

AUSTRALIA'S POLICIES ON CLIMATE CHANGE

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Australia's existing and proposed policy mix provides important context for considering its future emissions reduction goals.

As in other countries, Australian governments have been implementing policies to reduce emissions for more than two decades. Regulatory measures include labelling and minimum performance standards for appliances, changes to building codes to drive energy efficiency and restrictions on land clearing. A range of market-based schemes has been implemented to promote emissions reductions, including national schemes such as the Renewable Energy Target and state-based schemes.

In 2011, legislation was passed to create the carbon pricing mechanism (a cap-and-trade emissions trading scheme). This commenced in July 2012. The government intends to repeal this legislation and implement the Direct Action Plan. The centrepiece of the Direct Action Plan is the Emissions Reduction Fund, which is to purchase emissions reductions through a reverse auction.

Australia requires a suite of complementary policies to drive cost-effective emissions reductions in its economy.

Chapter 5 introduces Australia's policy initiatives to reduce emissions. It:

- describes Australia's existing policies to reduce emissions
- discusses the need for a suite of policies to realise the full range of cost-effective emissions reduction opportunities
- outlines the government's new policy.

Many policies are used by governments around the world to address climate change, and in most cases a number of policies are used in concert. Box 5.1 outlines the main types of policies used, as context for the description of the policies implemented in Australia.

BOX 5.1: CLIMATE CHANGE POLICY TOOLS

The main policy tools used to address climate change include:

- Market-based mechanisms, such as:
 - cap-and-trade emissions trading schemes—which put a price on greenhouse gas emissions, by capping the allowed quantity of emissions and requiring liable emitters to surrender a permit for each unit of emissions
 - baseline and credit schemes—which allow participants to obtain credits for emissions reductions beyond a baseline of emissions or emissions intensity. When participants emit more than the baseline, they may be required to purchase credits from other parties or pay penalties
 - carbon taxes—which add a set cost to every tonne of greenhouse gas emitted.
- Regulation, such as minimum energy performance standards, which can be used to help unlock emissions reductions less responsive to price signals.
- Government subsidy or grant programs, which pay for emissions reduction activities by businesses or households.
- Informational tools, such as energy rating labels, which increase consumer awareness of the financial and environmental benefits of more energy-efficient appliances.
- Reporting requirements, such as energy efficiency opportunities, to raise the profile of an organisation's opportunities and performance to decision-makers.
- Support for research, development and commercialisation of low-emissions technologies and practices.

Particular policy tools are likely to be effective at addressing different barriers to emissions reductions. It is likely a range of complementary policies will continue to be necessary in Australia, and elsewhere, to deliver effective global action on climate change in the most cost-effective manner.

The cost of emissions reductions delivered using different policy tools can vary widely. To date, market-based mechanisms, such as emissions trading schemes, have been an important part of policy mixes that have delivered the most cost-effective emissions reductions (Productivity Commission 2011, p. xiv; OECD 2013, p. 4).

An effective and efficient policy mix should:

- Reduce emissions cost-effectively. Where a range of policy tools are used, the relative cost of emissions reductions across policies should be considered. New policies should be subject to appropriate cost-benefit and regulatory impact assessments that take into account the private and public costs and benefits of emissions reductions as well as other relevant factors.
- Be applied consistently and predictably over the longer term. This is particularly important where emissions reductions depend on long-term investment decisions, such as installing new electricity generation capacity.

- Take into account the interaction between policies aimed at reducing emissions and other energy, industry or trade objectives to avoid perverse outcomes or duplication. The IMF (2013, p. 1), for example, notes global energy subsidies may increase global energy emissions by about 13 per cent.
- Assign responsibility to the right level of government. In Australia, Wilkins (2008, p. 32) recommends that the Commonwealth take primary responsibility for emissions reduction policy.
- Identify each policy's distributional effects and, if appropriate, ensure transitional or assistance measures are put in place. Some climate change mitigation policies, like other policies, can have a regressive effect and distributional issues should be considered in the policy design process (Büchs, Bardsley and Duwe 2011, pp. 285–307).

