

## Audit Report No. 27 2009-10

# Coordination and Reporting of Australia's Climate Change Measures

## Introduction<sup>1</sup>

8.1 Climate change caused by the emission of greenhouse gases has been recognised as a global challenge. Although the impacts of climate change may vary worldwide, these can include increases in average surface temperatures, sea level rise, increased climate variability and extreme weather events, such as prolonged drought and severe storms.<sup>2</sup> There is evidence in Australia that climate change has already had an impact. The Australian Bureau of Meteorology has indicated that since the 1950s temperatures in Australia have, on average, risen by about one degree Celsius with an increase in the frequency of heatwaves and a decrease in the numbers of frosts and cold days.<sup>3</sup> Rainfall patterns have also changed

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1 The following information has been taken from Audit Report No. 27 2009-10, *Coordination and Reporting of Australia's Climate Change Measures*, pp. 15-18.

2 M Parry, O Canziani and J Palutikof, World Meteorological Organisation Bulletin 57 (1) April 2008, *Key IPCC Conclusions on Climate Change Impacts and Adaptations*, p. 4.

3 Bureau of Meteorology, *Monitoring Australia's Climate Change fact sheet*, BOM available from <<http://www.bom.gov.au/climate/docs/FactSheet3pdf>> accessed 28 June 2010.

with the northwest of Australia experiencing an increase in rainfall over the last 50 years, while at the time of the audit much of eastern Australia and the far southwest have experienced a decline in rainfall and prolonged drought conditions.

- 8.2 The United Nations Framework Convention on Climate Change (UNFCCC) was established in 1992. It sets out an overall framework for intergovernmental efforts to address the challenges posed by climate change. Australia is among some 194 national signatories to the convention, which is the primary forum for designing global climate change strategies. In recognition of the risks presented by rising greenhouse gas (GHG) emissions, the Kyoto Protocol was established under the convention in 1997. The protocol aims to foster national emission reductions through a binding international agreement. Forty countries, including Australia, have emission targets under the Kyoto protocol designed to be achieved over the five year Kyoto period, 2008-12.
- 8.3 The Government has indicated that addressing climate change is a high priority and more than \$15 billion has been committed to climate change initiatives.<sup>4</sup> The Government's response to climate change is based on its *Three Pillars* strategy: reducing emissions; adapting to unavoidable climate change; and helping to shape a global solution.
- 8.4 The Department of Climate Change (DCC) was established in December 2007 to assist the government to pursue its climate change agenda. DCC had specific responsibility for:
- coordinating climate change policy;
  - measuring and reporting national GHG emissions;
  - international reporting commitments under the UNFCCC and the Kyoto Protocol; and
  - measuring the impact of abatement measures towards national targets.
- 8.5 In March 2010, DCC became the Department of Climate Change and Energy Efficiency (DCCEE). The energy efficiency function of the Department of the Environment, Water, Heritage and the Arts was also transferred to the new department.
- 8.6 DCCEE also administers the recently legislated 20 per cent renewable energy target and has to implement the Carbon Pollution Reduction

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4 Climate Change Budget Overview 2009-2010, p. 3.

Scheme (CPRS) currently being proposed by the Government subject to the passage of the legislation by the Parliament.<sup>5</sup>

- 8.7 State and Territory Governments have also introduced an extensive range of measures to reduce GHG emissions and to adapt to climate change. The Australian Government has been working with State and Territory Governments through the Council of Australian Governments (COAG) to achieve a coordinated intergovernmental response to climate change. In December 2007, COAG 'acknowledged the benefits in reducing the confusion, overlap, duplication, and red-tape associated with the current proliferation of climate change programs across jurisdictions.'<sup>6</sup> In March 2008, COAG agreed that each jurisdiction would review their climate change mitigation measures<sup>7</sup> in order to harmonise and align existing and future programs with the proposed emissions trading scheme.
- 8.8 To measure Australia's GHG contribution, the Australian Government has maintained a national emissions inventory since the early 1990s. The inventory, which is managed by DCCEE, provides a detailed national profile of Australia's emissions. The inventory is classified into six internationally defined sectors, based on particular emissions processes:
- energy (including stationary energy, transport and fugitive emissions);<sup>8</sup>
  - industrial processes;
  - solvents and other products;
  - waste;
  - agriculture; and
  - land use, land use change and forestry (LULUCF).
- 8.9 Australia's largest emitting sector is stationary energy and, in 2007, it contributed to over half of the national GHG emissions.<sup>9</sup>

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5 The department has advised that it is establishing the Australian Climate Change Regulatory Authority to implement the CPRS.

