

Complementary or contradictory?

An analysis of the design of climate
policies in Australia

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Introduction: good climate policies raise revenue

Contrary to popular belief, the policies that are most effective in driving down greenhouse gas emissions actually raise revenue rather than cost the budget money. The Gillard government has recently scrapped, or wound back, a range of policies designed to help reduce greenhouse gasses in order to ensure the budget returns quickly to surplus. These policies, including the Cleaner Car Rebate, Green Car Innovation Fund, Green Start Program (the ironically named replacement to the Green Loan scheme as the replacement was scrapped before it started), and the Solar Homes and Communities Plan, are often called 'complementary policies' as they are designed to complement the operation of a (as yet unseen) carbon price.

This paper outlines the circumstances in which such complementary policies are required and then assesses whether the recent decision to modify and abolish a wide range of these complementary policies was justified. Before doing so, however, it is first necessary to place the need for complementary policies in the broader context of an efficient, effective and equitable approach to reducing greenhouse gas emissions. The three steps towards achieving that goal are:

Step 1 towards a coherent policy framework is to remove the wide range of existing subsidies and tax concessions that work to artificially reduce the price paid for fossil fuels in Australia. As outlined in Table 1, these concessions include exempting airlines from paying fuel excise, arbitrarily allowing some mining companies to pay lower rates of tax than others and providing even giving bigger fringe benefits tax concessions to people who have company cars if they can prove that they drove their car long distances.

While subsidies can sometimes play an important role in encouraging socially beneficial behaviour (for example encouraging people to vaccinate their children), subsidies can also encourage behaviour that is contrary to the public interest. In this paper such policies are described as 'contradictory policies'. As Table 1 shows, contradictory climate policies in Australia cost the taxpayer more than \$9 billion per year. Over the next four years, these contradictory climate policies will cost taxpayers more than \$39 billion. (See Table 1)

Table 1

	2010-11	2011-12	2012-13	2013-14	Total
Concessional FBT treatment of company cars	\$1,110	\$1,220	\$1,290	\$1,340	\$4,960
Exemption from fuel tax for aircraft	\$1,000	\$1,050	\$1,100	\$1,150	\$4,300
Concessional tax treatment of oil from north west shelf	\$580	\$580	\$580	\$590	\$2,330
Accelerated depreciation for planes, oil and gas assets and commercial vehicles	\$915	\$1,000	\$1,030	\$1,055	\$4,000
Exemption from excise for LPG, LNG and CNG	\$550	\$320	\$350	\$370	\$1,590
Fuel Tax Credits Scheme for vehicles used in Mining, agriculture and other non-road purposes	\$5,162	\$5,289	\$5,680	\$5,799	\$21,930
Total	\$9,317	\$9,459	\$10,030	\$10,304	\$39,110

There can be no doubt that the only way to achieve 'least cost abatement' is to abolish these contradictory policies. Any proposal, either by government or others, to reduce emissions at least cost while leaving these policies in place can clearly not be described as least cost. If for political or other reasons the government wishes to provide financial assistance to those who produce and consume the most fossil fuels it should do so via direct cash payment rather than indirect subsidies to the use of fossil fuels. That is, if it is deemed necessary to continue to provide billions of dollars per year those who contribute the majority of Australia's greenhouse gasses then such assistance should not be provided in a way that actually encourages people to consume more fossil fuels than would otherwise be the case.

Proposing to introduce a carbon price while retaining existing fossil fuel subsidies is analogous to driving a car with the accelerator and the brake both pressed to the floor.

Step 2 is to introduce a price on greenhouse gas emissions. The need to introduce a price to drive emission reductions has been long understood by economists and politicians in Australia. John Howard, Kevin Rudd and Julia Gillard and Malcolm Turnbull have all called, in one form or another, for the introduction of a carbon price.

As discussed in greater detail below, the introduction of a carbon price provides new incentives for both producers and consumers to change their behaviour. Furthermore, just as the removal of contradictory measures will save billions of dollars per year the introduction of a carbon price will raise tens of billions of dollars in new revenue. That said, every billion dollars provided in compensation to polluters is a billion dollars that cannot be spent either investing in large scale complementary policies (such as public transport expansion) or spent on other services.¹

Step 3 is to develop a broad suite of complementary policies designed to change behaviours that are less responsive to changes in price than would usually be assumed in economic models. For example, as landlords do not benefit from the lower electricity bills that flow from installing ceiling insulation it is highly unlikely that changes in the electricity price will lead to large changes in the energy efficiency of rental properties.

