

FOOD PRICES & EMISSIONS TRADING

Emissions trading schemes such as the proposed Carbon Pollution Reduction Scheme (CPRS) would, for the first time, place a limit and a price on carbon pollution, effectively driving medium to long-term investment in clean energy, clean technologies and energy efficiency at lowest cost to firms and consumers.

While agriculture will not be covered by the CPRS directly, concerns have been raised about the indirect impact of higher energy and other prices on the cost of staple foods. Some have claimed that, as a direct result of the scheme, Australians will face excessive extra costs at the supermarket.

This brief draws on publicly available evidence that shows food price rises are likely to be modest under the proposed scheme or even with more ambitious action to cut emissions. In fact, drought and other extreme weather events are already increasing the cost of food to consumers much more than is likely under emissions trading.

Between 2005 and 2007, drought conditions pushed grocery prices up by an average of 12%, with many grocery items rising higher still¹.

More recently, the last quarter of 2009 saw fruit prices rise by nearly 16% due to poor growing conditions in some areas of the country².

By comparison, Treasury estimates an overall rise in the price of groceries of no more than 1% with the CPRS³. UK analysis of climate action reducing carbon pollution 80% by 2050 in that country predicted the average Briton's food bill rising by only 0.59% by 2020 and by 1.42% by 2050⁴.

Unless global carbon pollution peaks soon, climate scientists predict that southern Australia will see worsening drought conditions and extreme events become more commonplace⁵. While prices normally fluctuate for a range of reasons, in a future dominated by extreme weather, food costs are likely to be ratcheted up permanently.

The costs of inaction on climate change are far greater than the costs of action. Unchecked, climate change is a much greater threat to Australian food prices than emissions trading schemes which seeks to be part of a solution.

WHAT IS THE LIKELY IMPACT OF THE CPRS ON FOOD PRICES?

In August of 2009, the Australian Food & Grocery Council (AFGC) - which represents food processors and supermarkets - first claimed that the price of Australian-made staple foods would rise by 5% with the advent of the CPRS⁶. Similarly, Senator Barnaby Joyce has suggested that the price of a roast would rise to \$100⁷.

The AFGC has said their claim is based on "internal modelling" which the group will not release publicly⁸. This makes it very difficult to comment on the credibility of their claim.

Note that while the AFGC has actively campaigned against emissions trading⁹, Woolworths - one of its members - "is supportive of well balanced and compatible emissions trading schemes for Australia..."¹⁰, and has apparently sought to distance itself from the AFGC's claim.

The origin of the figure quoted by Senator Joyce is less clear but appears to be based

on the belief that the inclusion of agriculture under the CPRS would drive up the price of meat to such extraordinary levels. Given that agriculture is now to be exempted from any direct liability under the scheme, this assertion is no longer relevant¹¹.

In any case, both claims stand in sharp contrast to the results of publicly available economic modelling by the Australian Treasury¹².

According to Treasury figures, the cost of living is expected to rise by about 1.1% in the first two years of the scheme (as measured by the Consumer Price Index) with no ongoing inflationary effects. Grocery prices are projected to rise by less than 1%. This translates into a cumulative average weekly rise of about \$1.30 on the current average household grocery bill (less than the price of a loaf of bread), adding up to around \$70 a year.

The impacts on consumers, particularly the most vulnerable, can be softened substantially by using the revenue raised by the CPRS. The Australian Government proposes to compensate all low-income households and provide cash assistance to 97% of middle-income households via the Household Assistance package – a \$49 billion, ten-year fund drawn from revenue generated by emissions permit auctioning¹³. Household assistance is to be indexed to the CPI so it increases with changes with the effect of the carbon price on the cost of living.

ENERGY, FUEL COSTS AND FOOD PRICES

The modern food industry, and the processed food sector in particular, is dependent on fossil fuels to produce, process, package, distribute, store and prepare food. We might imagine then that increased energy costs under the CPRS will affect food prices and the cost of processed foods in particular. While this is true to an extent, the overall impact on consumers is likely to remain low for several reasons:

Firstly, the affordability of energy and energy services is actually likely to improve substantially in the longer term, notwithstanding emissions trading and an associated increase in energy prices¹⁴. This is because wages and income levels will rise with the economy continuing to grow strongly as it shifts to a low-carbon footing.

