

FORM AND SCOPE OF GOALS



The Authority recommends a set of emissions reduction goals to guide Australia's transition to a low-emissions economy and contribute to global efforts to avoid dangerous climate change. The Authority takes a budget approach, which highlights the trade-offs between actions taken now and those made necessary later. These goals are designed to provide a clear course for action in the short term and guidance for planning in the medium and long term, and include points of review to respond to changing circumstances.

The recommended set of goals includes a 2020 emissions reduction target, a trajectory range from 2020 to 2030, and a national emissions budget for the period 2013 to 2050. These goals are coordinated and consistent. The short-term emissions reduction target represents Australia's next step in the strong action it needs to take to meet the long-term budget. A trajectory range in the medium term balances Australia's effort over time and allows effort to be adjusted in light of new information.

The recommended goals are consistent with international emissions accounting rules. Australia's emissions in the first Kyoto Protocol commitment period were less than its target. This means that Australia has surplus emissions units that can be used towards the 2020 target. The Authority considers that the best use of this carryover is to strengthen the 2020 target by 4 percentage points.

Australia's emissions reduction targets are net of trade. This means they can be met flexibly through a combination of domestic and international emissions reductions—any international emissions reductions Australia buys will count as reductions towards our target, but any emissions reductions sold overseas cannot be counted. Using international reductions would help Australia meet its goals cost-effectively.

Voluntary action, such as individuals and companies offsetting their emissions to become 'carbon-neutral', can achieve emissions reductions above and beyond national targets. The Authority recommends that the government continue a 'targets plus' approach, recognising voluntary action by cancelling an equivalent quantity of Kyoto units.

In developing its recommended set of goals, the Authority has considered important preliminary matters, which are outlined in this chapter:

- the case for the Authority recommending goals to 2020 and beyond
- how longer term goals should be reviewed and updated over time
- how to treat and account for different emissions reductions, including voluntary action to reduce emissions and Australia's surplus emissions rights from the 2008–2012 Kyoto Protocol period.

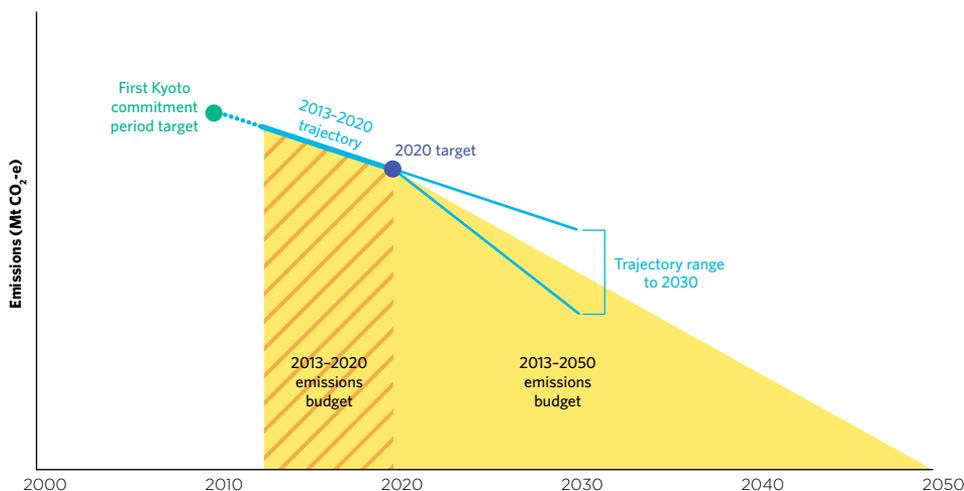
7.1 A COORDINATED SET OF GOALS FOR AUSTRALIA

The Clean Energy Act requires the Authority to recommend an indicative national emissions trajectory and a national emissions budget. The legislation gives the Authority discretion over the nature of and timeframe for its recommended emissions reduction goals.

Given that climate change is a long-term issue, there is value in a coordinated set of near-term and longer term goals. Near-term goals should represent a credible step towards the longer term objectives, and not leave too much of the emissions reduction effort until later; equally, too much effort in the near term could prove costly and disruptive.

The Authority is recommending a coordinated set of emissions reduction goals that give a degree of certainty in the short term to 2020, and predictability and flexibility over the medium term to 2030 and long term to 2050 (Figure 7.1).