Governments at all levels have a long history of relying on 'complementary policies' to augment the role played by price based measures to change behaviour. For example:

- *Smoking* - State and Federal and local Governments have been publicly committed to reducing smoking in Australia for more than three decades. While taxes on cigarettes play an important role in discouraging smoking, governments rely heavily on advertising, restrictions on sale to those under 18, restriction on which shops can sell them, restrictions on where they can be smoked and subsidised access to treatments to help people quit.
- *Alcohol* - as with smoking, state and federal governments pursuit of reduce levels of alcohol consumption rely on a combination of taxes, advertising and regulations concerning who can sell alcohol, who can buy it (sales to both minors and intoxicated people are prevented) and where it can be consumed.
- *Unleaded fuel* - Lead in petrol has been linked to significant health problems including developmental delay in children. In order to convert the vehicle fleet to one that relied on unleaded petrol the Federal government introduce range of policies, one of which was to modify the fuel excise arrangements to ensure that unleaded petrol was cheaper than its polluting counterpart. The more important policy change, however, was to require all cars sold in Australia after 1998 to run on unleaded petrol and to make it illegal to put leaded petrol in such vehicles.
- *Private health insurance* - In 1999 the government introduced a 30 per cent private health insurance rebate specifically designed to encourage more people to purchase private health insurance. Soon after, however, the government introduced a range of other policies to encourage the uptake of private health insurance, the most effective

¹ It is worth noting that the compensation scheme attached to the Rudd Government's Carbon Pollution Reduction Scheme (CPRS) was so generous that the proposed introduction of Australia's first carbon price actually imposed a net cost on the Commonwealth budget. That is, the proposed compensation was actually greater than the estimated revenue.

of which was to specifically requiring people to purchase private health insurance before they turned 30 or face legislatively determined higher prices if they decided to join at a later date. Further, the government also required people who earned more than \$50,000 per year to take out private health insurance or instead forfeit 1 per cent of their taxable income to the government.

There is no doubt that complementary policies have an important role to play in the development of an economically efficient suite of greenhouse gas emission reduction policies designed to work well in the real world. There is, however, also no doubt that successive Australian governments, at all levels of government, have shown a preference for the pursuit of so called 'complementary policies' despite their reluctance to either abolish contradictory subsidies or implement the carbon price that the 'complementary policies' are supposed to complement.

It would seem, therefore, that the politics of taking money from polluters is far harder than the politics of spending taxpayers' dollars on complementary measures. Presumably this relative political difficulty in taking money from polluters underpins the recent decision to scrap a range of climate policies rather than abolish the more expensive, and more damaging, contradictory policies. That said, there is also no doubt that while their objectives may be desirable some of the complementary policies that have recently been scrapped were poorly designed and unlikely to deliver any significant benefits. A more detailed examination of these policies is provided below.

Why we need a price on carbon

While much is made of the complexity of tackling climate change, at its heart the economics of climate change are quite simple. Because those who burn fossil fuels do not have to pay for the cost of safe waste disposal the cost of their products is artificially low. Just as slavery helped keep the price of US cotton low, and taxpayer provision of free roads makes private car use cheap, the ability of coal fired power stations to dump hundreds of millions of tonnes of carbon dioxide into the atmosphere makes coal fired electricity far cheaper than it would otherwise be.

Economists refer to the situation in which the actions of one person impact on an innocent bystander as an 'externality' because the costs or benefits in question are external to the person making the decision. When an activity imposes costs on another person, for example air pollution, it is called a negative externality.

Imposing a price on pollution forces those who burn fossil fuels, and those who purchase goods and services that rely heavily on polluting forms of energy, to internalize the cost of releasing greenhouse gasses into the atmosphere. That is, introducing a price on carbon does not prevent people from burning fossil fuels but it ensures that those who do pay a price for doing so. This both discourages the consumption of pollution intensive products and encourages producers to switch to other forms of energy to avoid paying the carbon price.

