

Submission on mining taxation

To the Select Committee on New Taxes

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Terms of reference:

On 30 September 2010, the Select Committee on New Taxes initiated an inquiry into the following matter:

- (a) new taxes proposed for Australia, including:
 - (i) the minerals resource rent tax and expanded petroleum resource rent tax
 - (ii) a carbon tax, or any other mechanism to put a price on carbon, and
 - (iii) any other new taxes proposed by Government, including significant changes to existing tax arrangements;
- (b) the short and long term impact of those new taxes on the economy, industry, trade, jobs, investment, the cost of living, electricity prices and the Federation;
- (c) estimated revenue from those new taxes and any related spending commitments;
- (d) the likely effectiveness of these taxes and related policies in achieving their stated policy objectives;
- (e) any administrative implementation issues at a Commonwealth, state and territory level;
- (f) an international comparison of relevant taxation arrangements;
- (g) alternatives to any proposed new taxes, including direct action alternatives; and
- (h) any other related matter.

This submission seeks to respond to the terms of reference of the inquiry in two parts under the headings 'Minerals Resource Rent Tax' and 'Carbon Tax'.

Minerals Resource Rent Tax

Introduction

The Australia Institute has undertaken a good deal of research on the Australian mining industry and the related taxation arrangements. This submission should be read in conjunction with the earlier contributions.¹

The mining industry is one of the most profitable in Australia with total profits (gross operating surplus in 2009–10) of \$81 billion out of a total value added of \$99.5 billion.² That is per cent of the value produced in the mining sector is profit (using the broad ABS measure).

Just a few years ago, in 2003–04, total profits were a more modest \$26 billion. Most of the increase since then has been a result of the commodity boom. If not for that, profits might have gone backwards given the decline in mining productivity. Nevertheless, the increase in profit due to high commodity prices is considerable, perhaps around \$55 billion in annual profits.

The mining companies knew that there were strong arguments to the effect that their profits depended on access to resources that are owned by all Australians. Consequently, much more of the additional profits should have gone to the community as a whole—more than the extra to be paid as company tax. And, in principle, the mining industry favoured a profit-related tax as it did not want to be lumbered with higher state royalties that it would still have to pay when commodity prices slump again.

The Henry Report

The Henry Report recommended a ‘resource rent tax’ to cover most minerals in Australia. The Rudd Government agreed and decided to implement the ‘Resource Super Profits Tax’ (RSPT).

The RSPT was to address the decline in the share of mining profits being collected by governments in Australia. The combined share of the two types of mining-specific taxes, state royalties and collections under the Petroleum Resource Rent Tax, has fallen substantially from around 40 per cent of profits on the eve of the mining boom to about 13 per cent currently.³

The essential idea of the RSPT was simple; if a mining project is only earning ordinary returns then it would only attract the ordinary company tax. However, where a mine is sitting on a superior resource, super profits are generated just because of the attributes of the mineral deposit and not the attributes of the miners. The super profits arise because a company has access to a resource that is really the property of the people of Australia. In any other industry a super profit would be the signal that would encourage competitors to enter the industry, expand the market and so eliminate the super profits. Competition is expected to work to eliminate super profits unless they are due to something that the competitors do not have access to, in this case superior Australian resources.

As the report put it:

¹ The most relevant are D Richardson, *The benefits of the mining boom: Where did they go?* The Australia Institute, 9 June 2009; D Richardson, ‘Why we need a resource super profits tax’, *Online Opinion*, 25 May 2010; D Richardson ‘Was the mining boom good for you?’ *Online Opinion*, 19 June 2009.

² ABS, *Australian System of National Accounts, 2008-09*, cat no 5204.0, 8 December 2009.

³ Australian Government, *Australia’s Future Tax System: Report to the Treasurer*, December 2009.

Through the Australian and State governments, the community owns rights to non-renewable resources in Australia and should seek an appropriate return from these resources.

Another attraction of the RSPT for the Henry Report was the fact that the tax base was immobile; it could not be shifted offshore for example. It would be wrong to interpret the Henry Report as saying there would be no reduction in mining activity but instead that any behavioural changes are small and are less than the changes in behaviour of the equivalent collection of some other taxes.

In principle, the tax on super profits arising from access to superior resources should not deter investment or induce other changes in behaviour. However, in practice we are talking not about a large number of competing anonymous companies but about specific companies with their own management styles, their own ideas about playing bluff and so on. This should not be pushed too far but it always needs to be borne in mind that when talking about the reaction of companies, it is specific individuals who may not always react as if economic incentives were all that matter.

