

# Harder to do than to say?

The failure of the CPRS to reduce emissions from coal-fired power stations

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Richard Denniss

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## What has the minister said?

Coal-fired power stations comprise the largest source of greenhouse gas emissions in Australia, accounting for 36 per cent of total emissions in 2008.<sup>1</sup> Any determined effort to tackle what Prime Minister Rudd has referred to as the 'moral challenge' of climate change would presumably seek to reduce emissions from that source significantly. The proposed Carbon Pollution Reduction Scheme (CPRS), however, does not.

The Minister for Climate Change, Penny Wong, has repeatedly described the transformative nature of her proposed scheme. For example:

We need to get on with transforming our economy, with making the investments in renewable energy, in clean technology that we know we'll need to compete in that world.<sup>2</sup>

And

[What] we have to do over time is to transform what is a highly carbon intensive economy to a low carbon economy. That is a very substantial economic transformation and what we've put in place is a comprehensive scheme that will enable that transformation to occur.<sup>3</sup>

Furthermore, in describing to the Press Club the task she had been given at the launch of the CPRS Green Paper, Senator Wong stated:

Climate change is being caused by the ceaseless pouring of carbon pollution into the atmosphere. If we are going to tackle climate change, we need to reduce carbon pollution dramatically—which is much harder to do than it is to say. Over time—but starting now—we need to move toward the low pollution economy of the future.

The longer we delay action, the harder it will be and the more it will cost. Our test of responsibility lies in what we do today, because what we do today will determine whether we are prepared for tomorrow. This is going to be hard ... We can't afford to wait.<sup>4</sup>

## What does the Treasury modelling suggest the CPRS will do?

Despite the bold language used by the Minister for Climate Change, modelling conducted by the Treasury makes clear that there will be no real transformation of the coal-fired power generation industry in Australia until at least 2033.

Figure 1 shows Treasury's projections for the reliance on black and brown coal for electricity generation in Australia between 2010 and 2050.

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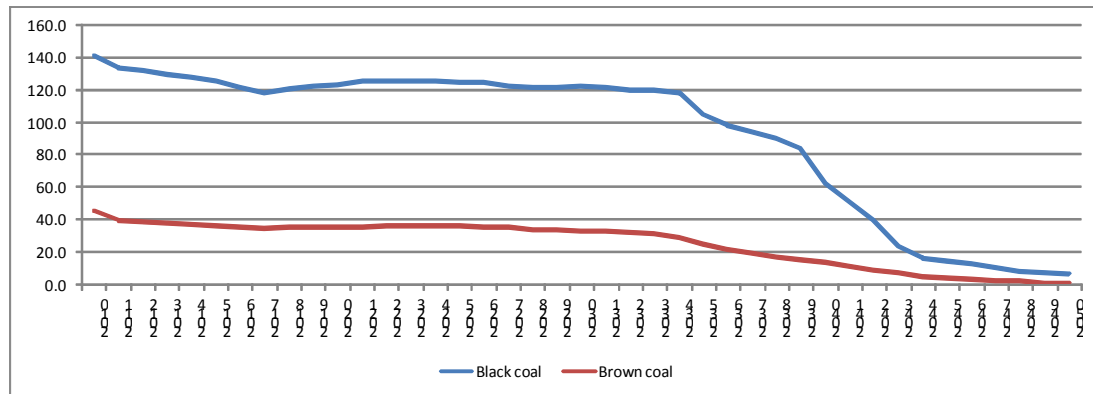
<sup>1</sup> Department of Climate Change, Australia's national greenhouse gas accounts, Quarterly update, March 2009. Available at: [http://www.climatechange.gov.au/en/climate-change/~/\\_media/publications/greenhouse-acctg/quarterly-update-national-greenhouse-gas-inventory-mar-2009.ashx](http://www.climatechange.gov.au/en/climate-change/~/_media/publications/greenhouse-acctg/quarterly-update-national-greenhouse-gas-inventory-mar-2009.ashx).