It is important to note that for a carbon price to work effectively it should reflect the full cost of the harm done to others. In Australia this is unlikely to be the case as the government has repeatedly linked the likely size of any carbon price to the potential impact on business. It should be highlighted that the economically efficient way to use price to tackle a problem such as climate change is to set the carbon price equal to the harm done by pollution and then let the market determine the impact on business. In Australia, however, this causation has been reversed.

The reason that many economists have a strong preference for relying on the introduction of a carbon price to change consumer and producer behaviour in relation to energy use is that price changes do not force individuals to do anything. That is, while the introduction of a ban on air conditioners would almost certainly drive a significant reduction in household electricity use such a blunt approach would have a number of unintended consequences, for example, it may make the lives of some elderly people a misery while doing nothing to discourage people from running three refrigerators.

The introduction of a carbon price, on the other hand, allows individuals to make their own decisions about the best way to adapt. For consumers, those who value the energy they are using the most highly will continue to consume it, and will pay a premium for the privilege. Those who value other forms of consumption more highly will switch their air conditioners off and spend their money on something else instead.

For producers the story is assumed to be similar. Those who can improve their production process will invest in doing so to avoid paying higher energy bills. Those who cannot will pass on price rises to their customers and those producers whose consumers refuse to pay higher prices will be forced to shut down.

Of course, in reality the responses of consumers and producers are far more complex than that typically assumed by economic models. For example, both producers and consumers seem to significantly under invest in energy efficiency technologies with more Australian homes having air conditioners than have ceiling insulation. Further, low income earners may be unable to afford to run their air conditioners regardless of the personal benefit they would receive from doing so. Economic models typically assume that income is distributed evenly.

Why a price on carbon isn't enough

Even if all of the contradictory policies that encourage fossil fuel use were removed, and a carbon price consistent with the harm that greenhouse gas emissions cause was introduced, a significant role for complementary policies would still be required. In the words of Dr Martin Parkinson (2010), the Secretary of the Department of Climate Change (who is soon to be the secretary of the Department of Treasury):

The lack of a carbon price signal is fundamental, and no long term policy solution is possible without the creation of incentives to protect the integrity of our climate system and reduce the risks of dangerous climate change.

But it needs to be complemented by other measures. These include support for the development of new low-emissions energy technologies, integration of climate considerations into transport planning, provision of general energy efficiency information, and addressing split incentives in rental markets.

Significantly, Dr Parkinson (2008) also argues that:

Truly complementary measures should be targeted to areas of real market failure. In all cases, policies need to be well designed and implemented, and need to demonstrate that the benefits of government action outweigh the costs.

The 'market failure' referred to by Dr Parkinson refers to a situation in which rational individuals left to their own devices will likely make decisions which, while possibly in their

own short term self interest, will reduce the collective wellbeing of the community in which they live. For example, while it may be in the perceived self interest of a person to play their music loud at midnight night time or drive at high speed when they are in a hurry such actions are deemed to be harmful to the community as a whole. That is, such actions are said to impose negative externalities on others.

Significantly, we do not allow people to pay for permits to annoy their neighbours, nor do we allow them to pay for premium drivers licenses that allow faster driving speeds. Instead, we rely on regulation to prohibit such behaviour and impose sanctions, including imprisonment, for those who recklessly ignore the law. While much has been made of the need for a price on carbon the potential role for regulation should not be overlooked. As discussed above, as a nation we have used regulation to remove lead from petrol, to remove cigarette advertisements from our televisions and even to ban incandescent light bulbs. Well designed regulations can be effective, efficient and equitable and while relying on price provides greater flexibility, relying on regulation typically provides the certainty that business groups often say they require.

When the actions of an individual impose costs on others a market failure is said to exist, with this specific form of market failure known as a 'negative externality'. Other forms of market failures relevant for climate policy include:

Split incentives - In some situations the people who face the costs of certain actions are not those who will benefit from them, either in the short run, the long run or both. For example, if a tenant incurs the cost of installing insulation in a rental property it is likely to be future tenants who capture most of the benefits. Similarly, if a landlord installs insulation it is the tenant who will benefit from improved amenity and lower electricity bills. In such situations, market forces are unlikely to address simple problems.

Public goods - Some services can only be provided to everyone or no-one, for example, national defence or removing air pollution. That is, it is very difficult to exclude individuals from protection from invasion or the availability of fresh air. In turn, it is virtually impossible for the market to provide such services as there is no need for 'customers' to actually pay to receive a service. Much research and development expenditure shares the characteristics of a public good which is why government investment in R&D is often so important.