FIGURE 7.1: THE AUTHORITY’S RECOMMENDED SET OF EMISSIONS REDUCTION GOALS



Note: Figure is illustrative only.
Source: Climate Change Authority

7.1.1 2020 GOALS

Australia has committed internationally to a target range of between 5 and 25 per cent below 2000 levels by 2020. As 2020 approaches, it is appropriate to refine the target range to a single 2020 emissions reduction target to provide a clear course for short-term action by Australian governments, businesses, communities and households.

The Authority recommends:

- a single 2020 emissions reduction target
- a trajectory to the 2020 target to indicate the pace of emissions reduction
- an emissions budget for the period 2013–2020 to provide a cumulative constraint on Australia's net emissions.

7.1.2 EXTENDING THE TIMEFRAME—POST-2020 GOALS

There is a compelling case for increasing the amount of guidance in Australia's post-2020 emissions reduction goals, including to:

- improve policy predictability by providing an early indication of future emissions reduction goals, which can reduce risk and costs for business
- improve environmental effectiveness by linking Australia's action more directly to a scientifically derived global emissions budget
- clarify the distribution of Australia's effort over time, and the implications of short-term goals for intergenerational equity
- inform international negotiations on the post-2020 framework, as Australia and other countries are likely to begin indicating post-2020 goals in 2014 or 2015
- increase government transparency and accountability for achieving its long-term goal.

A wide range of stakeholders expressed strong support for post-2020 goals, including businesses, non-government organisations and individuals. For example, the Energy Supply Association of Australia said:

... [a]s a capital-intensive industry with long-lived assets, long-term investment signals are required to enable an orderly and efficient shift to lower emissions technologies ... [S]uch targets will continue to be valuable irrespective of the proposed repeal of the carbon price.
(Draft Report submission, p. 1)

The main concern raised was that these goals need to remain appropriate and relevant as circumstances change; for example, as the international response to climate change evolves. This can be achieved through periodic reviews of medium- and long-term goals to ensure new information is considered.

The Authority concludes that clear but flexible long-term guidance on Australia's emissions reductions can help create a stable, predictable environment for Australia's transition to a low-emissions future.

RECOMMENDED POST-2020 GOALS

The Authority considers a national emissions budget to 2050 and a trajectory range from 2020 to 2030 would provide long-term guidance while maintaining flexibility to respond to new information. Combining a budget with a trajectory range capitalises on the advantages of each:

- A long-term budget to 2050 provides a direct, transparent link between Australia's emissions reduction goals and its overarching objective to limit warming to below 2 degrees. It can also increase government accountability by providing a simple measure of progress. The budget to 2050 should be subject to periodic review. The Authority's recommended budget is described in Chapter 8.
- A trajectory range to 2030 balances flexibility and predictability for medium-term policy by allowing space to adjust and respond to new information. A trajectory range to 2030 provides some guidance on the distribution of effort to 2050, can inform Australia's international commitments and signals a willingness to take stronger action under the right conditions. The Authority's recommended range is discussed in Chapter 9.

The Authority's approach incorporates many elements proposed by stakeholders in their submissions to the Issues Paper. AGL Energy proposed a long-term national emissions budget to 2050 complemented by a medium-term trajectory range for potential future caps from 2020 to 2030. Energy Australia suggested a trajectory range (also known as a gateway) could be useful to improve investor certainty and that 10 years of gateways from 2020 should be considered. Oxfam, Australian Conservation Foundation and Climate Action Network Australia were broadly aligned in support of post-2020 guidance, such as a long-term budget, interim targets and a longer term trajectory. Some stakeholders proposed medium-term targets; for example, to 2030.

Stakeholders had different views about the merits of trajectories, which may equally apply to the use of a trajectory range. Non-government organisations were broadly supportive, whereas the Business Council of Australia recommended the Authority refrain from nominating trajectories because they would inhibit Australia making the most efficient distribution of emissions reductions over time (*Draft Report submission*, p. 2). The Authority agrees that goals should provide some flexibility in the timing of emissions reduction effort. The purpose of a trajectory or trajectory range, however, is to provide broad guidance on the pace of emissions reductions over time, not to set binding limits in each year. As a result, trajectories allow efficient distribution of effort over time. That said, having recommended a long-term budget, the Authority considers a trajectory or trajectory range that stretched beyond 2030 would be unnecessarily prescriptive at this time.

As discussed further in Section 7.2, post-2020 goals must be reviewed regularly, and the reviews themselves should respond to changing circumstances in a reasonably predictable way.