An important question then is how much of the rent should be taxed. If all super profits were taxed at 100 per cent, there would be no incentive for the mining company to operate the mine efficiently. As the Henry Report acknowledges, Norway imposes a 78 per cent tax on rents in the petroleum sector which may well be about the rough upper limit for resource rent taxes. The government had instead accepted the Report's recommendation that rents be taxed by way of a separate resources super profits tax of 40 per cent. The RSPT was to be a deduction against company tax so that in the first year of operation, 2012–13, the total tax on rents or super profits would have been 58 per cent. However, as the company tax was to be reduced to 28 per cent by 2014–15, the RSPT would be reduced to 56.8 per cent that year. The Henry Report's agenda is a company tax of 25 per cent, which implies a total tax on super profits of 55 per cent.

While the rates could have been higher, in other ways the RSPT was rather tight. To tax super profits, or profits above a normal rate, the government has to define that normal rate of return on investments. The rate for the Petroleum Resource Rent Tax (PRRT) is the bond rate plus five percent for most expenditure and the bond rate plus 15 per cent for some exploration expenditures. However, for the proposed RSPT the normal rate was just the long bond rate. Given that the long-term bond rate has been around five per cent recently in Australia, the RSPT would have been triggered once the project had repaid its original capital outlay and, in addition, had generated a five per cent return.

Prior to Henry there was speculation that the Australian Government would have to negotiate with the states to abolish their royalty regimes. However, the RSPT scheme intended state royalties and any already announced changes to be deducted against RSPT obligations.

Pre-election changes

The original RSPT was too much for the big mining companies and they threw everything behind their effort to get rid of it. Not only is the mining industry a powerful lobby but it is largely dominated by three powerful companies; BHP Billiton (BHP), Rio Tinto (RIO) and Xstrata.⁴

⁴ There has recently been a debate about whether regulators should allow banks to grow so big that they cannot be allowed to fail. Maybe there is an argument against letting mining companies to grow so big that they wield enormous political and economic power. In that context it is interesting to observe that the international regulators objected to BHP and Rio combining their iron ore operations.

Incidentally, the miners were also instrumental in sinking the Carbon Pollution Reduction Scheme (CPRS). Mining uses an incredible amount of energy; it is estimated that energy costs account for up to 16 per cent of the value of mining output in Australia.⁵ So any price on carbon represents another threat to the mining companies' profits. The Minerals Council of Australia complained about 'massive new costs to mining activity in Australia' and published estimates of job losses. Its claims were ludicrous; it claimed that 66,000 jobs would be lost when total employment in mining is 198,100 people.⁶

On 2 July 2010, the Prime Minister, Julia Gillard, and Treasurer, Wayne Swan, announced the Minerals Resource Rent Tax (MRRT) to replace the RSPT. There were a number of differences but the two main changes were to the structure of the tax. First, the definition of super profits (or rents) was changed to be the bond rate plus seven per cent rather than just the bond rate under the RSPT.

In addition, the actual rate of tax was reduced from 40 per cent to a nominal 30 per cent but, with the addition of a 25 per cent extraction allowance, the 30 per cent becomes an effective 22.5 per cent.

The MRRT also dropped the arrangements for carrying forward losses under the RSPT. Those were complicated arrangements that meant the government would share in loss-making projects but those arrangements were not valued by the mining industry.

The MRRT is now essentially similar to the tax on petroleum under the PRRT but with different rates. Given that Australia already had the PRRT operating as a long-term and well-understood example of a resource rent tax, it may have been inevitable that the final outcome would be similar arrangements for all other minerals. However, an important change is that the MRRT only applies to iron ore and coal. Also announced at the time was an extension of the PRRT to all other oil and gas projects. Apart from iron, coal, oil and gas, most minerals remain free from resource rent tax.

State royalties are also deductible against the MRRT; however, it now seems the miners want Commonwealth protection against any other increases in royalties that the states may impose.⁷ It would be silly for the Commonwealth to agree to that. There may well be perfectly good reasons for the states to increase mining taxes, for example to pay for local infrastructure, but should that apply to any increase in payroll tax on miners? It should be left to the states to make their own arrangements with the mining companies.

Arguments for the mining tax

BHP Billiton announced a pre-tax profit of \$19.6 billion for 2010, up 68 per cent on last year's profit. Net after-tax profit increased by an incredible 116 per cent. And that is basically the case for taxing the super profits of the miners. BHP did not suddenly become a great deal cleverer or more skilful at its business; it increased profit dramatically because the rest of the world, and especially China, wants Australian commodities so badly.

⁵ See C Eren, R Denniss and D Richardson, *Green jobs: what are they and do we need them?* The Australia institute, 7 July 2010.

⁶ ABS, *Labour force, Australia, Detailed Quarterly*, Cat no 6291.0.55.003, 16 September 2010.