5.1 AUSTRALIA'S CLIMATE CHANGE POLICY

Like other countries, Australia has drawn on a wide range of measures to reduce its greenhouse gas emissions.

Climate change policies have been introduced at all levels of government since the late 1980s. Climate change policies began with voluntary schemes such as energy labelling (initially in New South Wales and Victoria from 1986) and the national Greenhouse Challenge Program for industry from 1995. Energy labelling became mandatory from 1992 and progressed to minimum standards on a range of devices from 1999 (including refrigerators, freezers and air conditioners). In 2003, New South Wales introduced its Greenhouse Gas Reduction Scheme (GGAS), one of the first mandatory emissions trading schemes in the world. The Commonwealth Parliament introduced a mandatory RET in the electricity sector in 2001 (see Section 5.1.1).

In 2011, the Clean Energy Future package was legislated. The Clean Energy Act established long-term goals to reduce emissions to 80 per cent below 2000 levels by 2050 and to contribute to a global response to limit warming to below 2 degrees. Other major elements include a carbon price that covers over half of Australia's emissions and the Carbon Farming Initiative (CFI), which provides incentives to reduce emissions in the land sector.

At the Commonwealth level, the main legislated policy tools are currently the RET, the carbon pricing mechanism and the CFI, complemented by funding bodies such as the Clean Energy Finance Corporation (CEFC) and the Australian Renewable Energy Agency (ARENA).

A broader suite of sector-specific initiatives are also in place, and state and local governments play an important role through, for example, land use controls, energy efficiency and renewable energy programs.

5.1.1 RENEWABLE ENERGY TARGET

The RET drives investment in renewable energy. It creates a guaranteed market for renewables using a tradable certificate scheme that encourages projects at large scale (for example, wind farms) and small scale (for example, solar PV on household rooftops). Electricity retailers and other entities that purchase wholesale electricity are required to surrender a certain number of renewable energy certificates each year or pay a shortfall charge.

The RET has been in place and driving renewable energy generation since 2001. The target, initially legislated by the Howard Government to deliver 9,500 GWh of renewable energy in 2010, was expanded in 2009 to 45,000 GWh in 2020 by the Rudd Government. At the time, this was estimated to deliver 20 per cent of electricity generation in that year, including renewable generation already operating prior to its introduction. Recent softening of electricity demand means the RET could now deliver a higher share of renewable electricity in 2020 (CCA 2012, p. 43).

The RET target was split into two schemes in 2011:

- the Large-scale Renewable Energy Target (LRET) supports large-scale projects. The LRET has annual fixed targets and a 2020 target of 41,000 GWh
- the Small-scale Renewable Energy Scheme (SRES) supports the installation of small-scale systems. The SRES has an implicit target of 4,000 GWh, but is uncapped. The Authority estimates it may result in about 11,000 GWh of generation in 2020 (CCA 2012, p. 43).

Since the introduction of the RET in 2001, Australia's renewable electricity capacity has doubled (CCA 2012). About one million households have installed rooftop solar PV (DIICCS RTE 2013, p. 89), which the Australian Energy Market Operator (AEMO) estimates will generate about 2,700 GWh in 2013 (AEMO 2013).

Between 2001 and 2012, the RET reduced emissions by an estimated 20 Mt CO₂-e (CCA 2012, p. 12).

5.1.2 CARBON PRICING MECHANISM

The carbon pricing mechanism requires Australia's largest greenhouse gas emitters—liable entities—to acquire and surrender eligible units for each tonne of CO₂-e they emit, creating an incentive to reduce those emissions. The Commonwealth Government intends to repeal the legislation supporting the carbon pricing mechanism; this section describes the scheme as currently legislated.