Information asymmetry - The simple models of human behaviour that often underpin economic analysis typically assume that not only are individuals 'rational' in all their decision making but that they can acquire and analyse information costlessly. In reality, of course, people find it very hard to compare the costs and benefits of different products. The inability of people to easily inform themselves is a form of market failure.

The introduction of a carbon price will help to overcome one of the biggest forms of market failure responsible for the growth of greenhouse gas emissions, namely, the fact that those who burn fossil fuels are not responsible for paying for the disposal of the greenhouse gasses that their fuels generate. While industries who generate toxic chemicals can no longer dispose of them for free into our rivers and oceans those who generate carbon dioxide or methane remain free to use the atmosphere as their dumping ground. Introducing a price on carbon provides polluters with an incentive to cut down on their emissions as the less they pollute the less they will have to pay. That said, the diverse range of other market failures that dominate the way energy is generated and used in Australia ensures that a carbon price is only one plank in the platform of necessary policy changes. Significantly, however it is the plank with the greatest potential to raise revenue.

What would good complementary climate measures look like?

Not all proposals to reduce emissions will be good ideas. Alternatively, some good ideas can be so poorly implemented that they become inefficient, inequitable or even as with the home insulation scheme, dangerous. If complementary policies are to make an effective contribution to greenhouse gas reduction and to do so without imposing unnecessary costs on taxpayers they need to be well designed and regularly evaluated. The following criteria provide a framework by which all complementary policies should be evaluated.

1) Efficient (low abatement cost)

Complementary policies can be evaluated by looking at the amount of money they cost and comparing it to the reduction in carbon emissions (abatement) they drive. If two policies reduce carbon emissions by 1000 tonnes and one costs \$10,000 and the other costs \$100,000, it is preferable to implement the cheaper policy, unless there are other policy objectives that the more expensive option delivers.

2) Address a clear case of market failure

The rationale for a complementary measure needs to be a clearly identified case of market failure. As discussed above, it is to be expected that a range of consumer and producer behaviours will not respond in the desired way to changes in price. Similarly, problems associated with the distribution of income or flaws in other markets may act as an impediment to the operation of a price signal.

When such problems exist, well designed complementary measures can help to ensure that least cost abatement can still be achieved.

3) Work in conjunction with, not opposition to, other policies aimed at reducing emissions

As the name suggests, the purpose of complementary measures is to complement the effectiveness of the operation of a carbon price and other existing emission reduction policies. The main principles for ensuring that complementary policies are genuinely complementary should be *that a complementary policy augments, rather than offsets, the operation of another policy.*

For example, the Rudd Government's Carbon Pollution Reduction Scheme (CPRS) was designed in such a way that any abatement generated by its subsidies for household PV solar panels would simply reduce the abatement effort required by other polluters. That is, the PV subsidies only changed who was directly responsible for pollution, not the total amount of pollution generated.

4) Complementary with policies of other levels of government

A corollary of the above is the need for Commonwealth policies to work well with state and local government policies and vice versa. Not only do decisions about the division and/or overlap of responsibilities need to be well considered but specific policy proposals from one level of government need to build on what is already occurring in overlapping jurisdictions.

A fundamental flaw with the design of the CPRS was the decision to assign all responsibility for mitigation (the process of reducing greenhouse gasses) with the Commonwealth while assigning all responsibility for adaptation (the process of

coping with climate change) with the state and federal governments.² In addition to ignoring the political reality that elected state and local governments might have a strong desire to implement emission reduction policies, the decision by the Commonwealth to take sole responsibility for mitigation ignored the fact that in some cases state and local governments were better placed to design and implement mitigation policies.

Similarly, the current arrangements with PV solar subsidies result in households in some states simultaneously receiving subsidies from both their state government and the commonwealth government.

5) Equitable

While it is generally accepted that the introduction of a carbon price should be designed in such a way that it takes account of the impacts on low income earners there is much less discussion of the need to ensure that complementary policies are equitably designed.