⁷ J Freed and J Kehoe, 'Miners cry foul over rate refunds', *The Australian Financial Review*, 20 October 2010.

BHP earned a very high return on equity at 48 per cent.⁸ In a competitive market, high returns are competed away unless the company has some underlying advantage. BHP's advantage is its access to high value Australian (and overseas) resources. In this sense, BHP can be fairly said to enjoy 'monopoly' profits. Of course, this submission is not singling out BHP for special treatment; other corporations could equally be chosen. The point here is that BHP's profits and those of other mining companies reflect the international demand for scarce Australian resources.

There are other considerations. The mining boom gave very little by way of benefit to ordinary Australians. Indeed, prior to the global financial crisis most people would have been affected only by the higher interest rates on their mortgages as the Reserve Bank of Australia (RBA) fought the inflation threat it perceived arising from the commodities boom. Others would have been affected by the appreciation of the Australian dollar that reduced the competitiveness of all other trade-exposed industry in Australia. Outside mining there is little evidence of real incomes being higher than what they would otherwise have been.

A mining tax is a vital mechanism for capturing some of the national gains and distributing them more widely. Of course, the distribution of the gains raises a host of issues and most of us would have different opinions as to the best use for any surge in revenue. Not surprisingly, there has been some debate about how the additional super profits tax should be used, with some emphasis on building up reserves for a post-mining future. The government's response goes some way towards that with its emphasis on infrastructure spending and the infrastructure fund.

As for sharing the benefits of the super profits tax among individual Australians, most will go towards superannuation benefits or lower company taxes that will benefit shareholders, including indirect shareholdings through superannuation. Nothing is expected to change for those on income support. Indeed, the Henry Report has flagged a reduction in pension payments through the use of some alternative indexation arrangements that would be lower and so not keep up with community standards. Likewise, people who rely on wage increases will only benefit to the extent their fortunes reflect the conditions in the mining industry. Other workers may be adversely affected as conditions in their industry worsen from the effects of either tighter monetary policy or the high value of the Australian dollar.

On top of all that, there is little so far from the government that goes toward assisting the sectors that have been adversely affected by the indirect impacts of the mining boom. All other trade-exposed sectors of the Australian economy have had to put up with a loss of competitiveness as the Australian dollar appreciated. Tourism and manufacturing appear to have been particularly hard hit.

A more imaginative approach could have addressed some of the other problems associated with the mining boom, in particular its tendency to squeeze out other sectors such as agriculture, manufacturing, tourism and other trade-exposed sectors. That squeeze follows the large cash flows from mining exports that flowed into Australia and pushed up the exchange rate. A fund that is used to invest offshore can offset the cash inflow and so remove the pressure on the exchange rate as the Petroleum Fund of Norway has done over the years. In addition, by keeping some of the revenue offshore, governments will not be tempted to spend it in a way that could exaggerate the boom.

⁸ BHP Billiton, *Annual Report 2010*. Return on equity is calculated by dividing profit before tax by equity at the beginning of the financial year.

The important point here is not the details of how a mining-boom fund might be set up but a recognition of the principle that if a mining boom is associated with a massive increase in the flow of cash into Australia, this should be offset by the government managing a simultaneous outflow of cash. The build-up of a portfolio of overseas assets is prudent as a means of hedging against a possible future when the mining boom might end, either through a crash in commodity prices or a depletion of the resources.

Indeed, it is not even necessary for the government to undertake all the offshore investment; super funds and other financial institutions could be encouraged to invest in offshore assets. The mining companies themselves might be urged to keep their profits surge offshore. The important thing is that we understand how the Norwegian fund worked and debate the need in Australia to set up a mechanism that would do a similar job.

Arguments against the mining tax

Obviously, no one likes to be subject to a higher tax and the mining industry is no exception. The miners were always going to cite employment and anything else they could think of to use against the tax. So their first predictable point is that the tax is too heavy and will deter investment and activity in the industry.

A sense of history is needed to inform about these claims. The tax on super profits will still be less than the tax on ordinary profit in the previous resources boom of the late 1970s and early 1980s. Back then the company tax rate was 46 per cent. Royalties, which tended to be at least five per cent of the value of production, were imposed on mining companies as well. A five per cent state royalty would have meant that profit was taxed at a total of 51.4 per cent (if profits are 50 per cent of revenue). Private companies were also subject to an undistributed profits tax.

There were no franking credits then, so by the time the company income was received in the hands of the shareholder, the company income in this example was taxed at 81 per cent for someone on the top personal tax rate of 60 per cent at the time.