CONCLUSION

C.10 A coordinated set of emissions reduction goals for the short, medium and long term would provide a more predictable environment for businesses and others to act. An appropriate set of goals for Australia comprises:

- A short-term target for 2020, and an emissions budget and trajectory to 2020 providing a clear course for short-term action.
- A trajectory range to 2030 and a national emissions budget to 2050, providing guidance for longer term planning, subject to periodic review to respond to new information and changing circumstances.

7.1.3 DEFINING THE INDICATIVE NATIONAL EMISSIONS TRAJECTORY TO 2020 AND RANGE TO 2030

The Authority recommends straight-line indicative trajectories to the 2020 target and from the 2020 target to either end of the 2030 range (Figure 7.1).

Given that trajectories are indicative rather than binding in every year, and that the appropriate long-term path to reduce emissions is uncertain, straight lines are a sensible approach. They provide a simple pathway to defined goals, and can be subject to regular reviews to incorporate new information. Curved trajectories to 2030 would not provide significant additional guidance.

The trajectory requires a starting point. The Authority defined its recommended trajectory to 2020 in the same way Australia defined its target for the second commitment period of the Kyoto Protocol—based on a straight line from 108 per cent of 1990 emissions in 2010 to its recommended target in 2020. Appendix B discusses how the Authority’s recommended 2020 goals relate to Kyoto Protocol targets.

The principal advantage of a trajectory range is that it balances flexibility and predictability. As with Australia’s 2020 target, which was originally proposed as a target range rather than a single point, Australia can usefully start with a 2030 trajectory range. This could be particularly helpful for the government as it considers Australia’s post-2020 international commitments. Under the UNFCCC negotiations, many countries will put forward post-2020 goals in 2014 and 2015 (Section 4.2). Australia may choose to put forward a range for 2030 now, and narrow this over time as the form and scale of international action becomes clearer. If strong global action to reduce emissions transpires, Australia could track towards the lower (more ambitious) bound of the range; if not, Australia could track towards the upper bound.

The Authority’s overall approach to the trajectory range is similar to that recommended by the National Emissions Trading Taskforce (2007) and the Prime Ministerial Task Group on Emissions Trading (2007) but is applied to national emissions rather than caps in an emissions trading scheme.

The width of the trajectory range is also important—an extremely wide range provides little guidance; while an extremely narrow range provides little flexibility to respond to new information over time. The range should maintain flexibility while providing reasonable guidance on the pace of post-2020 reductions.

7.2 PERIODIC REVIEW OF LONGER TERM GOALS—WHAT, WHEN AND HOW

The trajectory range to 2030 and the emissions budget to 2050 should be reviewed periodically in light of new information to ensure they remain appropriate and relevant.

The Authority considers reviews of medium- and long-term goals should take place every five years, as currently provided for under the Clean Energy Act. More frequent reviews could tend to reduce, rather than improve, certainty for investors. However, major developments such as new international agreements may warrant special reviews; for example, it may be appropriate to review Australia’s medium- and long-term goals in 2016 to take account of any new agreements on the post-2020 framework.

These periodic reviews should be conducted according to clear, defined criteria to help increase policy predictability. The Authority considers three factors of particular importance here:

- **Climate science**—new science that indicates the desirable global budget is smaller than previously estimated could imply stronger action by Australia. Evidence that the global budget is larger than previously estimated could imply less action.
- **The level and pace of international action on climate change**—stronger international action could imply stronger Australian action, and weaker international action could imply weaker Australian action. This criterion would take into account Australia’s international obligations and undertakings. These act as a ‘floor’ to any future trajectories—allowing strengthening but not weakening. In the same way, Australia would not adopt a 2020 target below the bottom of its current 5–25 per cent range.

- **Economic factors**—higher than expected costs (for example, because of macroeconomic shocks or because low-emissions technologies have not developed as expected) could imply weaker action by Australia. Lower than expected costs (for example, because low-emissions technology is cheaper than expected) could imply stronger action is warranted.

Technical considerations may also be relevant. For example, developments in international accounting rules for greenhouse gas emissions could affect the scope of national goals, as discussed in Section 7.3; and changes in national and global population projections could affect the size of the national budget, as discussed in Chapter 8.

