OVERVIEW

Key points

- Where activities are covered by an emissions trading scheme (ETS), individuals and firms factor the traded price of greenhouse gas emissions into their decision-making and adjust their production and consumption in the most cost-effective way.
  - An effective ETS therefore is most likely to achieve a given abatement target at least cost to the community.
- With an effective ETS, much of the current patchwork of climate change policies will become redundant and there will only be a residual role for state, territory and local government initiatives.
- Once an ETS is in place, other abatement policies generally change the mix, not the quantity, of emissions reduction. Retaining existing, or introducing new, policies to supplement the ETS would need to offer other benefits. Those with potential include:
  - addressing a lack of incentive to conduct research and development in low-emissions technologies
  - addressing barriers to the take-up of cost-effective energy efficiency opportunities
  - exploiting abatement potential in sectors and activities not covered by the ETS.
- Currently, the most significant climate change policy instrument is the Mandatory Renewable Energy Target (MRET) which is marked for significant expansion. However, with an effective ETS in place, the MRET would:
  - not achieve any additional abatement but impose additional costs
  - most likely lead to higher electricity prices
  - provide a signal that lobbying for government support for certain technologies and industries over others could be successful.
- The extent to which land use, agriculture and forestry will be included initially in the ETS is uncertain. While it appears feasible to include forestry and some elements of agriculture, it is unclear whether this is the best option.
  - Other policies in uncovered sectors could encourage additional abatement. A key example is credit for carbon sequestration (greenhouse gas offsets). But ensuring the effectiveness of such arrangements can be difficult and costly.
  - There is little benefit in Australia pursuing emission reductions that are not recognised under international rules. This has implications for linking with other countries' emissions trading schemes.
- All supplementary policies must be subject to rigorous evidence-based analysis to determine if their rationales are sound and, if so, whether intervention would deliver a net community benefit after consideration of the costs of action.

Overview

The Australian Government, like some other developed nations, has decided to reduce greenhouse gas (GHG) emissions in advance of achieving the comprehensive international response that will ultimately be needed to significantly reduce global emissions. Central to this is its decision to meet specified GHG targets through an emissions trading scheme (ETS).

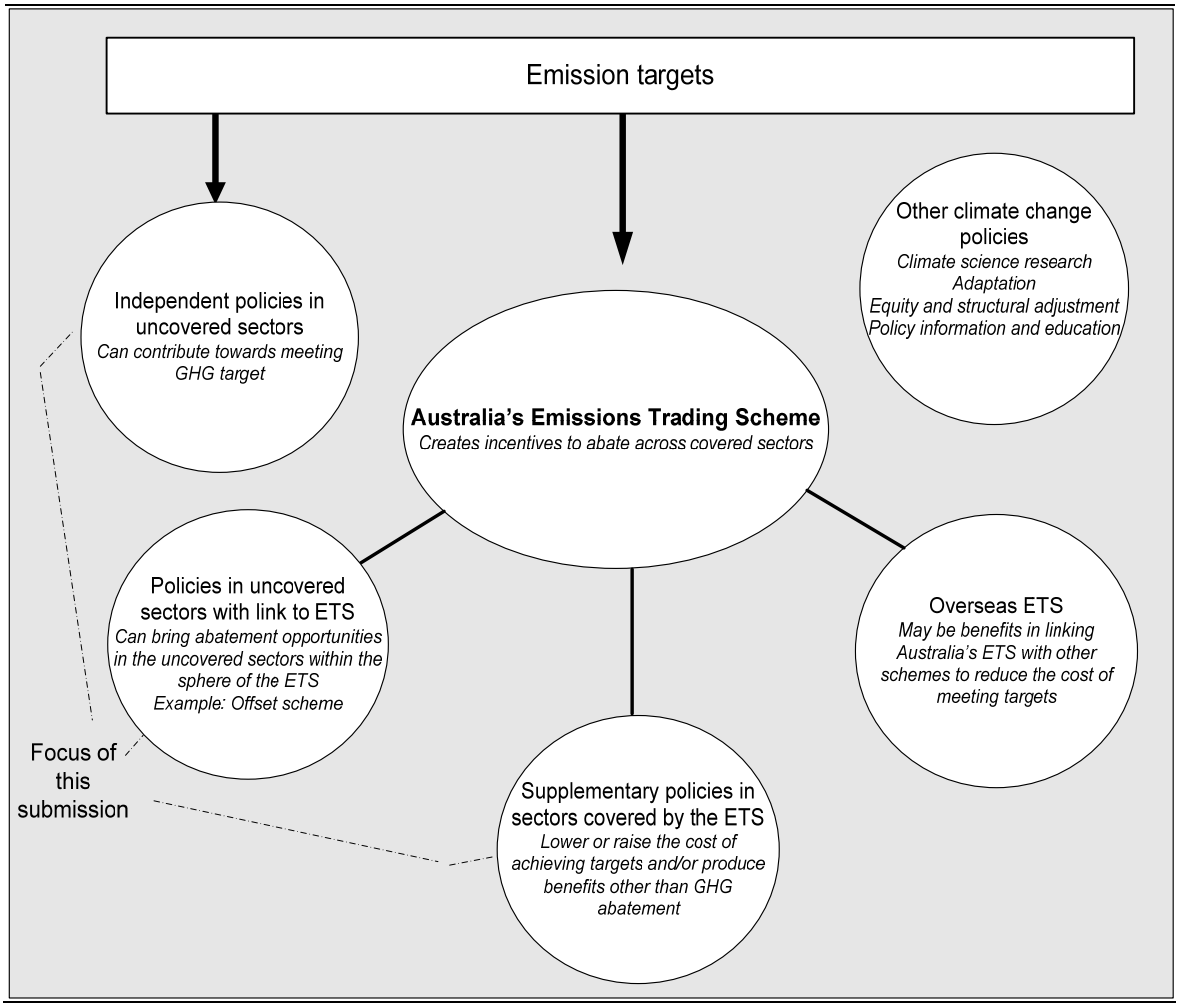
The hope is that Australian action will signal a commitment to be part of a global solution and add to momentum for other nations to take similar action. It could also assist Australia to gain a 'seat at the table' to influence the design and rules for any wider international agreement, including how national schemes might be linked. Of course, even if effective international measures are put in place to reduce GHG emissions, this would reduce, but not eliminate, climate change impacts. Consequently, adaptation to climate change is likely to be as important a consideration as abatement.