By contrast, under the formerly proposed RSPT, a company's super profit was to be taxed at a maximum of 67.9 per cent from the perspective of a shareholder on the top personal tax rate.⁹ For a company with ordinary profits and super profits in the ratio 50:50, the company income would be taxed at 57.2 per cent in the hands of the individual on the top rate. Under the MRRT, the maximum tax rate from the perspective of the shareholder is reduced to 58.5 per cent of super profits. Of course, super profits are more narrowly defined and limited to iron, coal, and through the PRRT, oil and gas. Neither the MRRT nor the earlier RSPT approached the tax levels of the 1970s and 1980s yet some of the same companies were the enthusiastic participants then as they have been recently.

One of the arguments the miners have used against the mining tax is that it will drive miners away from Australia. Figures published by the Australian Bureau of Statistics (ABS) show that Australia possesses:

- 38 per cent of the world nickel resources
- 38 per cent of uranium resources
- 33 per cent of the lead

⁹ For each \$100 of super profit, the RSPT was to be \$40, company tax initially at 30 per cent of the remainder (\$60), and then, assuming all the rest is paid as dividends, 46.5 per cent is payable with a franking credit for company tax paid.

- 28 per cent of the zinc
- 25 per cent of the brown coal
- 20 per cent of the silver
- 15 per cent of the iron ore and 13 per cent of the gold.¹⁰

If Australia had insignificant supplies of those commodities, the mining companies might have a case. But if they really want to be world players in the major commodities, there are few countries other than Australia of any significance.

Looking at those figures and bearing in mind that Australia produces much smaller shares of the world's oil and gas, it appears that the wrong minerals have been exempted from the MRRT and PRRT. With a third or more of all nickel, uranium and lead, perhaps Australia should be thinking of even bolder taxation initiatives for those particular minerals.

'Sovereign risk' is a concept that the miners have re-introduced into the debate. It used to refer to the risk of nationalisation or expropriation in some third-world countries in the past. Nowadays, it seems to refer to just any tax increase that affects a mining company. For example, it was used in the context of the proposed emissions trading scheme. There is, of course, the 'risk' that any democratic country will change tax rates, environmental laws, industrial relations legislation, land rights and a host of other circumstances. But in a democracy, questions about spending and taxing are always subject to debate and change.

While the proposed MRRT is much more generous than the previous RSPT, it should be noted that neither applies until all capital investment has been recovered together with the 'uplift factor'—either the bond rate under the RSPT or the bond rate plus seven per cent under the MRRT. Company tax now applies irrespective of any notion of risk and well before a company has clawed back its initial outlay. By contrast, the MRRT does not kick in until capital has been repaid, and repaid more than in full with the 'uplift factor' equal to the bond rate.

The question of risks is interesting. Even salaried workers take a risk that their employer will be solvent on pay day and when leave and super etc are due. Risk has never been a reason for being light on tax. And it is easy to overstate the risk. A typical mining project does not go ahead until a full assessment of the deposit, the engineering studies, and full costings are undertaken and even then the sponsor will try to line up long-term sales contracts and hedging operations. When returns were lower, iron ore producers for example used to try to get buyers to invest in projects as a means of tying up the customer's long-term support.

Earlier it was mentioned that in order to define super profits or 'rents', the question of normal returns had to be defined. The Henry approach was to assume that normal rates of return are given in the market by the 10-year bond rate. The idea here is that a government bond is risk-free and so its value in the market should reflect the returns investors will accept on a risk-free investment. In theory, investors should want a similar return plus the appropriate risk premium on any other investment, suggesting that, for the investor, there should be no real difference between investing in a government bond and investing in a risk-free mining project.

This sounds reasonable, but in a global economy we need to ask which country exhibits the appropriate 10-year government bond rate. According to *The Economist*, the 10-year bond

¹⁰ ABS, *Year Book Australia, 2009–10*, Cat no 1301.0, 4 June 2010.

rate is 5.01 per cent in Australia, 2.43 per cent in the US, 2.28 per cent in the euro area, 2.98 per cent in the UK, and 0.87 per cent in Japan.¹¹

Given the wide variability in world 10-year government bond rates, the miners would appear to have a legitimate complaint against using the long bond rate. Treasury's theoretically pure argument may not necessarily fit the dirty world of real markets. It is not possible to provide an exact definition of the normal rate of return or an exact means of calculating that rate.

It must be said that these types of criticism are telling. We cannot know exactly where the boundary between normal and super profits lies but, in a global economy, it cannot reflect each of the different 10-year government bond rates. Strangely, the miners have not examined those sorts of issues.

