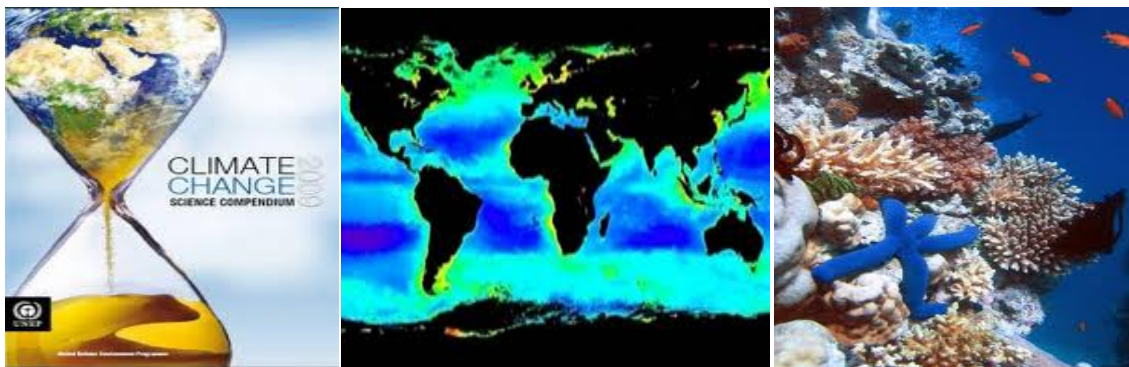


# 4<sup>th</sup> Seminar on Environmental Auditing and 3<sup>rd</sup> Working Meeting of ASOSAI WGEA

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## ***Auditing Climate Change Programs***

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## Introduction

Climate change, caused by the emission of greenhouse gases, is a global issue and has the potential to affect ecosystems, water resources, food production, human health, infrastructure and energy systems in all countries.<sup>1</sup> Australia, along with many other countries has introduced a range of programs to address climate change.

The Australian National Audit Office (ANAO) has conducted performance audits across a number of climate change programs including:

- Audit Report No. 34, 2003–04, Administration of Major Programs, Australian Greenhouse Office;
- Audit Report No. 26, 2009–10, Administration of Climate Change Programs; and
- Audit Report No. 27, 2009–10, Coordination and Reporting of Australia’s Climate Change Measures.

Audit reports No. 26 and 27 were part of an international collaboration audit undertaken through the International Organisation of Supreme Audit Institutions (INTOSAI) Working Group on Environmental Auditing.

In 2011–12, the ANAO examined the implementation of the National Greenhouse and Energy Reporting Scheme (NGERS). This audit was particularly important as measuring and reporting emissions are key elements of a wide range of climate change mitigation programs and the audit preceded the introduction of a carbon pricing mechanism in Australia. This paper discusses the NGERS Audit and some of the impacts and results, challenges and lessons learned.

## Background and audit planning

NGERS was established through national legislation in 2007 and is administered by the Australian Government Department of Climate Change and Energy Efficiency (DCCEE). NGERS was designed to introduce a single national reporting framework for corporations that have significant greenhouse gas emissions from energy consumption and energy production. The five objectives of the NGER Act are to:

- underpin the introduction of a proposed emissions trading scheme in the future;
- inform government policy formulation and the Australian public;
- meet Australia’s international reporting obligations;
- assist Commonwealth, state and territory government programs and activities; and
- avoid the duplication of similar reporting requirements in the states and territories.

In February 2011, the Government proposed that a carbon pricing mechanism would be introduced from July 2012 with a cap-and-trade emissions trading scheme following within three to five years. The initial carbon pricing mechanism is expected to raise over \$7.7 billion in 2012–13 and \$24.5 billion over the three years to 2014–15.<sup>2</sup>

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<sup>1</sup> International Organisation of Supreme Audit Institutions, Working Group on Environmental Auditing, *Coordinated International Audit on Climate Change; Key Implications for Governments and their Auditors*, November 2010, p.9. (Sourced from the Intergovernmental Panel on Climate Change; Synthesis Report, 2007.)