The Authority is not inclined to prescribe more specific criteria. These might appear to add clarity, but in practice may not allow decisions to be based on the best available information. For example, the very specific 2020 target conditions are a source of sometimes unproductive debate on the detail of other countries' actions rather than the overall scale and trend in global action. In combination with broad consultation and transparent decision-making, the Authority considers general criteria provide a more robust base for setting appropriate goals over time.

Periodic reviews should:

- Extend the trajectory range to maintain a similar amount of guidance over time. The recommended 2020 goals and trajectory range to 2030 provide 16 years of initial guidance. Similar guidance can be maintained by extending trajectories by five years at each five-yearly review.
- Narrow the existing trajectory range as more and better information becomes available. In truly exceptional circumstances, a review could recommend the trajectory range moves outside the previously defined range.
- Review the 2050 emissions budget and, in the longer term, extend the budget beyond 2050.

RECOMMENDATIONS

R.1 The trajectory range and the national budget to 2050 be reviewed at least every five years. There could be additional reviews to take account of major developments; for example, in 2016 to take account of international developments on the post-2020 framework. As part of these reviews, the trajectory range would be extended to maintain a similar period of guidance over time, and short-term targets and trajectories would be set within the existing range.

R.2 The periodic reviews of the trajectory range and the national budget to 2050 have particular regard to the following general criteria—changes in or new information about climate science, the level and pace of international action, and economic factors.

7.3 DEFINING THE GOALS—WHAT IS COUNTED AND HOW?

In recommending targets, trajectories and budgets, the Authority must define which emissions are counted and how. This includes which greenhouse gases, emissions sources and sinks are counted and how international emissions reductions are used. This section sets out:

- the Authority's intended approach, taking into account Australia's international obligations and undertakings under the Kyoto Protocol and UNFCCC
- the practical implications of this approach, particularly for land sector emissions and removals, and the use of units 'carried over' from the first commitment period of the Kyoto Protocol.

7.3.1 GOALS SHOULD BE CONSISTENT WITH INTERNATIONAL RULES

The Authority has applied the Kyoto Protocol rules for gases, sectors, sources and markets in its recommended goals because they are the most definitive and binding set of accounting rules.

The Kyoto Protocol sets clear rules on which emissions count towards Australia's Kyoto commitments (Box 7.1). Australia must follow these rules for its current, unconditional commitment to limit average annual emissions to 99.5 per cent of 1990 levels from 2013 to 2020.

The accounting framework for post-2020 emissions reduction commitments is currently under negotiation. These discussions are still in their early stages, but are likely to build on current rules and accommodate the use of a wider range of international emissions reductions from domestic and regional schemes.

The Authority has also followed the UNFCCC and Commonwealth Government practice of accounting for emissions on a production rather than a consumption basis. Some stakeholders support a consumption approach; for example, the Australian Industry Greenhouse Network argues that production-based emissions accounting is less rigorous and distorts the measurement of Australia's efforts to reduce emissions (*Draft Report submission*, p. 6). The Authority considers that production-based emissions accounting provides an appropriate basis for Australia's goals. It focuses on emissions within Australia, over which Australia exercises direct control, and is the basis on which Australia's international commitments are calculated.

Both Australia's domestic emissions reductions and the purchase of international reductions contribute to keeping warming below 2 degrees. Australia's goals are net of trade to reflect this. If Australia's domestic emissions were above the recommended goals, these goals could still be met with purchased international reductions. Chapter 12 discusses the role of international reductions in more detail.

BOX 7.1: KYOTO PROTOCOL ACCOUNTING FRAMEWORK

The Kyoto Protocol provides guidance about the emissions countries must count towards their emissions reduction commitments and the units that can be used to meet a commitment. For the second commitment period, Kyoto Protocol rules count emissions:

- of seven greenhouse gases (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulphur hexfluoride and nitrogen trifluoride)
- from the sectors and sources of energy, industrial processes, solvent and other product use, agriculture and waste
- from the land sector, including afforestation, reforestation and deforestation, and forest management; and countries have the option to elect cropland management, grazing land management and revegetation activities.

The Kyoto Protocol counts national emissions on a net basis—countries' domestic emissions are adjusted for any imports and exports of emission units. It only allows units created under the UNFCCC and the Protocol to be used to meet Protocol emissions reduction commitments. For example, this includes units generated from emissions reduction projects in developing countries under the Clean Development Mechanism but it does not include units generated from reducing deforestation in developing countries.