On the other hand, no matter how the MRRT and PRRT are constructed, it is clear that the mining industry at the moment has more than enough capacity to pay. Perhaps that is another way of saying that as long as the tax is profit-related, it probably does not matter much how it is constructed. When the miners are profitable they should pay.

Other issues

Revenue

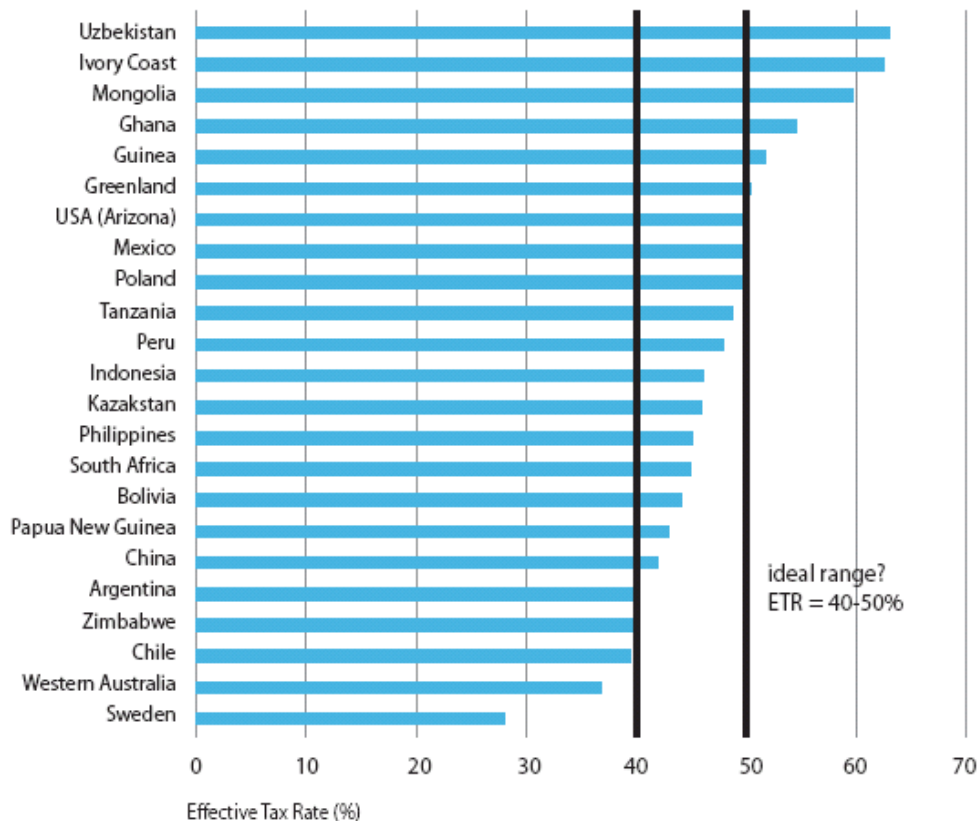
To date, the government has published only the net impact of the introduction of the MRRT and the extension of the PRRT, which is expected to be \$10.5 billion in 2012–13 and 2013–14. From these figures, it is not possible to calculate how variations to the MRRT would affect revenue. Treasury might be asked to provide the revenue impact of increasing the MRRT to 40 per cent and extending it to other minerals.

International comparisons

International comparisons are rarely published. The reason is most likely the difficulty of making comparisons between countries when there is a vast difference in the way mining is taxed. Indeed, some other measures are used that can have tax-like effects but act completely differently. For example, some countries operate production-sharing agreements or compulsory sharing of equity in mining projects. In addition, the attributes of the mine itself can influence the tax treatment. However, a recent study done for the OECD compares a hypothetical copper mine in various countries. The relevant graph showing the results is reproduced in the figure below.

¹¹ *The Economist*, 18 October 2010.

Figure 1: Effective tax rates on a model copper mine in various countries



Source: P Mitchell, 'Taxation and investment issues in mining', in The Extractive Industries Transparency Initiative, *Advancing the EITI in the mining sector: a consultation with stakeholders*, EITI, 2009.

The results are very interesting. They show that if the model copper mine happened to be in Western Australia, the effective tax rate would be around 37 per cent, the second to bottom on the list of countries included in the study. Moreover, the study finds the ideal range is 40 to 50 per cent, the range in which most countries fall.

Of course, not only is the effective tax rate important, so is the design of the tax system. As the Henry Report argues, resource rent taxes are better than royalties because the latter is a cost to miners whether or not the operation is profitable. Hence a royalty is more likely to deter investors than resource rent taxes, which are more of a profit-sharing arrangement, or indeed, a super-profit-sharing arrangement.

