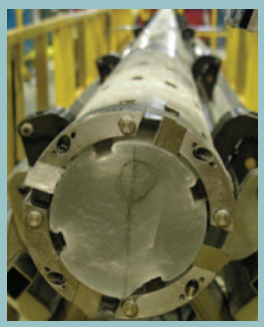

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KING COAL STILL ON THE THRONE

Even the most radical redesigns of the world's energy supply seem unable to sideline coal. Long vilified as the dirtiest of fossil fuels, coal is plentiful, relatively cheap and easily accessible and looks likely to be around for the long haul.

In the past two years alone, China has developed a startling 170 gigawatts of coal-fired power capacity (*Nature* **454,** 388–392; 2008) — more than twice Britain's entire electricity-generating capacity, installed over a century — and has overtaken the United States as the greatest global emitter of greenhouse gases. In India, Mumbai-based Tata Power is putting US$4 billion into constructing one of the world's largest coal-fired power plants, intended to come online in 2012.

It's not just emerging economies hungry to develop quickly that are counting on coal for energy. Despite sizeable opposition, the UK government looks likely to approve development of the first new British coal-fired power plant for 30 years at Kingsnorth in Kent.

Although the unabated exploitation of coal threatens to nullify efforts to move the global economy into low-carbon mode, politicians are evidently confident that we can have our carbon cake and eat it — by capturing the carbon dioxide and burying it underground. Last month, leaders from the Group of Eight (G8) countries made a long-awaited, but ultimately disappointing, statement on climate change that does little to address escalating emissions but gives the seal of approval to the holy grail of 'clean coal' technology through carbon capture and storage (CCS).

The rich-nation clique gave the nod by supporting the launch of "20 large-scale demonstration projects globally by 2010, taking into account various national circumstances, with a view to beginning broad deployment of CCS by 2020", and pledged $10 billion annually in government money over the next few years to the task.

On the face of it, this commitment seems encouraging. A 2005 report by the Intergovernmental Panel on Climate Change estimated that once developed, CCS could remove up to 90 per cent of emissions from coal-fired plants. But the G8 statement does little more than pay lip service to the notion of controlling climate change. Reading between the lines, the R&D funds pledged by world leaders in Hokkaido, Japan, seem to come from existing research grants rather than being 'new money'. And given that CCS has yet to be proved to work on electricity-generating plants, much is needed in the way of investment.

Measured against the sequestration capabilities of the world's three existing showcase projects, America alone would need 1,500 such plants to store the emissions generated by its electricity industry. Yet its one serious attempt to make CCS operational, in the form of the FutureGen project, was cancelled this year owing to an unexpected hike in costs from $830 million to $1.8 billion. And although the European Commission has called for upwards of a dozen commercial coal plants with CCS to be deployed by 2015, how they will be funded is anyone's guess.

At this rate of progress, the goal of broad deployment of CCS on coal plants by 2020 is a vain hope — and with new plants being deployed by the dozen, CCS can't come quickly enough.

OLIVE HEFFERNAN, EDITOR

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