

UBS Investment Research

Australian Economic Comment

Carbon tax – economic implications

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■ Government announces details of the carbon tax

The Government has announced its long-awaited carbon price policy. The package includes a \$23/t carbon price to be paid by around 500 of the largest emitters, taking effect 1 July 2012. The price then rises by 2.5% real p.a. for three years. On 1 July 2015, the price will be set by the market. The Government aims to cut carbon emissions by 5% by 2020 (from 2000 levels), and by 80% by 2050. Carbon pricing is estimated by the Government to slow Australia's income (GDP) growth by 0.1% p.a. This seems to be a relatively conservative (i.e. small) estimate.

■ CPI impact – largely one-off in 2012/13, but what happens in 2015/16?

The Government estimates that a \$23/t carbon price will add 0.7%pts to inflation initially in 2012-13. Our own analysis suggests a 'direct' impact of around half of this (based on the government's estimate of a 10% price rise for electricity and 9% for gas and other household fuels). The remainder comes from 'indirect' impacts, such as rises in food, other goods, and services prices. Subsequent inflation effects are likely to be small (<0.1% pt). However, there's uncertainty about how much the price of carbon will rise (or fall) once the emissions trading scheme is in place.

■ Households fully compensated, on average

We estimate the price rises will reduce household income by about 0.3%pts, similar to a 25bp rate increase (0.4%pts) – but this is before assistance and abatement. Lower income households will be fully (or over) compensated, through changes in the income tax and welfare payments. But higher income households will be worse off. Abatement could leave some households better off.

■ Budget impact – slightly negative

The Federal budget will be negatively impacted by \$4bn over four years to 2014/15. It is not clear how much the impact will be from then on.

■ Implications...what does it mean for the RBA?

Should the RBA adopt the Government's estimate of a 0.7% CPI impact to its forecasts at its next SoMP, that would imply an upgrade to its headline CPI forecasts of ~¾%pt for Dec-12 and Jun-13 (all else unchanged). Further, given the policy will affect a range of items, there is likely to be a non-negligible upward impact on core CPI as well. Notwithstanding the RBA's current near-term 'neutral' stance, the prospect of higher core inflation post the carbon tax does add to the case that higher rates will be needed in the medium term. Inflation expectations are important to assess the likely degree of 'second round effects' on prices, if any.

Overall, we believe the carbon tax will have a relatively limited macroeconomic impact on the outlook for monetary policy. Some high emitting industries will be affected, but for the near term, the announcement may end some of the policy uncertainty that has seemingly weighed on consumer and business confidence. (For sectoral and stock implications, see the note from our strategy team "The impact of carbon pricing", also released today).

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The Policy

- The carbon price will start at \$23/tonne from 2012/13, and rise by a real 2.5% p.a. (i.e. on top of CPI) to 2014/15. Prices will then be ‘set’ by the market from 1 July 2015. There will be a price floor and ceiling:
 - The floor is \$15/t, rising by a real 4% p.a.,
 - The ceiling is set at \$20 above the ‘expected international price’, and will increase by a real 5% p.a. This may somewhat help to alleviate concerns that the carbon price could ‘spike’.
- The carbon tax does not apply directly to fuel for households or businesses. However, where the carbon tax applies, it will be achieved through changes in fuel tax credits for businesses. At the moment, businesses receive a full 38c credit on the fuel tax excise – this will be reduced to 32c for fuels used in domestic aviation, rail transport, diesel generators for mine sites. However, the agriculture, forestry, and fishing industries will be totally exempted from the carbon tax. Further, the Government intends to apply the carbon price to heavy on-road transport from 1 July 2014, but no details have been provided