Conclusion

The need for a heavier tax on mining activities in Australia has a good deal of support at the moment. The miners can easily bear it and their super profits are due the Australian resources they exploit—not their own abilities. If, as suggested in the Henry Report, a rent tax on mining is compared with other income taxes, there would seem to be no contest. The Henry Report outlines a strong case for a resource rent tax.

If implemented, the Henry Report's proposal for an RSPT would have meant that super profits would be taxed at a maximum of 67.9 per cent from the perspective of individual investors. By

comparison, in the last resources boom of the late 1970s early 1980s the tax on all profits in all companies was taxed at 81 per cent for those at the top of the personal income tax scale.

The politics of the RSPT meant that the government watered it down to the presently proposed MRRT, which operates in a similar manner to the PRRT but with a lower effective rate. From the perspective of individuals, that brings the maximum tax on super profits down to 58.5 per cent but super profits are more narrowly defined and exempted for many minerals.

There is a strong case for taxing mining super profits and it seems the miners have got off fairly lightly. At the very least, we might suggest that the MRRT should be increased to 40 per cent, the PRRT rate, and that it should apply universally.

The Henry Report proposed a theoretically pure resource rent tax. The political negotiations that followed resulted in some important compromises and perhaps too many concessions to the mining industry. The biggest anomaly is that the resource rent tax, in practice, has three rates: 40 per cent for oil and gas, 22.5 per cent for iron and coal and zero for all other minerals. It would seem there is an important unfinished agenda here.

Carbon Tax

- 1) Carbon pollution presents major adverse consequences for the planet.
- 2) For the good of the planet we have to either ban it, in whole or in part, and/or impose financial incentives to reduce it.

If we accept proposition 1, proposition 2 follows pretty well automatically. Economists tend to prefer using price mechanisms as a more efficient way of reducing carbon emissions, but sometimes unequivocal bans or regulation can also have their place.¹²

These propositions seem so obvious that it would almost be insulting to the reader to labour the point. One of the aspects this submission seeks to stress is that a carbon price, however implemented, is likely to involve additional government revenue that can be used for many other purposes, including compensating consumers. We think this situation can be very attractively packaged as we have shown in an earlier paper.¹³

The government's own estimate is that the additional cost per household would be \$6 a week as a result of the direct impact of the \$25 carbon tax on the costs of electricity, gas and other household fuel.

There are also indirect costs to consumers contained in the prices they pay for other commodities. The butcher has power costs that are passed on to consumers; electricity is used to smelt the aluminium that goes into all aluminium products, including cans of soft drink. Adding indirect effects increases the additional cost per household to \$18.50 a week, an increase of 1.1 per cent on the value of all household consumption expenditures.¹⁴ The figure of 1.1 per cent was also the estimate of the total impact on the Consumer Price Index in the government's white paper published in 2008.¹⁵

People are naturally concerned about power costs and it is true that electricity prices have increased more than other prices over recent years. In the three years to June, prices increased by nine per cent overall but electricity increased by 41 per cent, a good reason for consumer sensitivity to carbon taxes. On the face of it, this is not a good time to add to electricity prices.

Certainly, a carbon tax increases the cost of electricity but, like all other taxes, it can be returned to people. The point is not to punish consumers but to tilt their choices away from carbon-emitting activities. A well-designed program based on a carbon dividend cheque can more than compensate most people for higher electricity costs so long as they don't use excessive amounts of electricity.

A carbon tax at \$25 a tonne would raise \$13 billion. The Australia Institute has conducted some research on how that could be used. Of course it could all just go towards a budget

¹² The world-wide ban on CFC refrigerants is a good example of a ban that really had no alternative.

¹³ R Denniss and D Richardson, *Why a carbon tax is good for the hip pocket*, The Australia Institute, 1 August 2010.

¹⁴ These are The Australia Institute estimates based on ABS, *Australian National Accounts: Input-Output Tables – Electronic Publication 2005-06*, Cat No 5209.0.55.001, 18 November 2009. The input-output tables allow us to track the increased energy costs on other businesses, which eventually flow into higher costs for consumer purchases. Those additional costs are compared with the average household expenditure on consumption goods as reported by the Australian Bureau of Statistics in ABS, *Household Expenditure Survey, 2003-04*, cat no 6530.0, 15 February 2006. Those expenditures in turn are updated to 2011–12 values using CPI estimates from ABS, *Consumer Price Index, Australia, June 2010*, cat no 6401.0, 28 June 2010 plus official inflation forecasts from the *2010–11 Budget Papers*.

¹⁵ Australian Government, *Carbon Pollution Reduction Scheme: Green Paper*, July 2008.

surplus, there are many other options. Company tax could be reduced, the GST could be cut, funding could be directed into alternative energy research and so on. There are many options and it is possible to have combinations of two or more of them. But a very attractive option is the **carbon dividend cheque**.