For example, many state governments now have 'Solar Feed in Tariffs' which are simply subsidies paid to people who install PV solar panels. Despite the generosity of these schemes making them quite lucrative for those who participate, the high upfront costs ensure that low income earners are far less likely to participate. Similarly, people who rent their home or who live in units are far less likely to participate. As the subsidy is funded by all electricity users but only received by the minority of people who participate the distributional consequences of the scheme are determined solely by the demographics of those who participate. An analysis by Macintosh (2010) makes it clear that households in areas of high socioeconomic status are the most likely to be in receipt of the subsidy.

It is also important to note that the fairness of a feed in tariff cannot be improved by increasing the uptake of the scheme as, by definition, the subsidy can only be paid to a minority of electricity consumers. That is, if 100% of customers installed PV panels then they would all be in receipt of the subsidy but there would be no one left to pay it. Alternatively, if 99 per cent of people were in receipt of the subsidy then the cost to the 1 per cent who were paying it would be crippling.

While neither of the above scenarios is likely it clearly demonstrates why the design of complementary policies is so important. The decision to provide a 20 year price guarantee for the value of the feed in tariff subsidy, as is the case in the ACT, will create growing inequities over time.

6) Accountable

Complementary policies have an important role to play in driving behaviour change and, in turn, emission reductions. That said, as was seen with the failed home insulation scheme and the Green Loan scheme not all complementary policies will be well designed and/or well implemented.

² In hindsight it seems remarkable that the state governments ever allowed the Commonwealth to take sole responsibility for mitigation (which when pursued through a carbon price raises significant amounts of revenue) while the states accepted sole responsibility for the enormous costs of building, modifying and repairing the enormous amounts of social and economic infrastructure associated with the cost of adaptation. (See Denniss and Richardson 2008)

In order to achieve significant emission reductions at low cost, ensure taxpayers money is well spent, and facilitate the design and implementation of even better policies in the future, it is important for the objectives of complementary measures to be spelt out and for the operation of policies to be monitored against those criteria on a regular basis.

Importantly, the failure of a program such as the home insulation scheme should not be conflated with the conclusion that significant market failure does not exist in relation to the split incentives in the housing market. It would be a poor reflection on the imagination of the Government policy process if the failure of one program led to the conclusion that a particular problem could not be solved.

Recent proposals to modify complementary climate policies

On January 27, 2011 Prime Minister Julia Gillard announced a plan to fund a \$5.6 billion assistance package to assist with the necessary reconstruction following the Queensland floods. The largest component of the funding is proposed to come from spending cuts, with the majority of the proposed cuts coming from complementary climate policy measures. In particular, the Prime Minister announced cuts in the form of:

- Not proceeding with the Cleaner Car Rebate Scheme
- Abolishing the Green Car Innovation Fund
- Reducing and deferring spending on the Carbon Capture and Storage Flagships and Solar Flagships programs and the Global Carbon Capture and Storage Institute
- Capping annual claims under the Liquefied Petroleum Gas (LPG) Vehicle Scheme
- Capping funding for the Renewable Energy Bonus Scheme – Solar Hot Water Rebate
- Not proceeding with Round 2 of the Green Start Program
- Capping funding for the Solar Homes and Communities Plan

In explaining the decision to focus her governments spending cuts on complementary climate policies Prime Minister Gillard (2011) stated:

“The key to these carbon abatement program savings is my determination to deliver a carbon price.

“There is complete consensus that the most efficient way to reduce carbon is to price carbon. Some of these policies are less efficient than a carbon price and will no longer be necessary – others will be better delayed until a carbon price’s full effects are felt.

“We looked at these programs, we looked at the determination the government has to price carbon, we determined the most economically efficient thing to do was get that price on carbon.”

The explicit rationale provided by the Prime Minister for her decision to wind back, or abolish, funding for these programs is that they will become redundant when a price on carbon is introduced or more effective after one is introduced. This suggests that the Gillard Government believes the specific objectives of the policies to be scrapped or wound back

are best met by a broad based carbon price rather than well targeted complementary measures.

Does a carbon price remove the need for the complementary measures that have been wound back?

This section provides a brief analysis of the need, or lack thereof, for the policies listed above as providing the bulk of the funding for the Commonwealth's contribution to Queensland's flood reconstruction efforts. More detail on the individual policies can be found in Appendix A.