In fact, the move to clean energy and greater energy efficiency will help industries – including the food industry – cope with potentially much higher oil prices as world demand begins to outstrip available supply in the coming years. The need for such measures was underlined by recent projections from the International Energy Agency's chief economist Fatih Birol that, without “big new” discoveries, output of conventional oil will peak by 2020¹⁵. The IEA noted that strong global action on carbon pollution would extend that peak, ironically suppressing oil price rises.

In addition:

- Farmers and most food businesses will be not be covered by the CPRS and therefore only indirectly exposed to the carbon price¹⁶;
- Farmers and heavy on-road vehicle users (such as the trucking industry) will receive fuel tax credits to cover increased fuel costs¹⁷;

- The Government has also set aside \$150 million over five years to help food processors, especially the meat and dairy industries, to assist with the transition to cleaner energy sources and better energy efficiency¹⁸; and
- Farmers will also become eligible to generate a range of new 'offset' products (e.g. methane capture from livestock operations) to sell into the carbon market¹⁹.

Finally, in Europe, where an emissions trading scheme has been in place since 2005, there are few indications of a significant food price jump as a result of a carbon price.

FOOD PRICES AND CLIMATE CHANGE: THE IMPACT OF DROUGHT

The early years of the 21st Century have seen large parts of mainly southwest and southeast Australia labour through the worst drought on record. While conditions have eased in some parts, many food-producing areas in the southeast remain badly affected²⁰. Consequently, agricultural productivity levels have fallen sharply.

While dry periods are, historically at least, a natural part of life in Australia, higher-than-normal surface temperatures, with more warm and fewer cool days and nights, as well as increasing bushfire frequency and intensity have accompanied recent drought conditions. Rainfall is declining in both the southeast and southwest of the continent. These trends are all judged by scientists to be due to rising greenhouse gases²¹. Climate change is happening now.

Even the AFGC's dubious claim of a general, CPRS-induced 5% rise in food prices is small in comparison to recent price rises as a result of the 'big dry'. In 2007, for example, the media reported a number of striking price increases directly linked to prolonged drought:

- The wholesale price of a tonne of butter rose from \$1,800 to \$2,550²²;
- A loaf of bread by between 20 and 40 cents²³;
- A dozen eggs by 50 cents²⁴;
- A litre of milk by 10 cents²⁵; and
- A kilogram of cheese by a \$1²⁶.

In a more in-depth study, leading economist Professor John Quiggin, shows that Australians' average food bill rose 12% between September 2005 and September 2007 while much of Australia's food growing regions were in under severe drought conditions. This is twice the rate of increase in the CPI²⁷. The price rise for many staple foods was much higher still (Table 1).

A spiralling food bill comes on top of assorted other costs of drought^{28,29,30}, including:

- increased water charges;
- tens of thousands of jobs lost in rural communities;
- hundreds of millions of dollars' worth of lost farm income; and
- billions of tax dollars spent to repair drought-degraded infrastructure and provide support to affected individuals, families and communities

In short, agricultural commodity prices typically swing upwards and downwards, sometimes dramatically and surprisingly, and for a range of reasons, including Australia’s highly variable climate. By comparison, the impact of the CPRS on the cost of living is likely to be relatively small and much more predictable.

Table 1: The grocery price impact of drought and other severe weather events (adapted from Quiggin (2008))

Food category	Price effect
Vegetables	2005-07: +33%
Fruit	2005-07: +43% Bananas 2005-06: +300%
Honey	2002-03: +100%
Bread	2005-07: +17%
Eggs	2005-07: +17%
Milk & other dairy products	2005-07: +11%
Meat & seafood	2005-07: +4% Lamb 2000-03: +59% Beef 2000-03: +31%
All food products	2005-07: +12%
CPI	2002-03: +4.4% 2005-07: +6% 2002-03: +2.7%

(Source: ABS, 6401.0 Consumer Price Index, Australia, September 2007.)