Impact on inflation

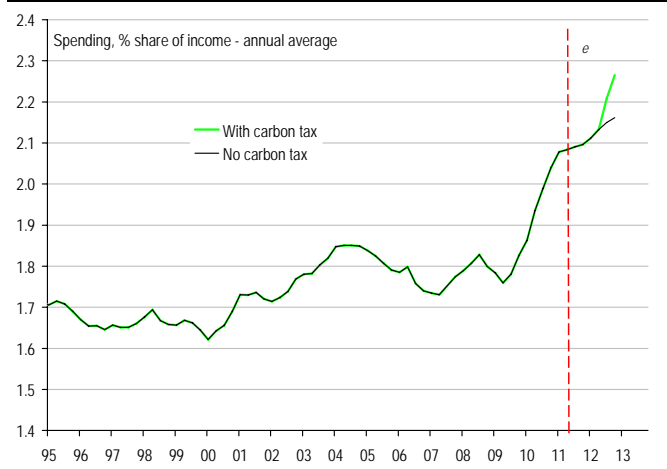
- The Government estimates the initial impact of a \$23/t carbon price will raise CPI by a total of 0.7% in 2012-13, less than Treasury and RBA estimates of around 1% under the previously proposed CPRS. The initial estimated price impact on electricity prices is 10%, gas prices is 9%, but food prices is minimal at <0.5%. Post the initial impact, during the fixed price period, we estimate this would probably raise CPI by less than 0.1% p.a. Once prices are set by the market, the impact could vary depending on the price.
 - It’s unclear from the Government’s documents, but it does seem that these assumptions were based on a carbon price of \$20/t for businesses, but a \$23/t price for households. This effect may add an additional 0.1%pt to the estimated inflation impact.
- This impact is significant – but not a ‘game changer’ for the medium-term outlook. To put it in context, the initial 0.7%pt impact is the same as the contribution to headline CPI from the fruit & vegetables price spike (caused by weather) across Q111 and Q410. It is also well below the GST impact of 2.5% in 2000-01, which was also much broader across all sectors of the economy.
- The Government estimates that the imposition of the carbon price will raise electricity prices by 10% and gas & other household fuel prices by 9%. Our analysis suggests that this will account for about 0.3-0.4%pts, or half of the estimated 0.7% impact. ‘Indirect’ price rises will come from food, transport, other goods and services due to rises in business costs as a result of the imposition of the carbon tax. (This is a similar conclusion as the RBA previously made with a \$25/t price under CPRS.) This is a reasonable assumption, albeit perhaps on the low side.

- Questions remain over the second round impacts, if price-setters take the opportunity to raise prices ‘under the cover’ of a carbon tax. However, the Government says ‘that appropriate action will be taken against businesses’ that raise prices above the carbon impact (albeit it is unclear how the Government can either determine this, or can regulate prices in this manner).

Impact on household income

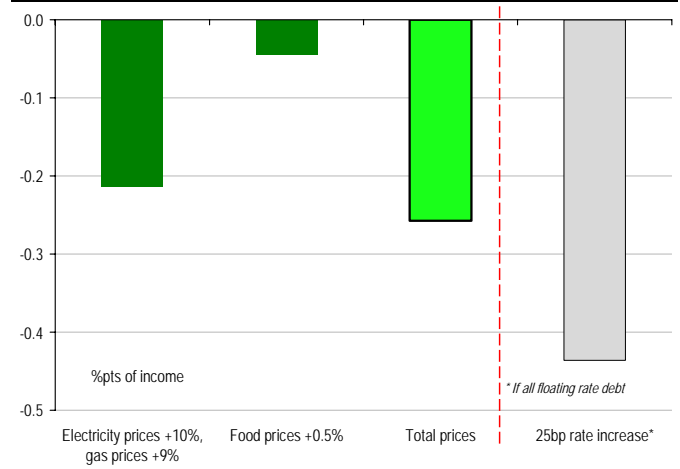
- On average, households are fully compensated. According to the government, out of 9 million households in 2012/13, 8 million will get some assistance. Of this, 5.7 million will be assisted to (at least) meet the impact, and of them, 4 million will be better off with assistance of around 120% of the impact. However, almost 1 million higher income households will receive virtually no compensation.
- The total household assistance is \$14.9bn over 4 years – primarily from tax cuts and family payments. This includes \$8bn of tax reform, including \$7bn of tax cuts targeted to low and middle-income earners. There is also a 1.7% increase in pensions to account for pensioners’ higher than average spending on utilities relative to the population, which is a 1% increase above the estimated CPI impact. Overall, households receive just over 50% of the revenue raised from the carbon tax.
- The carbon tax will cause overall household average weekly spending to increase by \$9.90/week, which is offset by assistance of \$10.10/week. Of this, there will be increases for bills of electricity (\$3.30/week), gas (\$1.50/week), and food (<\$1/week).
- We estimate the carbon price impact on household disposable income is 0.3%pts, around the same impact as a 25bp rate increase (0.4%pts, see Chart 2). The share of spending to disposable income will increase markedly with the carbon tax (from 2.1% at the moment, Chart 1). However, this analysis assumes no ‘abatement’, where households reduce their consumption (and their bills) voluntarily in response to changes in relative prices.