This submission considers the most cost-effective way that Australia can meet a given abatement target. (The scope is outlined in figure 1.) It does not consider: adaptation policy; the rationales for, or the costs and benefits of, pursuing given emissions targets; the specification of those targets; or design features for the ETS. Its focus is primarily on one key question: *in the presence of a well functioning ETS, what other domestic climate change policies are warranted?*

The objective needs to be least cost abatement

Once GHG targets are set, the optimal policy response is to price emissions directly — either through an emissions tax or an ETS. Under an ETS, the allowed amount of GHG emissions determines the creation of permits that entitle holders to emit a specified volume of GHGs. The demand for permits is driven by the requirement to acquit permits when releasing GHGs. Provided the emissions target 'bites', permits have value and can be traded in an emissions market. This harnessing of market mechanisms allows permits to be traded throughout the economy to reach their highest value uses. Unlike prescriptive command and control approaches, an ETS leaves it to producers and consumers — who have better information about their own production costs and preferences than governments — to work out the most cost-effective way to reduce emissions. In this way, the targets are most likely to be achieved at lowest cost to the economy and community.

Figure 1. **Relationship between the ETS and supplementary policies**



Bold arrows indicate that a policy can be used to meet (or contribute towards meeting) Australia's pre-determined emissions target. Other policies do not affect achievement of the target. Policies are connected to the ETS where they can influence the mix of abatement under the ETS and the permit price.

Achieving this least-cost abatement objective could, however, be subject to challenge from the confluence of several factors.

- The costs of abatement will be apparent from the start, but the benefits will not:
  - the community will bear highly visible costs through, for example, rising energy and fuel prices
  - benefits will be conditional on the actions of others and (to the extent that they arise) will not accrue for a long time
  - the effect of the policy response will be hard to assess owing to the difficulty of comparing climate-related and economic outcomes with and without an ETS — the counterfactual cannot be observed.
- If permits are auctioned, this will generate substantial government revenues, intensifying pressures to hypothecate funds to other climate change initiatives —

particularly schemes that appear to provide more tangible outcomes than the diffuse results of the ETS's economy wide price signal.