THE FUTURE OF FOOD PRICES WITH CLIMATE CHANGE

If the rise in emissions is not reversed soon, climate scientists predict a dangerous increase in the extent, severity and frequency of drought in southern Australia in the coming decades.

In a recent joint paper, the Bureau of Meteorology and CSIRO conclude that the incidence of drought warranting ‘exceptional circumstances’ assistance to farmers is likely to increase from *once every 25 year on average to once every 2 years* in southeast

Australia by 2040, and over a wider area³¹.

As climate change unfolds the impacts go well beyond drought to include heightened storm, fire and flood risk in different parts of country, together with rising pest, weed and disease risks for agriculture³². This is why the Garnaut Review highlights food production as one of the most vulnerable industries with global warming unabated³³.

Garnaut notes, for instance, that irrigated agriculture in the Murray-Darling Basin could all but cease by century's end if the worst-case climate scenarios are allowed to play out³⁴. Additionally, CSIRO scientists suggest that without adaptation, Australia could become a net importer of wheat as soon as 2050³⁵.

According to Quiggin, the drying trend in southern Australia, together with heightened uncertainty associated with farm productivity because of more extreme weather, is likely to result in *permanently higher prices* for many commodities. Prices will continue to spike from time to time, perhaps more frequently, as wilder weather combines with other factors, such as oil and fertiliser price volatility³⁶. Both consumers and producers are, however, likely to feel the ill-effects of a rapidly changing climate long before 2100 or even 2050, with greater price uncertainty from year-to-year in a more volatile farming environment.

WHAT ABOUT MORE AMBITIOUS ACTION?

The Government has proposed an emissions reduction target range of 5-25% by 2020 and 60% of 2000 levels by 2050. Based on the best available science, the Garnaut Report called for a reduction on 2000 emissions levels by 90% by mid-century to avoid dangerous climate change.

Serious action towards such a target would mean higher carbon prices than those currently under consideration by the Australian Government. How would such action to achieve 'deep cuts' in emissions affect the affordability of food?

Unfortunately, there is no detailed Australia-specific study available. Late last year, however, the UK-based *New Scientist* magazine commissioned a modelling exercise to test the claim that strong action on climate change is unaffordable³⁷. The magazine commissioned Cambridge Econometrics to compare the economic impact of meeting the United Kingdom's mandated 2050 emissions reduction target of 80% below 1990 levels versus current policy settings³⁸.

While there are obvious differences between the UK and Australia in terms of, for example, freight distances (lower in the UK), the cost of fuel (higher in the UK) the production mix, and the reliance on coal, the British study at least provides a ballpark figure – a broad idea of the magnitude of price effects of ambitious action on climate change.

Cambridge Econometrics worked out that carbon prices would have to rise as much as thirty-three times higher than today to achieve the 80% reduction in emissions³⁹. Even so, their modelling showed the cost of the average Briton's food bill rising by only 0.59% by 2020 and by 1.42% by 2050.

The policy debate in Australia would be helped with a similar study here.

CONCLUSIONS

Drought and other extreme weather events are *already* making life more difficult for many Australians, particularly those in rural and regional communities. The current drought and general drying trend in southern Australia are due, in part, to rising emissions levels. Carbon pollution and climate change is likely to assume a bigger role in drought in the future. Scientists predict a striking increase in the severity, frequency and extent of extreme drought in the continent's southeast, where most of our food is produced.

Left unchecked, climate change will raise food prices significantly higher – far higher than industry's speculations as regards the CPRS. Even with stronger climate action – a higher carbon price, say, to reach an 90% cut in emissions by 2050 – the weekly grocery basket is likely to remain affordable.

In fact, while we can only guess at the price impact of a more volatile climate, the effects of emissions trading are reasonably foreseeable, so governments can (and should) ensure the most vulnerable in society are no worse off.

Action to switch to a clean energy economy is affordable, climate change is not.

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- ¹¹ To the best of our knowledge, the Senator has not qualified his claim since changes to the CPRS - including a permanent exemption for agriculture - were adopted by the Government following negotiations with the Opposition
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- ¹³ Wong, *et al.* (2009) *Op. cit.*
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