In an example we examined, the government could pay a family of four a dividend cheque of \$2,100 per annum, perhaps in quarterly instalments to help with utility bills. The extra cost of the higher electricity charges should be around \$18.50 a week making that family \$1,100 better off each year. They would be even better off if they were to use less electricity than average and the higher prices will encourage them to do that. Lower income groups tend to spend less on electricity (less on everything) so they would be even better off on average.

A benefit of \$1,100 a year for an average family of four is a substantial amount. After two years of such savings, a family of four from most places in Australia could have a week's holiday on the Gold Coast.

The Australia Institute's costings are based on giving families \$700 a year for each of the first two family members and half that thereafter. So a family with a large number of children will get even more than the example above.

The Howard Government was able to impose the goods and services tax as part of a package that made most people better off. Exactly the same thing can be done with the carbon tax by using it to fund the carbon dividend cheque. But there is a warning: proposals to give a large proportion of the tax back to the polluters make it much less likely that the bulk of families will be better off.

Other policies

A carbon price is not the end of the story. A carbon price is not everything. As James Galbraith points out, the fact that Europeans are twice as energy-efficient as Americans reflects a host of factors, not just that Europe is a more energy-efficient version of the US.¹⁶ It reflects the ways Europeans organise their lives, their housing patterns, transport networks and power grids. Those sorts of things cannot fundamentally change as a result of individuals making their own uncoordinated responses to a carbon price.

Business is unlikely to change substantially as a result of carbon prices despite the outstanding efforts of some organisations. We calculate that electricity costs for the average business are around one per cent of production costs according to the latest input-output tables.¹⁷ Thus, for a business to concentrate on energy efficiency measures means it is spending valuable management time on one per cent of the value of production. It therefore seems unrealistic to expect managers to be seriously interested in energy efficiency unless the increase is very large as a result of the carbon price.

If efficiency gains are likely to be limited, the best practical hope is for a substantial substitution of renewable electricity for that produced with fossil fuels. A price on carbon would, in principle, encourage more investment in renewable energy. In practice however, the price incentives can be diluted because much of the industry has oligopolistic structures and is subject to regulatory control with price caps and other mechanisms. In the case of a government-owned

¹⁶ J K Galbraith, *The Predator State*, NY, The Free Press, 2008.

¹⁷ ABS, *Australian National Accounts: Input-output tables—Electronic publication, 2005-06 final*, Cat no 5209.0.55.001, 18 November 2009. We know that electricity costs have increased since then so the figure now may be around 30 per cent higher.

generator able to recover costs through a cost plus formula, there may be very little financial incentive to invest in renewable energy.

Overall, it seems that while a price on carbon is an important step in achieving reductions in emissions, that approach does have limitations and is likely to need supplementary measures.

Before leaving this section there is a semantic issue we should quickly deal with. The Opposition has referred to the carbon price as a big new tax. It may be tempting to try to argue that there is a difference between a price on carbon and a tax but, as the Budget Papers have classified the CPRS as a tax, there seems little point in arguing the contrary. For that reason, price and tax are used interchangeably in this submission.

Setting a carbon price

Choosing between different types of methods for setting carbon prices is going to involve a lot of considerations. The CPRS involved a sophisticated trading system but it was really a means of auctioning permits to polluters in the context where they could buy extra in the market from those who had purchased excess permits. In addition, speculators were free to enter the market as buyers and sellers. We get the impression that the tail seemed to wag the dog in the sense that secondary trade looked like becoming more important than the initial auction system. Just as the main activity on the stock exchange, the buying and selling of second-hand securities, overwhelms the real function of the stock exchange, which is the flotation of new companies or supplementary capital-raising by existing companies.

The resource cost of running the stock exchange seems high relative to the cost of raising new capital—the real justification of the equity trading system. Recently, the Initial Public Offerings (IPOs) on the Australian Stock Exchange have been low but in the four or five years prior to that averaged around \$15 billion per annum.¹⁸ However, the value of those transactions in new capital is swamped by the swapping of second-hand shares on the exchange. In September 2010, the daily average was a turnover of \$5.6 billion a day,¹⁹ or on an annual basis around \$1,460 billion. Effectively, only one in one hundred transactions by value is raising new capital. The share market is a good example of a tail wagging the dog. Most of the activity has almost nothing to do with raising capital but seems dominated by the wheeling and dealing of short-term traders.