6 Department of Finance and Deregulation, *'Strategic Review of Australian Government Climate Change Programs,'* Final Report, July 2008, p. 42.

7 Mitigation is achieved through abatement initiatives. The terms mitigation and abatement are used interchangeably throughout the report. Measures can include grant programs, regulation, incentives, rebate schemes and voluntary initiatives.

8 Fugitive emissions are by-products, waste or loss in the process of fuel production, storage or transport, such as methane released into the atmosphere during oil drilling and refining, or leakage from pipelines.

9 Department of Climate Change, *Australia's Fifth National Communication on Climate Change,* 2010, p. 5.

- 8.10 Data from the inventory is used to meet international reporting requirements under the UNFCCC and the Kyoto Protocol, and to track progress towards the Kyoto emissions target. Activity data, used to estimate GHG emissions, is principally sourced from other Australian Government agencies, such as the Australian Bureau of Statistics. The introduction of the *National Greenhouse and Energy Reporting Act 2007* (NGER Act) has also meant new reporting arrangements, as the Act mandates annual emissions reporting for corporations whose energy production, energy use, or GHG emissions exceed defined thresholds. Data collected under the NGER Act will supplement existing data collection arrangements.
- 8.11 Measures to mitigate the production of GHG emissions have been undertaken by all jurisdictions, primarily through a mixture of regulatory measures, grant programs, incentive and rebate schemes. To assess the impact of Australia's climate change programs, reliable and accurate calculations of the amount of GHG emissions abated is necessary. Abatement estimates are calculated by DCCEE to determine the aggregate and likely future impact of Government measures. The Department's estimates are used to track Australia's progress towards meeting emissions targets, including the Kyoto Protocol target. Abatement estimates for individual programs are also calculated by the agency responsible for delivering the program. The impact of Australia's abatement initiatives are reported by DCCEE in public reports and in the four yearly National Communications report to the UNFCCC.

## The Audit

### Audit objectives<sup>10</sup>

- 8.12 The objective of this audit was to assess the coordination of Australian, State and Territory Government climate change programs and the integrity of measuring and reporting of Australia's greenhouse gas emissions and abatement. Particular emphasis was given to the:
- coordination of Australian Government and State/Territory climate change programs;

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<sup>10</sup> The following information is taken from Audit Report No. 27 2009-10, p. 18.

- integrity of the national inventory to measure Australia's greenhouse gas emissions; and
- integrity of measuring and reporting government abatement measures.

## Overall audit conclusion<sup>11</sup>

8.13 The ANAO made the following overall audit conclusion:

Australian, State and Territory Governments are taking action in response to climate change. Measures have been put in place across all jurisdictions to reduce Australia's GHG emissions and, under COAG, programs are being streamlined. Since 1992, Australia has also been involved in international efforts to address climate change through the UNFCCC. Australia's national inventory has been improved over time and provides a sound basis for understanding the sources, trends and levels of emissions from industry sectors. The inventory is also used to measure and report on Australia's progress in meeting the Kyoto Protocol emission target of 108 per cent of 1990 levels (under the UNFCCC).

In 2008, there were some 550 climate change related measures across jurisdictions, resulting in the overlap and duplication of programs. In general, the program reviews requested by COAG have resulted in some rationalisation and subsequent adjustment to programs to enhance complementarity and consistency with the proposed CPRS. However, progress in streamlining some State and Territory programs has been slower than anticipated by COAG, with some reviews yet to be finalised. There is still considerable scope for further rationalisation across jurisdictions. However, this is a matter for consideration by responsible governments.

Australia's national GHG inventory is well developed and provides a reliable method for measuring and reporting national emissions. Technical reviews, overseen by UNFCCC accredited experts, indicate that the inventory broadly meets international requirements for data preparation and reporting. The department has implemented 74 per cent of UNFCCC recommendations but could improve its process for the ongoing management of outstanding recommendations by documenting required actions, resources and timeframes.

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11 The following information is taken from Audit Report No. 27 2009-10, pp. 18-21.