- There is a widely held view that a multiplicity of abatement measures must be pursued because there is no 'silver bullet' for addressing climate change and a lack of recognition that an ETS encourages a diversity of actions.
- The absence until now of an economy wide signal of the social cost of emitting GHGs has prompted all governments to devise a variety of indirect measures, with many such schemes now having an entrenched constituency.

These considerations suggest that not only are Australian governments about to face their most difficult ever regulatory challenge, they will be subject to lobbying to retain abatement measures and also to institute new ones. This is manifest already in government commitments to greatly increase expenditures on climate change programs. Unless carefully conceived, additional measures could significantly increase abatement costs yet provide no additional emission reductions.

By allowing the market to achieve an efficient outcome through the decentralised price-responsive actions of everyone in the economy, an effective ETS could do the 'heavy lifting'. In fact, an ETS could shoulder so much of the abatement effort that other policies would be needed only to fill any gaps in its reach. Accordingly, much of the current disjointed and fragmented patchwork of climate change policies throughout Australia would be expected to become redundant.

The case for additional climate change policies

Under a 'pure' ETS with a binding quota, the quantum of emissions is fixed. In this case, other abatement policies aimed at sectors covered by the ETS could change the composition of emission reductions but not total emissions (box 1). Under an ETS with a 'safety valve' — that is, allowing emissions above the cap, subject to a penalty — it is possible that supplementary policies could result in extra abatement. That said, the policies would generally result in additional emission reductions that were more costly than the safety valve price, thereby defeating its intent.

To be justified, supplementary policies would need other rationales, including:

- lowering the cost of abatement by correcting for:
  - unpriced 'spillovers' leading to underprovision of innovation in low-emissions technologies
  - information barriers that may prevent the uptake of cost-effective energy efficiency opportunities.
- addressing gaps in the coverage of an ETS where excluded sectors offer low-cost abatement or sequestration opportunities.

Box 1. **Interaction of an ETS with other climate change policies: the case of light bulbs**

Under an ETS, the emissions target is set below the level that would have otherwise occurred. With the demand for permits exceeding their supply, as in any market, the price of permits has to rise to equate quantity demand and supply. By enabling firms with access to lower cost abatement opportunities to reduce their emissions, and firms with high abatement costs to purchase permits and continue to emit, a fixed GHG emissions target can be met. Supplementary policies targeting sectors covered by the ETS will not alter total abatement.

Mandating energy efficient light bulbs, for example, could achieve greater abatement from less energy use, but there would be an equivalent decrease in abatement elsewhere. This is because the energy efficiency policy reduces emissions and thereby displaces other abatement that would have occurred in order to meet the ETS target, reducing the demand for permits such that their price falls. As it is unlikely that all firms and households would install energy-efficient light bulbs under an ETS, the policy-induced abatement occurs in place of other abatement that would have occurred with a higher permit price. The composition of abatement changes, not the amount.

Moreover, unlike market-determined abatement through the ETS, households and firms are constrained from acting according to their assessment of whether savings on their energy bills from replacing their incandescent lighting systems are greater than the cost. In contrast, an ETS by itself would allow households and firms to respond to price signals in the way they deemed most cost-efficient — for instance, opting to retain some incandescent bulbs while installing more efficient heating.

Other rationales for supplementary policies are generally weak. It has been suggested that, because it will take time to establish the credibility of an ETS, transitional policies are needed to fill the gap (box 2). This could be done, for example, by preventing construction of energy-inefficient buildings that might not be built if the expected ETS-related increases in energy prices were factored in. To the extent that the argument has a coherent underpinning, the policy response should be to address any such credibility problem directly in the design of the ETS. Moreover, the likelihood that policymakers would be able to correct for any credibility deficit in a way that produced more benefits than costs is questionable.

Another claimed rationale is that special measures might deliver additional non-mitigation benefits — for example, it is suggested that subsidies to assemble hybrid cars in Australia could reduce GHG emissions as well as fostering domestic activity in the motor vehicle sector. While it is clearly appropriate to assess all costs and benefits of a policy initiative, with an effective ETS in place any climate change benefit of a subsidy for the production of hybrid cars would be illusory. The policy would therefore need to be justified on industry policy grounds.