Chart 1: Utilities spending will lift further as a share of income



Source: ABS, UBS

Chart 2: Direct carbon tax impact on income < 25bp RBA hike



Source: ABS, RBA, UBS * 2012, assume -0.3 elasticity ** assume 100% variable

Income tax reform

- Part of household compensation will come from changes to income tax, benefiting taxpayers earning up to \$80,000 per annum. Those who earn more than \$80,000 will pay around the same as before (Tables 1 and 2).
- The tax-free threshold will rise from \$6000 to \$18,200 in 2012-13, and to \$19,400 from 2015/16. However, while thresholds increase, the lowest marginal tax rates will also increase to 19% (from 15%), and the second lowest (for incomes from \$18,200 to \$37,000) will increase to 32.5% from 30% (and to 33% in 2015/16). (See Table 1.) More importantly, the 'effective' tax free threshold will rise by a much smaller amount – from \$16,000 now, to \$20,452 in 12-13, and then to \$20,979 in 15-16.
- 60% of taxpayers get an annual tax cut of \$300 in mid-2012, and another \$83 in mid-15 – for a total of \$386. Specifically, incomes under \$25,000 receive \$503 and \$83 (total \$586). Incomes under \$20,000 receive \$600 initially (then nothing). (See Table 2.)
- The Government has a stated aim is to 'increase rewards from work and reduce disincentives to participation'. However, incentives may differ across income groups, with some possibly negatively affected. They also want to 'assist households to improve energy efficiency to save money' (i.e. encourage abatement).

Table 1: Tax scales

Tax Scales	2011-12		2012-13		2015-16	
	Threshold (\$)	Marginal Rate	Threshold (\$)	Marginal Rate	Threshold (\$)	Marginal Rate
1st Rate	6,001	15%	18,201	19%	19,401	19%
2nd Rate	37,001	30%	37,001	32.5%	37,001	33%
3rd Rate	80,001	37%	80,001	37%	80,001	37%
4th Rate	180,001	45%	180,001	45%	180,001	45%
LITO	Up to \$1,500	4% withdrawal rate on income over \$30,000	Up to \$445	1.5% withdrawal rate on income over \$37,000	Up to \$300	1% withdrawal rate on income over \$37,000
Effective tax free threshold*	16,000		20,542		20,979	

* Includes the effect of the tax free threshold and the Low Income Tax Offset

Source: Commonwealth Treasury

Table 2: Tax cuts

Income	Tax Cuts		
	From 1 July 2012	From 1 July 2015	Total
\$20,000	\$600	--	\$600
\$25,000	\$503	\$83	\$586
\$30,000	\$303	\$83	\$386
\$35,000	\$303	\$83	\$386
\$40,000	\$303	\$83	\$386
\$45,000	\$303	\$83	\$386
\$50,000	\$303	\$83	\$386
\$55,000	\$303	\$83	\$386
\$60,000	\$303	\$83	\$386
\$65,000	\$303	\$83	\$386
\$70,000	\$253	\$63	\$316
\$75,000	\$128	\$38	\$166
\$80,000+	\$3	\$13	\$16

Source: Commonwealth Treasury

Impact on growth and employment

- The carbon pricing is estimated by the Government to slow Australia's income (GDP) growth by 0.1%p.a. This seems to be a reasonable but conservative estimate.
- This suggests that the impact on jobs will be limited overall. However, we expect to see some reallocation of labour away from large-emitting industries to lower-emitting industries.

Impact on the Federal Budget

- The carbon tax will cost the Budget a modest \$4.0bn over four years (0.1% of GDP) from 2011-12 to 2014-15 – therefore a marginal 'fiscal easing' – rather than being 'revenue neutral' as previously thought. There is a negative impact in 2011-12 due to upfront payments to families and pensioners (in May-June 2012). Revenue raised in 2012-13 sees a positive net impact of \$1.1bn. However, increased costs in 2013-14 and 2014-15 see a negative impact of \$1.3bn and \$1.1bn. This is due to increased industry assistance worth \$10bn from 2011-13 to 2014-15, together with \$4bn in new commitments for the Energy Security Fund, loans to generators for purchase of future carbon permits, and biodiversity programs.

What does it mean for the RBA?

- If the RBA adopts the Government's estimate of a 0.7% CPI impact to its forecasts at its next SoMP, that would imply an upgrade to its headline CPI forecasts by ~¾%pt for Dec-12 and Jun-13 (all else unchanged). Further, given the policy will affect a range of items, there is likely to be a non-

negligible impact on core CPI as well. (This is in contrast to the narrower spike in fruits and vegetables prices in Q410 and Q111, which had minimal impact on core CPI).

- Notwithstanding the RBA's current near-term 'neutral' stance, the prospect of higher core inflation post the carbon tax does, at the margin, add to the case that higher rates are likely for the medium term. Inflation expectations are important to assess the degree to which second round effects are likely.
- Overall, we believe the carbon tax will have a relatively limited macroeconomic impact on the outlook for near-term monetary policy. Some high emitting industries will be affected, but in the near term, the announcement may end some of the policy uncertainty that has seemingly weighed on consumer and business confidence.

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