The aggregate impact of all government mitigation actions has been revised by DCCEE over time. The estimated aggregate level of abatement is 74.5 Mt CO<sub>2</sub>e<sup>12</sup> annually over the five year Kyoto Protocol period; a 15 per cent revision down from 2007. The downward revision reflects a more realistic assessment of program achievements as well as the termination and adjustments to a range of programs. The aggregate abatement is made up of 35 measures, covering programs, legislation and strategies. Of these measures, only nine account for 85 per cent of the aggregate abatement. A first step would be to more clearly define a 'measure' and focus on those measures that are quantifiable and materially significant in terms of overall national abatement.

Overall, the methodology employed by DCCEE to estimate the impact of abatement measures provides a reasonable level of assurance as to the integrity of the aggregate abatement. The department uses the best available program level data, takes into account reasonable assumptions of future uptake and gives consideration to the overlap between programs that can result in double counting abatement. Notwithstanding, improvements could be made in estimating individual abatement measures through a more comprehensive consideration of 'business as usual' operations,<sup>13</sup> the attribution of overlap to individual measures, and improvements in the quality and consistency of data provided by delivery agencies.

There is no consistent approach by delivery agencies to estimating abatement. Guidelines and methodology are currently being developed by DCCEE to assist agencies to calculate the impact of abatement measures and cost new climate change initiatives. To be effective, the methodology will need to be applied consistently across all relevant delivery agencies and be supported by administrative practices and performance reporting frameworks. Extending this approach in the future to State and Territory agencies would facilitate a nationally consistent approach to performance measuring and reporting on GHG abatement.

DCCEE publishes national *aggregate* abatement estimates in four-yearly international submissions to the UNFCCC. However, the 2010 submission did not provide comparable figures for

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12 Mt CO<sub>2</sub>e refers to millions of tonnes (Mt) of carbon dioxide equivalents (CO<sub>2</sub>e). 74.5 Mt CO<sub>2</sub>e represented 13.5 per cent of Australia's emissions in 2008 using Kyoto Protocol accounting.

13 Business as usual refers to the likely action taken in the absence of the measure.

individual measures as it only gave an estimate for 2020. The *Tracking to Kyoto* report also provided an *aggregate* abatement estimate for the Kyoto period. Although previous reports were supplemented by emission sector papers that provided details of *individual* measures, this did not occur for the 2009 report. Currently, the absence and variability of abatement figures being reported means that a consolidated picture of individual abatement measures and aggregate abatement is lacking. For greater transparency, abatement figures for individual measures and in aggregate could be reported more regularly by the department in a consolidated domestic publication.

The public reporting of achievements for individual measures has also not been consistent across Australian Government agencies and has generally been poor. Where abatement figures are published in annual reports, they are often not comparable across years or programs. A more consistent approach to reporting abatement programs would inform the Government and Parliament of the success, or otherwise, of government program achievements.

Despite these administrative shortcomings, current projections by DCCEE suggest that Australia is on track to meet its target under the Kyoto Protocol of limiting emissions to no more than 108 per cent of 1990 levels. Preliminary estimates by DCCEE indicate that Australia's total GHG emissions in 2008 were likely to limit emissions to 106 per cent of 1990 levels by 2012. However, confirmation of Australia's performance throughout the five year Kyoto period – through Australia's GHG inventory – will not be available until 2015.

## ANAO recommendation

**Table 8.1 ANAO recommendation, Audit Report No. 27 2009-10**

1.	To increase transparency and consistency of reporting the impact of climate change abatement measures, the ANAO recommends that: <ol style="list-style-type: none"> <li>(a) Australian Government agencies responsible for delivering climate change programs report abatement estimates/figures in annual reports and against program targets, where applicable; and</li> <li>(b) the Department of Climate Change and Energy Efficiency annually publish a consolidated report of all Government measures with estimates of current abatement and forecasts for five yearly intervals, and, where practicable, the net abatement of individual measures.</li> </ol>
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**DCCEE response:** *Agreed*

## The Committee's review

8.14 The Committee held a public hearing on Wednesday 16 June 2010, with the following witnesses:

- Australian National Audit Office (ANAO); and
- Department of Climate Change and Energy Efficiency.

8.15 The Committee took evidence on the following issues:

- reviews;
- National Framework for Australian Climate Change Science;
- UNFCCC recommendations;
- quality data collection;
- abatement measurement guidelines;
- 'business as usual factors'; and
- reporting.

## Reviews

8.16 The ANAO noted that the Council of Australian Governments (COAG) had established a Complementary Measures Sub-Group of Australian State and Territory governments to undertake a review of climate change mitigation measures being undertaken by State and Territory governments to streamline these measures across jurisdictions.<sup>14</sup> The reviews were due for completion by mid-2010. The Committee asked DCCEE if the reviews had been finalised.