Box 2 **Supplementary policies during the transition to an ETS**

The credibility of an ETS is fundamental. If people expect the ETS to be rescinded or watered down in the future, abatement will focus on activities that have a short time horizon. Hence, the resulting abatement could be of the wrong character — that is, insufficiently focused on transforming long-lived capital goods. Investment in low-emissions technologies could also suffer. This has led some to argue for a greater role for supplementary policies in the initial years of an ETS, while the credibility of emissions prices is being established. There are problems with doing this:

- it can be difficult to tell whether an ETS has low credibility as there are many reasons why firms might respond differently to policymakers' expectations
- there would be a risk that supplementary policies could change the composition of abatement for the worse, due to the limited information and instruments available to policymakers
- supplementary policy can itself compromise the credibility of an ETS because it tends to lower ETS permit prices.

A better approach would be to set emissions targets and design the ETS and related institutions in ways that promote credibility. Australia appears to be in a good position to establish a credible ETS having gained insights from the National Emissions Trading Taskforce, the Task Group on Emissions Trading and now the Garnaut Review. Lessons have been learned from others in establishing an ETS, in particular the European Union. In addition, Australia has a demonstrated record in establishing independent institutional arrangements.

Lowering the cost of abatement through technology policy

An ETS — in raising the cost of emitting GHGs — would provide a powerful incentive to develop low-emissions technologies. Arguably, however, given the scale of the technological transformation necessary to reduce emissions, price incentives may not be sufficient. Knowledge spillovers are likely to be particularly marked in this area and thus private enterprises may underinvest in developing new technology. This arises from the difficulty the innovator may face in capturing the benefits associated with innovation — for example, the development of basic knowledge capabilities or diffusion of new ideas that can be used cheaply by others without payment to the originator. In essence, the benefits spill over for use by others at no cost to the user. Without intervention, this knowledge creation and diffusion could be underprovided.

The strongest case for public support occurs for basic research in science and/or where businesses undertake novel R&D activities that will either spill over cheaply to others, or trigger cycles of innovation by rivals. This could also include pre-commercialisation activities such as testing 'proof of concept' through demonstration plants.

The case for public funding to support business commercialisation and deployment is weaker because there are fewer potential spillovers at this later stage. For instance, as failure to commercialise would give rivals the time to poach the R&D knowledge, firms usually have adequate incentives to move quickly to commercialisation. Thus, public support at this stage risks financing investments that would have occurred anyway. That said, the price impacts of an ETS would provide a strong 'demand pull' for the commercialisation and deployment of low-emission technologies.

Taking a wider view, the degree to which the costs of abatement in Australia are reduced is likely to depend overwhelmingly on innovation that occurs elsewhere. Benefits from international cooperation on government support for research and development activities in low-emissions technologies are likely. Engagement with a more diverse portfolio across the globe will assist in promoting technology transfer. The composition of Australia's policy in this area should be guided by the contribution it can make and national interest considerations, including a reflection of domestic energy resources (for example, coal, uranium and the sun). However, a balance needs to be struck between providing technology-neutral support and targeting particular areas of potential promise, such as carbon capture and storage, that could reduce emissions from coal generated electricity consistent with Australia's national interest.

Renewable energy targets in the presence of an ETS

The capacity of an ETS to provide the demand pull to support deployment of low-emissions technologies means that they will play an increasingly important role as emissions targets are tightened. This has implications for the efficacy of the Mandatory Renewable Energy Target (MRET) scheme. The MRET specifies that an amount of electricity generation must come from renewable energy sources, but excludes other low-emissions technologies such as carbon capture and storage or nuclear power.

If the objective of the MRET is to address any spillovers associated with developing new renewable technologies, then it is not well-targeted. Being a quota, it fills with least-cost renewable sources — typically mature technologies such as wind. The main concern, however, is with its interaction with an ETS.

The current MRET target of 9500 gigawatt hours per year directly affects the mix of electricity generation — that is, the quota is binding. If, as planned, the MRET target were expanded to 45 000 gigawatt hours in 2020 (equivalent to 20 per cent of electricity generation), it could have a substantial impact on abatement costs (box 3). It would also reduce incentives to abate emissions or innovate in ways that do not meet the eligible technology criteria.

Box 3 **Operating the MRET in parallel with an ETS increases abatement costs**

An ETS would result in a significant increase in renewable energy generation. If an expanded MRET (with a 20 per cent electricity generation target) were to operate in conjunction with an ETS, the combination of the two instruments would drive substantially more renewable energy generation (unless the ETS target was so stringent that a 20 per cent generation target would be achieved in the absence of the MRET — a remote outcome at best and one which would render the MRET irrelevant). However, the overall level of GHG abatement would remain the same.