Measures to reduce passenger car emissions

The Cleaner Car Rebate Scheme, commonly referred to as 'cash for clunkers' was designed to hasten the turnover of the car fleet with a view to removing the oldest and most polluting vehicles from the road more quickly than would otherwise be the case. The broad objective of the Green Car Innovation Fund, on the other hand, was to improve the fuel efficiency of the cars entering into the car fleet.

While the Prime Minister argued that the introduction of a carbon price would render such policies unnecessary, it is entirely unclear how it is she expects a carbon price to achieve the objectives of either of these policies. Firstly, the Rudd Government's CPRS was designed in such a way that it would not result in any increase in the fuel price and there has been no indication that the Gillard Government is keen to add the politics of rising petrol prices to the hurdles its proposed carbon price legislation will need to jump later this year. Under such circumstances, it is entirely unlikely that any impending carbon price will have any impact on the decisions made by those who produce or purchase cars.

However, even if a carbon price were to deliver a substantial increase in the price of petrol it is highly unlikely that such an increase would have a significant impact on either the choice of cars that people purchase or the design of cars being produced. Despite the inordinate attention paid to petrol prices in Australia, the fact remains that the cost of petrol constitutes only a very small portion of the costs of car ownership. Similarly, most cars purchased in Australia are not produced here, and in turn, their fuel efficiency will not be influenced by Australia's carbon price.

While the design of these programs was such that they were unlikely to drive a significant reduction in transport emissions, it is equally unlikely that the introduction of a carbon price would do so either.

Rather than simply abolish these schemes a coherent approach to achieving least cost abatement would involve abolishing the existing subsidies for passenger car use and following the lead of other countries who have long standing regulatory regimes to help reduce fuel consumption.

Measures to promote research and development

The Carbon Capture and Storage Flagships program and the Global Carbon Capture and Storage Institute have, to date, featured prominently in the rhetorical case that has underpinned successive government's declared optimism in so called 'clean coal technology'.

Leaving aside the probability that government funding for this technology would have ever resulted in the installation of commercial scale carbon capture and storage (CCS), the issue

at hand is whether the introduction of a carbon price would act as a substitute for the provision of specific research and development funding?

As the introduction of a carbon price would make the disposal of carbon dioxide more expensive it is true that such a policy improves the economic case for investment in CCS research. However, as CCS has not yet been shown to work at a commercial scale and other technologies (for example wind and gas) are far cheaper it is entirely unlikely that the market will allocate anything like the funding for CCS that has previously been promised for CCS.

Similarly, the objective of the Solar Flagship program was designed to drive investment in an emerging, and currently expensive, technology in the hope that the lessons learned in building commercial scale solar farms might yield future benefits for private sector investors willing to back such a technology.

While it would be reasonable for the Government to abandon research in a field in which it felt the chances of success were so small that the investment could not be justified this was not the explanation provided by the Prime Minister. There is no reason to assume that the introduction of a carbon price will drive the kinds of investment or knowledge creation envisioned under the schemes that the government proposes to wind back.

Measures to reform household energy use

The Rudd Government's attempts to drive changes in household energy use were as unsuccessful as they were ambitious. The home insulation scheme, the Green Loan scheme and the various iterations of the PV rebate scheme were all designed to drive fundamental change on an ambitious scale and all delivered substantial embarrassment, expense and, in the case of the home insulation scheme, loss of property and even life.

The failure of these previous schemes and the pre-emptive abolition and curtailment of the schemes listed above do not, however, provide any support for the Prime Minister's assertion that the impending arrival of a carbon price renders such complementary measures unnecessary.

The Australian energy market, and the behaviour of Australian householders in relation to the use of energy, is beset with market failure. For example, more Australian homes are air conditioned than are insulated. Those buying or renting new premises are fully informed about the visual amenity of the home in question but almost completely unaware of the energy costs associated with inhabiting it. While so called 'energy efficiency labelling' is increasingly common for housing it is virtually no use as the housing industry has worked hard to ensure that enormous houses that use enormous amounts of energy can still be described as efficient as long as they incorporate a specific set of appliances or design features. The introduction of a carbon price will exacerbate rather than ameliorate these market failures.

Conclusion

Well designed complementary policies have an important role to play in any attempt to drive significant greenhouse gas emission reductions in Australia. That said, there is no doubt that some complementary policies are so poorly designed and implemented that it is neither in the environment nor the taxpayers interest for them to be maintained.

