Fourth Report (2007), online at <http://www.ipcc.ch/>. To avoid dangerous climate change, it is widely agreed that global emissions should peak no later than 2016.

3 See for example, 'Capture readiness' – lock-in problems for CCS governance Nils Markusson, Stuart Haszeldine.

[http://www.geos.ed.ac.uk/research/subsurface/diagenesis/Capture\\_ready\\_GHGT9\\_v4\\_Markusson\\_08.pdf](http://www.geos.ed.ac.uk/research/subsurface/diagenesis/Capture_ready_GHGT9_v4_Markusson_08.pdf)

4 <http://thescotsman.scotsman.com/latestnews/In-full-Letter-to-the.4932922.jp>

5 [http://assets.panda.org/downloads/final\\_report\\_ecofys\\_eps\\_scenarios\\_09jan2009.pdf](http://assets.panda.org/downloads/final_report_ecofys_eps_scenarios_09jan2009.pdf)