The MRET would displace other energy generation sources, particularly gas. This has implications for abatement costs. By 2010:

- natural gas combined cycle generation (which has less than half the emissions of black coal) is projected to cost around $35–$45 per megawatt hour
- renewable generation is projected to cost from $55–$80 per megawatt hour for wind to $240-$400 per megawatt hour for photovoltaics.

Reserving a proportion of electricity generation for renewable energy sources changes the generation mix in a way that increases abatement costs for no additional emissions reduction benefit. These problems would be further compounded if state-based renewable energy target schemes were retained (or introduced).

An MRET operating in conjunction with an ETS would not encourage any additional abatement, but still impose additional administration and monitoring costs. To the extent that the MRET is binding (which is its purpose) it would constrain how emission reductions are achieved — electricity prices would be higher than otherwise and market coordination about the appropriate time to introduce low-emissions energy technologies would be overridden. If it was non-binding, it would simply increase administrative, compliance and monitoring costs. Moreover, it would also help to foster a perception that governments are amenable to interfering with the least cost abatement objective of the ETS. This could encourage other potential beneficiaries to seek special programs that neither increase abatement nor reduce its cost.

Lowering the cost of abatement through energy efficiency policy

By increasing the price of energy, an ETS would strengthen incentives for greater energy efficiency. Importantly, it would encourage a longer-term view about prospective energy prices, thereby influencing investment decisions for long-lived capital goods — for example, more energy efficient buildings.

There may be some potential for additional policies to reduce abatement costs by addressing barriers to the uptake of cost-effective energy efficiency opportunities. Possible rationales are:

- failures in the provision of information — for example, information that has public good characteristics and/or information that is available to some parties in a transaction but not others
- split incentives — for example, a builder may reduce capital costs of construction unconcerned that the operating costs experienced by the occupant will be higher as a consequence.

However, care must be taken to ensure that intervention delivers net benefits. Often market failures are more perceived than real (because market mechanisms are operating adequately) and interventions can be ineffective and costly. Indeed, energy efficiency policies can have costs that extend beyond administration and compliance. For consumers, there is the prospect of being compelled to reduce particular emissions-producing activities and/or forgoing product features that they value more highly than energy efficiency.

Many energy efficiency policies pursued by Australian governments, from information provision to energy-efficiency standards and subsidies (for example, for solar water heating), have been used to a greater extent than warranted by the potential market failures. Although this may have, in part, reflected the lack of any mechanism to incorporate the social costs of GHG emissions, it appears that some measures were 'over-stretched' to fill this policy void. In the presence of an ETS to target GHG emissions directly, energy efficiency policy should be refocused on efficiently addressing any barriers to the uptake of energy efficiency opportunities.

Policies for excluded sectors

While broad coverage is desirable, in practice factors such as the administrative costs of monitoring and verification, and the number of entities required to be covered, can make a sector unsuitable for inclusion in an ETS. It is likely that Australia's ETS will commence with coverage of stationary energy, transport, industrial processes and fugitive emissions associated with the production, processing and distribution of fossil fuels. This would cover around 70–75 per cent of total emissions. It is unclear if the waste, agriculture and land use (mainly forestry) sectors will be included initially.

If an overall national target for GHG emissions is pursued with no abatement measures in some sectors, then total abatement costs are likely to be higher than need be. This is because low-cost abatement opportunities in excluded sectors are not accessed and must be substituted for by higher cost options in other sectors. This provides a clear rationale for

considering abatement measures for all sectors, whether this is through the ETS or supplementary policy.

For sectors that pose particular difficulties for inclusion there are four main options:

- seeking to overcome these difficulties as best as possible and including the sector either fully or partially in the ETS
- introducing a 'baseline-and-credit' scheme that attempts to create incentives to achieve emission reductions relative to business-as-usual. Such schemes could link to the ETS
- pursuing independent policies that contribute to achieving the national target allowing the ETS cap to be higher than otherwise
- doing nothing, for example, if it were found that there were few low-cost abatement opportunities in excluded sectors and the policy-related costs of implementing separate schemes were high.