The carbon pricing mechanism covers more than half of Australia's emissions, including those from electricity generation, direct combustion, landfills, wastewater, industrial processes and fugitives. Some other sectors are covered by an equivalent carbon price (see Part E for further details).

The carbon pricing mechanism has a three-year fixed-price period from 1 July 2012 to 30 June 2015. During this period, the price of Australian carbon units started at \$23/t CO₂-e and rises 2.5 per cent a year in real terms.

From 1 July 2015, the number of available Australian carbon units issued by the government under the carbon pricing mechanism will be limited by a cap. Liable entities can acquire units from the government or through trading with other parties. Under the legislation, the minister responsible for climate change must set annual caps, taking into consideration the Authority's advice as part of this Review. The legislation requires caps to be announced five years in advance. In the event that parliament does not set caps through regulation, default caps apply (see Part E).

Australian Carbon Credit Units (ACCUs), generated under the CFI, can be used to meet carbon pricing mechanism liabilities. Approved international units can also be surrendered to meet up to 50 per cent of an entity's carbon liability. At present, approved international units include European Union Allowances (EUAs) and units generated under the Kyoto Protocol (limited to 12.5 per cent of an entity's liability). More detail on international carbon markets is provided in Chapter 12.

5.1.3 CARBON FARMING INITIATIVE

The CFI allows approved carbon reduction projects to generate ACCUs. It commenced in 2011. ACCUs can be sold to liable parties under the carbon pricing mechanism, or to individuals and organisations wishing to voluntarily offset their emissions (for example, through the Commonwealth Government's National Carbon Offset Standard).

Sectors eligible for the CFI are not covered by the carbon pricing mechanism. These include agriculture, forestry and waste (for waste deposited before July 2012).

The Clean Energy Regulator (2014) reports that, as of January 2014, 4.2 million ACCUs have been issued, representing 4.2 Mt CO₂-e of avoided emissions. Activities that have earned ACCUs under the CFI include:

- Reduction of emissions from waste. The waste sector accounted for the largest number of registered CFI projects and 96 per cent of ACCUs issued; the CFI has 74 registered waste projects involving gas capture, combustion and diversion.
- Management of savanna burning in the Northern Territory. The Indigenous Land Corporation has generated credits through projects that undertake controlled burning early in the dry season.
- Capture of methane from pig manure for use in generating electricity.

5.1.4 CLEAN ENERGY FINANCE CORPORATION

The CEFC is a clean energy investment fund. As with the carbon pricing mechanism, the Commonwealth Government intends to repeal the CEFC's legislation.

The CEFC co-finances emissions reduction projects with the private sector. As of June 2013, it has facilitated over \$2.2 billion in emissions reduction projects, comprising \$536 million of its own funds and private sector co-financing of \$1.55 billion. The CEFC (2013, p. 10) estimates its portfolio achieves about 4 Mt CO₂-e of emissions reductions annually at a negative cost (or a net return or benefit) of \$2.40/t CO₂-e.

5.1.5 AUSTRALIAN RENEWABLE ENERGY AGENCY

ARENA is a renewable energy investment fund. It provides financial assistance to improve the competitiveness of renewable energy technologies and increase the supply of renewable energy in Australia (ARENA 2013, p. 8).

ARENA provides financial assistance in two areas:

1. Research, development, demonstration, deployment and commercialisation of renewable energy and related technologies.
2. Sharing of knowledge and information about renewable energy technologies.

In 2012-13, ARENA (2013, p. 6) commissioned four major projects totalling \$560 million and managed more than 150 projects with commitments of \$1.1 billion.

