.

businessGreen

Print this page
- Save

Go back

The coal industry needs to know the game is up

/bg/opinion/2357602/the-coal-industry-needs-to-know-the-game-is-up

30 Jul 2014, Ben Caldecott, University of Oxford's Smith School of Enterprise and the Environment , BusinessGreen

Seeing the cooling towers of Didcot coal-fired power station being so expertly demolished in the early hours of Sunday morning was a wonderful spectacle. It is also an event we need to see repeated many hundreds of times globally over the next decade.

Retiring global coal generation capacity quickly is the only way we can deal with the multiple scourges of coal - namely, the millions of deaths caused globally from air pollution, the thousands killed in mining accidents each year, the devastating local environmental impacts from both mining and running coal-fired power stations, and the staggering amounts of carbon pollution that makes the major contribution to anthropogenic climate change.

The case for abandoning coal, particularly the least efficient power stations using the most polluting coal (lignite or "brown" coal) is quite simply overwhelming. No sane policy maker possessed with the facts could think that constructing new coal is a good idea, and many would agree that we now need a coherent strategy to actively kill off coal for good.

Such a strategy would need to be done in the most cost-effective way possible, over a realistic time period accounting for atmospheric carbon constraints, and also be politically feasible. At its core, such a plan will have to involve compensating owners of coal assets for prematurely closing their power stations. This is both reasonable and necessary if enough coal is to be decommissioned in time to keep temperature increases to below 2 degrees celsius above preindustrial levels - the international climate target agreed at Copenhagen in 2009.

To do this, countries (together or separately) could create Coal Closure Funds (CCFs). These would be set up with taxpayer funds, through a levy on energy bills, and/or contributions from philanthropists and individuals. CCFs would pay owners of coal-fired power stations to permanently retire their assets. The assets would then be made inoperable, opposed to simply being "mothballed", when they could then be reactivated at some future date.

CCFs would operate by organising a series of reverse auctions. Owners of coal-fired power stations would bid to receive a fixed price for each unit of generation capacity retired. The lowest bids would win the auction.

Auctions could be run annually and could cover power stations in one country, regionally or globally, depending on the geographical scope of the CCF. Auctions could also be run for specific types of coal-fired power station or those within a certain age range. Similar reverse auctions have been successfully used to reduce the number of fishing vessels and fishing permits in overfished areas, or to buy back abstraction licences in areas suffering from water stress.

CCFs could also operate a "degression" to incentivise coal owners to accept compensation sooner rather than later. For example, it could have a price cap for each auction and this would fall by a certain percentage each year. It could also offer more in total funds in early auctions and reduce the compensation kitty for later auctions. The result is that owners might be more likely to secure a better price the earlier they bid, encouraging early action.

In the US and EU, as many coal-fired power stations are 30+ years old, the additional cost of inducing early closure could be relatively small. There are also many investors who might jump at the chance of reducing their exposure to the regulatory and reputational risks associated with coal. As a result, limited public funds could quickly close a large number of coal-fired power stations.

In other countries, particularly China and India, where large fleets of coal-fired power stations are much newer, the funds required would have to be commensurately larger. Here CCFs could concentrate on the oldest and most polluting power stations first. In addition, helping to capitalise CCFs in developing countries, as well as early US and EU CCF operation, could be part of a grand bargain to secure international climate action.

Finally, we have recently seen the international market for Green Bonds take off. This has demonstrated the significant appetite for bonds that help to diversify asset portfolios away from coal and other fossil fuels. If compensation payments from CCFs were paid over multiple years, it might be possible to issue "Kill-Coal" Bonds on the back of these cash flows. KCBs could become another diversification asset for the same investors interested in Green Bonds.

In addition to CCFs, premature closures would need to be accompanied by support for individuals and communities negatively affected, for example by job losses. Lost generation capacity would also need to be replaced by cleaner alternatives and the rate of replacement would likely be the biggest constraint on the pace of any closure plan. These are challenges and would obviously need to be considered as part of any kill coal strategy.

In the absence of meaningful carbon pricing and in light of ever-increasing urgency, we desperately need a targeted strategy to retire coal-fired power stations. Part of this strategy must involve cost-effectively paying for premature plant closures. This can be done using CCFs operating reverse auctions. The first CCFs could be created in time for the next big climate negotiations in Paris in 2015 and then scaled up as experience of their operation is gained. There are few things that would achieve significant emission reductions as quickly and have other major co-benefits like reduced air pollution. They would also send an impressively loud and clear signal to the coal industry - your time is up, get out while you can!

Ben Caldecott is a Programme Director at the University of Oxford's Smith School of Enterprise and the Environment, where he founded and directs the Stranded Assets Programme.

Print this page
Save to disk
Go back