Agriculture, forestry and land use

There is a wide range of sources of emissions and sequestration in agriculture associated with the digestive processes of livestock, nitrogen fertilisation, and the build-up and depletion of soil carbon. The diversity and diffuse nature of sources makes the measurement and verification of GHG emissions difficult and potentially costly. This is compounded by a general lack of information about abatement opportunities. A further barrier to including agriculture in an ETS, or pursuing other mitigation policies, is the number of farms and facilities involved. In contrast, the land use, land use change and forestry sector can be a net sink for GHGs (through the removal of atmospheric carbon dioxide and its sequestration in biomass). It also poses fewer measurement difficulties and involves fewer participants.

It may be feasible to cover the forestry sector in an ETS quite soon (using one of several possible approaches), but whether the costs of doing so would outweigh the benefits is unclear. Another option being explored for forestry (and agriculture) is to introduce baseline-and-credit arrangements. For example, forest growers could provide credits for sequestering carbon in trees which could offset emissions in covered sectors. This would involve issuing credits for forests established as a consequence of the policy, but not for forests that would have been established anyway. The problem is that such baselines can never be established with certainty. And, while intuitively attractive, offset arrangements can be highly problematic. However, there are other potential approaches that could be taken independently of an ETS, such as specifically managing public forests for enhanced sequestration.

For agriculture, partial coverage of some emissions sources under an ETS is possible. New Zealand is going down this path, but the perceived imperative to do this — because agriculture accounts for around half of that country's GHG emissions — does not apply to Australia. Other approaches include: developing measurement protocols; promoting activities that reduce emissions, perhaps through extension services and/or subsidies; and taxes and regulation.

There are, however, two significant issues that must be considered for the land use, forestry and agriculture sectors.

1. The interactions of baseline-and-credit arrangements with an ETS: where there are deficiencies in verification, credits can be created that are not backed by genuine emission reductions (low additionality). A large influx of such credits has the potential to undermine the integrity and effectiveness of a linked ETS.
2. International accounting rules: where there is uncertainty about the treatment of emissions, it may be desirable to avoid committing to certain abatement opportunities until the rules are more certain. (The Kyoto Protocol excludes some major sources of emissions and sequestration.) Also relevant are the rules that might apply in other countries' emissions trading schemes. Some countries could deem it unacceptable to link with an Australian ETS that accepted a greater range of emissions and sequestration possibilities. (The European Union's ETS excludes carbon sinks as eligible offsets.)

There is a need for in-depth analysis of all mitigation policy options for agriculture, forestry and other sectors that pose particular difficulties for inclusion in an ETS. The policy that yields the greatest net benefits to the community should be chosen. If it transpired that the costs of action outweighed the benefits (including burden sharing from wider coverage), then this should have primacy over a singular desire to include as much of the economy as possible under an ETS.

The critical role of good governance

Once the GHG emissions target is set, the overarching objective must be to achieve that target at least cost. This necessitates the abolition of other climate change initiatives that, in the presence of an ETS, no longer contribute to additional, or lower cost, abatement. This leaves a limited range of policy niches that generally should be met by national-level policies (table 1).

Given that climate change is a global problem, the geographic source of emissions within Australia is of no practical relevance. While a national target is addressed most effectively by national policy, the potential for unwarranted supplementary policies to emerge is magnified in a federation.

Climate change initiatives at lower tiers of government are likely to conflict with national objectives, increase abatement costs, duplicate effort and encourage double counting of abatement. Moreover, if states and territories were to engage in bidding wars — through subsidies for renewable activities or 'compensation' for carbon-intensive activity — the location-related distortions would be of no benefit to the nation. As an extreme illustration, a negative net outcome would arise if, say, wind generators were attracted to subsidy-rich, but relatively wind-poor, locations.

There is a particular need to guard against governments introducing new policies to protect localised investments that arose from schemes that might be slated for abolition — for example, replacing mandated renewable energy targets with subsidies for renewable activities (including uncommercial feed-in tariffs).

State and territory (and local) government initiatives are best confined to:

- research on climate change impacts, adaptation and structural adjustment, where geographic location is an important consideration
- providing general information on energy efficiency where there might not necessarily be benefits from national coordination
- removing regulatory or other impediments to adoption of low-emissions technologies
- ensuring expected emissions prices are factored into their planning and investment.

It seems unlikely that particular jurisdictions would suffer unique, or more pronounced, market failures that warrant additional GHG mitigation measures.