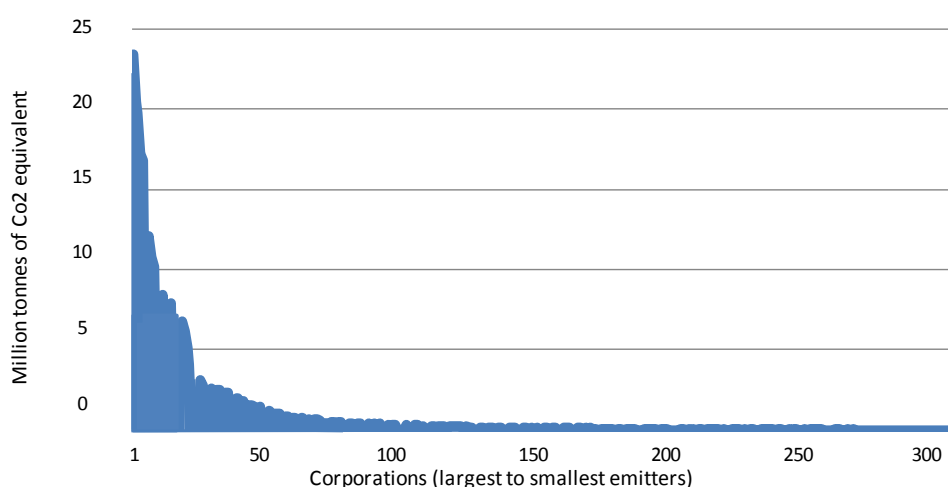
<sup>2</sup> Australian Government, July 2011, *Securing a Clean Energy Future*, p.131.

The carbon pricing mechanism applies to approximately 294 of the largest emitters of greenhouse gases in Australia.<sup>3</sup> In general, the NGERs threshold of 25 000 tonnes of carbon dioxide equivalents determines whether a facility is legally liable to report under the legislation. Carbon pollution from the following sources is covered by a carbon price: stationary energy; waste; rail; domestic aviation and shipping; industrial processes; and fugitive emissions.<sup>4</sup> Over half of Australia's emissions are intended to be directly covered by the carbon pricing mechanism.<sup>5</sup>

Figure 1 shows the level of direct emissions that the top 300 corporations emit annually.<sup>6</sup> The 100 corporations with the largest greenhouse gas emissions from direct combustion account for over 90 per cent of the total direct emissions reported.

**Figure 1**

**Published reporters and direct emissions levels for 2009–10**



Source: ANAO Analysis of NGER data involving direct (Scope 1) emissions for 2009–10.

**Objective, scope and criteria**

The objective of the audit was to assess the effectiveness of DCCEE's implementation and administration of NGERs. The audit scope covered the first two reporting years of the NGERs scheme.

The audit examined whether DCCEE had effectively: implemented the scheme; managed the integrity, security and quality of scheme data; monitored industry compliance with the provisions of the NGER Act; and streamlined reporting arrangements in line with the agreement by Australian, state and territory governments in 2009.

**Methodology**

<sup>3</sup> At the time of the audit this was estimated at 500 corporations. On the 15 June 2012, the Minister for Climate Change and Energy Efficiency indicated that 294 corporations were expected to have a legal liability under the carbon pricing mechanism.

<sup>4</sup> Fugitive emissions are greenhouse gas emissions formed as a by-product, waste or loss in the process of fuel production, storage, or transport, such as methane given off during oil drilling and refining, or leakage from pipelines.

<sup>5</sup> *ibid.*, p.27.

<sup>6</sup> Direct emissions (Scope 1) are derived from the combustion of coal, oil or other energy sources.

The development of the audit methodology was informed by the following publications:

- *Implementation of Programme and Policy Initiatives: Making implementation matter* (ANAO Better Practice Guide, August 2006);
- *Planning and Approving Projects—an Executive Perspective* (ANAO Better Practice Guide, June 2010); and
- *Administering Regulation* (ANAO Better Practice Guide, March 2007).

The audit considered key implementation risks and core compliance requirements of the NGER Act. The audit team reviewed planning, procedural, guidance and support documentation and files, interviewed departmental staff and stakeholders and conducted a review of the data collection, storage and analysis systems used.

A survey of the top 300 companies listed on the National Greenhouse and Energy Register (using an external service provider) enabled qualitative client data on the efficiency and effectiveness of the implementation process to be considered in the audit. This was further supported by interviews with a selection of businesses listed on the National Greenhouse and Energy Register.