The Gillard Government's decision to abolish and wind back a number of complementary schemes could have provided them with an opportunity to rethink the role of complementary measures and develop a more coherent suite of policies with the potential to deliver both

lower cost abatement as well as potential spill over benefits in the form of knowledge, exports and jobs.

However, in attempting to conceal the design flaws with some of their complementary measures under the imagined need to find budgetary savings the Gillard Government has instead further muddied the policy waters.

Rather than help inform the public that a carbon price has an important, but limited, role to play in driving behaviour change the Government has instead inflated expectations about what a carbon price can achieve as an excuse to avoid scrutiny over the design of its existing complementary measures.

Policies such as the Green Car Innovation fund were little more than a gift from Australia's taxpayers to the Australian car industry. But what is needed is not simply for such policies to be abolished in the name of cost cutting but replaced with policies that are genuinely transformative for the Australian car industry.

One irony of the decision to make savings at the expense of climate policies is that far greater savings could be made by abolishing the billions of dollars per year spent on contradictory policies that serve to encourage the consumption of fossil fuels. The greater irony, however, is that while the Prime Minister cited the impending arrival of a carbon price as making a wide range of climate policies redundant that same carbon price should deliver between \$10 and \$20 billion in additional revenue each year. Such a new source of revenue could easily fund the Queensland flood reconstruction several time over, unless of course the government is again planning to give every cent of new revenue away in compensation to those they are seeking to tax.

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Appendix A Details of scrapped and modified climate policies

Cleaner Car Rebate

The *Cleaner Car Rebate* scheme was announced by the Prime Minister in the lead up to the 2010 election. Under the scheme, owners of a pre-1995 vehicle would be eligible for a \$2,000 rebate if they scrapped it and replaced it with an eligible low-emission vehicle. The rebate was originally scheduled to run for four years, would be capped at 200,000 vehicles and have a budget of \$394 million. In order to pay for the program, the Government reallocated funding from three other climate initiatives: the Renewable Energy Bonus Scheme, Solar Flagship Program and the Carbon Capture and Storage Flagship Program.

Green Car Innovation Fund

The Green Car Innovation Fund was originally promised by the Australian Labor Party from opposition in the lead up to the 2007 federal election. The details of the program were refined in the 2008 federal budget, where the new Labor Government announced the Fund would consist of a \$500 million investment over five years from 2011 to 'encourage the Australian automotive industry to develop and manufacture low emissions cars'. The Government envisaged that the automotive industry would match investments from the Fund on a 3-1 basis, thereby leveraging \$2 billion in new investment. Acting on recommendations from the Bracks Review of the automotive industry, in November 2008 the Government announced that the Fund would be expanded to \$1.3 billion, the start date would be brought forward to 2009 and its running time would be doubled to 10 years. In the 2009 budget, the forward estimates indicated that \$765 million of the money available under the program would be spent over the four year period from June 2009 to 1 July 2013. A year later, this was cut by 25 per cent, to \$567 million.

The types of projects that have received funding under the program to date include:

- \$3.54 million to Alternative Fuel Innovations (AFI) Pty Ltd to help it develop a new LPG liquid injection system for vehicles;
- \$63 million to upgrade Toyota's engine plant in Altona, Victoria, which would help bring production of Toyota's latest four-cylinder engine for the Camry and Hybrid Camry to Australia;
- \$35 million to Toyota to subsidise the manufacture of the Hybrid Camry at the company's Altona plant in Victoria;
- \$42 million to Ford to help it fit the four-cylinder, turbo-charged EcoBoost engine to the Ford Falcon;
- \$149 million to GM Holden to help bring production of its 1.8 litre, 4-cylinder Holden Cruze to Australia (this project also received \$30 million from the South Australian Government);
- \$2.4 million to SMR Automotive Australia to help it set up a pilot plant in Adelaide to produce lightweight automotive mirrors; and
- \$440,413 to Orbital Australia to help it develop its FlexDI engine for Chinese automaker Changan Automobile.