The government could choose to set additional goals that reach beyond its Kyoto Protocol commitment and count a broader range of international emissions reductions towards those goals. The Authority's accounting assumptions do not preclude this—its recommended targets and budgets could be adjusted to take account of the additional emissions reductions from these other sources.

7.3.2 EMISSIONS FROM INTERNATIONAL AVIATION AND SHIPPING

International aviation and shipping are an important and growing source of global emissions. These emissions are not included in national commitments under the UNFCCC. Instead, they are addressed through the International Civil Aviation Organization and the International Maritime Organization, respectively (see Appendix B for further information). The Authority has therefore excluded these from Australia's national targets, trajectories and budgets. To ensure they are accounted for at a global level, the Authority has deducted an allowance for emissions from international aviation and shipping from the global emissions budget before considering Australia's share of that budget (Section 8.3).

This issue should continue to be monitored over time to take account of further information and international developments. If these emissions are included in future national commitments, the national emissions budget should be adjusted accordingly.

7.3.3 VOLUNTARY ACTION

Most emissions reduction activities within Australia help meet national targets and Australia's international obligations and undertakings. For example, the government has a range of policies and measures including the RET and Direct Action Plan to meet its goals.

Voluntary action refers to individuals and companies offsetting their emissions to become 'carbon-neutral' and households buying GreenPower (a government-accredited program for energy retailers to purchase renewable energy on behalf of customers). Voluntary Action achieves emissions reductions additional to—that is, above and beyond—national targets.

The government has previously indicated support for voluntary action being additional to national targets (Commonwealth of Australia 2009). In 2013, Australia calculated the emissions reductions flowing from recognised voluntary action in the period 2008–10, and cancelled 2.3 million Kyoto units (CER 2013). This ensured voluntary action delivered emissions reductions beyond the minimum required by Australia's first Kyoto target.

The Authority recommends that the government continue a 'targets plus' approach to voluntary action. This can be done by tracking the emissions reductions from recognised voluntary actions and, at the end of the second commitment period, cancelling an equivalent number of Kyoto units. The Authority has, in consultation with stakeholders, identified three forms of voluntary action that should be recognised—GreenPower purchases, voluntary cancellation of domestic units (for example, Australian carbon credit units generated under the CFI) and voluntary cancellation of renewable energy certificates generated under the RET.

The Authority has also considered voluntary action in its recommended caps (see Chapter 13).

RECOMMENDATION

R.3 The government recognise voluntary action by cancelling one Kyoto Protocol unit for each tonne of emissions reductions achieved in the period 2013–2020 through:

- the voluntary cancellation of domestic units,
- the voluntary cancellation of renewable energy certificates, and
- GreenPower purchases.

7.3.4 LAND SECTOR ACCOUNTING

In 2012, Kyoto Protocol Parties agreed to new rules for accounting for land sector emissions. These rules apply for the second commitment period. They make it mandatory for Parties to account for emissions and removals from forest management, and optional to account for emissions and removals from cropland management, grazing land management and revegetation. Australia has elected to count emissions from the optional land use activities, so the Authority has applied the same coverage for its recommended goals.

These accounting changes are expected to lead to net emissions reductions of approximately 12 Mt CO₂-e in 2020 (DIICCS RTE 2013). Overall, these activities are expected to provide 90 Mt of emissions reductions over the period 2013–2020 (see Appendix F5); this is equivalent to strengthening the 2020 target by 3 percentage points and makes any particular 2020 target easier to achieve.

7.3.5 CARRYOVER FROM THE FIRST COMMITMENT PERIOD OF THE KYOTO PROTOCOL

The Kyoto Protocol takes a budget approach to emissions reduction commitments, giving countries flexibility in meeting their targets. If emissions during a commitment period are less than the country's target, these surplus emission units can be carried forward into the next period. The Authority has therefore analysed 2020 goals and carryover on a budget basis. For example, carryover is assumed to be used towards the 2013–2020 budget, which is then converted to the corresponding 2020 target.

Australia's emissions over the first commitment period (2008–2012) averaged 104 per cent of 1990 levels, less than its 108 per cent target. As a result, Australia has an estimated 122 Mt CO₂-e of surplus emission units. Voluntary action during the first commitment period delivered an estimated 5 Mt of emissions reductions. This means Australia has an estimated 116 Mt CO₂-e to carryover.¹

Australia has a choice of how to use this carryover:

- use to help meet its 2020 emissions reduction target
- hold in reserve as insurance and decide later which option to choose
- voluntarily cancel the extra units
- use to strengthen the 2020 target.