An expert Information, Communications and Technology (ICT) firm was engaged to assess the security of the NGERs online reporting system in terms of privacy and confidentiality with oversight provided by the Department of Defence.<sup>7</sup>

## Overall conclusion and findings

The establishment of NGERs was a substantial and complex undertaking for DCCEE given the scale and broad coverage of the legislation across the Australian economy. The changing operating environment, particularly in relation to the proposed introduction of an emissions trading scheme in 2015 and the more recent carbon pricing mechanism, presented additional challenges for DCCEE that have impacted on the department's implementation of NGERs.

Nevertheless, DCCEE established a workable greenhouse gas and energy reporting scheme that provides a more accurate measurement of greenhouse gas emissions and energy use within Australia when compared to the voluntary industry surveys and programs that were previously in place. DCCEE also established a positive relationship with the majority of registered corporations. In addition, over 50 per cent of corporations indicated in their response to the ANAO's survey that real benefits have been obtained from measuring their greenhouse gases and energy use.

Notwithstanding these positive findings and progress to date, key aspects of DCCEE's administration required strengthening to improve the operation of NGERs. These include: enhancing the integrity of reported greenhouse gas emission and energy use data; better managing compliance with the regulatory requirements; and streamlining reporting obligations as intended.

### Data integrity

The quality and accuracy of reports submitted by corporations is critical for the overall integrity of the NGERs dataset. As the scheme relies on the self assessment and reporting of greenhouse gas emissions and energy data by corporations, a sound quality assurance

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<sup>7</sup> The Defence Signals Directorate in the Australian Government Department of Defence provides information security advice and services mainly to Australian federal and state government agencies.

process supported by a risk-based compliance program are key elements for effective administration.

DCCEE did not verify<sup>8</sup> the data reported by corporations. Rather the department's quality assurance relied on a desk top review of submitted data.<sup>9</sup> It is intended that verification will be a major component of DCCEE's compliance and audit program in 2012. In 2009–10, DCCEE identified that nearly three quarters of submitted reports contained errors, with 17 per cent of reports containing significant errors. The importance of accurate greenhouse gas emission and energy use data is particularly important with the introduction of a carbon price from July 2012. DCCEE has taken steps to improve data quality, including initiating a report re-submission process and the introduction of the recent *Data Quality Improvement Strategy*, to better position the department to monitor the integrity of data provided by registered corporations.

The integrity of the data collected under NGERS also relies on the functionality and security of the IT system used by entities with NGERS obligations, to report and store data. The IT security testing undertaken as part of this audit, identified significant security vulnerabilities within the system that increased the risk of an unauthorised person gaining access to, and threatening the integrity of NGERS data. The subsequent report made forty specific recommendations to improve security. Eight of these recommendations were classified as high priority. The results of this security testing highlight the importance of managing risks through sound change and release management controls for the update and enhancement of IT systems. At the completion of the audit, the ANAO's recommendations were being progressed by DCCEE and had been largely implemented prior to tabling.

## **Compliance management**

As the regulator, DCCEE is responsible for ensuring that regulated entities have met legislative requirements. DCCEE has put in place a number of strategies designed to educate and train representatives from corporations and to encourage compliance with NGERS registration and reporting requirements. However, the implementation of the NGERS compliance and audit program has been slower than planned. Implementation was constrained by the redistribution of resources following the deferral of the emissions trading scheme, and the lower priority afforded to this work within the first three years of NGERS. Consequently, a systematic, risk-based audit and compliance program was still in the process of being implemented. There remained substantial work to be undertaken to establish a program that is capable of providing an appropriate level of assurance that corporations are complying with their obligations.

The cost of compliance for corporations is also significantly higher than the estimates in the NGERS regulatory impact statement. Striking the appropriate balance between meeting compliance obligations and the associated cost for regulated entities will be an important consideration for DCCEE in implementing the NGERS compliance and audit program.

## **Streamlined reporting**

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<sup>8</sup> Data verification within this context is defined as testing and providing assurance that reported data is supported by accurate source material and records from which it is derived.

<sup>9</sup> This process tested: obvious data or calculation errors; the consistency of data received against other publicly available information such as the electricity market data; and consistency across the two years of NGERS reports.

NGERS was intended to reduce the duplication of reporting requirements across related programs and create a single national reporting framework. This legislated objective was reinforced by a Protocol agreed by Australian, state and territory governments in July 2009. There was initial progress under the Protocol to streamline reporting obligations, with DCCEE ceasing a number of national programs as well as voluntary company surveys. Despite this initial streamlining activity, progress effectively stalled from April 2010 when the Government deferred the introduction of an emissions trading scheme.