Green Start Program

The Green Start Program was created to replace the infamous Green Loan Scheme, which the Government announced would be shut down in late 2010 due to evidence it had been grossly mismanaged. In the press release announcing the changes in July 2010, the then Minister for Climate Change, Senator Penny Wong, stated that the Green Start Program would be split into two rounds:

- round one would fund energy assessments for households via grants to assessors; and
- round two would provide assistance to low-income households and other disadvantaged people to help them improve their energy efficiency, and would operate through a grants program to community and welfare NGOs.

On 21 December 2010, after the appointment of the current Minister for Climate Change, Greg Combet, it was announced that the Government would not proceed with either round one or two of the Green Start Program. To lessen the impacts on energy assessors, the Green Loan Scheme was extended to 28 February 2011 and \$30 million was set aside 'to provide assistance to uncontracted Green Loans assessors and to assist accredited assessors receive further training'.

\$129 million of the savings from round two of the Green Start Program were reallocated to the flood response.

Solar Homes and Communities Plan

The Solar Homes and Communities Plan (SHCP) was originally a product of the Howard Government's deal with the Australian Democrats over the GST. The Government and Australian Democrats agreed that it would create a program, called the Photovoltaic Rebate Program (PVRP) that would provide grants to meet half the cost of household PV systems, up to a maximum of \$5,500 per household. After a number of program modifications, in the lead up to the 2007 election, the Howard Government announced it was doubling the rebate, from \$4.00 per watt installed to \$8.00 per watt installed, up to a maximum of \$8,000. When the Rudd Government took office, it changed the name of the program to the SHCP and continued with the inflated rebate. Not long after, it was clear the program was suffering from excess demand, which the Government tried to address by introducing a means test. This failed and demand for the program ballooned.

Between January 2000 and December 2007, there were 13,538 successful applications; or around 1,700 a year. In the final 18 months of the program, there were over 94,000. Ultimately, this level of public demand was unsustainable and it led to the program's demise. Facing a substantial blowout in costs, the Government closed the program on 9 June 2009 but promised to provide payments to eligible applicants who made claims prior to the program's termination.

In 2008, the Rudd Government estimated the SHCP would cost \$152.5 million over the forward estimates. After all eligible rebates have been processed total expenditure is expected to reach \$1.1 billion. Despite the magnitude of the spending, the program achievements were modest: over 100,000 PV systems were subsidised under the program but they will only reduce emissions by around 90,000 tonnes CO₂-e per year, at a cost of between \$238/tCO₂-e and \$282/tCO₂-e.

In response to the floods, the Government has capped the amount of funding available to outstanding claimants. This is expected to save \$85 million, which has been redirected to the flood recovery effort.

Funding cuts to ongoing programs

Liquefied Petroleum Gas (LPG) Vehicle Scheme

The Rudd and Gillard Labor Governments inherited the LPG Vehicle Scheme from the Howard Government. It was announced in August 2006 at the height of one of Australia's regular petrol price panics and, depending on the mood of the Government, its objective was 'to capitalise on Australia's LPG resources by encouraging vehicle owners to buy new LPG vehicles or convert existing vehicles to LPG' or help 'motorists to offset high petrol prices'. Under the original scheme, \$1000 grants were available for the purchase of vehicles fitted with an LPG unit at the time of manufacture and \$2000 grants were available for the LPG conversion of a new or old petrol or diesel vehicle. The Labor Government subsequently changed this, providing \$2000 for the purchase of new vehicles fitted with LPG prior to its first registration and \$1750 for conversions, which would be gradually reduced to \$1000 over the period 2009 to 2012.

At the end of 2010, \$543 million had been paid out under the LPG Vehicle Scheme, with 2336 grants going to new vehicles and 276,014 being paid for conversions of registered vehicles. In its flood announcement, the Government indicated that, from 1 July 2011, it would cap the scheme at 25,000 conversions per year over the remaining life of the program (until June 2014).

Renewable Energy Bonus Scheme

Like the Green Start Program, the Renewable Energy Bonus Scheme was created to deal with the failure of another; the Home Insulation Program. The much criticised Insulation Program was rolled into the Solar Hot Water Rebate Program to create the Renewable Energy Bonus Scheme. Initially the program offered \$1000 rebates for ceiling insulation and solar hot water systems and \$600 rebates for heat pumps. The ceiling insulation component was later dropped on the recommendation of Dr Alan Hawke, who reviewed the administration of the original insulation program. In response to the floods, the Government announced it would cap funding under the scheme, thereby saving \$160 million over two years.