With the introduction of an ETS, all existing and prospective climate related programs need to be (re)assessed comprehensively according to principles of good regulatory process. Essentially, this means that clear objectives should be targeted in a manner that maximises net community benefits. For climate change-related measures, there is an *additional* hurdle — namely, whether the policy objective is already met by the ETS. In a number of cases, including the MRET, the answer will be yes.

Table 1 **Policies to supplement the ETS — summary conclusions**

Type of policy/action	*Case for*	*Comments*
Development of low-emissions technologies		
Support at R&D stage of innovation (e.g. tax credits and offsets for R&D)	Strong	• Demand pull from the ETS likely to be insufficient due to innovation spillovers. • International cooperation on technology policy may require a contribution from Australia.
Support at middle stage of innovation (e.g. partial funding of demonstration plants)	Moderate	• Demand pull from the ETS may be insufficient due to innovation spillovers and risks associated with moving to 'proof of concept' and demonstration. • Matching grant arrangements may be appropriate.
Support at market accumulation and diffusion stage of innovation (e.g. mandatory renewable energy targets and feed-in tariffs)	Weak	• Increase abatement costs but leaves overall GHG emissions unchanged. • Case for deployment support additional to that provided by the ETS is weak due to limited spillovers. • Reduce incentive to implement abatement activities that do not meet their specific criteria. • Demonstrates willingness by governments to interfere with the objective of the ETS, thereby encouraging further rent-seeking.
Reduce barriers to deployment of low-emissions energy	Strong	• There may be fossil fuel subsidies, arrangements for electricity markets and infrastructure issues which create unwarranted barriers to the deployment of low emission technologies.
Energy efficiency[a]		
Provision of information	Strong	• ETS will stimulate greater provision of information, but general information on energy efficiency may be underprovided due to public good characteristics.
Requiring information disclosure (e.g. 'star-rating' labelling for appliances)	Moderate to strong	• Addresses information asymmetry between buyer and seller if market mechanisms do not operate. • Variations in energy savings and compliance costs mean this option is likely to be warranted for some appliances only. • Requiring such disclosure for buildings is problematic due to heterogeneity.
Preventing access to energy-inefficient products	Weak to moderate	• An intrusive way to address information problems as it can override informed consumer preferences. • Rationale is strongest if significant split incentive problems remain after an ETS is introduced.
Subsidies and other financial incentives (e.g. rebates on energy efficient goods)	Weak	• Do not address a policy relevant market failure. • Increases costs by redirecting abatement towards more expensive options and by adding unnecessary administrative tasks.
Energy efficiency target schemes	Weak	• The types of schemes proposed involve the creation of financial incentives and so the above comments apply. • Open to 'gaming', which can result in both high verification costs and low effectiveness.
Mandating investment in energy efficiency	Weak	• Firms are in the best position to respond to the incentives from the ETS.

Type of policy/action	*Case for*	*Comments*
Uncovered sectors		
Offset arrangements linked to the ETS (e.g. allowing forest growers to generate sequestration credits)	Uncertain	• The ETS will exclude some sectors initially. It may be desirable to include some of these sectors within a few years. Where this is the case, introducing offset arrangements in the interim may create high costs for only a small benefit. • Where sectors are to be excluded for an extended period, other policies that may exploit low-cost abatement opportunities should be explored. • Offset arrangements are one option. Being market-based instruments they have the potential to be relatively efficient. • However, to be effective and efficient they require activities to be credited only if they would not have occurred anyway (in the absence of the policy), and this can be difficult and costly to verify. These difficulties pose a threat to the credibility of the ETS and could preclude linking of Australia's ETS to schemes in other countries.
Other policies not linked to the ETS (e.g. subsidies, information provision, managing public forests for sequestration)	Uncertain	• There is a range of alternative policy options to offset arrangements. All options should be considered (including doing nothing). • Further research is needed to determine the way forward for agriculture and forestry.
Other		
Adaptation		
Policies to facilitate adaptation to climate change	Strong	• While people will adapt to changes in climate themselves, there are a range of market failures that are likely to require government attention. • Unlike mitigation, adaptation can be effectively pursued unilaterally.
Equity and structural adjustment		
Programs to assist people least able to cope with costs of GHG mitigation and for adversely affected regions	Strong	• Equity objectives should be met directly and in the most cost-effective way.

a Excludes policies to support the development of energy efficient technologies. Such policies are covered by the 'Development of low-emissions technologies' section of the table.