The Authority considered these options and their implications for environmental effectiveness, economic impacts and Australia's international influence.

If the carryover was used to help meet the existing, minimum 5 per cent 2020 target, it would reduce costs (relative to meeting the 5 per cent target without carryover) but deliver no environmental benefit, nor any positive influence on international action. Under this option, Australia's effective 2020 target would be 1 per cent below 2000 levels, as carryover is sufficient to cover the remaining 4 percentage points. Given the strengthening trend of international action, Australia's capacity to reduce emissions and revised projections that show the emissions reduction task is already smaller than previously expected (discussed in Section 10.2), the Authority does not consider this an appropriate approach.

In the context of setting caps for the carbon pricing mechanism, some stakeholders suggested the government hold the carryover as insurance for unexpected events. The Authority considered these risks and determined there is no need for this insurance (see Section 13.4).

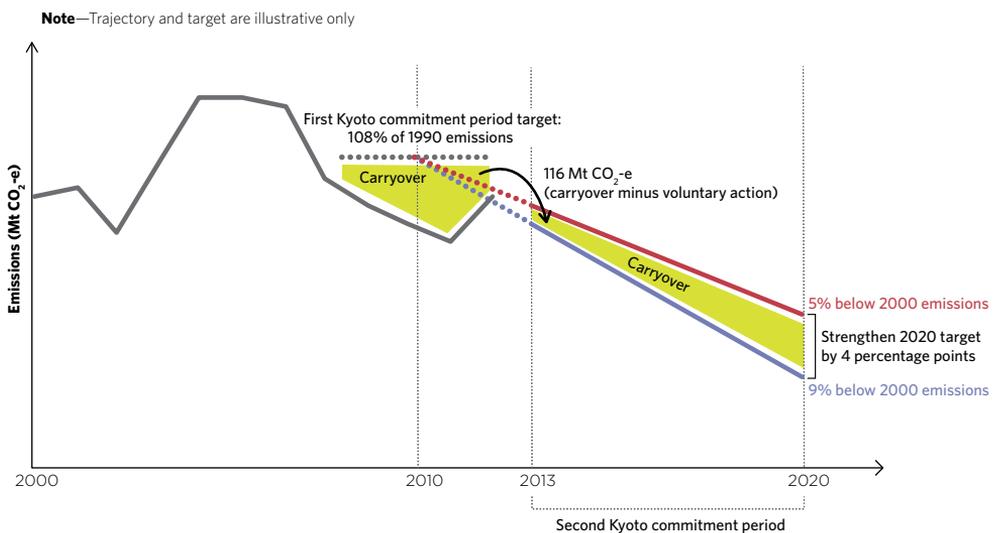
A range of stakeholders supported voluntarily cancelling the carryover, including the Australian Conservation Foundation (*Issues Paper submission*, p. 11). This option has the environmental benefit of permanently reducing Australia's emissions by the amount of the carryover but, given very few other countries have carryover, is unlikely to have any influence internationally.

¹ Figures do not add due to rounding. For more detail regarding carryover see Appendix E3.8.

Using the carryover to strengthen the 2020 target allows Australia to adopt a more ambitious target for no additional cost, compared to meeting a weaker target without carryover, as the reductions have already been made and can now be used. This has the same environmental benefit as cancelling the carryover, but is more visible internationally. As a result, it is more likely to influence other countries to strengthen their goals, maximising the potential environmental benefits. Strengthening the target by 4 percentage points is equal to an additional 122 Mt CO₂-e of emissions reductions; roughly equivalent to Australia’s carryover (Figure 7.2).

On balance, the Authority recommends the carryover be used to strengthen Australia’s target.

FIGURE 7.2: CARRYOVER RELATIVE TO THE 2013-2020 BUDGET AND 2020 TARGET



Note: As discussed in Section 7.1, the indicative national trajectory begins at 108 per cent of 1990 emissions in 2010 to be consistent with Australia’s commitments under the Kyoto Protocol. Strengthening the 2020 target by 4 percentage points requires an additional 122 Mt CO₂-e of abatement over 2013-2020. This is provided by carryover plus 5 Mt CO₂-e of additional effort (see Chapter 10). Figures do not add due to rounding.

Source: Climate Change Authority

CONCLUSION

C.11 The best use of Australia’s carryover from the first Kyoto Protocol commitment period is to strengthen the 2020 emissions reduction target.