As a consequence, multiple reporting obligations remained. The audit found that registered corporations incurred capital costs ranging from \$5000 to \$3 million, with recurrent costs ranging from \$1500 to \$1.5 million. These reported estimates significantly exceeded the original cost estimate of \$10 000 for annual entity costs at the time the legislation was passed by the Parliament. Reporting obligations and the associated inefficient use of resources were frequently cited as a significant problem by respondents to the ANAO survey and during discussions with stakeholders. Of the corporations surveyed, 63 out of 108 respondents (58.3 per cent) stated there had been no reduction in reporting requirements. If the objectives of the agreed Protocol are to be realised, DCCEE will need to give priority to working with jurisdictions to streamline current reporting requirements.

## **Recommendations**

The ANAO made three recommendations designed to: better target departmental compliance efforts; improve data sharing with Australian Government and authorised state or territory agencies; and advance efforts to further streamline greenhouse gas emission and energy use reporting requirements. These were agreed by the department.

## **Impact and results**

The audit provided assurance to Parliament that the Government had a workable scheme to measure and report on greenhouse gas emissions. This was important given that the Government had scheduled a major new initiative to price carbon at some \$24.5 billion over the three years to 2014–15. The calculation of emissions was the basis for measuring the tax liability of Australian corporations. The audit also highlighted particular weaknesses in the administration of the scheme that required attention prior to the introduction of the carbon pricing mechanism. In particular, the audit highlighted the importance of:

- maintaining adequate security for on-line information systems that are regularly upgraded and updated over time and where third parties are engaged with administrator access and privileges to the IT system. The audit provided clear guidance to the agency on measures to reduce IT security risk prior to the introduction of a new carbon pricing mechanism involving significant legal and taxation liabilities for particular corporations in Australia.
- establishing a comprehensive quality control system and a systematic, risk-based audit and compliance program early in the implementation phase to provide assurance in relation to the quality of the data; and
- ensuring that measuring and reporting obligations are as streamlined as possible to manage compliance costs for corporations. The audit gave renewed impetus to cooperation between levels of government in Australia to improve the efficiency and lower the cost of compliance with greenhouse gas measurement and reporting.

## Challenges

The audit methodology proved to be robust and reliable. However, to provide a comprehensive report to Parliament the ANAO sought to obtain the views of key stakeholders. These stakeholders were some of the largest publicly listed corporations in Australia. While the ANAO had no mandate to audit these corporations, we sought voluntary comments from them on their perceptions of how NGERS was implemented. The relatively high response rate (approximately two-thirds of surveyed corporations) provided a client satisfaction measure that also highlighted some of the challenges in complying with the legislation as well as a considered view on the implementation by the agency. The survey was supported by face-to-face interviews with a sample of corporations as well as round table discussions with peak industry bodies. This approach provided the audit and, consequently, the Parliament with a collective view from stakeholders that supplemented audit findings on the agency.

IT security testing was also challenging as there was a risk of damaging the agency's IT system in undertaking a full penetration test through the audit. However, by testing on a clone of the system, the risk was eliminated. Using specialised IT security experts was also particularly helpful in obtaining a quality assessment of the security of the system within a reasonable timeframe. Having forty recommendations implemented prior to tabling the audit report also removed the problem of the audit report highlighting weaknesses in security that could potentially be exploited by third parties.

## Lessons Learned

The timing of the audit was particularly relevant, as it preceded a major new policy on carbon pricing. DCCEE was supportive of the audit because of the timing and the insights that the audit could provide prior to a major policy and organisational change for the agency. While timing cannot always be guaranteed because of competing audit priorities, it does illustrate that audits can be timed to maximise their acceptance by the agency subject to the audit.

The client survey provided a benchmark for DCCEE for its own client surveys in the future. Obtaining a sufficiently high response rate is however, critical, if any meaningful results can be obtained. Focusing questions on a small number of key points was particularly important.

Supporting the survey with face-to-face interviews and round table discussions also provided further qualitative data that enabled case studies to be developed in the report to Parliament. In particular, the work with industry raised the profile of the role of performance audit as an important public sector policy tool for improving program delivery.