5.1.6 OTHER SECTOR-SPECIFIC INITIATIVES

A range of initiatives exists to reduce emissions in the land, industry and buildings sectors:

- Land clearing regulations—annual rates of land clearing have decreased substantially since 1990, largely due to state-based regulations in New South Wales and Queensland on new land clearing, and weaker economic conditions for farming (leading to reduced incentives for farmers to clear land and expand production). Recent relaxation of land clearing regulations in Queensland, New South Wales and Western Australia may affect future emissions reductions (see chapters 6 and 11).
- Minimum energy performance standards—from 1999, some products and appliances such as refrigerators and air conditioners have been subject to minimum energy performance standards through state government legislation. Building on this, the *Greenhouse and Energy Minimum Standards (GEMS) Act 2012* (Cth) implements nationally consistent standards for appliances in the residential and commercial sectors.
- The Energy Efficiency Opportunities (EEO) program—introduced in 2006, this program promotes energy efficiency in Australia’s largest energy-using firms (firms that consume more than 0.5 PJ of energy per year). The program requires firms to assess their energy use and identify cost-effective energy efficiency opportunities (with a payback period of up to four years). The government has announced funding for this program will cease from 1 July 2014 (Commonwealth of Australia 2013, p. 145).
- New building standards—under the *Building Energy Efficiency Disclosure Act 2010* (Cth), commercial offices must disclose energy performance and receive a building efficiency rating through the National Australian Built Environment Rating System. Residential energy efficiency standards for new buildings have been in the National Construction Code since 2003; these were strengthened in 2010. Most states and territories now require new residential construction to meet minimum thermal efficiency standards.
- Efficient lighting—the Commonwealth is phasing out inefficient lighting in favour of more efficient alternatives such as compact fluorescent and LED lamps. Sales restrictions on inefficient lighting begun in 2009 will be expanded to a broader range of lighting over time.
- Energy savings ‘white certificate’ schemes—while the design of these schemes can differ across states, in general they place an obligation on a party—such as energy retailers—to meet an energy efficiency improvement target. White certificates can be generated when businesses or consumers implement energy efficiency measures, and may be surrendered to a regulatory body by a liable party to meet its obligations. These schemes operate in the Australian Capital Territory, New South Wales, South Australia and Victoria.

5.2 THE DIRECT ACTION PLAN

The Commonwealth Government plans to introduce the Direct Action Plan to replace the carbon pricing mechanism and other elements of the Clean Energy Future package. In this Review, the Authority has not made any assumptions about policy design or implementation beyond what has been announced.

A central feature of the Direct Action Plan is the Emissions Reduction Fund (ERF) but it also includes:

- rebates for solar panels, solar hot water systems and heat pumps
- grants for renewable energy in schools and towns
- planting an additional 20 million trees.

A Green Paper on the ERF was released by the Department of the Environment in December 2013. It states the ERF will be designed to:

- identify and purchase emissions reductions at the lowest cost
- purchase emissions reductions that are genuine and would not have occurred in the absence of the ERF
- allow efficient business participation.

A key aspect of the ERF will be safeguarding emissions reductions, primarily by setting baselines that discourage emissions growth above historical levels.

The Green Paper states that baselines could be set on a historical business-as-usual basis based on absolute emissions or emissions intensity. Additionally, baselines could take account of external events, such as an economic downturn, by setting them at a facility's historical high point of emissions.

The Green Paper states the government has an objective to not raise revenue from ensuring compliance with the scheme, and the safeguard mechanism could have flexible compliance arrangements that could allow:

- a baseline to be exceeded for a period of time without penalty
- multi-year compliance periods, so a baseline could be exceeded in one or more years if the average baseline of the compliance period is not exceeded
- businesses to offset an exceeded baseline by purchasing emissions reduction credits.

The Green Paper notes the electricity sector is the largest single source of Australia's emissions, and is a key source of potential emissions reductions. The government intends to work closely with the sector on how the ERF can complement existing policy such as the RET.

The Green Paper also seeks feedback on other design issues, such as developing methods to credit emissions reduction activities, managing the auction process and the ERF's coverage.

CONCLUSION

C.7 Australian governments at all levels have implemented a wide range of policies to reduce emissions over the last two decades, and there has been considerable change in the suite of policies over time.