8.17 DCCEE informed the Committee that the reviews had been completed and the final report is now available on the COAG website.<sup>15</sup>

## National Framework for Australian Climate Change Science

8.18 The ANAO noted the importance of the National Framework for Australian Climate Change Science in avoiding costly overlaps and duplication in climate change research.<sup>16</sup> An implementation plan for the

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14 Audit Report No. 27 2009-10, pp. 49-52.

15 DCCEE, submission no. 6, npn. Report available <http://www.coag.gov.au/reports/index.cfm>.

16 Audit Report No. 27 2009-10, pp. 56-58.



Framework was expected to be completed by June 2010.<sup>17</sup> The Committee asked DCCEE for an update on the progress of the implementation plan.

- 8.19 DCCEE told the Committee that the Implementation Program for the Framework is being developed by the High Level Coordination Group, chaired by the Chief Scientist, and is expected to be completed by November 2010. The additional time has been necessary to ensure that:

... the Implementation Plan fully integrates the national climate change science effort, enabling resources to be deployed with maximum efficiency.<sup>18</sup>

## UNFCCC recommendations

- 8.20 The ANAO noted that Australia's Greenhouse Gas Emissions Inventory is subject to an annual review by the United Nations Framework Convention on Climate Change (UNFCCC).<sup>19</sup> The Audit found that although 74 per cent of the UNFCCC recommendations for the latest review had been implemented there were 13 recommendations outstanding and that it was unclear 'how the department plans to handle these matters'.<sup>20</sup> The Committee asked DCCEE what steps the Department has taken to address these outstanding recommendations.
- 8.21 DCCEE explained that the UNFCCC reviews only become available late in the annual inventory cycle and recommendations cannot always be acted on in time to include in the imminent Inventory Report.<sup>21</sup> For example, in 2010 the UNFCCC review report was released on 5 March and the National Inventory Report was due on 27 May.<sup>22</sup>
- 8.22 DCCEE informed the Committee that after the release of the Audit Report, the Department has taken steps to ensure that progress on the implementation of recommendations is included in the National Inventory Report.<sup>23</sup> The Department told the Committee that the May 2010 National Inventory Report includes a list of the UNFCCC recommendations, a timeframe for implementation and actions taken to address each recommendation.<sup>24</sup>

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17 Audit Report No. 27 2009-10, p. 58.

18 DCCEE, submission no. 6, npn.

19 Audit Report No. 27 2009-10, p. 65.

20 Audit Report No. 27 2009-10, p. 69.

21 DCCEE, submission no. 6, npn.

22 DCCEE, submission no. 6, npn.

23 DCCEE, submission no. 6, npn.

24 DCCEE, submission no. 6, npn.

- 8.23 In addition, DCCEE told the Committee that UNFCCC recommendations that will take time to implement have 'been included within the Department's work program for 2010-11' and progress on implementation will be included in the next National Inventory Report in April 2011.<sup>25</sup>

### Quality data collection

- 8.24 The ANAO noted that the implementation of the *National Greenhouse Energy Reporting Act 2007* (NGER Act) would improve the quality of data collected for Australia's emissions inventory.<sup>26</sup> The Committee noted that the first data collected under this legislation had been due in late October 2009 for the 2008-09 financial year and asked DCCEE how the integration of this data into the inventory went.
- 8.25 DCCEE informed the Committee that the first data collected under the NGER Act is currently being integrated into Australia's National Inventory and will be included in Australia's next submission to UNFCCC in April 2011.<sup>27</sup>
- 8.26 The Committee inquired if the integration of the data had presented any difficulties for the Department. DCCEE told the Committee that the integration has required the 'development and refinement of the software used to manage the national inventory' and that this process has been managed over two inventory cycles and should be completed during 2011.<sup>28</sup>
- 8.27 The Committee asked DCCEE if the quality of the data collected had improved. The Department told the Committee that as a result of the data collected under the NGER Act the National Inventory will be more accurate.<sup>29</sup> DCCEE identified gaps in the data collection that will be filled and a number of areas where the collection process has been streamlined.<sup>30</sup> In its submission to the inquiry, the Department provided examples of the way the collected data will improve the overall outcome:

The data collected will improve the quality of the emission estimates through a greater utilisation of facility-specific data, the increased use of higher-order tier 3 methods to estimate emissions

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25 DCCEE, submission no. 6, npn.