<sup>2</sup> 'Penny Wong discusses emissions trading conflict', Lateline, 26 May 2009. Available at: <http://www.abc.net.au/lateline/content/2008/s2581603.htm>.

<sup>3</sup> P Wong, 'Climate change, carbon pollution reduction scheme white paper', Transcript of interview with Lyndal Curtis, ABC am. Available at: [http://www.getfarming.com.au/pages/farming/speeches\\_view.php?slid=9200020081216143712](http://www.getfarming.com.au/pages/farming/speeches_view.php?slid=9200020081216143712)

<sup>4</sup> P Wong, 'A carbon pollution reduction scheme for Australia', speech to The Press Club in Canberra at the launch of the Green Paper, 16 July 2008.

**Figure 1: Electricity generated by black and brown coal—terrawatt hours(TWh), 2010–2050**



Source: Australian Government. The Treasury, *Australia's low pollution future*, Chart 3.9.<sup>5</sup>

As the figure shows, after the introduction of the CPRS there is a slight reduction in the amount of electricity generated from black coal between 2010 and 2020 and virtually no reduction in brown coal electricity (the dirtiest form of electricity generation) over the same period.

After 2020, emissions from black coal-fired power stations are actually forecast to rise slightly before stabilising until around 2033. The figure shows that electricity generated from brown coal-fired power stations is also stable between 2020 and 2033.

According to the Treasury modelling, it is not until 2033 (in 24 years time) that emissions from black and brown coal both begin to fall rapidly.

In order to interpret these projections it is necessary to consider the following:

- The decline in electricity generation from black coal is not actually driven by the introduction of the CPRS. Rather, it is the introduction of the 20 per cent renewable energy target which drives investment in renewable energy and, in turn, leads to a small reduction in electricity generated from black coal.
- While the introduction of the renewable energy target is clearly successful in stimulating investment in renewable energy, the additional energy generated from this source displaces black coal-fired electricity, not the much more heavily polluting brown coal-fired power.
- After the 20 per cent renewable energy target is achieved in 2020, there is no further reduction in the amount of electricity generated by black and brown coal-fired power stations because the projected carbon price is significantly less than the cost difference between renewable electricity and coal-fired electricity. While the introduction of a carbon price will reduce the profits of the coal-fired power stations, Treasury modelling shows that it will not actually reduce the amount of electricity they generate.

<sup>5</sup> Australian Government. The Treasury, *Australia's low pollution future: The economics of climate change mitigation, Summary report*, Commonwealth of Australia, 2008. Available at: [http://www.treasury.gov.au/lowpollutionfuture/summary/downloads/Australias\\_Low\\_Pollution\\_Future\\_Summary.pdf](http://www.treasury.gov.au/lowpollutionfuture/summary/downloads/Australias_Low_Pollution_Future_Summary.pdf)

- The reason that emissions from black and brown coal-fired power stations decline dramatically in 2033 has nothing to do with the introduction of the CPRS and the associated carbon price. Rather, Treasury has simply assumed that clean coal will be invented and, having been invented, it will also be relatively inexpensive. In the words of Treasury:

Carbon capture and storage (CCS) technology combined with coal and gas electricity generation is assumed to be available on a commercial scale from 2020 in both Australia and the world. The approach to modelling CCS in MMA and GTEM differed, reflecting the level of detail in the respective models and the inherent uncertainty surrounding a technology that has yet to be demonstrated on a commercial scale.<sup>6</sup>

- Treasury also assumes that between 2033 and 2043 we can replace or retrofit every coal-fired power station in Australia. This technology is yet to be invented, it is unclear if it is invented that it will be able to be retrofitted to existing power stations and the time lags to plan and build such large and elaborate pieces of infrastructure are likely to be substantial. It would therefore seem unlikely that, after 25 years of inaction, such a rapid transformation would be possible.
- In modelling the costs of the hypothesised clean coal, the Treasury has not factored in the enormous infrastructure costs associated with building the network of pipes that would be required to transport carbon dioxide to the, as yet, undiscovered sites for underground storage:

Depending on the location of sequestration relative to the point of emission, extensive pipelines may be required. It is possible that existing gas distribution infrastructure could be employed to facilitate this. However, to the extent that new pipes are required to transport CCS, the fixed cost of building those pipes is not assumed to be paid for by generators in the modelling.<sup>7</sup>

## How can the CPRS not reduce carbon pollution?

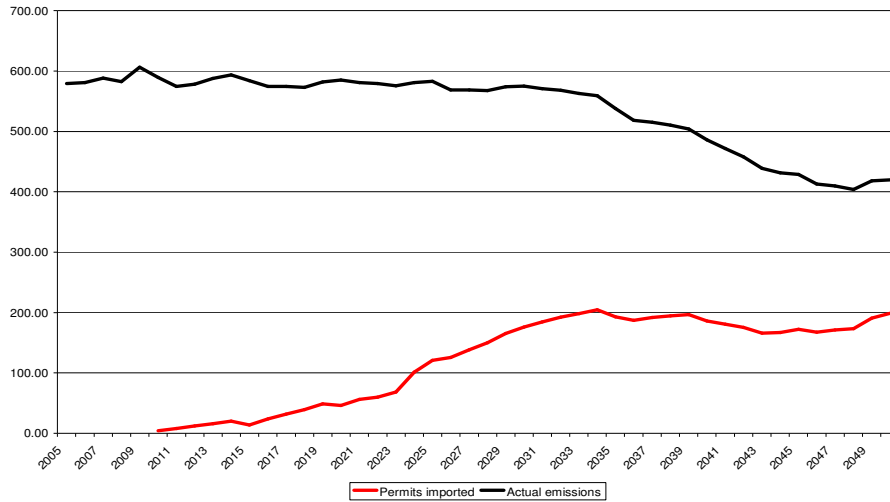
Perhaps the least understood feature of the proposed CPRS is the fact that the whole point of the scheme is not to reduce Australia's domestic emissions but to import a large number of permits from developing countries. Figure 2 shows that while the level of domestic emissions in Australia is projected to remain stable, over time the number of permits that we purchase from other countries is projected to rise rapidly.

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<sup>6</sup> Australian Government. The Treasury. *Climate change mitigation policy modelling: Summary of assumptions and data sources*, 3 October 2008. Available at: <http://ministers.treasury.gov.au/Ministers/wms/Content/pressreleases/2008/attachments/108/Treasury%20climate%20change%20mitigation%20policy%20modelling%20assumptions.pdf>

<sup>7</sup> Australian Government. The Treasury, *Climate change mitigation policy modelling*.

Figure 2: Australia's actual emissions and permit imports (Mt)



Source: Australian Government. The Treasury, *Australia's low pollution future*, Chart 3.6.

The international agreements that Australia is both party to and likely to become party to permit the importation of other countries' efforts to reduce emissions, but such an approach is entirely inconsistent with the rhetoric of 'moral challenge' and 'economic transformation' outlined above. Indeed, it would seem that Minister Wong was right to state that 'we need to reduce carbon pollution dramatically—which is much harder to do than it is to say'.

## Conclusion

Australia needs an effective national and binding approach to tackling climate change. However, the CPRS is complex, expensive and ineffective. The government's strategy appears to be to suggest to voters that it is taking significant action on climate change while simultaneously assuring industry that no such transformation is occurring. In relation to the data presented above, the Minister for Climate Change should provide straightforward answers to the following questions:

- 1) Is the Minister aware that the Treasury modelling shows that emissions from black and brown coal do not fall until 2033?
- 2) Is the Minister aware that these emissions only fall after 2033 because of the assumed invention of clean coal?
- 3) Could she describe the extent of the 'transformation' of the coal-fired power industry that results from the CPRS?