Whatever might be the justification for the stock exchange trading system, it seems curious that we would want to establish a similar system for carbon permits. That would make sense in a market where rights to pollute are grandfathered but transferable.²⁰ However, the CPRS was always to be based on an auction system. By having both an auction and a trading scheme, there are effectively two market mechanisms. The auctioning of permits is analogous to the auctions under IPOs for newly listed companies. We would expect that fairly soon the permits would be trading among people who, in the main, would not use them. Having auctioned carbon permits there really needs to be a rethink about the need for the extra second-hand market. (The public sector auctions such things as radio frequencies without needing a second-hand frequency market.)

¹⁸ Australian Securities Exchange, *IPO: The road to growth and opportunity*, Sydney, 2009 at http://www.asx.com.au/professionals/pdf/asx_ipo_brochure.pdf (accessed 26 October 2010).

¹⁹ Reserve Bank of Australia, *Statistical Tables*, (accessed 26 October 2010).

²⁰ In this sort of model there is a concern that old polluters should be able to sell to new polluters so that people who can better use the permits can buy the incumbents out of the market.

Of course, a fixed price for carbon also eliminates the need for a wasteful secondary market. Under that model, the government makes the market as a willing seller and buyer at the fixed price, leading naturally to the issue of whether it is better to have a volatile price or volume.

A main feature of the CPRS was that it proposed to set emissions targets and let the price fall where it might. That gets us to the issue of whether we want a system in which price or quantity is volatile. With a fixed price, obviously price is stable but the amount of emissions will vary from year to year as other conditions change. The volume of permits people buy at the set price will change. However, if the volume of permits is fixed, all the adjustment will take place in the price. But in that case, the price of carbon will be volatile causing the electricity price to be volatile as well, making it difficult for investors in electricity generation facilities. Volatile electricity prices prevent investors from making reasonable assumptions about their future returns and create difficulties in convincing a sceptical lender that the project will generate sufficient revenue.

We have already experienced problems with the Renewable Energy Target (RET) with investors in renewable energy being upset by the price fluctuations. As the additional RET certificates came on stream as a result of the incentives for household solar electricity generation, the RET market soured until the government made new arrangements to separate the wholesale and retail aspects of electricity incentives.

That also raises an important issue that The Australia Institute has addressed many times. If there is a scheme, such as the previously proposed CPRS, that sets volumes, a new scheme can be introduced, perhaps at the state government level, which attempts to initiate new carbon reduction measures. That means that, under the set volume, there are now additional places for more emissions from elsewhere. In that case, state-government initiatives are frustrated since they merely free up permits for the other polluters.

As mentioned above, electricity prices have risen substantially in recent years. Part of the reason may have been under-investment in plant in both electricity distribution and generation. There is a widespread belief that the reason for the under-investment is the uncertainty about whether or not there will be a carbon price and what that price will be. It seems to be becoming rather urgent that a carbon price be imposed. If our proposal for a carbon dividend cheque is adopted, individuals can be compensated to cover the price effect of the carbon price as well as much of the recent price increases. The imperative now seems to be the setting of a stable price outlook which argues strongly for a fixed price.

Of course, the fixed price model requires a mechanism to ensure that the price is revised from time to time so that Australia in fact meets its emissions target. However, we would envisage a price that begins at a reasonably modest level but quickly rises to perhaps \$25 a tonne, indexed thereafter. Subsequently, a possible model would involve holding five-yearly inquiries into whether the price remains appropriate.

Conclusion

This submission takes as given the need for action to address carbon emissions. Indeed, the need for a carbon price or tax seems self-evident. One of our concerns has been to point out that a carbon price does not have to mean just another burden on the people of Australia. Instead, we have advocated a **carbon dividend cheque** as a mechanism for returning the revenue.

We examined the option of paying a carbon dividend cheque to each household at \$700 per annum per person for the first two members of the household and \$350 thereafter. The overwhelming majority of families would be better off under this arrangement and the amount by which they would be better off will depend on their electricity usage. So the carbon price

has the effect of taking from consumers according to how much they use but returning a fixed sum to families according to the number of family members. The strong incentive to economise on electricity remains but most families will be financially better off.

While a carbon price is certainly an important instrument to assist a reduction in carbon emissions, other mechanisms are also important. We have to recognise that there is a limit to what uncoordinated decision-makers can do in response to even strong price signals. For example, electric vehicles are unlikely to be popular unless a government can coordinate and arrange rapid recharging facilities, battery exchange programs and the like. Town planning, research and development initiatives, demonstration programs and so forth are involved. Our submission does not go into these but it is important to recognise their role even with a price on carbon.

While a price on carbon is important, so is the way it is set. The present submission argues that price stability is critical for business decision-making. Generally there is a trade-off between price volatility and quantity volatility. Since it is price stability that makes profit projections more reliable, this submission opts for a set price rather than leaving the market to determine the price.