26 Audit Report No. 27 2009-10, p. 76.

27 DCCEE, submission no. 6, npn.

28 DCCEE, submission no. 6, npn.

29 DCCEE, submission no. 6, npn.

30 DCCEE, submission no. 6, npn.

and through improved allocation of data to individual sectors. The reporting of standardised measurements made by individual facilities, encouraged under NGERs, will improve the accuracy of the inventory. Small improvements in the coverage of emission sources will also be achieved.<sup>31</sup>

## **Abatement measurement guidelines**

- 8.28 The ANAO noted the need for a consistent and standardised approach to measurement of program abatement to enable governments to make informed decisions about the effectiveness of abatement programs.<sup>32</sup> The DCCEE advised the ANAO that a draft guidance document outlining such measures was being developed at the time of the Audit and was expected to be published by mid-2010.<sup>33</sup> The Committee asked DCCEE if that tool had been completed and implemented.
- 8.29 DCCEE informed the Committee that the proposed guidelines are still under development and that a draft is 'currently undergoing internal Departmental clearance processes'.<sup>34</sup>

## **'Business as usual' factors**

- 8.30 The ANAO noted that in some cases it was difficult to distinguish between improvements in abatement caused by business as usual and economic initiatives and those resulting from government programs.<sup>35</sup> The ANAO suggested that more consideration should be given to the business as usual component within programs and broader abatement drivers in order to improve the integrity of individual estimates.<sup>36</sup> The Committee asked DCCEE if any steps had been taken to improve the consideration of business as usual factors and other economic drivers.
- 8.31 DCCEE informed the Committee that a program to improve individual estimates is underway and business as usual factors and other economic drivers would be considered as part of that work program.<sup>37</sup>

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31 DCCEE, submission no. 6, npn.

32 Audit Report No. 27 2009-10, p. 91.

33 Audit Report No. 27 2009-10, p. 91.

34 DCCEE, submission no. 6, npn.

35 Audit Report No. 27 2009-10, p. 85.

36 Audit Report No. 27 2009-10, p. 92.

37 DCCEE, submission no. 6, npn.

## Reporting

- 8.32 The ANAO found that the level of reporting on the impact of individual programs across Government agencies was inconsistent and generally poor.<sup>38</sup> Further, the Audit found that the reporting on individual programs was often *ad hoc* making it difficult to consolidate and compare the results.<sup>39</sup> The ANAO recommended that responsible agencies report annually on abatement estimates/figures and that DCCEE publish an annual consolidated report.<sup>40</sup> The Committee asked the Department what steps have been taken to implement this recommendation and improve reporting.
- 8.33 DCCEE told the Committee that the Department has commenced a work program to improve the estimates of individual measures and that the updated abatement estimates was to be published in a consolidated report in 2010 to 'improve transparency and consistency'.<sup>41</sup>

## Conclusion

- 8.34 The Committee is encouraged that Australia's Greenhouse Gas Emissions Inventory meets international requirements and acknowledges the steps being taken by DCCEE to improve the implementation of UNFCCC recommendations with regard to the Inventory.
- 8.35 The Committee acknowledges that further consideration will need to be given to ongoing rationalisation of Australian, State and Territory Government climate change programs to prevent overlap and duplication.
- 8.36 The Committee is concerned by the inconsistencies identified in the reporting of abatement measures across agencies and urges that Government agencies and the DCCEE fully implement the ANAO recommendation to improve this process. The Committee notes that the initiatives outlined in response to this audit report were still in progress of implementation at the time of this inquiry and therefore recommends that the DCCEE provide the Committee with a progress report on implementation within 12 months of the tabling of this report.

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38 Audit Report No. 27 2009-10, p. 97.

39 Audit Report No. 27 2009-10, p. 97.

40 Audit Report No. 27 2009-10, p. 98.

41 DCCEE, submission no. 6, npn.

#### **Recommendation 4**

**The Committee recommends that the Department of Climate Change and Energy Efficiency provide the Committee with a progress report within 12 months of the tabling of this report on the concrete measures that have been implemented to improve the effectiveness of Australian government abatement programs.**

**The report should include:**

- **a copy of the finalised abatement measurement guidelines;**
- **examples of how 'business as usual' factors and other economic drivers have been taken into account when measuring individual estimates; and**
- **a copy of the annual report showing the consolidated abatement figures across responsible agencies.**

